PROFESSIONAL DOCTORATE (PROFD)

First Contact Practitioner’s (FCP) Challenges and Learning and Development Needs in Response to Managing Fitness for Work and Sickness Absence Certification for Primary Care Patients: Consensus Development

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First contact practitioner’s (FCP) challenges and learning and development needs in response to managing fitness for work and sickness absence certification for primary care patients: consensus development.

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A thesis submitted in fulfilment of the requirements of Glasgow Caledonian University for the degree of Professional Doctorate

The School of Life and Health Sciences

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Abstract

Research Aim
Competent FCPs improve therapeutic outcomes in primary care (Stynes et al., 2010) and with further training and development, the expectation of improved work-related outcomes (Black, 2022). It is therefore important to define and articulate the health and work competencies FCPs need to consistently offer evidence-informed information to be effective and efficient in their roles and overcome the difficulties of the current context in primary care. Thus, the main aim of this project was to identify the competencies that underpin the FCP’s role in providing fitness for work recommendations and sickness absence certification within the primary care setting.

Methods
A pragmatic multi-phase consensus approach was used to generate work and health competencies needed for primary care practice. Two national nominal group techniques (studies 1 and 2) provided the first insight in the competencies needed in an expert group of FCPs and OH/ACPOHE physiotherapists with a consensus criterion of 60% adopted. Study 3 consisted of a national modified Delphi study to confirm a final list of knowledge and skill-based items needed for primary care practice. A priori consensus criterion of 70% threshold level of group agreement was adopted for this three-round questionnaire study. Items between 51% and 69% of agreement were included for the next round and those items with less than or equal to 50% of agreement were considered unnecessary and were excluded. In the third round, the occupational health (OH) specific contents for primary care were classified according to the degree of consensus as follows: strong (≥70% of agreement), moderate (51%–69% of agreement) and weak (50% of agreement) based on the maximum consensus reached.

Principal Findings
Of the 30 initial competencies, 20 (67%) reached a strong degree of consensus and 2 (7%) reached a moderate degree of consensus and 8 (27%) competencies were not recommended (≤50% of agreement). 20 OH specific competencies reached a priori consensus level of agreement to provide the final group list.

Importance and Relevance
This is the first project to identify health and work-education competencies for FCPs in UK primary care settings. The results from the three individual studies represent a new contribution to knowledge. It provides the first empirically derived list of occupational health (OH)-specific competencies for FCP education in primary care ‘first point of care’ physiotherapy with a high level of expert agreement and high retention rate between rounds. Also, it is the first study to involve both FCP and OH physiotherapy professionals in the UK.
Dedication

This thesis is dedicated to Lottie, Finley, and our unborn and unnamed baby (as yet!), my mum and wider family who have supported me through my doctoral journey.
Acknowledgments

I would like to express my thanks to the participants who gave their time, enthusiasm, and opinions to bring this project to life.

I owe a debt of gratitude to my supervisory team, Dr Heather Gray, Dr Sivaramkumar Shanmugam and Professor Lorna Paul, for their guidance, unwavering support, patience and understanding throughout the course of their involvement with the project.

I would like to thank Dr Keith Halcro, Professor Kim Burton, Professor Kaveh Asanati, Dr Lina Petrakieva and Dr Grace Poulter for their support and guidance. Thanks to the Education Awards Panel of the CSP who assisted me through the Doctorate in Year 3 and in attending several conferences over the years.

I should also like to thank my colleagues in the NHS for which I work for all their support, it is one of the most difficult times in the history of the health service. They all, in different ways, provided me with encouragement, space and strong academic role models during a very difficult time.

I owe a great deal to my friends on the cohort; when all else failed, they were always there. It was an honour to share this doctoral journey with them and to share repeated Glasgow trips.

Again, I thank my wife Lottie and son Finley, for their belief in me and constant support and love. They have sacrificed time away from me due to this project. Finally, to my wider family, I hope I have made you proud.
Author’s declaration

“I declare that, except where explicit reference is made to the contribution of others, that this dissertation is the result of my own work and has not been submitted for any other degree at Glasgow Caledonian University or any other institution.”

Printed Name: Cameron Black

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Date: 10.12.2023
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Glossary of Terms

**Agenda for Change (Afc)** is the current National Health Service (NHS) grading and pay system for NHS staff, apart from doctors, dentists, apprentices, and some senior managers.

**Additional Roles Reimbursement Scheme (ARRS)** provides funding for 26,000 additional roles to create bespoke multi-disciplinary teams.

**Network Contract Directed Enhanced Service (DES)** was introduced on 1st July 2019 to set out core requirements and entitlements for a Primary Care Network (PCN). By 2023/24, the Network Contract DES commits an investment of £2.4 billion into primary care across the country, or £1.47 million per typical PCN.

**Advanced Practitioner (AP)** is an experienced, registered health and care practitioner who can deliver advanced clinical practice. This level of practice is characterised by a high degree of autonomy and complex decision-making. This is underpinned by a master’s level award or equivalent that encompasses the four pillars of clinical practice as outlined by National Health Service England (NHSE): leadership and management; education and research; demonstration of core capabilities; and area specific clinical competence (NHSE, 2017a).

**Allied Health Professional (AHPs)** are professionally autonomous practitioners that encompass 14 different professions, including: Art Therapists; Drama therapists; Music therapists; Chiropodists/Podiatrists; Dietitians; Occupational Therapists; Operating Department Practitioners; Orthoptists; Osteopaths; Paramedics; Physiotherapists; Prosthetists and Orthotists; Radiographers; Speech and Language Therapists (NHS, 2019a).

**First Contact Practitioner (FCP)** is a physiotherapist who has expertise in musculoskeletal disorders, most likely with a master’s degree and is working within Primary Care as a first point-of-contact. The role of the FCP in Primary Care is to assess patients with soft tissue, muscle, and joint pain and to decide on the most appropriate management pathway. The role is typically at a band 7/8 level, which are the higher NHS role bandings (Chartered Society of Physiotherapy, 2018a).
Primary Care Networks (PCN). Since 1 July 2019, most GP practices in England have come together in approximately 1,300 geographical networks covering populations of 30–50,000 patients. Most networks are geographically based and, between them, cover all practices within a CCG boundary. NHSE has significant ambitions for PCNs, with the expectation that they will deliver many of the commitments in the long-term plan and provide a wider range of services to patients (The King’s Fund, 2019a).

Snowball sampling is a technique used to gather research participants through identification of an initial participant who then can offer an expanded network of other potential participants (Beck et al., 2004).
### Acronyms

<table>
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<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AHP</td>
<td>Allied Health Professional</td>
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<tr>
<td>AP</td>
<td>Advanced Practitioner</td>
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<td>BMA</td>
<td>British Medical Association</td>
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<tr>
<td>CCG</td>
<td>Core Clinical Commissioning Group</td>
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<tr>
<td>CSP</td>
<td>The Chartered Society of Physiotherapy</td>
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<tr>
<td>DHSC</td>
<td>Department of Health and Social Care</td>
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<tr>
<td>DWP</td>
<td>Department for Work and Pensions</td>
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<tr>
<td>FCP</td>
<td>First Contact Practitioner</td>
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<tr>
<td>FFW</td>
<td>Fitness for Work</td>
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<tr>
<td>GCU</td>
<td>Glasgow Caledonian University</td>
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<tr>
<td>GMC</td>
<td>General Medical Council</td>
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<tr>
<td>GP</td>
<td>General Practitioner</td>
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<tr>
<td>GPFV</td>
<td>General Practice Forward View</td>
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<tr>
<td>HCP</td>
<td>Healthcare Professional</td>
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<td>HEE</td>
<td>Health Education England</td>
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<td>HRA</td>
<td>Health Research Authority</td>
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<tr>
<td>ICBME</td>
<td>International Competency-Based Medical Education</td>
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<tr>
<td>Acronym</td>
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<tr>
<td>ICS</td>
<td>Integrated Care Systems</td>
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<tr>
<td>LBP</td>
<td>Lower back pain</td>
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<tr>
<td>NHS</td>
<td>National Health Service</td>
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<td>NHSE</td>
<td>National Health Service England</td>
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<td>OH</td>
<td>Occupational Health</td>
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<td>PCN</td>
<td>Primary Care Network</td>
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<td>REC</td>
<td>Research Ethics Committee</td>
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<tr>
<td>RCGP</td>
<td>Royal College of General Practitioners</td>
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<td>RTW</td>
<td>Return to Work</td>
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<td>SA</td>
<td>Sickness Absence</td>
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<td>SLR</td>
<td>Systematic Literature Review</td>
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<tr>
<td>SSP</td>
<td>Statutory Sick Pay</td>
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<td>STP</td>
<td>Sustainability and Transformation Partnerships</td>
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Chapter 1. Introduction

1.1 Introduction to the research study

This research project provides a novel exploration of the learning and development needs of First Contact Practitioners (FCP) involved in the musculoskeletal (MSK) management of patients within the NHS’s primary care service. It presents on newly generated work and health competencies through expert group consensus that considers the knowledge and skills required for FCPs to provide fitness for work (FFW) recommendations and sickness absence (SA) certification in primary care. In this chapter I briefly discuss the drivers behind this thesis including the background of the health and work agenda, a brief introduction into the FCP model of practice and finally an overview of the format of the thesis. A list of publications related to this thesis is presented in Appendix 1. Before the thesis commenced, a feedback and sense checking exercise took place on the topic, with a summary of feedback presented in Appendix 2.

During this Professional Doctoral journey, I have presented at national conferences, been seconded to work on a national evaluation of practice, facilitated training and participated in workshops aimed at developing FCPs. I recognise these experiences have contributed to new knowledge and influenced the direction of research, the formulation of objectives and research method of inquiry. Thus, there is a degree of embeddedness of study pre-conception within my own professional journey as a clinical academic.

1.2 Drivers behind this thesis

Employment is a key factor for health, both directly and indirectly in making an impact on an individual employee, their families, and the wider communities in which they live (McGinnis et al., 2002). Evidence supports the negative effects of unemployment, such as an association with an increased risk of mortality and morbidity, including disabling illness, cardiovascular disease, poorer mental health, and negative health behaviours (Marmot et al., 2010). From an occupational health perspective, which is my area of expertise,
individuals who take more than 6 months sickness absence have lower general wellbeing and only 50% are likely to return to work (RTW) (OHID, 2022).

There are considerable variations in employment rates across individuals with a physical or mental health presentation. Specifically, those with a history of mental ill health or substance misuse find staying in, and opportunities for, employment more difficult (Bauld et al., 2010). MSK and common mental ill health are the most common causes of sickness absence (SA) in developed countries, and the solutions to this have become a major research focus, especially as the economic and societal costs are growing each year (Hill, 2015). In 2020/21, approximately 1.7 million workers in Great Britain were suffering from ill-health that was either caused or worsened by their current or past jobs (HSE, 2022). Of the 1.7 million workers, 78% of work-related illness was due to MSK and common mental health disorders (CMDs) such as stress, depression, or anxiety (HSE, 2022). These figures constitute significant risk of ongoing SA and reduced probability of a RTW, which impacts on employers, society, and productivity. In addition, the coronavirus (COVID-19) pandemic and the government’s response has impacted recent trends in health and safety statistics provided by stakeholders.

While the pandemic response may have led to additional SA, furlough, social distancing, shielding and increased homeworking may have helped to reduce other causes of SA in 2020. However, the latest Labour Force Survey estimates suggest that in 2020/21 the SA rate in the UK was the highest it has been since 2010, at 2.2% (ONS, 2022). Within the NHS, the average overall SA rate for England was approximately 6.2% in December 2021, with some staff groups reporting a SA rate of 10.9% (ambulance staff support) and 8.6% (ambulance staff) (NHS Digital, 2022). An estimated 149.3 million working days were lost because of sickness or injury in the UK in 2021, equivalent to 4.6 days per worker and women, older workers, those with long-term health conditions, part-time workers, and those in caring, leisure and service occupations had the highest rates of SA (ONS, 2022). Again, the main reason for this SA is due to minor illnesses (21.9%) and MSK conditions (13.4%) followed by mental health conditions (9.8%). Around one quarter of absences were defined as ‘other’ (including COVID-19) because of the pandemic (ONS, 2022). Therefore, to reduce a variety of societal, community and individual costs related to SA and reduce the risk of long-term disability associated with an extended absence from work, it is paramount
to better understand strategies that can facilitate work-related support in the form of focussed discussions and strategies aimed at preventing avoidable SA.

Lastly, the UK has been forecasted to face a sharp economic slowdown due to inflation, a reduction in household spending and risk from external shocks such as war, financial crisis and environmental risks from climate change throughout the world (MPC, 2022). In fact, the economy is forecasted to shrink by 0.25% in 2022, which may lead to business difficulties and unemployment rising from 3.6% in 2022 to around 5% in 2024 (MPC, 2022). This suggests that vocational support and the maintenance of working age adults will need to continue long term.

Evidence shows that good work is good for health and that a bad working environment, characterised by low levels of job control and organisational fairness, and a high effort-reward imbalance, may contribute to poor health. HCPs may be able to consider some of these non-modifiable factors, however, FFW and SA certification can be powerful modifiable factors for prolonged absence with an ability and immediacy for change. For example, if the majority of SA is due to minor illnesses and MSK conditions, there is an argument to suggest that with adequate support, these individuals may be FFW in some capacity and SA can be limited. Despite this, 95% of the time the Fit Note is used a ‘Sick Note’, which suggests that either 95% of individuals are either truly too ill to work, receiving incorrect FFW advice or it is the path of least resistance for the certifier in a time-limited consultation with little thought given to their work and health outcome. In Chapter 2, the health and work agenda and work-focused healthcare is further developed.

From my own experiences as a clinician, I know that for many HCPs, especially physiotherapists who have a therapeutic relationship with patients, the health and work agenda is not a priority. This motivated me to understand further the barriers of considering work within a consultation and to closely examine the knowledge and skills of FCPs regarding the topic within a primary care setting. The aim is to identify competencies to underpin the primary health care FCP role as a leader and educator for the work and health agenda. I chose this topic as I believe FCPs can be work and health champions and thus positively influence the health and wellbeing of primary care patients and minimise the effects of both ill health and risk of worklessness. Throughout this Professional Doctoral
journey, I became acutely aware of the challenges posed to primary care due to a variety of reasons and the need to overcome barriers in the form of FFW and SA certification. In my end reflective chapter, Chapter 12, I further develop on the initial motivations and thought processes at the thesis pre-conception stage and how clinical experiences shaped data collection, learning and knowledge and practice ideas within the practicalities of the research. I acknowledge that as a clinical academic I am an ‘insider-researcher,’ which allows me to judge the truth but also risks a degree of loss of objectivity due to the familiarity of OH and physiotherapy practice and introduction of bias through incorrect assumptions based on my own prior knowledge (Unluer, 2012). Throughout this study, I was required to balance the ethical roles of ‘insider’ academic, clinician, expert, and impartial ‘researcher.’

1.3 FCP model of practice

A First Contact Practitioner (FCP) is a diagnostic clinician working in Primary Care at the top of their clinical scope of practice at master’s level Agenda for Change Band 7 or equivalent and above (HEE, 2020). This allows the FCP to be able to assess and manage undifferentiated and undiagnosed MSK presentations (HEE, 2021). To become an FCP, a credentialling and recognition process is required through Health Education England (HEE), whereby a physiotherapist must have completed a taught or portfolio route to practice. The FCP is the fundamental professional group that this thesis is based on, and their learning and development is a main focus of the research conducted.

The study has also emerged because of the FCP model of practice, which is now established within primary care and challenges the traditional physiotherapeutic professional boundaries. This model of practice requires a degree of professional specialisation that may be considered an expansion, broadening or extension of the clinical role. This role has emerged due to the recognition that general practice was under huge strain and with ever increasing budgetary restraint, innovative approaches to patient care were required. The role of physiotherapy was reinforced within the NHS’s Long-Term Plan which states, ‘we will expand the number of physiotherapists working in primary care networks, enabling people to see the right professional first time, without needing a GP referral’ (NHS England, 2019:
Thus, FCPs are now established and working at a higher level from that achieved on initial registration, with the expectation of working at master’s level to make complex decisions and assess and manage undifferentiated and undiagnosed MSK presentations (HEE, 2021). As the roles have become commonplace across primary care, I became interested in the depth and scope of practice in such roles and was increasingly interested as to whether FCPs could consider a FFW and SA certification role in primary care.

1.4 Significance of the research

MSK conditions are a significant public health concern as they are the greatest cause of disability in England and are costly for health services, with 30% of the population consulting with their GP about a MSK condition each year (Arthritis Research UK, 2018). They may be broadly grouped as inflammatory conditions such as rheumatoid arthritis, conditions of MSK pain such as osteoarthritis of the hip, knee, neck and back pain, and osteoporosis and fragility fractures. An ageing population may mean that more people are living with MSK conditions, and a later retirement age may mean that people need to work longer with an MSK condition. Indeed, many working age adults would like to discuss work within a clinical encounter, but often do not have the opportunity to do so (Hutting et al., 2020). A number of studies have considered the value and importance of work-focussed health conversations, embedding work as a health outcome, facilitating continuation or resumption of work and tackling obstacles to work participation early (Lin et al., 2019; Caneiro et al., 2019; Lewis and O’Sullivan, 2018; Bartys et al., 2019), and these will be considered within the detailed literature review (Chapter 2).

The present study considers FCPs work-related knowledge and skills, which are recognised as critical competencies in terms of providing FFW and SA certification in primary care. The results generated using two national NGTs and one national Delphi study have the potential to further contribute to knowledge, enabling further FCP education and practice planning centred on addressing the knowledge and skill requirements of FCPs in the context of work and health education. This research will add to the extant body of research knowledge through the collection of original data regarding work and health competencies of FCPs in the primary care setting.
1.5 Statement of the problem

Although most physiotherapists acknowledge the importance of their patients work, occupation and the ability to work are often not sufficiently addressed within regular clinical encounters (Oswald et al., 2017; Hutting et al., 2017). Therefore, the absence of work-focused healthcare often creates an obstacle to work participation due to the lack of consistent, evidence-informed information within supportive conversations. It is widely recognised that GPs struggle with this contractually obliged role within the SA system (Coole et al., 2015). Studies suggest that GPs feel ill-equipped to offer advice to patients about RTW issues (Money et al., 2010), with only 4 in 100 undertaking postgraduate training in occupational medicine (HSC Information Centre, 2009). The medico-legal systems require a Statement of Fitness for Work (known as a ‘Fit Note’) as a measure to certify SA but almost 95% of over 6 million Fit Notes issued by GPs in 2020 advised that the patient was not ‘fit for work’ without suggesting adjustments or advice for the work conducted (NHS Digital, 2021). In addition, even though most patients with common health problems are deemed low risk, this data suggests that over one-third of patients were ‘signed off’ for 5 weeks or longer, and evidence from the UK Government suggests that 20% of these patients are unlikely to ever work again (DWP and DoH, 2017). In 2016, the UK Government acknowledged that the ‘Fit Note’ ‘was not fully achieving what it set out to do’ (NHS Digital, 2017).

Primary care may be an ideal environment to influence work-related outcomes for those living with undifferentiated and undiagnosed conditions in the community, as it acts as the first point of contact in the healthcare system and the ‘front door’ of the NHS. It is well known that medical fitness has limited relevance in most employment situations, with many medical conditions and all minor health problems having minimal implications for work. The premise behind replacing the previous sick note with the ‘Fit Note’ centred on the mindset of what patients can do, rather than what they were incapable of doing (Black, 2008). However, a functional assessment of an individual’s capacity (or ability) and by extension what they ‘can do’, is often not translated into the ‘Fit Note’ and GPs report that they are inadequately prepared for its use, have little training in its use, time constraints in a consult, and little advertisement of its use in the GP curriculum. Therefore, certifying a patient ‘not fit for work’ is often the path of least resistance in a GP consultation that lasts for 600
seconds. The role of SA certification and FFW is potentially amenable to management within the FCP primary care model. In the UK, this model provides patients with direct access to diagnostic physiotherapists training to become at the top of their clinical scope of practice. Multi-stakeholder agenda supports the need for work advice for employed people at risk of avoidable and unnecessary SA. Various similar phrases have been used in the literature to describe this phenomenon avoidable, unnecessary, needless and avoidable. Christian et al (2015) used the descriptions needless work disability and avoidable work disability and despite a lack of consistency, avoidable may be a good description since it implies stakeholders can do something about it (Burton, 2024). It is described as unnecessary as many patients with common health conditions are treatable and have great potential for rehabilitation yet are medically certified as permanently unfit for gainful employment (Burton, 2024). ACOEM (2006) further expanded on this and report that (work) disability can be medically required, discretionary or unnecessary. They report that medically unnecessary disability occurs whenever a person stays away from work because of largely non-medical issues such as: the perception that a diagnosis alone (without demonstratable functional impairment) justifies work absence, other problems that masquerade as medical issues, e.g., job dissatisfaction, anger, fear, or other psychosocial factors, poor information flow or inadequate communications, administrative or procedural delay (ACOEM, 2006). In another study from Kremer and Steenbeek (2010), they assumed that absence for non-health reasons, work-related absence and absence that was unnecessary according to the workers. In their study of Dutch workers, they concluded that according to work, sickness absence can be reduced and that around 11.0% of their sickness rate was not mainly because of health reasons. In addition, 14.9% of the workers thought their absence could have been shorter or prevented and that overall, 21.5% was considered avoidable and that only 35.4% of the absence rate was truly regarded as work-related (Kremer and Steenbeek, 2010).

The challenge is in reducing training and system barriers to this health and work agenda. It is estimated that only 1/3 of employees have access to occupational health services (Fit for Work Europe, 2020), which leaves the majority looking towards the ‘front door’ of the NHS for occupational support. As this is traditionally seen as outside the remit of a physiotherapist who readily assess, diagnose, manage and discharge MSK patients without
the need of a GP consult, there is added incentive to consider FCP learning and development needs to effectively implement vocational advice and support for their patients (Letrilliart and Barrau, 2012).

### 1.6 Research Aim and Objectives and Structure of the Thesis

#### 1.6.1 Research Aim

Competent FCPs improve therapeutic outcomes in primary care (Stynes et al., 2010) and with further training and development, the expectation of improved work-related outcomes (Black, 2022). It is therefore important to define and articulate the health and work competencies FCPs need to consistently offer evidence-informed information to be effective and efficient in their roles and overcome the difficulties of the current context in primary care.

Thus, the aim of this project was to identify the competencies that underpin the FCP’s role in FFW and SA certification within the primary care setting. My thesis continues in Chapter 2 by exploring the literature pertaining to primary healthcare in the United Kingdom, the sickness certification structure and the FCP model of practice. A narrative literature review of existing training and development of FCPs is presented alongside the theory behind the work and health agenda. The chapter concludes with the solutions to the gaps highlighted by the literature review and draws upon global and local contexts.

Chapter 3 provides an analysis of concepts related to competency and competencies. In addition, the chapter discusses the contemporary literature related to expertise, healthcare education and learning theory. Chapter 4 begins by introducing my position as the researcher, followed by a discussion relating to my choice to adopt a pragmatic philosophy and approach to address the aim and objectives. The ontological and epistemological assumptions underpinning the methodological approaches used in this study are discussed. Studies 1 and 2 comprised of two national NGTs pertaining to generating and reaching consensus on the challenges involved and learning and development needs for FCPs to consider FFW and SA certification in primary care practice. Study 3 utilised a national Delphi
study to examine and review these competencies and identify the final core work and health competencies overall.

Chapter 5 presents the research methods employed within Study 1, followed by those used in Study 2.

Chapter 6 presents the findings of the two nationals NGTs. The findings have been integrative to facilitate comparative analysis of the research questions posed and answers from the two professional groups. In Chapter 7, the findings of Study 1 and 2 in relation to existing literature are discussed. This is followed by a discussion of the methodological strengths and limitations of the studies, the implications for FCP educational practice and suggestions for future improvements to practice.

In Chapter 8 and 9 the methods and results for Study 3 are presented. In Chapter 10, the overall findings from the three Studies are discussed in relation to the existing literature. This is followed by a discussion of the methodological strengths and limitations of all studies. Finally, the educational implications of the research are explored before discussing future research areas of interest.

Chapter 11 provides an overview of the achievements of this study and a conclusion to the thesis. Finally, Chapter 12 offers a reflection on the whole Professional Doctorate journey and the unique development experience.
Chapter 2. Literature review

2.1 Chapter overview

Having decided, as the thesis introduction explained, to focus upon the learning and development needs of FCPs within UK primary care settings, I embarked upon a comprehensive literature review. This chapter is an account of that critical review of the research literature. I had already decided upon a question that was suitable for investigation and I was aware that the literature review would be necessary to accomplish the outcomes that Kamler and Thomson (2006: 28) clarify: considering the work of research luminaries, theorists and writers in the specialist area, defining any specialist or contentious terms, identifying the major debates in the context into which the study is placed and providing an outline of the nature of the chosen fields relevant to the inquiry. Additionally, the literature review identifies gaps within the field of research and considers the contribution that the new research will make, thereby justifying the overall rationale for undertaking this Professional Doctorate project (Cooper, 2010). It may also identify previous approaches employed and consider important issues which remain unresolved (Marshall and Rossman, 2016).

This initial critical review of the literature examines the current thinking, conceptual basis and evidence-based practice issues related to the topic and proposed study. A literature review has been defined as a ‘summary of the knowledge around a specific question or topic, or to make recommendations that can support health professionals and organizations make decisions about a specific intervention or care issue’ (CIHR, 2008). This chapter therefore critically reviews other pertinent studies that are closely related to the one proposed, how the proposed study fits within the on-going dialogue in the literature and whether there are research gaps to be filled through extending or building on prior knowledge (Marshall and Rossman, 2016). As such, this chapter serves not only as a framework for the proposed study but also a benchmark for comparing its results with other findings (Boote and Beile, 2005). Along with the identification of central issues in the field and integration of related topics, this chapter acknowledges the exploratory nature of the
topic and the overall depth of research to date, this will likely impact the focus and rationale of the study and further validate the research questions (Punch, 2016).

The chapter starts with an explanation of the comprehensive search strategy employed before critically appraising the studies it yielded. While several relevant studies are identified which provide a foundation for the present study and outline the need for improved FFW education in primary healthcare, no studies were identified that systematically investigate the FFW and SA competencies needed within primary healthcare, the setting in which FCPs work. This review covers an extensive search of all types of studies, including grey literature related to professional practice (Brettle and Grant, 2004). This broad approach was deemed necessary to understand what is known about the concepts involved and to overcome the anticipated lack of primary research (Tricco et al., 2018).

2.2 Search strategy

This literature review considers the justification of the methodology used in the research project. It was decided that a scoping review would be used to synthesise knowledge and identify main concepts, theories, and the extent and range of the evidence on the current work and health topic.

As an initial step, a formal and detailed review protocol was developed and followed throughout the entire review process. This protocol included the identification of the questions to be addressed, the search strategy, the screening criteria and process, the data extraction strategy and procedures, the conceptual framework, the data analysis techniques, and the work schedule. As suggested by leading methodologists, the protocol was not conceived as an inflexible guide to be applied in a rigid way (Arksey and O’Malley, 2005). It served as a framework and was flexible to answer the initial research questions. The broad questions for the review were: 1) What is the research base on the FCP model of practice? 2) what learning and development needs have been investigated for FCPs in the healthcare literature on the FFW and SA certification topics 3) what are the main gaps in this literature? 4) what are examples of promising research avenues on the health and work
topic for FCP clinicians and other HCPs? Thus, the initial section follows a narrative review and the final section follows a scoping review on work and health (section 2.13 and 2.18).

A scoping approach to review existing literature, and to examine the extent, range, and nature of research activities, to identify research gaps, and to summarise and disseminate research findings was employed with the following steps:

1. Identifying the research question: starting with wide definitions for study population, interventions, or outcomes, to ensure breadth of coverage in the search, and then setting parameters based on the scope and volume of references generated. Levac et al., (2010) suggested that maintaining a broad search strategy with clearly defined concepts and their continuous refinement.

2. Identifying relevant studies: as comprehensively as possible identifying primary studies (published and unpublished) and reviews suitable for answering the central research question. To achieve this, a strategy that involved searching for research evidence via different sources was used. Armstrong et al., (2011) suggest from a practical point of view, decisions must be made at the outset about the coverage of the review in terms of time span and languages.

3. Study selection: unlike systematic reviews, inclusion and exclusion criteria are developed post hoc once familiarity with the literature has been gained. Daudt et al., (2013); Levac et al., (2010) recommend that multidisciplinary expertise and group consultation within the scoping team is used to inform and guide the definition of the search criteria and clinical applicability of data for extraction.

4. Charting the data: data synthesis and interpretation adopted a narrative or descriptive approach in place of a more systematic data extraction or analytic method.

5. Collating, summarising, and reporting the results: emphasis would not be placed on the ‘weight of evidence’ nor on evaluating the quality of evidence, but an analytic or thematic framework to guide the narrative account of existing literature.

6. Consultation exercise: it was decided due to time constraints that a consultation period with potential contributors was not implemented. In the literature this is an optional step
and may have been beneficial to consider practical insights and validate information relating to the scoping review.

The primary research question for the scoping review was ‘What evidence exists regarding the use of the Fit Note/Med 3 and training required for FCPs to effectively complete it in primary care settings?’. Secondary questions were related to existing knowledge and literature on the topic and provided further context for the research included ‘What is the current problem of UK sickness absence management?’, ‘How is SA certified within primary care settings?’, ‘What is the extent of the historical background of sickness absence?’, ‘What are the existing gaps in literature regarding the use of the UK Fit Note?’, ‘What are the common barriers to implementing the work and health agenda within the UK and beyond?’ and ‘What is the summary and key themes on interventions aimed at improving work outcomes, and what evidence exists on their effectiveness?’. An extensive search of the following databases was conducted to identify articles from inception to March 2022 to inform the discussion on FCP practice: EBSCO host: Medline and CINHAL; Web of Science (Core Collection), OVID host: including PsycINFO, Ovid Medline, Cochrane, Public Medline (PubMed), Public Medline Central (PubMed Central), Allied and Complementary Medicine Database (AMED), PEDro (Physiotherapy Evidence Database), British Medical Journals (BMJ Journals), Biomedical Central (BioMed Central), Excerpta Medica Database (Embase), the World Health Organisation (WHO) and Google Scholar search engine. Due to the significant amount of policy related to the current field, grey literature was searched, including UK Government reports, policy statements and issue papers. Thereafter, additional literature was gathered from hand searching reference lists, healthcare related professional/regulatory bodies and healthcare groups interested in the work and health topic.

Comprehensiveness and breadth were important however the practicalities of time, budget and individual resources were factored into the search. Time and personnel resources meant two independent reviewers could not collaborate on reviewing articles or determine final inclusion and participate in reviewer meetings as per recommendation.

Main search key words (free text searching) entered for computerized searches and Google Scholar included: first contact practitioner; define; definition; fitness for work; sickness
certification; sickness absence; competencies; occupational health. The search terms were grouped with truncation (*) where possible. Terms within each category were searched in each database using the Boolean operator ‘OR,’ and then across categories using ‘AND.’ Articles were included in the review if they met specific criteria: empirical studies reporting quantitative and/or qualitative data or literature reviews evaluating FCP practice and FFW, SA or OH knowledge and skills. This was widened to include FFW, SA certification, use of the Fit Note, SA system, work-related conversations, work and health and primary care practice outside of the FCP domain as there was scant data and content on FCPs reported in the initial search with the original terms (conducted 17th March 2022). The grey literature found on the initial search was included into an expanded scoping review of the literature.

Therefore, due to an initial lack of primary literature pertaining to FFW and SA certification involving FCPs, the literature review adopted the methodology of a scoping review. Scoping study methods are now commonly used for a broad searching of literature on a specific topic (Levac et al., 2010). They offer coverage of a body of literature on this topic and give a clear indication of the volume of literature and studies available, as well as an overview of its focus (Munn et al., 2018). Scoping reviews are therefore useful for examining emerging FCP evidence when it is still unclear what other, more specific questions can be posed and addressed by precise systematic reviews (Armstrong et al., 2011).

This scoping review, in terms of the review question, has a broad scope with more expansive inclusion criteria and has been influenced by the seminal papers of Arksey and O’Malley (2005), Levac et al. (2010) and Peters et al. (2015). There has been an increased demand for scoping reviews to underpin high-quality knowledge translation across many healthcare settings, especially when review questions involve exploring, mapping, and discussing concepts across a breadth of evidence, but this in turns necessitates consistent, clear, and rigorous reporting. Thus, the PRISMA-ScR checklist offers transparency and uniformity of reporting to improve the quality and value and has been used to comprehensively report the methods and findings of scoping reviews (Tricco et al., 2018).

This scoping review is a comprehensive evidence synthesis that aims to identify and map relevant evidence that meets pre-determined inclusion criteria regarding the topic under review. It has a broader review question that that of a traditional systematic review and is deemed indicated to consider the emerging evidence, clarify the key concepts in the
literature and the characteristics of these concepts (Munn et al., 2018). It includes more than one study design and as the topic relates to a concept, for example, FFW and SA certifying competencies to address OH factors in primary care practice, rather than a specific intervention, it seemed more appropriate to use this methodology to allow the inclusion of a diversity of study types and grey literature.

Papers published in English in a peer-reviewed journal or conference paper and available in full text were included in the review. All types of studies were included, as well as systematic reviews without a time restriction and the initial grey literature found. Studies had to include FCP as the main practitioner involved in managing FFW in primary care, and this was broadened to include other HCPs. The titles and abstracts were screened to discard all irrelevant articles. Full texts were reviewed to determine eligibility for inclusion and Google Scholar to supplement the primary database searches. The initial screening of titles and abstracts revealed literature pertaining to work and health, SA, FFW, work conversations and FCP model of practice, but none that included FCP and any of the preceding themes together and were mostly in HCPs that were not physiotherapists. Despite this, literature is presented later in this review on the studies found in physiotherapists (not FCPs) that specifically consider work-related competencies and obstacles to practice.

2.2.1 Search Method

The final keywords were as follows pertaining to the topic: ‘Work and health,’ ‘Sickness absence,’ ‘Fitness for Work,’ ‘FCP model of practice,’ ‘Physiotherapy/Physical therapy,’ ‘Return to Work,’ ‘Work Participation’ ‘FCP competencies’ and ‘Occupational Health Competencies/education/professional competencies’. A university librarian was used to assist in selecting appropriate keywords for the literature search. The search was conducted on the 17th of March 2022. An extensive list of the final keywords used in the work-related competency search strategy within Medline, CINHAL and Embase are presented in Table 1 and Table 2.
Table 1. Research strategy used to conduct literature search in Medline and Embase databases (OVID).

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*English only was a sub-criterion in the final search.*
Table 2. Research strategy used to conduct literature search in CINAHL (EBSCOhost).

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**SU. EXACT= terms in subject heading, TI, AB = terms in the title or abstract fields. *English Only was added as a sub-criterion in the final search. MH- search for exact CINAHL subject heading; searches both major and minor headings.**
2.3 Primary Healthcare in the United Kingdom

Primary healthcare is defined by NICE (2019) as:

‘Healthcare delivered outside hospitals. It includes a range of services provided by GPs, nurses, health visitors, midwives and other healthcare professionals and allied health professionals such as dentists, pharmacists, and opticians. It includes community clinics, health centres and walk-in centres.’

The number of overall consultations has continued to grow within primary healthcare in the United Kingdom (UK) as it faces unprecedented challenges due to the growing complexity of an ageing population and their care needs and a workforce crisis (International Council of Nurses, 2021; British Society of Rheumatology, 2021). Firstly, the ageing population has resulted in a 16% increase in primary care contacts for those aged over 85, with age-related conditions and time and resource intensive co-morbidities (The King’s Fund, 2016). Secondly, the prevalence of MSK conditions has seen a global increase and are a global public health consideration. They are described as a group of non-communicable conditions that affect the bones, muscles, joints, ligaments, and tendons of individuals (Arthritis Research UK, 2018). MSK conditions comprise of more than 150 diagnoses that affect the locomotor system as set out in the International Classification of Diseases (World Health Organisation, 2018). They are broadly grouped as inflammatory conditions such as rheumatoid arthritis, MSK pain conditions, such as back pain and osteoarthritis of the knee, hip and ankle, and bone conditions, such as bony injury, osteoporosis, or fragility fractures.

MSK conditions affect individuals across the life-course and although the prevalence tends to increase with age, younger people are also affected, often with deleterious effects during their peak income-earning years in the workplace (WHO, 2019). The Global Burden of Disease study highlighted the significant burden of disability associated with MSK conditions, measured as the second highest contributor to worldwide disability, and low back pain as the single leading cause of disability worldwide for the last 30 years (James et al., 2018). In the UK, MSK conditions impact on the nation’s productivity and organizational output, indeed only 59% of people of working age with a MSK condition are in employment
and in 2017, MSK conditions were the second largest cause of sickness absence with around 28 million days lost in work (a 1/4 of total sickness absence) (ONS, 2018).

The overall costs associated with this lost productivity are estimated at over £7 billion per year (ONS, 2018). As a comparison, in the USA this lost productivity in the workplace amounts to approximately 1.5% of Gross Domestic Product and around US$ 213 billion in cost (United States Bone and Joint Initiative, 2016). In addition, MSK conditions are costly for national healthcare services, with around 20-30% of England’s population consulting with their General Practitioner (GP) each year with an MSK condition? (Arthritis Research UK, 2018). It is estimated that MSK conditions account for £4.76 billions of spending each year (NHS England, 2019) and by 2025, there will be an estimated 9.1 million people living with one or more long-term condition in the UK. Among people over 45 years of age who report living with a major long-term condition, more than 3 out of 10 also have a MSK condition (UK Government, 2022). The increase in MSK conditions can be attributed to the aging population but also to an increase in obesity and other lifestyle-related factors, associated with MSK deterioration (NHS Digital, 2016). In fact, seven in 10 people who report living with a long-term MSK condition are overweight or obese (UK Government, 2022).

There are considerable challenges associated with a knowledgeable and skilled workforce to support healthcare provision for the above context. The GP Forward View (NHSE, 2016a) set out the ambition for around 5,000 GPs in the service by 2020, with estimates highlighting the number of full-time equivalent (FTE) GPs to have decreased by 157 between December 2017 and March 2018 (NHS Digital, 2018). More recently, as of January 2023, there were 36,488 individual (headcount) fully qualified GPs working in the NHS in England. In Full Time Equivalent (FTE) terms of 37.5 hours a week, this equates to 27,287 full-time fully qualified GPs (BMA, 2023). The overall number of GPs has seen little growth since 2015, with the number of GP partners declining significantly over that time and despite a drive to recruit an additional 6,000 GPs by 2024, evidence suggest that primary care now has the equivalent of 2,078 fewer fully qualified full-time GPs compared to September 2015 baseline (when NHS Digital’s data collection method commenced) (BMA, 2023).
This is not a new trend but reflects a pattern of fewer doctors conducting GP training, decreasing hours to part-time and/or taking early retirement (Fletcher et al., 2017). In fact, FTE full-qualified GPs have reduced to an overall figure of 27,558 in June 2022, a reduction from 28,000 a year earlier and in the five years from June 2017 to June 2022, general practice has lost 1,554 FTE fully qualified GPs, a drop of 5.3% (NHS Digital, 2022). Reasons for GPs intending to leave practice include high levels of stress (48%) and working excessive hours (34%) (RCGP, 2018). The GP Forward View (2016) reinforced that there was a steady increase in patient expectations and a transference of pressure accordingly on GP staff. This is reinforced with the number of registered patients in England increasing from 60.8million to 61.8million in 2021/22, with the number of patients for each FTE fully qualified GP in the country 2,241, up from 2,174 in 2021 (NHS Digital, 2022). The profession delivered an unprecedented 367m appointments in 2021 and has delivered 8% more appointments in the first six months of 2022, excluding COVID-19 vaccinations compared with the same period last year (NHS Digital, 2022). The King’s Fund (2017b) found that only 18% of patients felt the NHS fell short of their expectations but satisfaction with GP services was at an all-time-low at 63% (The Kings Fund, 2019b). More recently, the proportion who ‘saw or spoke to someone at a time they wanted to or sooner’ was 51%, with 31% ‘offered a choice of time or day’ and only 7% ‘offered a choice of healthcare professional’ (UK Government, 2022). Whilst patients were satisfied with the overall quality of care, experience, free NHS access, involved in decisions about their treatment and confidence and trust of NHS staff, dissatisfaction existed with long waiting times, staff shortages, finding it difficult to make an appointment, and worry about the burden on the NHS (UK Government, 2022). Indeed, 84% of patients needed a GP appointment in the last 12 months but more than half (55%) avoided making an appointment (UK Government, 2022).

The King’s Fund studies hypothesized that expectations were achieved due to the low level and downward shift in patient expectations overall (The King’s Fund, 2018, 2019b) and it could be argued that patient expectations being met is not a true measure of care service quality, merely the minimum acceptable level from the NHS.
2.4 Primary care solutions

There have been dynamic efforts to overcome the above primary care deficiencies. The GP Forward View (2016) promised increased investment into multi-disciplinary training hubs throughout England to support the extensive workforce within primary care, including an increase in Nurse Practitioners (NPs, see glossary), Physician Associates and Pharmacists. Stakeholders involved reported that NPs have been an integral part of GP practice and that a broad range of other HCPs were able to share the GP workload, and offer patients improved access to specialist care and the right HCP (NHSE, 2016a).

The NP role was established in the early 1990s, following the first GP contract which highlighted that a considerable proportion of tasks within primary care services could be effectively managed by nurses (Wilson et al., 2002). With training, NPs can autonomously accept patients with undiagnosed conditions, make decisions based on their need and implement them with a doctor accessible if required (Myers et al., 1997). The role has expanded to include immunisations, long term disease management, nurse-led clinics, and triage (Campbell et al., 2014).

Evidence supports the utilisation of nurses within primary care and the roles implemented have produced no significant differences in health outcomes or symptom resolution, although patient satisfaction is higher with NP management (Young et al., 2016). As per FCPs, NP consultation lengths are notably longer; which may account for the higher satisfaction rates rather than the immediate knowledge and skills of NPs solely (Horrocks et al., 2002). However, the NP role can be seen as complementary to medicine, with breadth and depth of health knowledge and holistic training, NPs are positioned to redefine services away from traditional biomedical diagnoses to a whole person focus of care (Carryer and Dams, 2017). NPs have clinical expertise and clinical skills that are highly utilised by patients within the overall practice team (NHSE, 2016a).

The GP Forward View recognised that other HCPs could offer their profession-specific specialties and complement primary care practice, resulting in a wider and broader MDT workforce (NHSE, 2016a). Indeed, since a successful pilot study on clinical pharmacists in 2015, there are now 1000 FTE clinical pharmacists working in practices nationally (NHSE,
2022). A nationally independent evaluation of the pilot scheme of GP federations provided evidence on pharmacists seeing the right person to discuss medicine service delivery, community pharmacy and advice on multiple medicines with improved patient satisfaction and reduced opioid use (Deeks et al., 2018).

Another role within primary care is the Primary Care Practitioner (see glossary), providing advanced clinical skills for minor illnesses and injuries, conducted by qualified paramedics and nurses (NHS, 2018b). It was postulated that these clinicians would be able to effectively identify the patients to see in a care navigator role with GPs providing expert clinical input where needed (Silverston, 2019).

MSK conditions are the greatest contributor to persistent pain across the world for all ages and the largest contributor to worldwide disability (Tsang et al., 2009). In adults, the most common MSK conditions in primary care are low back pain, knee, and shoulder pain respectively (Jordan et al., 2010). Indeed, these conditions are the greatest cause of years lost to disability (NHS, 2019), with chronic joint pain or osteoarthritis affecting over 8.75 million people in the UK. Over 30 million working days are lost due to MSK conditions every year in the UK (ONS, 2017) and MSK conditions account for over 30% of GP consultations in England, causing significant individual and societal economic burden (Department of Health, 2006).

Due to the ageing population, an increasing number of people with long-term disability, chronic conditions and multiple health conditions will increase the need for care and change the nature of the demand. This will put pressure on health and care systems to adapt to meet these changing demands. MSK conditions are not immune to this age-associated increase, with the proportion of osteoarthritis in the population increasing by 64% between 1990 and 2010 (March et al., 2014). In the older population, MSK conditions are expected to rise with an increase in presentations to primary care, and with many experiencing co-morbidities, there is a risk of greater symptomatology (Jordan et al., 2010). Recent estimates suggest that 20.3 million people have a MSK condition in the UK, almost one third of the population (PHE, 2017) and by 2030 four in ten working-age people will have a long-term condition such as a MSK (Versus Arthritis, 2021).
These people are less likely to be in work than people with no long-term health condition and are more likely to retire early (Labour Force Survey, 2020). The cost of working days lost due to osteoarthritis and rheumatoid arthritis was estimated at £2.58 billion in 2017 rising to £3.43 billion by 2030 (Versus Arthritis, 2021). Therefore, it is imperative to consider the needs and support of working age adults within a backdrop of an ageing population and a rise of non-curable conditions.

For those patients that need an operation and MSK treatment, for example, joint replacements, physiotherapy and other planned surgery, delay to treatment can prolong recovery and increase the risk of developing persistent conditions, significantly impacting on an individual’s physical, psychological, and social well-being, with greater time needed when treatment ensues (Sampalli et al., 2015). The multi-dimensional impact of MSK conditions provides evidence for early access to experts in the field, like FCPs; however, on average wait times are between 2-12 weeks for secondary care physiotherapy, depending on region and Trust, with some secondary care providers experiencing 18-week-waits from GP and self-referral routes (NHS, 2016b). More recently, a freedom of information request sent by business health specialists Equipsme revealed that patients are waiting an average of 45 days for routine and 18 days for urgent physiotherapy appointments, with one fifth of NHS Trusts responding that patients had to wait over 60 days for a routine appointment (Equipsme, 2019). One Trust (East Sussex Healthcare NHS Trust) had the longest wait for routine physiotherapy appointments at 132 days.

As primary care is the ‘front door’ of the NHS system, a major draw for the FCP model of practice is to see patients at the start of their care pathway, providing first line intervention and diagnostics optimised where indicated, improved secondary care conversion rates, appropriate physiotherapy referrals, without a referral and with minimal wait times (CSP, 2018a).

2.5 Multi-professional framework for advanced clinical practice

Common to the new roles is the HCP working at a higher level from that achieved on initial qualification and registration. The increased number in these roles has resulted in a debate
as to how the level of AP should be defined and what core capabilities are required for practice (HEE, 2017). Since then, frameworks have been consistently revised to nationally define the role, requirements for entry, guidance, and principles that APs should adhere to and a clear pathway into and within the profession (HEE and NHSE, 2018; NHSE, 2017a). HEE and NHSE (201) created the multi-professional framework setting out the necessary core capabilities, which expand upon the four pillars of AP (see Figure 1) and are characterised by a high degree of autonomy and complex decision making. APs are expected to practice at level 7 (master's level) and therefore to make sound judgements in the absence of full information and to manage varying levels of risk when there is complex, competing, or ambiguous information or uncertainty (HEE, 2017). An AP in MSK can be developed from a range of specialities, if the evidence (through a higher education institution or portfolio route) is mapped against the IFOMPT level 7 standards. The AP works at AfC band 8a and above which reflects their level of practice. They would be expected to: work as part of, lead and manage, a multidisciplinary team; critically assess and address their own learning needs, as well as critically engage in research (HEE, 2017). HEE, in association with its multi-disciplinary partners, has developed the following definition of advanced practice (HEE, 2017, see Figure 1):

‘Advanced practice is delivered by experienced, registered health and care practitioners. It is a level of practice characterised by a high degree of autonomy and complex decision making. This is underpinned by a master's level award or equivalent that encompasses the four pillars of clinical practice, leadership and management, education, and research, with demonstration of core capabilities and area specific clinical competence.

Advanced practice embodies the ability to manage clinical care in partnership with individuals, families, and carers. It includes the analysis and synthesis of complex problems across a range of settings, enabling innovative solutions to enhance people’s experience and improve outcomes.’
Figure 1. AP as described within NHS Education for Scotland’s Four Pillars of Practice (2022).

The framework stresses that AP is a key component of workforce transformation, with the assumption of better meeting the needs of the locality population with the added value of a configuration of experienced broad skilled professionals. Historically, Byles and Ling (1989) were potentially the first authors to describe practitioners extending their scope of practice as Extended Scope Practitioners (ESPs, see glossary), although they were referred to as ‘orthopaedic assistants’ rather than ESPs. These emergent roles considered the role of physiotherapists involved in helping reduce orthopaedic outpatient waiting times. This was expanded on and research through descriptive audits was published on ESPs triaging low back pain referrals in spinal clinics (Hourigan and Weatherley, 1994). This allowed outcome comparisons of a physiotherapist’s management of GP referrals to orthopaedic clinics with one of two subconsultant-grade surgeons (Weale and Bannister, 1995).

These studies suggested that appropriately trained physiotherapists were equally capable of managing such referrals but due to the small-scale studies and lack of numbers, between-group differences of the two healthcare professional groups were insignificant. Despite this, these seminal studies facilitated ESPs undertaking roles in orthopaedic outpatient clinics. A systematic review highlighted a consensus regarding what roles are considered extended scope, including: ordering radiology; independent prescribing; limited ordering of pathology tests; and therapeutic injection tasks (Saxon et al., 2014).
The recent shift from what extension of scope is required to the capabilities of the HCP is clarified within the AP practice frameworks. Interestingly, the framework acknowledges ‘specialist capabilities,’ and the possibility of further learning and development of skills or knowledge outside of core capabilities (NHSE, 2017a). This change in terminology may be reflective of the wider stakeholder stance of blurring of role boundaries to reduce the tribalism around skill ownership (King et al., 2015) and a recognition that additional skills may be required of the HCP to address the needs of the local population, for example, joint injections. It sets out broad principles for delivering sustainable, collaborative teams and local healthcare delivery (HEE and NHSE, 2018). The differences between the UK academic master’s level 7 descriptors in Figure 2 and the capabilities across Band 7 and Band 8a (AfC) in primary care are listed in Table 3.
Graduates of specialised/advanced study master’s degrees typically have:

Subject-specific attributes:

An in-depth knowledge and understanding of the discipline, informed by current scholarship and research, including a critical awareness of current issues and developments in the subject.

The ability to complete a research project in the subject, which may include a critical review of existing literature or other scholarly outputs.

Generic attributes (including skills relevant in an employment-setting): A range of generic abilities and skills that include the ability to:

- Use initiative and take responsibility,
- Solve problems in creative and innovative ways,
- Make decisions in challenging situations,
- Continue to learn independently and to develop professionally,
- Communicate effectively, with colleagues and a wider audience, in a variety of media.

The Quality Assurance Agency (QAA) Level 7 is the UK academic master’s (MSc) level. FCPs are expected to work at master’s level in their clinical pillar of practice as previously mentioned but have not yet reached that level in all four pillars of practice to be verified as an AP. Level 7 practice requires complex clinical reasoning skills, complex decision making and critical thinking. The key differences for FCPs involves managing undifferentiated and undiagnosed conditions in primary care, as first point-of-contact clinicians that can identify red flags, serious pathology and take appropriate action (HEE, 2020). This requires high-level complex decision making and is working towards Level 7 practice across all four pillars as per Figure 1 on page 46.

Table 3. Capabilities as recommended by HEE (2020).

<table>
<thead>
<tr>
<th>First Contact Practitioner Band 7</th>
<th>Advanced Clinical Practitioner Band 8a</th>
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<tr>
<td>Manages undifferentiated undiagnosed conditions.</td>
<td>Manages undifferentiated undiagnosed conditions.</td>
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<tr>
<td>Able to identify red flags and underlying serious pathology and take appropriate action.</td>
<td>Able to identify red flags and underlying serious pathology and take appropriate action.</td>
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<tr>
<td>First Contact Practitioner Band 7</td>
<td>Advanced Clinical Practitioner Band 8a</td>
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<tr>
<td>Works within practice, across PCN, multi-organisational, professions and across care pathways and systems including health, social care, and the voluntary sectors.</td>
<td>Works within practice, across PCN, CCG and ICS, multi-organisational, professionals and across care pathways and systems including health, social care, and the voluntary sectors.</td>
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<tr>
<td>High level complex decision making to inform the diagnosis, investigation, management, and on referral within scope of practice.</td>
<td>High-level of complex decision making to inform diagnosis, investigation complete management of episodes of care within a broad scope of practice.</td>
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<tr>
<td>Actively takes a personalised care approach to enable shared decision making with the presenting person.</td>
<td>Flexible skill set to adapt to and meet needs of the PCN population and support public health.</td>
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<td>Contributes to audit and research projects.</td>
<td>Manages medical complexity.</td>
</tr>
<tr>
<td>Contributes to education and supervision within their scope of practice for the multi-professional team.</td>
<td>Actively takes a personalised care and population centred care approach to enable shared decision making with the presenting person.</td>
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<tr>
<td>Facilitates interprofessional learning in area of expertise.</td>
<td>Actively engages in care from a population care viewpoint.</td>
</tr>
<tr>
<td>Promotes and develops area of expertise across care pathways.</td>
<td>Leads audit and research projects.</td>
</tr>
<tr>
<td>Working toward Advanced Clinical Practice (level 7 across all 4 pillars).</td>
<td>Leading audit within areas of capability.</td>
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<tr>
<td>Provides multi-professional AP clinical and CPD supervision across all 4 pillars with relevant training.</td>
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<tr>
<td>Leads education in their area of expertise.</td>
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<tr>
<td>Enables, facilitates, and supports change across care pathways and traditional boundaries.</td>
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<tr>
<td>Working toward level 8.</td>
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### 2.6 Funding

There are multiple collaborations, systems and capital flows that have facilitated the development of the above roles. The Government delivered a General Practice Access Fund.
throughout certain areas of England in 2013 and 2016 so that practices could achieve the aims of the GP Forward View (NHSE, 2016a). These aims suggested that by 2020 all primary care patients should have improved access to general practice services including standard appointments, along with access to out of hours and urgent care (NHSE, 2016a).

In 2015, sustainability and transformation plans (STPs) were announced in NHS planning guidance with local councils and the NHS collaborating across England. STPs were five-year plans covering all aspects of NHS spending in England and 44 areas were identified as the geographical ‘footprints’ to offer a co-ordinated approach to addressing quality and new models of care; improving health and wellbeing; and improving efficiency of service to implement the Five Year Forward View (NHSE, 2019c, 2014). STPs have now been superseded by Integrated Care Systems (ICSs, see glossary) as partnerships between NHS commissioners, NHS Trusts, Local Authorities, and the voluntary and community sectors sharing a joined-up budget and designed to break down barriers between commissioners of services and those that provide them. ICS leaders do not have direct authority over the whole system and therefore ICSs create links across all stakeholders to provide shared responsibility for how they operate their overall budget and resource for their local populations (NHS, 2019e).

ICSs have created Primary Care Networks (PCNs) which aim to meet the need of service improvements through proactive care for the people and communities they serve. There are currently 1,250 PCNs across England that are based on GP registered patient lists, typically serving communities of between 30,000 to 50,000 people which will utilise part of the £4.5 billion additional funding by 2023/24 (NHSE, 2022). They build on the core offering of primary care services and aim to offer a proactive, broader, personalised, and coordinated approach to health and social care in the community as set out in the ambitions documented within the NHS Long Term Plan (NHSE, 2019e). Within this model, PCNs may allow GP practices to offer extended hours, a broader clinical offering, and an ability to offer new services in personalised and anticipatory care (The Kings Fund, 2019a). By 2023/24, the Network Contract DES will commit an investment of £2.4 billion into primary care across the country, or £1.47 million per typical PCN. This includes funding for around 26,000 more health professionals including additional clinical pharmacists, physician associates, first contact physiotherapists, community paramedics, pharmacy technicians and social
prescribing link workers, described as Additional Roles Reimbursement Scheme (ARRS). Bigger teams of health professionals will work across PCNs, as part of community teams, providing tailored care for patients and will allow GPs to focus more on patients with complex needs. NHSE’s objective is for the Network Contract DES to support PCNs to deliver the ambition for improved standards of care across the country, setting realistic expectations for delivery that benefit patients. The new Network Contract DES for 2021/22 includes the promised increase in full-year funding for the ARRS, from a maximum of £430m in 2020/21 to a maximum of £746m in 2021/22 (NHSE, 2022).

2.7 Physiotherapists’ as FCPs

The impact of musculoskeletal (MSK) conditions is well documented in the literature, including poorer health related quality of life and increase healthcare utilisation (van der Zee-Neuen et al., 2016). They are the main cause of disability (due to LBP) for the last 30 years, sickness absence from work and loss of productivity (Bevan et al., 2009; EUMUSC.net, 2007). Physiotherapists may be ideally suited to work within PCNs in the FCP role as MSK gatekeepers, especially as the role and education pathways have evolved to ensure that they have the right skill mix and competencies to respond to the growing MSK burden and local community needs (WCPT, 2019).

In traditional primary care settings, the first HCP to review a patient with a MSK condition is the GP, and to access physiotherapy, patients (outside of direct access settings) required a GP referral (Foster et al, 2012). In the current system, the primary care patient can choose to access a FCP directly for a MSK issue; a physiotherapist who provides first point of contact care for patients, without the need for prior GP review (CSP, 2022). This is an alternative to another model of practice of direct access, in which a patient can self-refer to an NHS physiotherapist within secondary or primary care in some NHS Trusts or access to a physiotherapist directly, through a self-funding private method (NHS, 2018d).

From the initial direct access routes within the NHS some twenty years ago, it has been welcomed that physiotherapists especially in an AP role, are able to practice autonomously with the aim of reducing waiting times and providing appropriate care for patients (Fennelly
et al., 2018a; Razmjou et al., 2013; Sephton et al., 2010, Daker-White et al., 1999). The Chartered Society of Physiotherapy (CSP) extended the scope of physiotherapy practice to include intra-articular and intra-lesion injections for appropriately trained physiotherapists (Chartered Society of Physiotherapy Council, 1997). In 2005, physiotherapists, with appropriate training, were granted autonomy to practice as supplementary prescribers so that they may prescribe the drug they were administering (CSP, 2018b).

The role was further extended in 2012 when it was granted that physiotherapists who were appropriately trained and qualified may independently prescribe from a list of seven controlled drugs (Department of Health, 2012). It is important to note that before this novel FCP role existed, physiotherapists were becoming established within first-contact roles in Accident and Emergency (A&E), orthopaedic clinics and outpatient settings with good outcomes (Taylor et al., 2011; Pearse et al., 2006).

A growing body of evidence demonstrates efficacy of first point-of-contact physiotherapy. The findings of initial studies found that physiotherapists were able to manage between 85% and 93% of patients independently in outpatient orthopaedic clinics, and the waiting times of those clinics reduced (Hockin and Bannister, 1994; Daker-White et al., 1999; Belthur et al., 2003). The studies by Pearse et al. (2006) and Taylor et al. (2011) highlighted that 85% and 77% of patients respectively strongly agreed that they were satisfied with their physiotherapist management. There is evidence to suggest that physiotherapists have a greater knowledge and understanding of MSK conditions than doctors of all grades, except for specialist orthopaedic surgeons (Childs et al., 2007).

In their systematic review (Demeules et al., 2012) identified three studies that reported AP’s diagnostic accuracy as ‘good’ and comparable to orthopaedic specialists, with other studies reporting similar accuracy outcomes. Since this systematic review, AP frameworks have been built upon, laying out training requisites for capabilities (HEE and NHSE, 2018). In 2017, Health Education England, NHS England and NHS Improvement worked in partnership with Professional bodies and Royal Colleges to develop a national framework for advanced clinical practice, which ensures that there is national consistency and understanding about advanced level practice. It could be argued that, since the development of this framework,
the knowledge and skills demanded of APs has increased and both AP’s and orthopaedic specialists’ knowledge may be higher than Desmeules et al’s (2012) review concluded.

FCP services are integrated within the local MSK pathway in geographical areas and provide a partial solution to the workforce crisis within primary care (CSP, 2018a). FCPs work at an advanced level at a minimum of AP in the clinical pillar, with many working toward or at AP level across all four pillars (CSP, 2022). The role of the FCP is to provide safe, high-quality assessment, diagnosis, self-care advice, first line management and onward referral as appropriate, at the start of the patient pathway. This also involves the appropriate management of red flags (high risk medical pathologies) and underlying serious conditions in line with a typical NHS banding of 7-8a level (CSP, 2022).

### 2.8 Patient safety

There is a basis for GP-led care as core to keeping people well at home, providing health risk assessments and secondary disease prevention, and some authors stress the importance of patient safety and that other professionals may miss serious medical pathologies such as cancer or fractures (Foster et al., 2012). However, a systematic review suggested that MSK triage and direct access services can have comparable clinical outcomes when compared to GP-led care (Babatunde et al., 2020). Ludvigsson and Enthoven (2012) in a comparative cohort study showed that participants who accessed care for their MSK conditions via direct access services reported better quality of life at 3 months post initial consultation (mean EQ 5D (standard deviation SD) 0.65 (0.22) for direct access groups vs. 0.51 (0.30) for GP-led care, \( p = 0.01 \), although their study was not based in the UK and therefore there is a concern of using inferences drawn from their specific participations drawn from their local population. They also found that out of a total of 432 patients, physiotherapists were able to identify all serious pathologies. In addition, Holdsworth et al. (2008) suggested that GPs were over 96% confident in physiotherapists accurately diagnosing and appropriately managing MSK conditions, with no evident safety concerns.

There is increasing evidence, suggesting that direct access physiotherapy could provide better outcomes in terms of disability, quality of life, and healthcare costs compared to
primary physician-led medical care for patients with MSK conditions but not for pain outcomes (Demont et al., 2021). However, this scoping review could find only seven studies of weak to moderate methodological quality in the emergent literature (CEBM, 2011) that direct access physiotherapy was not associated with any adverse events in a total of 64,251 patients directly evaluated by physiotherapists (Bornhoft et al., 2019; Denninger et al., 2018; Bishop et al., 2017; Goodwin and Hendrick, 2016; Mintken et al., 2015; Holdsworth et al., 2006; Moore et al., 2005).

Only two studies were comparative in design, and these reported no serious adverse events or missed red-flag diagnoses by GPs or physiotherapists (Denninger et al., 2018; Bishop et al., 2017). Bishop et al., (2017) reviewed medical records in their trial and found no evidence of missed serious pathology in MSK patients who received direct access care. Similarly, across the three other studies evaluating outcomes after introduction of direct access services, there was no record of any adverse event related to patient management through direct access, nor were there reports of physiotherapists involved in litigation or disciplinary action pertaining to the examination and treatment of patients seen through direct access (Goodwin and Hendrick, 2016; Mintken et al., 2015; Moore et al., 2005). There was also no report of missed diagnosis or delay in diagnosis of MSK conditions as a result of accessing care through MSK triage and direct access in these studies.

In summary, for this important area, the limited number of studies did not show worse outcomes, adverse effects, or missed red-flag diagnoses for patients with MSK conditions who accessed care through MSK triage and direct access. An overall absence of evidence of harm as a result of direct access to physiotherapy services was found but the available studies were not designed to robustly assess this, and the overall quality of the studies was deemed as low to moderate in quality.

To overcome some of the concerns of non-GP-led care, Moffatt et al. (2018) recommended that GPs are provided with more information on physiotherapists’ training to support the shifting role boundaries. This may include a reinforcement of the FCP model of practice providing safe, high-quality assessment, diagnosis, self-care advice, at the start of the patient pathway with appropriate management of red flags and underlying serious pathology. This is underpinned by FCPs working at a standard of practice and governance to
provide quality care that improves patient outcomes, with sufficient time allocated for supervision, de-briefing training and CPD processes. The above evidence provides the latest information on physiotherapy outcome on patient safety, but there is limited evidence on the FCP model of practice.

### 2.9 Training

FCP is not direct access physiotherapy and the studies above do not cohere to the specific terminology used for this role in the UK. The latest definition of FCP is: ‘A diagnostic clinician in primary care working at master’s level with undiagnosed and undifferentiated diagnoses managing complexity and uncertainty at the first point of contact who has a minimum of 5 years post graduate experience’ (Mercer and Hensman-Crook, 2022). The knowledge and attributes required for FCPs to safely practice was first evaluated by Langridge (2019) where FCPs felt it essential that they have knowledge of wider medical presentations to minimise the risk of serious pathology being missed, using clinical reasoning skills with knowledge of multi-morbidities. In comparison to secondary care, FCPs use advanced skills such as injection therapies, diagnostic requests, and independent prescribing autonomously, often within shorter 20-minute appointments compared to standard physiotherapy.

There was a perception that only practitioners with considerable experience had this wider breadth of knowledge and were able to manage time pressures (Langridge, 2019). The study used a think-aloud method to explore eight clinicians’ views via a stage 1 semi-structured interview process. This was followed by a stage 2 focus group involving physiotherapists and a general practitioner trainer. A thematic analysis then followed, which involved the researcher and a research colleague coding the data and subsequently developing themes. One major limitation of this study was that the researcher was a clinician in the same environment, which was likely to have influenced the data and the participations may have felt ‘judged’ on their views. Another problem, which is directly applicable to this thesis, is that no work-related themes were identified in the study, which suggests that the clinicians did not place value on or suggest that work and health should underpin the competence, capability, and training requirements in FCP roles.
Training and capabilities as previously discussed have been developed and defined by Health Education England, to provide robust academic and clinical governance framework through the roadmap to support clinicians and the system they work within (HEE, 2021). The roadmap guides clinicians through what is required before entering primary care, how to demonstrate competence when working in primary care, and how to develop further toward advanced practice covering all four pillars of practice.

The training can be done via a portfolio route supported by a Roadmap Supervisor, or via a taught master’s level course at a Higher Education Institute. The training is divided into 3 stages and requirements for each stage are outlined below: Stage 1 is the development of a portfolio of evidence at master’s level academically mapped against the MSK Knowledge Skills and Attributes document as outlined in the roadmap. Stage 2 is the development of a portfolio of evidence of the application of the proven academic knowledge into practice using Work Based Placement assessments. Once stage 1 and Stage 2 have been completed, recognition as an FCP is gained. Stage 3 is ongoing training to become an Advanced Practitioner.

All the learning gained to become an FCP is relevant. To complete via a portfolio route, the evidence gained from FCP training can be submitted as part of the portfolio on the Advanced Practice supported portfolio route. If a clinician has completed the taught route, the credits gained can be used as part of an Advanced Clinical Practice Master’s degree (Mercer and Hensman-Crook, 2022). Later in this chapter, further roles and responsibilities and characteristics of the role are outlined along with the recognition by the regulator, the Care Quality Commission (CQC), that it is the responsibility of the employer to ensure training is completed as outlined in the CQC FCP ‘mythbuster’ (CQC, 2022).

### 2.10 FCP model of practice

FCP services are designed based on local population health data and the GP contract framework leaves it to PCNs to decide how new roles are employed through the Additional Roles Reimbursement Scheme (ARRS). First Contact Physiotherapist roles created from 31 March 2019 are likely to be funded in part by PCNs through the new ARRS. This is detailed in
the five-year framework for GP services as agreed between NHS England and the BMA General Practitioners Committee (GPC) published in January 2019. The scheme is intended to create an estimated 20,000+ additional posts in five reimbursable primary care roles by 2023/24. These are: Clinical Pharmacists, First Contact Community Paramedics, First Contact Physiotherapists, Physician Associates and Social Prescribing Link Workers.

Through ARRS, NHS England will reimburse employment on-costs, and 70% of the ongoing salary costs. By 2024, an average PCN will have access to sufficient funding to employ three FCPs, in addition to five clinical pharmacists, three link workers, two physicians’ associates and one community paramedic. However, the framework grants flexibility to PCNs to determine the staff mix of the extended team employed through the Scheme. (Please note: NHS England’s GP Contract Framework only names First Contact Physiotherapists as reimbursable under ARRS.) Where FCPs are employed by an NHS trust or other non-PCN body, the proportion of time that the FCPs spend on PCN-related activity (WTE) will be used to calculate the actual salary costs eligible for reimbursement through the ARRS.

The ARRS does not prevent PCNs, or member practices, from employing staff outside of the scope of the Scheme – for example, other Allied Health Professionals in MSK FCP roles, or First Contact Physiotherapists working in pathways other than MSK. In order to claim reimbursement, members of the PCN need to agree the make-up of their workforce and to include any FCPs employed or contracted prior to April 2020. In addition, FCPs employed or contracted prior to April 2020 and becoming a PCN resource will need to be reimbursed from within the ARRS (see section 4.2 and 4.3 of Network Contract Directed Enhanced Service Guidance) (NHSE and BMA, 2019).

FCPs have autonomous clinical responsibility for patients and, as regulated professionals through the HCPC, are legally required to hold appropriate indemnity cover for their work. This could be through an employer, professional body, or other provider. Potential employers of FCPs include: PCNs, General practices, GP Federation and NHS trusts (or whoever is the local MSK provider). Though the CSP, BMA and RCGP recognise that different models have their own benefits, on balance, they recommend that existing providers of NHS services employee FCPs. The argument is that this option helps to embed and integrate FCPs across the MSK pathway (where they can access training and peer support). It also enables
the provider to ensure service consistency and staff continuity. Lastly, it may provide stronger links between FCPs working in general practice and other MSK services across the MSK pathway. When GPs employ FCPs in their practice, then the General practice would be required to suitable indemnify their employees, and if the practice is contracting directly with the FCP, then the individual must ensure cover is suitable for the role. The GP contract framework agreement includes the introduction of a state-backed indemnity scheme for general practice. The Clinical Negligence Scheme for General Practice went live in April 2019 and provides all staff working in and for a general practice with clinical negligence cover subject to the terms of the policy. This includes Allied Health Professionals working in the delivery of primary medical services.

The GP contract framework agreement leaves it to PCNs to decide how new roles are employed through the ARRS. The BMA’s Primary Care Network Handbook provides further information about employment options including the ‘Non-GP provider model.’ It is possible PCNs’ membership agreements can be expanded to describe members’ responsibilities regarding additional staff groups. Each PCN is expected to provide details in their members shared and legally binding Network Service Agreement on their arrangements for employing or contracting an extended general practice team through the ARRS, and how relevant individuals will be deployed in relation to the PCN activity. Other funding sources for the other 30% of FCP salary costs, and for FCP posts established before 31 March 2019, the funding options include:

- commissioning by the CCG as part of an integrated MSK pathway
- savings from reductions in secondary care referrals and surgical interventions
- transformation funding may be available and is used by some CCGs and STPs

This funding is typically fixed term and designed to foster and facilitate the adoption of innovative practice. It is important that this is replaced with mainstream CCG funding once the pilots have demonstrated their value. Lead providers within an Integrated Care System could directly employ FCPs or contract from GPs. If an FCP service is GP practice funded, the GP practices and PCNs can choose to fund or partially fund their own FCP posts. For example, this could be from income generated by the FCP (though administering soft tissue
and joint injections) or through reduced locum or GP salary costs. In these cases, the FCP could be contracted from the Trust, directly employed, or join the practice as a partner).

MSK FCP services position highly skilled and regulated MSK practitioners at the first point of contact in primary care within a multitude of models that have evolved, varying from practice to practice. Although FCPs are based in primary care and be accessed in the same way as GPs (e.g., via the care navigator, receptionists or the online booking system) or through a local triage process, differences are noted in: the type of consultation (virtual, telephone and/or face to face), the number of appointments, the length of consultation, the capabilities of the FCP, FCP banding and the interventions that are actionable under the FCP (HEE and NHSE, 2018; CSP, 2019b; 2018a).

Whether the practitioner was a first contact or not is dependent on the patient’s local care pathway with the general practice, hub, or same day access centre. The GP would be first contact in instances where patients access the GP for their MSK condition but are then referred to the FCP by the GP. However, if the patient accessed the GP regarding a different issue and were then encouraged to access the FCP for a new MSK condition, the FCP would be first contact for this presentation.

The expectation is based on the ‘right place’ (primary care setting locally) and ‘first time’ (without a GP referral). For some, this may involve an expedited self-referral service to the FCP online or contacting the practice, and in others, a requirement for telephone triage by a care navigator prior to FCP appointment (CSP, 2019a). With the COVID-19 pandemic response and pivot to digital methods, there may be practices offering full virtual assessment and treatment, like the ‘PhysioDirect’ model (Pearson et al., 2016). This model involves telephone assessment of MSK conditions, with patients receiving a package of care including self-management strategies and therapeutic exercise or face-to-face consultations for differential diagnoses (Pearson et al., 2016). In the ‘PhysioDirect’ model the physiotherapist is in a first contact role that is located within a physiotherapy department and not within the MDT of a primary care practice. The FCP may not necessarily be based in the patient’s practice if it is part of a large PCN with several local practices, the FCP may be co-located, and the patient would be expected to travel to a particular practice (NHS, 2019e). This is defined within healthcare settings as a ‘hub and spoke model,’ in which the
business operates from a central location, issuing instructions to the lower-level hubs (Gaille, 2015).

2.11 PCN employment

First contact practitioners (physiotherapists) are eligible for reimbursement under the Network Contract DES with applicable limits at AfC 7-8a at Annual maximum reimbursable amount per role at £ 55,670. The latter salary is the maximum reimbursable amount and is the sum of (a) the weighted average salary for the specified AfC band plus (b) associated employer on-costs. These amounts do not include any recruitment and reimbursement premiums that PCNs may choose to offer. If applicable, the on-costs will be revised to take account of any pending change in employer pension contributions. The maximum reimbursement amount in subsequent years will be confirmed in line with applicable AfC rates. This allows for one WTE per PCN where the PCN’s Patients number 99,999 or less and two WTE per PCN where the PCN’s Patients number 100,000 or over (NHSE and NHSI, 2020).

Where a PCN employs or engages a First Contact Physiotherapist under the ARRS, the PCN must ensure that the First Contact Physiotherapist (NHSE, 2022):

a. has completed an undergraduate degree in physiotherapy;
b. is registered with the Health and Care Professional Council;
c. holds the relevant public liability insurance;
d. has a master’s Level qualification or the equivalent specialist knowledge, skills and experience;
e. can demonstrate working at Level 7 capability in MSK related areas of practice or equivalent (such as advanced assessment diagnosis and treatment);
f. can demonstrate ability to operate at an advanced level of practice, in order to deliver the key responsibilities outlined

Where a PCN employs or engages one or more First Contact Physiotherapists under the Additional Roles Reimbursement Scheme, the PCN must ensure that each First Contact Physiotherapist has the following key responsibilities, in delivering health services (NHSE, 2022):
a) work independently, without day-to-day supervision, to assess, diagnose, triage, and manage patients, taking responsibility for prioritising and managing a caseload of the PCN’s Registered Patients;
b) receive patients who self-refer (where systems permit) or from a clinical professional within the PCN, and where required refer to other health professionals within the PCN;
c) work as part of a multi-disciplinary team in a patient facing role, using their expert knowledge of movement and function issues, to create stronger links for wider services through clinical leadership, teaching, and evaluation;
d) develop integrated and tailored care programmes in partnership with patients, providing a range of first line treatment options including self-management, referral to rehabilitation focussed services and social prescribing;
e) make use of their full scope of practice, developing skills relating to independent prescribing, injection therapy and investigation to make professional judgements and decisions in unpredictable situations, including when provided with incomplete or contradictory information. They will take responsibility for making and justifying these decisions;
f) manage complex interactions, including working with patients with psychosocial and mental health needs, referring onwards as required and including social prescribing when appropriate;
g) communicate effectively with patients, and their carers where applicable, complex, and sensitive information regarding diagnoses, pathology, prognosis, and treatment choices supporting personalised care;
h) implement all aspects of effective clinical governance for own practice, including undertaking regular audit and evaluation, supervision, and training;

h (i). develop integrated and tailored care programmes in partnership with patients through: effective shared decision-making with a range of first line management options (appropriate for a patient’s level of activation); assessing levels of patient activation to support a patient’s own level of knowledge, skills and confidence to self-manage their conditions, ensuring they are able to evaluate and improve the effectiveness of self-management
interventions, particularly for those at low levels of activation; agreeing with patient’s appropriate support for self-management through referral to rehabilitation focussed services and wider social prescribing as appropriate;

h (ii). designing and implementing plans that facilitate behavioural change, optimise patient’s physical activity and mobility, support fulfilment of personal goals and independence, and reduce the need for pharmacological interventions;

i) request and progress investigations (such as x-rays and blood tests) and referrals to facilitate the diagnosis and choice of treatment regime including, considering the limitations of these investigations, interpret and act on results and feedback to aid patients’ diagnoses and management plans; and

j) be accountable for decisions and actions via Health and Care Professions Council (HCPC) registration, supported by a professional culture of peer networking/review and engagement in evidence-based practice.

The following also sets out the key wider responsibilities of First Contact Physiotherapists (NHSE, 2022):

a. work across the multi-disciplinary team to create and evaluate effective and streamlined clinical pathways and services;

b. provide leadership and support on MSK clinical and service development across the PCN, alongside learning opportunities for the whole multidisciplinary team within primary care;

c. develop relationships and a collaborative working approach across the PCN, supporting the integration of pathways in primary care;

d. encourage collaborative working across the wider health economy and be a key contributor to supporting the development of physiotherapy clinical services across the PCN;

e. liaising with secondary and community care services, and secondary and community MSK services where required, using local social and community interventions as required to support the management of patients within the PCN; and
support regional and national research and audit programmes to evaluate and improve the effectiveness of the First Contact Practitioner (FCP) programme. This will include communicating outcomes and integrating findings into own and wider service practice and pathway development.

### 2.12 FCP capabilities

The Primary Care Educational Roadmap was developed by Health Education England, with support from and in collaboration with multi-organisational, multi-professional, and patient group stakeholders. It builds upon work previously undertaken by the national programme delivered by the Arthritis and Musculoskeletal Alliance (ARMA) and its member organisations, as well as the subsequent work that delivered the Musculoskeletal core capabilities framework for first point of contact practitioners.

HEE Primary Care training commences when a physiotherapist has a minimum of three years post-registration experiences within a MSK professional setting, therefore working as a MSK physiotherapist. The FCP frameworks outlines in detail capabilities required for the role to be delivered consistently across multi-professional boundaries and not just primary care. The application of the framework has been complemented with several important electronic modules, which are located within the E-Learning for Health portal. These are free to access for NHS staff and can be accessed by external partners for a small fee (e-integrity). The Primary Care modules cover areas such as managing complexity, mental and public health, illness identification, and red flags ([https://www.e-lfh.org.uk/programmes/musculoskeletal-primary-care](https://www.e-lfh.org.uk/programmes/musculoskeletal-primary-care)), and are also complemented by the personalised care modules ([https://www.e-lfh.org.uk/programmes/personalised-care-planning/](https://www.e-lfh.org.uk/programmes/personalised-care-planning/)). Clinicians are required to complete all modules associated with both programmes. For external partners, [https://portal.eintegrity.org/eintegrityregistration/register/356](https://portal.eintegrity.org/eintegrityregistration/register/356) links the clinician to an external annual licence agreement (HEE, 2019).

Once the e-learning modules have been completed, the learner must access an appropriately trained AP supervisor to work with the ‘trainee’ FCP to review their current
portfolio of knowledge and assess any learning needs required against the KSA document as listed in the Roadmap. The ‘trainee’ FCP is advised to register with the HEE advanced practice process and utilise the online portal and CPD portfolio. This will allow the ‘trainee’ FCP to upload evidence against this pathway, which can be transferable across all CPD including Primary Care. The ‘trainee’ FCP then begins the process of compiling a portfolio of evidence against the KSA document prior to embarking into Primary Care. This evidence can be cross-referenced against the advanced practice MSK standard (IFOMPT) and will allow the ‘trainee’ FCP to build evidence towards Primary Care (FCP) and AP. Evidence can be from practice, from educational institutions, or from both as required.

Once these processes are complete, the individual can embark into Primary Care. As mentioned previously, if an individual does not wish to complete a portfolio route to FCP, they could access an HEI FCP MSc level 7 module for MSK. They will still be expected to complete the online e-learning modules and have their KSA verified, but their Primary Care recognition will occur within the module itself and will not require any further process. The career progression pathway is summarised in Figure 3, with an expected timeline for credentialing of a FCP.
Clinicians are expected to be supported by a verified FCP AP supervisor outside primary care to complete required primary care recognition prior to entry into an FCP role. Skills such as injection therapy, requesting diagnostic scans and non-medical prescribing are non-essential for the role unless highlighted by the Practice as being needed to meet the population requirements (NHSE, 2019f; HEE and NHSE, 2018).

If indicated, FCPs are able to refer patients to other HCPs or services. However, this may be inconsistent across practices due to variation in services available and the local Clinical Commissioning Group’s (CCG,) regulations on primary care staff accessing these services (Nicholson et al., 2016). For instance, FCPs with the training to order radiology may be able to action this, or they may be required to defer to the GP in some geographical locations. The key difference between these routes is the length of time the patient must wait in order to receive the investigation, which is dependent on how accessible the GP is to the FCP, or the waiting times for a GP appointment. FCPs can refer patients to a Musculoskeletal Assessment and Treatment Service (MATS)/Musculoskeletal Clinical Assessment and

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**Figure 3. Career progression within primary care roles (HEE, 2020).**

<table>
<thead>
<tr>
<th>Pre-registration degree</th>
<th>Postgraduate learning in practice</th>
<th>Primary care training for First Contact Roles, Portfolio routes and taught HEI models</th>
<th>Entry to Primary Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre registration exposure to practice based learning</td>
<td>Minimum of 4-6 months via portfolio routes; theory (stage 1) verified PRIOR to entry into PC. Stage 2 completed in PC</td>
<td>Taught FCP HEI level 7 module: 10 months</td>
<td>Continuation to Advance Practice (stage 3)</td>
</tr>
</tbody>
</table>

MINIMUM OF 3 YEARS - consider rotational posts and shadowing opportunities.
Treatment Service (MSK CATS)/Musculoskeletal Clinical Assessment Service (MCAS) (Roddy et al., 2013; Sephton et al., 2010). This service is a Single Point of Access (SPA) for referrals, as patients have access to a range of community-based HCPs for management of all aspects of their MSK condition, including their triage, treatment, and administrative tasks (CSP, 2019d). If the FCP is unable to order the patient scans, this service can request. FCPs may make referrals to Secondary Care for physiotherapy management – with a request for injection therapy or pre-operative checks if indicated. Alternatively, FCPs may refer to Secondary Care for orthopaedic or rheumatology specialists (DOH, 2006). Despite the differences in the route, fundamentally, the patient’s care pathway can be streamlined by the FCP signposting them to the appropriate HCP or service.

### 2.13 Work and health competencies for physiotherapists

As yet, and illuminated initially within this chapter, there has been no studies identified on what learning and development needs are required for FCPs to complete FFW and SA certification. However, although previous studies have not dealt with this topic, there is a limited body of evidence that has focused on knowledge, skills, abilities, and attitudes for physiotherapists working clinically to facilitate work participation and RTW of employees with MSK conditions.

This section excluded papers that: (1) Were written in a language different from English; (2) Focused on clinical treatments or interventions for MSK conditions or evaluated the effectiveness of a particular intervention such as a Government ‘Fit for Work’ service; (3) focused on prevention of work-related accidents or injury; and (4) unidimensional interventions such as physiotherapy treatment, health promotion or ergonomics (i.e., physiotherapists working on-site in industry and not clinically within healthcare settings). Although prevention is important, this review specifically focussed on the competencies FCPs/physiotherapists needed to possess to facilitate FFW and SA certification and therefore work participation and RTW.

The included studies (n = 41) were analysed using the fourth step of the Arksey and O’Malley’s methodological framework (Arksey and O’Malley, 2005). A PRISMA diagram representing the
steps of the inclusion process for this section of the review is presented in Figure 4. The evidence retrieved is summated within sections 2.13 and 2.18.

Figure 4. PRISMA diagram of the literature search for work and health competencies and pertinent literature on work and health for physiotherapists.

Interestingly, most studies are limited to only a small number of countries: United Kingdom, Sweden, Netherlands, the United States of America, Brazil, and Australia, with Australia producing approximately nearly 1/3 of the articles (n=12). The studies included were limited to perspective articles, where authors have applied literature findings to discuss their perspectives, discussion of historic changes about work-relevant physiotherapy practice and clinical commentaries on the work and health topic for physiotherapists. Five articles were
found based upon data from over 30 years ago and it is unclear how applicable this is to the UK healthcare landscape now. All the studies discussed physiotherapy competencies but only twenty-two of them (53.7%) solely focused on physiotherapists. Five studies were found (12.2%) on occupational therapists and the remaining 14 studies (34.1%) included other HCPs (e.g., physicians, nurses, osteopaths etc) involved in MSK condition management for employees in their country. As HCPs like these are often found within MDT settings in healthcare, it was decided to include them in this review.

Many articles considered that physiotherapists should be able to identify common psychosocial obstacles to RTW (Grimes, 1998; Perry et al., 2019; Johnston and Shaw, 2013; Saw et al., 2011) and specifically for some, identify social and psychological obstacles caused from the workplace itself (Hutting et al., 2017; Johnston et al., 2013). The authors suggested that physiotherapists should collate information pertinent to this area, such as: the employee’s relationship with line manager, employer, and other employees (Johnston and Shaw, 2013), perceived support they receive and perception that their employer wants them to RTW (Gliniecki and Burgel, 1995; Stigmar et al., 2012).

An important skill reported was for physiotherapists to develop a strong therapeutic alliance, a description of the interaction between HCP and patient that can positively impact treatment outcomes (Innes and Straker, 2002). Although this may be important, traditional OH settings do not often consider therapeutic relationships, as OH is often described as having ‘dual ethics,’ to the employer and employee (Tamin, 2013) and often is outside of the traditional therapeutic setting. One question that needs to be asked, however, is whether the skill of a clinician (such as an FCP), and confidence in them, is important in helping patients in healthcare settings deal with work issues and positively impact their MSK outcomes as suggested (Driver, 2006; Innes and Straker, 2002). These authors point out that to create a strong therapeutic trust, physiotherapists need to listen to their patients concerns (Driver, 2006; Innes and Straker, 2002), involve them in the decision-making process (Driver, 2006; Sowden et al., 2019) and co-produce and agree treatment goals (Johnston et al., 2013).

The three articles above argued that a patient-centred approach was critical for positive outcome. As part of this process, authors claimed that physiotherapists need to follow up
on actions taken by their patients (Johnston and Shaw, 2013), encourage them to collaborate through a problem-based approach (Daley and Miller, 2013) and show empathetic listening (Daley and Miller, 2013; Sowden et al., 2019; Gliniecki and Burgel, 1995; Johnston et al., 2013). Like OH practice, this approach in many of the reviewed articles considered helping patients realise the tangible issues/obstacles they are facing in a RTW or therapeutic setting and supporting them in proposing solutions or asking them how they could be implemented. It was suggested that physiotherapists support patient autonomy by developing patients’ ability to problem solve and help manage future problems because of work (Johnston et al., 2013).

Self-management was suggested by some, with the expectation of involving them in work rehabilitation and improving their work capacity (Perry et al., 2019; Stigmar et al., 2012). The idea that physiotherapists should recognise their patients’ perception of how their injury influences their work ability and RTW is a crucial element suggested by Gliniecki et al. (1995) and Shaw et al (2011), with a Dutch research team commenting that physiotherapists may not often discuss work-related obstacles with patients when they do not see the effect of a condition on work as a therapeutic outcome (Hutting et al., 2017). Thus, in their discussion of RTW and the rehab process (Shaw et al., 2011; Johnston et al., 2013) authors propose that discussion is initiated early in the process, ideally within the first or second visit (Johnston and Shaw, 2013). During the visits, Johnston and Shaw (2013) suggest that physiotherapists should assess their patient’s perceptions about RTW and their needs to enable goal setting, with two articles found that suggested RTW should be an explicit aim of rehabilitation (Johnston et al, 2012; Johnston et al., 2013).

Understanding and interacting in this way with patients has been discussed by a great number of authors in the literature. However, a new approach may be needed as although helping patients remain in or RTW is regarded as being crucial to recovery (Black, 2008), there is evidence stating that physiotherapists are not routinely addressing work issues among their patients (Moore, 2011). In fact, a report by Zheltoukhova et al. (2012) found that only some HCPs (38.3%) were likely to manage work outcomes as part of treatment for those with a MSK condition; 39% of patients responding, ‘Not at all’ and 22.7% responding ‘Very Little’ when asked ‘To what extent has your HCP considered your ability to stay-in or RTW’. Simmonds et al. (2012) found that even when physiotherapists give advice on work-
related issues, it is not always consistent with evidence-based practice or guidance, which recommends patients RTW as quickly as possible.

The above competencies found suggest that they are in keeping with the biopsychosocial (BSP) model, which has long been advocated for use in healthcare (Waddell, 2004). Yet it seems HCPs with high fear-avoidance beliefs and a biomedical orientation toward treatment are more likely to advise patients to limit work and physical activities as evidenced within a systematic review and at odds to the accepted BSP model (Darlow et al., 2012). In their discussion of work psychosocial factors that act as potential obstacles for patients to RTW, Main et al. (2008) invented the term ‘blue flags’ and adopting a Blue Flag framework by HCPs can lead to improved work outcomes (Costa-Black et al., 2010). To overcome some of the challenges of the nature of Blue Flags, namely, negative perceptions about the relationship between work and health, early RTW and intervention is recommended to influence rehabilitation and the mental health of employees (Daley and Miller, 2013; Adam et al., 2010; Stigmar et al., 2012; APTA, 2017).

A key skill suggested to consider work issues, work ability and overall work environment was to be confident in assessing and suggesting well thought out work accommodations/adjustments, such as modified or amended duties or reduced hours (Perry et al., 2019; Adam et al., 2010; Sowden et al., 2019; APTA, 2017), facilitating work simulation (APTA, 2017) and encouraging employees to resume active lifestyle factors (APTA, 2017; Stigmar et al., 2012; Shaw et al., 2011). Some authors have suggested that physiotherapists may have the skills to provide achievable goals for work factors and recommendations to employers about changing work duties, through their assessment of patients’ FFW along with their MSK expertise (Viera, 2006). This has been further explored in prior studies in which physiotherapists are recommended to get their patients to describe their work tasks (Perry et al., 2019) and enquire to the employer about a job description to deconstruct patients’ work tasks performed daily (Daley and Miller, 2013).

Although unlikely to be applicable to FCPs in busy primary care settings, this review found evidence to suggest that physiotherapists should undertake workplace assessments and observations (Adam et al., 2010; Park, 2003). Also, to ensure that patient’s physical ability and job demands are in synchrony and to use functional capacity evaluation or a demands
analysis (Innes and Staker, 2002; Viera, 2006). The authors above fail to acknowledge in precisely what settings this can be conducted and how much time is needed to adequately identify the physical obstacles to work participation (Adam et al., 2013). For example, a workplace assessment may be a key skill to identify physical barriers and understand an individual’s work ability, but an appreciation of their capacity for work tasks, their psychological and social factors is likely to beyond the reach of a primary care consult that on average is 10-20 minutes in duration.

A key skill mentioned in seven studies (Perry et al., 2019; Daley and Miller, 2013; Adam et al., 2013; Adam et al., 2014; Innes and Straker, 2002; Stigmar et al., 2012; Johnston and Shaw, 2013) was that of communication. Many suggested that stakeholder engagement was important, especially making employers aware of the work-related decisions on their employee and reasons for these decisions. If implemented, some authors suggested that it could improve co-operation and commitment (Adam et al., 2013) and the RTW process. This is a consistent theme in UK research, with employers often ‘frozen out’ of health and work discussions and often cite a lack of understanding of medical information on Fit Notes or that the information given lacks practical strategies that are workable (Bartys et al., 2019).

Daley and Miller (2013) even suggested that physiotherapists should confirm if their patient’s employer has the ability and resources to implement the recommended work changes, although in the UK it is encouraged for the HCP to give the recommendations and for the employer to decide as to whether they are practicable to implement (e.g., reduced hours, pattern, job tasks for their employees).

The key problem with this is that it is likely to be a non-modifiable factor, outside of a FCPs control, and one that may cause conflict, if the employer could not implement any recommended changes. The above studies in the extant research do not fully explain how HCPs can reach out to employers/workplaces but they do provide a blueprint of knowledge, skills, abilities, and attitudes related to communicating to workplaces, specifically in the consideration of facilitating an early RTW and assessing a patient’s FFW.

Ten studies built on the above approach on communication skills to add depth to involving stakeholders in the rehabilitation journey of ill or injured employees (Perry et al., 2019;
Daley and Miller, 2013; Adam et al., 2013; Adam et al., 2013; Sowden et al., 2019; Shaw et al., 2011; Adam et al., 2011; Miller et al., 2008; Park., 2003; Adam et al., 2014). This is especially pertinent to patients who are supported by an employee’s compensation system where robust communication is needed to offer timely and concise information, progress, and any functional limitations to stakeholders (Perry et al., 2019). For FCPs, it is likely that there are many stakeholders involved in their patient’s rehabilitation (e.g., GPs, other AHPs, Specialists, employer, insurer, state, etc.) and it may be challenging to communicate to all parties of interest (Johnston and Nielsen, 2011; Sowden et al., 2019).

A few authors have recognised that by using the International Classification of Function, Disability and Health (ICF) which helps consider the MSK or other condition’s impact of work-relevant tasks and participation (Stigmar et al., 2014). For instance, using the ICF’s activity and participation domains integrates an understanding that may encourage a co-production with stakeholders that is clear and consistent and co-ordinates their efforts (Sowden et al., 2019). As this thesis sits within the unique UK health and care landscape, it may be important for FCPs to understand the jurisdiction of the employee’s compensation system and statutory sick pay and/or social benefit landscape and how to navigate and communicate about it.

There is limited evidence to suggest that receiving worker’s compensation/disability benefit, is an obstacle to work participation but studies vary in terms of methodology and design, with many having obvious flaws or shortcomings (Bartys et al., 2019). One review study indicated that some people view compensatory systems as a safety net, regardless of health condition or not (Werner and Cote, 2009). Thus, it was uncertain to determine whether an association exits. As an example, it was reported in one study that employees had a significantly increased risk of prolonged claims if they file a compensation claim within 12 weeks of pain onset, with a negative argument on the effect of receiving compensation (Hestbaek et al., 2009). However, the effect was worse for those with neck pain than low back pain, and this was unexplained. Similarly, another study reported a significant increase in RTW for non-compensated injured workers compared to compensated workers receiving functional restoration treatment, but this difference had diminished at 6 months (Tollison, 1993). In contrast, another study reported that receiving employee’s compensation did not
affect time to RTW (Hadler et al., 1995), and another found bi-directional effects depending on an individual’s health locus of control.

Interestingly, and in contrast to what the literature may expect, employees reporting that the course of their pain was outside of their control were more inclined to RTW compared to individuals who reported to be more in control (Gallagher, 1995). These studies highlight the limited and dated evidence suggesting that compensation/disability benefit, is an obstacle to work participation, but there is robust evidence to suggest that it is the specific and unhelpful characteristics of compensatory systems that limit work participations.

This may be of important to FCPs and physiotherapists, by specifically directing them toward pertinent resources, case managers, OH departments (if covered) and human resources departments (Johnston et al., 2013). The knowledge, skills, abilities, and attitudes for this area may be described as more of a gatekeeping role through directing patients to other resources when the clinician’s knowledge is incomplete. For the UK context, schemes providing widespread easy access to compensation may discourage work participation, suggesting that unlimited compensation may have adverse effects in older studies (McNaughton et al., 2000; Jamison et al., 1988). For some, it was suggested that employers, with problematic rules, practices, or complex systems, and of employers working against recommendations (such as modified duties) (Frank, 1998) can contribute to negative work outcomes, with specific citation of unions and compensators.

It is reported in the literature that initiatives involving income insecurity during RTW are potential obstacles by reducing employee’s incentives to engage in such initiatives (Magnussen et al., 207; Corden and Sainsbury, 2001). In addition, when this process is slow, it influences work disability directly or indirectly as it leads to a longer duration of work absence (McEachen et al., 2010). Therefore, specific elements such as regulation and conduct, and an absence of decision-making with medical uncertainty may reward people for continued disability. Lastly, regulations concerning the size of wage compensation rates following compensation claims may impact of work participation. Some studies suggest that high wage compensation rates following injury claims can influence work disability by increasing absence duration (Kim et al., 2006; Beals, 1984; Olenick et al., 1996; McNaughton et al., 2000). Although one study suggested that age and employer size were stronger
predictive factors of prolonged absence than wage compensation rates (Olenick et al., 1996), another did report a 1.6-increased risk of continued work absence for those on high compared to low wage compensation rates (Kim et al., 2006). Finally, those were wage compensation approached or exceeded work wages were reported as a disincentive to work partition following injury claims, and that earning related compensation resulted in slower exit of the system overall (Beals, 1984; McNaughton et al., 2000). To apply the above information, FCPs may need to consider this as an area that requires attention but not in-depth knowledge, especially for the UK/local context and how to signpost when outside of their scope of practice. The research found suggests the need for a ‘flexible’ compensation/benefits system with regulations that allow for adaptations related to the individual, workplace, and business cycle. More comparable studies need to be conducted, especially in the UK, to understand cultural and financial cross-country differences, offering nuanced views of how such systems affect work outcomes in those covered with different legislation, cultural norms, and socio-demographic statuses.

Several questions regarding work-related competencies remain to be addressed and a closer look to the literature highlights a few gaps and shortcomings, related to barriers to implementation. This may be an important focus of this thesis both in the development of FCPs work-related competencies in primary care and their capacity to enact these in practice. It is noted in several studies that OH and work-relevant practice is absent and where it does exist, is vague and not focused, especially in undergraduate physiotherapy curricula (Sowden et al., 2019; Mininel et al., 2018). Hutting et al., (2017) and others suggest that work competencies are often hidden or set within other areas of expertise of the curricula, or not even mentioned at all (Sowden et al., 2019). It is noteworthy that OH is a specialised area of HCP practice and can be complex, with some areas rooted in employment law and health and safety aspects, many studies suggest it should be clearly identified and addressed within undergraduate programmes, entry-level curricula and continuing professional development (Stigmar et al., 2015; Hutting et al., 2017).

The previous studies suggest that work and health competencies in physiotherapy is largely obsolete outside of the United States (Larson and Miller, 2005) and without formal guidance about physiotherapy practice for this area; work participation, rehabilitation for work, and RTW strategies may continue to be an unmet need for many working age adults in the UK
(Oswald et al., 2017). It could be argued that if clinical guidelines are published, it could help orient and define work and health content to be taught and embedded within undergraduate university programmes (Adam et al., 2013). Two studies from Australia suggest another problem encountered, with a paucity of placements in university programmes within work and health and OH settings (Adam et al., 2013; Adam et al., 2013). This is likely to limit the possibility for students to expose themselves to the area and acquire knowledge and skills to practically implement in their training. To address this area, further research could answer whether new physiotherapy graduates with case specific direction and supervision from experienced physiotherapists, could assist them in OH complex decision making regarding RTW and work participation (Adam et al., 2011). The question then becomes how best to define and clarify physiotherapist’s role in the work rehabilitation process and for them to see that work is health outcome, for their patients with those presenting with MSK conditions (Stigmar et al., 2014; Beales et al., 2017). One of the tough challenges for all physiotherapy stakeholders is to address this lack of clarity so that physiotherapist’s advice, RTW planning, and rehabilitation is accepted and taken intently by employers, insurers and physicians involved in employee’s care (Beales et al., 2017).

Further obstacles to successful implementation may relate to well-intentioned ideas, for example, empowering patients using a problem-solving (Sowden et al., 2019) and self-management approach to health. Although this may provide patients with resources to cope and navigate their journey and improve their health (Johnston et al., 2013), it may increase the burden on employees with MSK conditions who may feel already overwhelmed. Therefore, the context and timing may be key to adequately support their patients, plan for the correct time to intervene and reassess work ability and capacity (Dineen-Griffin et al., 2019).

Most physiotherapy competency studies on the topic stress the importance of early RTW for presenting patients. Even though this recommendation highlights regular contact with work and the importance of work, a decision on work should be carefully considered within the BSP approach. Thus, a careful appreciation of the various psychosocial and work context factors along with their condition and work capacity (Ellen et al., 2016). For instance, some studies state that too early a RTW can jeopardise employee health and risk future
employment (Gewurtz et al., 2018) and that some may want to RTW early due to financial, social, or personal reasons (fear of losing their employment) (Pincus et al., 2010). Nonetheless, physiotherapists are supported to initiate early, formal work-related discussions about RTW, with a recent Swedish empirical study demonstrating that it can improve their patient’s work ability and participation (Sennehed et al., 2018). For some (Pincus et al., 2010), in opposition to the early RTW model, they found that a brief absence period may be perceived by HCPs as positive for recovery if the patient remains physically active during the period.

Historically, there is adequate evidence to suggest that a lack of support from significant others is an obstacle to work participation (Karlsson et al., 2010; Svensson et al., 2010; Campbell et al., 2012). Surprisingly, it is difficult to find support for communicating and collaborating with their patient’s family or significant other in the physiotherapy competency base. This may suggest that certain social or environmental contexts are missing in the literature related to work and health. This literature review did find a body of evidence referring to psychosocial factors prevalent in OH and primary care practice such as ‘fear of reinjury’ or ‘lack of support from supervisors and management.’ Competencies specifically considering the family and support network could be an unmet need, as recent studies have proved that significant others can play an important role in work participation for those with chronic conditions (Snippen et al., 2019). The findings from this study raise important professional issues and ethical dilemmas with regards to work-related practice. In a complex and MDT setting, where the scope of work-related practice can be shared, the ability for an individual FCP to effect change in a busy primary care environment with limited time may limit their impact.

As Loisel et al. (2005) summated, the work disability arena ‘encompasses many stakeholders and environments that all have an impact on employee’s care and trajectories.’ This may mean that FCPs can improve physiotherapy primary care and process, but the complexity of a patient’s work-related context might limit their impact of work participation and RTW. Moreover, in counties like Canada, OTs have developed competencies in work-related practice, ergonomics and received formal OH training. This could contribute to a blurring of professional boundaries and scope of practice disputes between AHPs. On the other hand, clarifying
physiotherapy competencies in work-related practice may improve clarity of HCP roles and expertise and could encourage effective collaboration between groups (Adam et al., 2011).

This review highlights a dilemma in primary care as to what depth and breadth of scope is enough to adequately address work-related competencies and which are core to under-, post-graduate or FCP trainees or whether these competencies should be offered to OH physiotherapists specifically. Other countries such as the Netherlands have physiotherapists enrolling into specific postgraduate educational programmes to become specialised ‘work-related physiotherapists (WPT)’ (Oswald et al., 2017). These WPTs work in a range of healthcare settings to facilitate the recovery and RTW of employees living with conditions that impact on work participation. Referrals can be made by physiotherapists to WPTs when work-related issues are more complex and complex barriers exist (Hutting et al., 2017). Even so, ‘generalist’ physiotherapists need to be able to identify and address, at least partially, work-related factors for their patients and be able to recognise when onward referral is necessary (Hutting et al., 2017; Oswald et al., 2017).

This section provides new evidence collected on physiotherapy competencies within the primary literature with an analysis and synthesis. There was a mixture of empirical data and theoretical study, along with abstract and text from specialist publications that has highlighted the existing literature but also obstacles to the development of such competencies.

This section used the Arksey and O’Malley methodological framework (2005) which although encourages reviews conducted with rigour, it does not require researchers to evaluate the quality of scientific articles selected. The strength of this framework lies in its breadth, where a quality assessment may exclude pertinent views and studies on the topic (Arksey and O’Malley, 2005). A key limitation is in its lack of formal evaluation which can lead to the inclusion of articles of poor methodological quality, affecting the strength of the section’s conclusion. The review did include grey literature through specific OH guidelines and references from included articles. It was decided not to include intervention studies on employees (e.g., clinical trials, motor control interventions, group therapy, etc.) as the corpus of articles may have been too big to include within the already sizeable literature review. The articles included originated from a small number of counties in Australia, North
American and Europe and none in Asia or Africa. Of those published, the majority consisted of narrative reviews and perspective articles, and thus it is unknown whether the competencies implemented would necessarily result in better outcomes of care and impact on work ability for employees with MSK conditions.

### 2.14 Regulatory requirements

The deployment of FCPs through PCNs as documented earlier is a notable change for general practice providers and the healthcare system in general. Providers of these services are now accountable for staff who they may not employ directly, but who deliver regulated activity on their behalf. It is mandated that all GPs responsible for delivering a regulated activity must register with the CQC (see glossary) under the Health and Social Care Act (2012) and the provider must show how they will meet the regulations when they register. The CQC (2022) in their online ‘GP mythbuster 106: Primary Care first contact practitioners (FCPs)’ report that:

> *The Health and Social Care Act 2008 (Regulated Activities) 2014 Regulations set out a provider’s responsibilities. The provider needs to be assured about the ‘fitness’ of those persons. Recruitment by another party may provide some assurance. However, the registered provider should not assume these checks have been completed.’*

and specifically on FCPs:

> *Providers need to ensure that all the staff they manage have had the appropriate recruitment checks and are supervised. This is for all staff, irrespective of who holds the employment contract. For example, where a FCP is employed by a local NHS trust and provides services to a GP practice, it would be essential for the practice to ask for assurances.’*

With the power to consider evidence and assurance of practice, the CQC expects that staff recruited into FCP roles have completed stage 1 of the roadmap and the arrangements are in place for stage 2 completion. In addition, they may request evidence that the provider has verified and is satisfied about safe recruitment. For example, they may ask the employer
of a FCP for assurance and/or evidence that the recruitment checks have been completed (registration, DBS, references, and qualifications). Beyond this, and not unique to FCPs, the CQC lists requirements for governance systems, checks for suitably qualified, competent, and experienced staff, assessing staff skills, knowledge, and experience, that are standard for all staff when they are recruited and deployed into primary care setting roles.

Stage 1 should be completed with a portfolio of evidence and verified before employment in Primary Care (unless the trainee FCP is an experienced paramedic already employed in primary care). The KSA should be completed prior to employment as a FCP or AP in Primary Care to assure patient safety. For clinicians already working in primary care this can be completed retrospectively. Stage 2 is completed with a portfolio of evidence and verified in Primary Care. This is the recognition process of the application of the KSA in Stage 1 to clinical practice in Primary Care. Best practice is that this should be completed within 6 months for a full-time member of staff, but this can be longer provided a completion date is agreed with the employer (HEE, 2022).

2.15 Specific challenges to the educational pathway within primary care

For those clinicians who have undertaken an advanced clinical practice MSc, the recommendation from HEE (2022) is that they have met the capabilities for stage 1 and stage 3. The recommendation would be to map the learning outcomes of the MSc to the KSA document and complete the e-learning modules and stage 2. If a placement was completed within the MSc, it may be that they have also met stage 2 requirements.

If a provider or individual clinician does not complete the verification process, there may be repercussions from the CQC. All registered clinicians are accountable for their practice and the NHS promotes a just and learning culture and HCPs should engage in relevant CPD and supervisory activity to ensure that their required registrant standards in the role that they are working in are met and the scope of practice is not exceeded. This is regulated by the HCPC and the GP practice in which the clinician works may be asked in a CQC inspection of evidence of clinician capability. The employer and employee should work together to ensure
capability within the scope of practice that staff are working in. The educational pathways have been created as a standard of practice and proof of capability in primary care for patient safety and governance and existing clinicians need to retrospectively train to prove this. This is also consistent for those that move into primary care from secondary and community settings, even though many of the capabilities may be similar, as there are underpinning primary care core elements that are additional to working elsewhere within the healthcare system.

When the clinician completes the ‘FCP Verification of Evidence form,’ upon successful completion of Stage 1 and Stage 2 of the roadmap and submits details via the recognition survey link (Primary Care Clinical level 7- FCP survey) they can prove credentialling of the taught route and portfolio route. After this, HEE’s Centre for Advancing Practice are currently exploring the opportunity of issuing a digital badge for FCPs, however this is a novel concept for the NHS and is currently still under development (HEE, 2022).

Lastly, in terms of supervision of FCPs, although there are several multi professional supervision courses to train supervisors for both clinical and CPD supervision, they do not include how to verify and sign off a portfolio of evidence at master’s level both academically and in practice using the Work Based Placement Assessment toolkit. This supervision course is a bespoke two-day course for the roadmap that is essential to train and maintain the pipeline of Multi-professional First contact and Advanced practice clinicians along the portfolio route in primary care. The two-day roadmap supervisor course can be completed by GP trainers (without the need of the course), a GP, a clinician who has a post-registration master’s degree, a full MACP member, a FCP or AP who is recognised by the HEE Centre. Any workplace-based assessments or verification undertaken by an individual who does not meet the criteria would not count as evidence in the roadmap portfolio and misleading trainers regarding eligibility could be deemed a fitness to practice issue.

2.16 FCP Evidence

This section will consider the evidence base behind the FCP model of practice, individual outcomes, and other sources. A large national evaluation was undertaken on FCP models of
practice based on a variety of outcomes (NHSE, 2019f) which provides the bulk of service evaluation studies and small-scale clinical outcome studies. The FCP national evaluation took place between October 2018 and March 2020 and comprised three phases.

**Phase 1** used a local context questionnaire to collect data on services’ funding, governance, staffing and care providers. **Phase 2** collected FCP consultation data over 10 months using a tool embedded into the electronic health record system of FCP pilot sites. **Phase 3** consisted of a mixed-methods national evaluation of the FCP model of care. This was a collaboration between Keele University and University of Nottingham and supported by the CSP charitable Trust and Join Work and Health Unit.

The evaluation commenced collecting quantitative data from STPs by sharing the Phase 1 questionnaire with STPs in August 2018. GPs and FCPs commenced submitting monthly activity data from September 2018, over a 6-month period. The NHSE’s FCP pilot evaluation included 42 STP/ICPs that introduced at least one FCP pilot, collecting a variety of quantitative and qualitative data. Five service aims were agreed which focused on the themes of (a) GP workload, (b) patient assessment and self-management advice, (c) high quality care and a good patient experience, (d) support to remain in, or return to, work and (e) staff experience. The data was generated from 240 FCPs from 40 services in England and patient data from 680 patients with follow up rates at 1, 2 and 3 months of were 63% (n=430), 62% (n=419) and 54% (n=370) respectively.

Measures collected in the initial questionnaire included patient characteristics, PROMS (Patient reported outcome measures) and PREMs (Patient reported experience measures). Monthly follow-up questionnaires collected global change of MSK symptoms since the patient first consulted with the FCP, whether patients consulted the GP for the same problem in the last month, MSK pain intensity and time off work due to pain. MSK health status (MSK-HQ) and impact on work were collected at 3-month follow-up only.

Information on the services were collected via pilot implementation pro-forma which permitted various analyses from stakeholder (clinical GP and FCPs and non-clinical patient) feedback from interviews and focus groups. Due to the recency of service implementation, there was varying quality in data collection through phase 1. Consequently, in phase 2,
consultation data collected by only six STPs was utilised (1/4 of the sites were delayed in data collection). The STP/ICS data increased through 2018/19 and into the Phase 3 analysis.

The evidence suggested that FCP versus GP referrals in the pilot evaluation were significantly reduced in referrals to orthopaedics by up to 21%, as well as a 41% reduction in referral to secondary care physiotherapy (NHSE, 2019f). This is also supported by a small-scale evaluation by Downie et al., (2019) of two practices in Scotland that demonstrated an even greater reduction in orthopaedic referrals from 1.1 to 0.7 patients per 1000, and 2.4 to 0.8 per 100. The evaluation reported that 84% of orthopaedic referrals were deemed ‘appropriate’; other similar studies reported a variation of rates at around 71% and 74%, however, these were not specifically compared to FCPs and the FCP model of practice and considered AP physiotherapists solely (Hussenbux et al., 2015; Hattam, 2004). NHSE found that FCPs tended to refer patients for 10% fewer blood tests compared to the GP and no Orthotist referrals compared to 1 in 10 GP MSK appointments.

There is an argument that the FCP would be able to ‘unburden’ GPs by taking some of their workload. However, GPs highlighted that patients may see GPs for other problems and discuss their MSK condition as an ‘add on’ and/or not the primary reason for consult (Goodwin and Hendrick, 2016). Despite this GP concern, evidence suggests that FCPs only need to refer a small percentage of patients back to the GP, ranging between 2% to 15% (Goodwin and Hendrick, 2016; Ludvigsson and Enthoven, 2012). There were significant variations in referral rates between patients onwardly referred to pain services by FCPs and GPs, with some large increases and large decreases across STPs and there was no change in referrals to rheumatology services in secondary care (NHSE, 2019f).

In general, the NHSE (2019f) pilot demonstrated that FCPs were referring less; only 2% of patients for radiology in the form of an MRI and 6% for X-rays. Similar findings were demonstrated in another study which focussed on an inner-city practice, with FCPs referring 6.4% of patients for investigations or for a secondary care opinion, compared to 33% of GPs (Goodwin and Hendrick, 2016). The Scottish pilot evaluation demonstrated a higher imaging referral rate of 9.2%, which was described as low, without a direct comparison with GP referral rates (Downie et al., 2019). This information suggests that referral rates by FCPs are lower to secondary care compared to GPs.
2.16.1 Cost benefit

It has been found that FCPS significantly reduced costs compared to a GP at £84.26 versus £647.16 per patient (Goodwin and Hendrick, 2016). This was accounted for by the reduction in diagnostic tests and the salary differences between FCPs and GPs (FCP at a Band 7 level). However, these findings should be interpreted with caution as the 500 patients who accessed an FCP had no GP comparison group. Instead, an economic evaluation of 100 patients who had accessed a GP was retrospectively undertaken using data provided by various secondary sources. Consequently, it was not possible to carry out a cost-minimisation or cost-effectiveness analysis which compromised the economic evaluation (Goodwin and Hendrick, 2016). Other cost-savings that have been inferred (but not quantified) include reduced pharmaceutical costs, as the FCP pilot evaluation highlighted 12% fewer drug prescriptions for MSKDs than GPs. Instead, the FCPs offered the patient advice in 69% of cases, compared to only 4% of patients with MSK conditions who accessed GPs (NHSE, 2019f). NHS and HEE’s cost calculator utilised available evidence to create an online calculator which is adjustable to local data. They claimed that when using baseline data in this calculator, the FCP role cost £54.11 per hour compared to £130.71 per hour for a GP (HEE, 2019).

This tool should also be approached with caution, as through transferring outcomes from one practice to another, it did not consider the complexity of practice contextual factors such as the FCP model, the differences in professional demographic and staff numbers, presences of PCNs or another partnership, patient acceptance of the FCP and local socioeconomic status of patients (CSP, 2019a, 2019b, 2017a, 2016b). The calculator’s underpinning evidence is based upon the Goodwin and Hendrick (2016) study as well as evaluations of physiotherapy direct access from around 16 years ago (Holdsworth et al., 2007; Jordan et al., 2007). In addition, audit data were used to inform the calculator although this has not been published in the literature, with questions remaining of the accuracy and robustness of the tool.
2.16.2 Patient satisfaction

There is limited evidence on patient satisfaction and acceptability of the FCP role. There is limited evidence from the NHSE evaluation that the experience of patients with MSK conditions has improved through the introduction of a FCP service. The patient questionnaires showed that 97% of all patients questioned would be likely or highly likely to recommend the service to a friend or family, with high satisfaction results from other small scale service evaluations. The evidence that is available suggests patients were more satisfied with the information on their MSK condition and self-care when it was provided by a physiotherapist in a primary care clinic rather than a GP setting (Ludvigsson and Enthoven, 2012). Although this study was based in Sweden and may not be transferable to UK context of a completely different healthcare setting, models of practice and primary care needs.

Significantly more patients expressed complete confidence in the physiotherapist’s ability to assess their condition compared with patients in the GP group (Ludvigsson and Enthoven, 2012). NHSE’s FCP evaluation (2019f) demonstrated 97% patients would be likely/highly likely to recommend the service to a friend or family, with a slight reduction to 96% from the updated data from Bishop (2019), and 99% of patients had complete confidence in the FCP’s competence to assess their presentation (NHSE, 2019f). The Scottish FCP evaluation similarly demonstrated 97% of patients responding ‘yes, definitely’ when asked if they had confidence in the FCP, with the remaining 3% a ‘yes’ (Downie et al., 2019). This suggests at face value patient satisfaction rates have improved but with insufficient longitudinal data on the same population it is difficult to confirm, but with the role since its infancy the evidence suggests that patient satisfaction levels recently are very good.

Systematic literature reviews first point of contact roles have focused on APs with clinical specialities in a range of healthcare settings. Although the reviews highlight a lack of robust evidence due to flaws in the observational designs and audits, they did conclude that the evidence available is supportive of the role, in being cost-effective and having positive patient outcomes and satisfaction (Thompson et al., 2016; Saxon et al., 2014; Stanhope et al., 2012; Kersten et al., 2007). A systematic literature review by Thompson et al. (2016) explored the role of AP physiotherapists working in MSK care but not FCP specific. It concluded that the literature did not provide an understanding of the mechanisms behind
patient decision-making, and, without this, it was not possible to fully understand the role’s impact (Thompson et al., 2016). It suggested that in the absence of qualitative data that takes into consideration these mechanisms, there is limited understanding on the complexity of role acceptability. NHSE’s (2019f) FCP pilot evaluation has provided qualitative data and identified five key themes from interviews of GPs, FCPs and patients. Participants for the qualitative interviews, focus groups and observational diaries were recruited from six FCP sites in England. Of the 39 participants, there were 14 patients, 11 FCPs, 8 GPs and 6 general practice non-clinical staff.

Firstly, the theme of ‘embeddedness is highlighted how it took time for the FCP role to become embedded into the Practice’s culture. ‘Communication’ was the second theme, and this had several components: ‘promotion,’ ‘record-systems’ and ‘signposting.’ Promotion needed to be more effective and there had to be a consistent role title that referenced physiotherapy. For ease of ordering investigations and onward referrals, record systems need to be efficient. It is vital for care navigators and receptionists to receive signposting training as frontline staff. The importance of receptionists in signposting patients to the FCP role, and the frequent expectation that the GP was the first step for assessment, is a common finding present in wider evidence (Goodwin et al, 2020). However, receptionists are faced with time challenges, preventing them consistently explaining new consultation methods to patients (Brant et al., 2018). Goodwin et al. (2020) found that the receptionist role was effective, but only if they understood the aims of the FCP service.

The third theme was ‘patient understanding of FCP,’ which was variable. Patients who had experienced the role were highly satisfied with the FCP and their advanced skills. ‘Contribution of FCP’ highlighted staff perceptions that the FCP could bring additional capacity through unburdening GPs. The final theme was ‘reconceptualising physiotherapy,’ which regarded the need for more consistent and collaborative service planning and implementation. This theme highlighted limited evidence of GP protectionism and that FCPs were perceived as an opportunity for physiotherapists to develop alongside other professions NHSE (2019f). This data provides qualitative insights into aspects of the role that may be important, some of which overlap with previous discussion on the wider AP role, for instance, ANP embeddedness in Practice and protectionism.
The available FCP research is predominantly audit based and focuses on satisfaction rates (CSP, 2019b; 2019c; 2017a; 2016a; 2016b and 2016c). Qualitative studies have only explored practice staff’s acceptability of the role or acceptability of the ‘PhysioDirect’ model, and thus not specifically the acceptability of the FCP role per se or the experience of working within the FCP model of practice (Moffat et al., 2016; Pearson et al., 2016). The FCP evaluation had a qualitative component in which two sites were selected for patient and staff interviews (NHSE, 2019f). Themes were identified; however, they were not disaggregated into staff and patient responses; but as highlighted previously, different stakeholders may have differing perceptions on quality of care (Campbell and Tickle, 2013; Wensing et al., 1994). The FCP audits lacked detailed descriptions of the practices’ contexts, despite large variation including: FCP models; the differences in practice demographics and staff numbers; and presence of PCNs or other partnerships (CSP, 2019a; 2019b; 2017a; 2016b; 2016c and 2016a). It may be that these contextual factors underlie the processes behind patient acceptance of the FCP, thus they must be considered.

2.16.3 Final national evaluation of FCP model of care

Overall, the final phase of the NHSE project was to evaluate the FCP model of care against its predefined service aims and success criteria. These were selected as 5 service aims and 12 success criteria with input from stakeholders and patients before the data collection phase. Five service aims were agreed which focused on the themes of (a) GP workload, (b) patient assessment and self-management advice, (c) high quality care and a good patient experience, (d) support to remain in, or return to, work and (e) staff experience. There were 12 success criteria in total, described in detail below.

As mentioned, the overall aim of the national evaluation was to evaluate the FCP model of care against predefined service aims and success criteria using an online evaluation platform. Measures collected in the initial questionnaire included patient characteristics, PROMS (Patient reported outcome measures) and PREMs (Patient reported experience measures). Monthly follow-up questionnaires collected global change of MSK symptoms since the patient first consulted with the FCP, whether patients consulted the GP for the same problem in the last month, MSK pain intensity and time off work due to pain. MSK health status (MSK-HQ) and impact on work were collected at 3-month follow-up only.
Eleven of the twelve success criteria were met. Criterion 8 was not met which has implications for the studies considered within this thesis and the wider evidence base for HCPs being able to effectively carry out FFW and SA certification. The success criteria of the FCP model:

**Success Criteria 1:** 20% of patients saw the GP for the same MSK problem in the 3-months following their baseline visit (target ≤25%).

**Success Criteria 2:** GPs discourse reflected confidence in the FCP service and competence of the FCPs.

**Success Criteria 3:** 95% of patients received sufficient information on self-care (target ≥70%).

**Success Criteria 4:** Patient discourse reflected self-efficacy and confidence in self-management techniques.

**Success Criteria 5:** 54% of patients achieved a 6-point minimal important change on the MSK-HQ at 3-months follow-up (target ≥51%).

**Success Criteria 6:** 94% of patients reported being ‘likely’ or ‘very likely’ to recommend the FCP service to family and friends (target ≥80%).

**Success Criteria 7:** Patient discourse reflected a positive experience of FCP.

**Success Criteria 8:** 29% of those in employment (n=388) reported receiving specific work advice from the FCP (target ≥75%).

**Success Criteria 9:** 54% of patients reported less impact of their MSK condition on work performance (as measured by the Stanford Presenteeism Scale) at 3 months (target ≥51%).

**Success Criteria 10:** Physiotherapist’s discourse reflects confidence in their competence to offer advice with regards to work related issues.

**Success Criteria 11:** Patient’s discourse reflected perceived benefit from the advice offered by the FCP with regards to work related issues.
Success Criteria 12: Staff discourse reflected a positive experience of working with and in the FCP services.

The above success criteria is noteworthy and reinforces previous evidence on the fact that HCPs do not consider the work and health topic within clinical encounters. Despite this, the evaluation’s authors stated in their summary of the results that ‘all FCPs stated that they would consider work-related issues with every patient of working age’ (Stynes et al., 2020). Two FCPs reported specifically about using the Allied Health Professions (AHP) Health and Work Report and finding this useful. However, availability of training to use the report was patchy and inconsistent and the practical application of the form itself was described as cumbersome. All participants saw the value in FCPs being able to sign patients off work with legislative authority. The fact that they currently could not do so was seen as strange and counterintuitive. GPs saw FCPs as far better equipped to make that assessment and often described themselves as following FCP advice. The only concern expressed with regards to this was a FCP who paralleled signing patients off work with other advanced practice skills:

“In terms of prescribing, I am scared of the, maybe the addictive nature of it, you do not know really what they are on, or what they’ve taking, and you are being held accountable for that. But then in terms of work, if you sign someone off who, you then could get them into this cascade of being off work. So, I do not know which one scares me more” FCP (Stynes et al., 2020).

The overwhelming consensus was that employment advice was integral to the FCP role and greater legislative accountability should be attributed to the role, so it was interesting that in a pre-defined success criterion of 75% of those in employment reporting receiving work advice, only 29% received it (Stynes et al., 2020). An argument could be made on what basis greater legislative accountability should be attributed, if FCPs on the whole are not providing work-related advice to working-age adults within a primary care consult. The authors of the national evaluation reported on reflection that the target (75%) may have been too ambitious in the context of the first consultation and may have been better focused on those reporting days-off-work due to MSK symptoms (Stynes et al., 2020). However, given that individualising care and advice to patients is a marker of ‘high-quality
care,’ they suggested that the figures should be higher for FCPs having a memorable conversation with their patients who are experiencing work-related absence.

The final data was collected from 2825 patients registered from 240 FCPs from 40 services in England and 34 of the 40 services were taking part in the NHSE FCP pilot. Of the 680 patients who completed the initial questionnaire (24%):

- Mean age was 56.2 (SD 14.9), 61% were female, 97% reported their ethnicity to be white
- Average pain intensity (on a scale of 0 to 10) was 6.1 (SD 2.13) and average MSK-HQ score (range 0 to 56, higher scores reflect less impact of MSK symptoms on health) was 33.8 (SD 9.5)
- 47% had an acute/subacute MSK problem (≤3 months) 25% had pain in >1 body region
- 49% reported ≥1 co-morbidity
- The Keele STarT MSK tool to determine the risk of persistent disabling pain classified patients as: 29% low-risk, 58% medium-risk, 13% high-risk

### 2.16.4 Outcomes at 3 months

Follow-up rates at 1, 2 and 3 months were 63% (n=430), 62% (n=419) and 54% (n=370). Of the 370 patients who completed the 3-month follow-up questionnaire:

Mean reduction in pain intensity from baseline was 2.8 (95% CI 2.5,3.1) Mean score improvement in MSK-HQ was 7.1 (6.0, 8.2) 64% reported overall improvement (much better/better) since seeing the FCP. The proportion of patients in employment (n=388) who took time off work in the previous month due to pain remained consistent over 3 months (9%):6% (22 patients) received a Fit note from the GP 3% (12 patients) received an Allied Health Professions (AHP) Health and Work Report from the FCP.

Patient acceptability of FCP services was very high with 98% of responding patients reported having confidence in the FCP’s competency to assess their problem, 95% reported receiving sufficient information about self-care, 93% reported receiving sufficient information about their MSK condition Patients reported feeling valued as individuals with respect to ‘care and
respect’ from general practice staff and ‘understanding and engagement’ of their problem by the FCP.

The results reinforce the summated evidence from the literature on LBP patients, suggesting that physiotherapists are not practising in accordance with recommendations for giving specific work advice (Chance-Larsen et al., 2018). They assert that ‘supporting FCPs to deliver work advice appears to be an unmet need and specific support for the delivery of work advice by FCPs may be needed.’ Like GPs, FCPs reported that training in the use of the AHP Health and Work Report (for GPs the Med 3 Fit Note) was inconsistent and that up to 40% of MSK consultations may need a Fit Note (Wynne-Jones et al., 2009). In this evaluation only 6% of patients reported receiving a Fit Note from the GP or 3% for an AHP Health and Work Report from the FCP, this may have resulted as patients were care-navigated or patient’s self-selected to have a GP review instead of a FCP, if they though they needed time off work.

The other bias was that patients in the evaluation may have been less likely to be off work or maybe reticent to share their work-related concerns. It is also noteworthy that a qualitative study exploring patient expectations of FCP found that patients were seeking advice about whether, and when, they could carry out things, including work (Erwin et al., 2020). This study was conducted to support the development of the MSK Health Capabilities Framework to ensure it reflected patients’ priorities, and it explored questions through focus groups in four locations across England. More specifically, participants in this study wanted to know whether and when they could do the things they needed or wanted to do, including work (Erwin, 2020). However, some participants found FCPs unable to answer those questions:

Female 8 in the study reported: ‘My husband is a dairy farmer. He cannot just leave the cows and it is difficult to get help, so of course his first question to the GP was, when can I get back to work? But to be honest, he [GP] could not answer that question.’

This study seems to reinforce the strong messaging appearing in professional frameworks that HCPs must work collaboratively with people who use health and community services. The participants wanted to make informed decision about their own health which echoes
the four principles of person-centred care put forward by the Health Foundation (Erwin, 2020). The study provided evidence from a range of people with differing conditions, healthcare experience and age, across England. A major limitation was that most participants had long-term conditions, with less representation from those with acute presentations or short-lived conditions. In addition, no young women (<25 years of age) participated.

2.17 Summary

Findings from several systematic reviews suggests that MSK triage and direct access services can have comparable clinical outcomes when compared to GP-led care (Babatunde et al., 2020). Those who access self-referral services are often younger, slightly more educated, with better socio-economic status and shorter duration of symptoms (Swinkels et al., 2014). These differences in patient profile may be due to the way services are advertised, organised, and implemented. It may also be because the GP is historically viewed as the default first point of contact (Goodwin et al., 2020; Moffatt et al., 2018). From the qualitative evidence, signposting was consistently and repeatedly described as essential in facilitating access to FCP as there was evidence of widespread lack of awareness of the existence of FCP services among the patient population.

The cohort of patients in the national evaluation and other small-scale studies suggests that the cohort of patients seeking GP care is more complex that those seeing FCPs, this is also mirrored in the Swedish study as reported above, where MSK patients consulting the GP reported worse general health (measured by the EQ-5D) than physiotherapy consulters (Ludvigsson and Enthoven, 2012). The differences in outcomes and patient characteristics could be explained due to methodological differences between studies, with patients’ more willing to participate in online data collection versus paper-based data collection, FCPs less likely to invite complex patients to participate in the evaluation or receptionists more likely to direct complex patients to GPs. The STEMS-2 study which assessed the impact of self-referral to physiotherapy services, again where there was no FCP pathway, showed an inconsistent impact on GP workload with a significant increase in GP consultations for MSK conditions observed in some practices (Bishop et al., 2020). The presence of a FCP within a
GP practice is likely to have a combined impact of diverting some GP MSK workload to FCPs, providing access to some patients who may not have consulted a GP with their MSK condition and reducing the burden within a GP consultation by removing the MSK element within multi-problem consultation (Bishop et al., 2020).

The main limitations of the national evaluation were that data collection was delayed and patients were not registered consecutively by the FCP. The CSP and NHSE used several different strategies to encourage more FCP engagement within the phase three evaluation; webinars for both FCPs and NHSE regional leads; targeted support with patient resources and FCP peer network advertising. There are no data on patients who did not participate in the online evaluation despite being asked by the FCPs, and no data on the patients who agreed to be registered but did not complete the on-line questionnaires. Therefore, it is difficult to judge if the sample was representative of the general population consulting FCPs. In terms of non-response bias over the three-month follow-up, those with follow-up data were slightly older but there was little difference in gender and baseline severity.

Lastly, for the online data collection, no information was gathered about the variation in the services and whether certain models performed more effectively than others. Like much of the FCP service evaluation data, the roll-out phase of the evaluation was open to FCP services anywhere in the UK but there was no uptake from services outside England, site visits to Northern Ireland and Scotland were planned for interviews and focus groups but were cancelled due to the Covid-19 pandemic. Despite this, the evaluation and small-scale service evaluation data above provides useful data on the characteristics of patients who are accessing the FCP service, their short-term clinical outcomes, and experiences of FCPs, GPs, general practice non-clinical staff and patients. The results confirm that key success criteria are being met, but importantly for this project, except for the key success criteria for the work and health topic. The authors acknowledged that ‘further work is needed to explore barriers to FCPs providing work advice’ (Stynes et al., 2020).

With an appreciation of the primary healthcare landscape, FCP model of practice, credentialing process, capabilities, and current outcomes it is now important to consider the FFW, SA certification and health and work arena. This is especially important as FCPs providing work-related advice seems to be ‘an unmet need’ as proposed by the national
evaluation and supported within research on other HCPs. Primary care consultations have grown more than 15% between 2010 and 2014 (The King’s Fund, 2016) yet the number of full-time equivalent GPs has decreased (NHS Digital, 2018). An estimated 30-40% of GP consultations are related to MSK conditions and many of these contacts will need a Fit Note (Goodwin and Hendrick, 2016). Therefore, it is of utmost importance to consider this topic, with evidence suggesting that there could be benefits for patients if physiotherapists were involved in monitoring and issuing sickness certificates (Holdsworth et al., 2008).

2.18 Work and health

The personal, economic, and societal burden of MSK conditions is substantial and increasing with an ageing population (Jin et al., 2020). Poor health associated with persistent MSK pain affects people’s lives in many ways, by causing disability, lowering independence, and limiting people’s capacity to participate in daily activities, enjoy life, and realise their potential (Briggs et al., 2016). Being unable to maintain regular employment, increased sickness absence and resultant inactivity due to disability or ill-health early retirement, all create financial hardship related to MSK pain, affecting individuals, communities, and society (Laires et al., 2018). The fiscal impact of persistent MSK conditions is also considerable and extensive, impacting on reduced employment earnings for employees, reduced tax contributions to governments, increased risk of state benefits and incurred healthcare service costs (Martins et al., 2021; Phillips, 2009). Indeed, MSK pain is one of the most common causes of work absence with almost 25% of European workers experiencing pain in the neck, shoulder girdle and upper limbs and 50% experiencing back pain at some point in their lives (Bevan et al., 2009; CBI, 2013) at a cost of around 12 billion EUR overall per year (Zheltoukhova, 2013).

There are positive associations between good work and good health, with the beneficial effects of work outweighing the risks of work and are greater than the harmful effects of long-term worklessness (DWP, 2016). However, this concept contrasts generally with increasing trends of SA, long-term incapacity, disability, and ill-health retirement to common health problems (mental and physical health conditions). Numerous studies have shown that individuals without a paid job have both poorer physical and poorer mental health
compared to employed individuals (Bartley et al., 2004; Wanberg, 2012). Subjective poor health was a risk factor for transition into disability benefits (relative risk (RR) 3.61; 95% CI 2.44 to 5.35), unemployment (RR 1.44; 95% CI 1.26 to 1.65), and early retirement (RR 1.27; 95% CI 1.17 to 1.38) (Van Rijn, 2014). The presence of a chronic disease was a more modest risk factor for disability benefits (RR 2.11; 95% CI 1.90 to 2.33) and unemployment (RR 1.31; 95% CI 1.14 to 1.50), but not for early retirement (Van Rijn, 2014).

Among studies there was a large heterogeneity, suggesting that the influence of poor health on the ability to work will not only depend on the nature and severity of health problems but also on individual, organizational, and national factors. In a Dutch longitudinal study, over 8000 employees between 45 and 64 years were followed for 3 years to investigate the influence of chronic health problems on exit for paid employment through disability benefits, unemployment, and early retirement (Leijten et al., 2015). Severe headache, diabetes mellitus, and musculoskeletal, respiratory, digestive, and psychological health problems predicted an increased risk of disability benefits (hazard ratios (HR) varying between 1.78 and 2.79) (Leijten et al., 2015).

What is apparent in such studies is the theory that improving work participation for disabled and sick-listed patients may improve health outcomes, quality of life and reduce fiscal implications and this theory is not a new concept (Waddell and Burton, 2006). A meta-analysis of 29 longitudinal studies showed that health problems are an important barrier for maintaining paid employment – and thus for trajectories out of paid employment during the working life course through disability benefits, unemployment, and, to a lesser extent, early retirement (Van Rijn et al., 2014). Since work-related factors are in essence modifiable, they should not only be primary targets for intervention programmes at the workplace but also be addressed in individual treatment plans within the ‘Front door of the NHS’ (primary care). A Dutch study of 749 long-term absentees with common mental health conditions, as diagnosed by a Doctor in the last 1 year (Schuring et al., 2017) suggested that entering paid employment resulted in substantial improvement in mental health as evidenced by a change of mean of 16 points on the mental health scale 0–100 of the Short-Form 12 ) and in physical health (mean of 10 points on the physical health scale 0–100 of the Short-Form 12). This novel evidence for causal inference that work can be good for health reflects findings from observational studies in the past. The sociologic theory of latent functions by Jahoda
(1982) posits that work contributes to personal identity and self-esteem and provides opportunities for social contacts and collective experiences, which may have direct and indirect effects on health.

In summary, work is, for most people, a necessity and it is part of who they are and is often the second thing we ask when meeting other people: ‘what is your name....and what do you do?’ (Waddell and Burton, 2006). Work provides structure to our lives and the evidence supports that work is generally good for our health and wellbeing: when compared with people who are workless, people who are in work have improved physical and mental health, better socioeconomic prospects, and reduced mortality (Waddell and Burton, 2006). This, though, should not be accepted that all work is good. The caveat is that good work, or more explicitly good jobs are health supportive. While a job many not be optimal for the employee with a health problem, and medication may be needed to facilitate a return, this needs to be balanced with helping the person RTW in a timely fashion as the probability of a successful return reduces over time (Waddell and Burton, 2008). Returning to work after a few days or weeks, even in a limited capacity, is a different proposition to obtaining and starting a new job after long-term incapacity.

The positive relationship between work and health underpinned the introduction of the Fit Note in April 2010 as the public face of UK statutory recognition that work is generally good for health, that going back to work (even in a limited capacity) can actually aid recovery, and that staying off work can lead to long-term absence, job loss and social exclusion. Remaining active at work, while acknowledging MSK pain, has been demonstrated to be beneficial to individuals and employers resulting in less sickness absence, less time on modified duties, and a reduction in pain recurrence (Waddell and Burton, 2006).

Intervening early when employees report musculoskeletal pain can have a significant impact on their ability to remain in work (Black, 2008; Waddell and Burton, 2008). The promise of Fit Note reform in 2010 has not been fully realised, largely due to a lack of robust implementation of the relevant policy directives (and work and health concepts) into practice (Bartys et al., 2019). The Fit Note should have transformed the way SA was certified, enabling people with common health problems to continue working instead of being ‘signed off’ (CBI, 2013). Despite recent policy ruminating, the underlying idea of an
HCP adjusting the job to suit the employee remains a key and important aspect of work-related rehabilitation from evidence as far back as fifteen years ago (Waddell and Burton, 2008).

### 2.18.1 The predicament and principles

The above concepts have critical implications for a person at risk or taking ongoing sickness absence. An employee off work can fully or partially RTW or is at risk of long-term incapacity and as personal, health, occupational and social factors change, they can conflict with disparate systems, policies and employer practices that act as barriers or obstacles in a return-to-work plan. These barriers to RTW and the strategies and rehabilitation interventions needed to overcome them become more complex over time (Waddell and Burton, 2004). This time pressure provides the basis for earlier clinical, workplace and work-related rehabilitation interventions (Waddell and Burton, 2008). Work-related MSK conditions account for 29% of all US workplace injuries (Silverstein and Evanoff, 2011). As work-related MSK conditions costs between 0.5% and 2% of the EU’s gross national product (Schneider and Irastorza, 2010), it could be argued that the current approach to work-disability and ill health is not working as MSK conditions are prevalent, costly, and increasing (Hurwitz et al., 2018).

Briggs and Dreinhofer (2017) also support the view that the rising burden of MSK conditions requires effective rehabilitation strategies of all the players involved in the process. In a call to action called ‘Rehabilitation 2030,’ Briggs and Dreinhofer (2017) pointed out that increasing disability rates such as that related to MSK conditions requires careful planning to improve and maintain access to quality rehabilitation for the future. They consider that to address the rising burden above, changes will likely be required at multiple levels (including health governance, policy, and how individuals’ access and participate in care) across multiple settings. Briggs and Dreinhofer (2017) contend that MSK conditions impact on functional health such as mobility, participation, financial security, as well as mental well-being and therefore emphasise the importance of improved work-related rehabilitation for these conditions globally.
A purely biomedical understanding of the work-health concept fails for FCPs because it does not acknowledge the interactions between an employee and their environment and does not promote the health-supportive aspects of work. The biopsychosocial model, which considers the complex interactions between the employee and their environment, can address the individual and psychological issues, but recognise the biological factors, while allowing work to be a key health outcome.

This framework was progressively developed by several clinical and occupational health experts and academics, culminating in a guide for the clinical and workplace environments (Kendall and Burton, 2009). The rationale of this framework as a tool is to accommodate employees in the workplace to ensure work ability, helping to prevent avoidable work disability. It considers the facilitation of identifying obstacles to work participation that can be overcome using a combination of work-focused healthcare (potentially from an FCP), a supportive workplace, strategies to overcome the obstacles and procedures to ensure all players are onside and collaborating (Kendall and Burton, 2009).

Figure 5 provides a conceptual model of the ‘pyramid of disability’ (amended from Evanoff et al., 2014). The base comprises employees without symptoms of MSK conditions, some employees with symptoms but do not seek treatment, while others seek treatment but experience no work disability (Evanoff et al., 2014). A smaller number of them progress to short-term or chronic functional impairment and work disability. As risk changes, recovery of function and alleviation of symptoms occurs, and workers move back down to lower levels of the pyramid. Therapeutic interventions, work related and non-work-related exposures to physical and psychosocial stressors, medical co-morbidities, workplace policies, and a variety of other personal and social factors can mediate transitions between levels of this pyramid.

The risk factors that play a predominant role in the initial transition from asymptomatic to symptomatic may differ from factors that most strongly affect prognosis and disability among symptomatic workers. Few studies have examined separately the risk factors for transitions between different stages of symptoms and disability, nor have most reviews considered separately the risk factors for different outcomes such as MSK without time loss and MSK with prolonged time loss. There are suggestions in this model that work-related
biomechanical factors are more strongly associated with initial incidence of MSD and transitions between states at the bottom of the pyramid, while psychosocial and psychological factors may be more strongly associated with outcome and prognosis (Evanoff et al., 2014).

Figure 5. Diagram presenting a conceptual model of the ‘pyramid of disability’ (amended from Evanoff et al., 2014).

Two systematic reviews were found in this literature review about return-to-work interventions for MSK conditions (Franche et al., 2005; MacEachen et al., 2006). The first review examined quantitative studies of workplace-based interventions for employees with MSK conditions and other pain conditions. They rigorously reviewed only peer-reviewed studies, with 10 of sufficient relevancy and quality to be included. The review focused on RTW interventions found within workplaces: early contact between employer and
employee, work accommodations (change in demands etc), communication between healthcare provider and employer, workplace visits, staff replacement and RTW co-ordination. The results suggested that strong evidence existed for work accommodations and communication between healthcare provider and employer significantly reduced work disability duration. There was also moderate level of evidence for early contact with the employee, workplace assessments and RTW co-ordination significantly reduced work disability duration. MacEachen et al., (2006) in a qualitative literature review examined the processes and practices of RTW for employees with MSK conditions and pain conditions. MacEachen et al. reviewed 13 qualitative studies from the study of France et al. (2005). They conducted a meta-ethnographic synthesis with 8 key concepts that considered: goodwill, relations between employees and systems, contact between employee and employer post injury and before RTW; employer contact with clinicians; modified work; union role; supervisor role; and workplace/organisational environment.

In all concepts reported there were potentially positive or negative consequences, for example, the role of the manager could facilitate or be a barrier to RTW outcomes. The authors presented three overarching findings: RTW is complex with great depth and breadth, goodwill and trust are key for a successful RTW; therefore, communication and social barriers are concerns to be addressed in the process. The findings from the above reviews were used to create a RTW tool named the 7 principles for successful RTW in Table 4 (Institute for Work and Health, 2008):

<table>
<thead>
<tr>
<th>Table 4. Seven Principles for Successful Return to Work (Institute for Work and Health, 2008)</th>
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<tr>
<td>The workplace has a strong commitment to health and safety, which is demonstrated by the behaviours of the workplace parties</td>
</tr>
<tr>
<td>The employer makes an offer of modified work (also known as work accommodation) to injured/ill workers so they can return early and safely to work activities suitable to their abilities.</td>
</tr>
<tr>
<td>RTW planners ensure that the plan supports the returning worker without disadvantaging co-workers and supervisors.</td>
</tr>
<tr>
<td>Supervisors/Line managers are trained in work disability prevention and included in RTW planning</td>
</tr>
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</table>
The employer makes early and considerate contact with injured/ill workers. 6. Someone has the responsibility to coordinate RTW

Employers and healthcare providers communicate with each other about the workplace demands as needed, and with the employee’s consent.

The tool was based on the best available research evidence and has become a popular tool for download. Since the creation of the seven-principle tool there have been several reviews. Authors have noted many of the above factors related to MSK conditions and a successful RTW (Campbell et al., 2013). A review of systematic reviews by Cancelliere et al., (2016) aimed to identify common prognostic factors for RTW across different health and injury conditions and although it covered a variety of common health problems, of the 56 reviews considered with low risk of bias, 35 included MSK conditions (primarily spine related). The factors associated with positive RTW outcomes were higher education and socioeconomic status, higher self-efficacy, and optimistic expectations for recovery and RTW, lower severity of the injury/illness, RTW co-ordination, and multidisciplinary interventions that include the workplace and stakeholders.

These interventions included multidisciplinary education, psychological, and outpatient interventions/comprehensive treatment. In addition, interventions that included exercise and early contact with the worker by the workplace (i.e., within the first 3 months following onset of work disability) were linked to positive RTW outcomes. Factors associated with negative RTW outcomes for MSK conditions included older age, being female, higher pain or disability, depression, previous SA and unemployment and higher physical work demands. The authors compared their findings to the seven principles and concluded their synthesis results overall supported the principles, without an evidence base for principles 3 and 4, although they were based on sound basic science regardless. They recommended adding an extra principle in the form of ‘the employee has access to multidisciplinary resources (including clinical interventions for pain, disability, depression, and poorer prognostic factors).’

In another review for the Cochrane group, van Vilsteren et al., (2015) found 14 RCTs conducted in a variety of settings that evaluated workplace interventions to prevent work
disability. Eight of these included employees with MSK conditions, with a subgroup analysis of these supporting MSK interventions reducing time to RTW compared to usual care. Most of the studies reported on modified work/accommodations, contact with health professionals, and some type of case management for their interventions. The reviews described had significant overlap, with many of the same articles appearing in them.

A year after this review, Williams-Whitt et al., (2016) considered the above study's findings with a review of the grey literature and a stakeholder panel. They argued that more emphasis should be placed on organisational factors in workplace interventions but supported the key findings. They suggested managers and supervisors should be provided with training to ensure they are fully engaged with employees in the RTW process. Cullen et al., (2018) added to the literature base with a systematic review examining the effectiveness of workplace-based RTW and work disability interventions for employees with MSK, mental health and pain-related conditions. They found 36 medium and high-quality studies, of which 14 studies (10 medium-quality and 4 high-quality) examined MSK and pain conditions with a strong level of evidence of a positive effect for robust multi-domain interventions to reduce SA time loss. They found that graded exposure to activity to have a positive effect of reducing sickness absence (moderate evidence), work modification having a positive effect on reducing lost time, and multi-domain strategies having a positive effect on work functioning after RTW (all moderate level evidence). Like the other reviews, the authors suggested interventions with multiple layers aimed at service co-ordination, work accommodations and improving employee health for reducing lost time associated with MSK conditions.

Lastly, Tingulstad et al., (2022) conducted a systematic review to assess and summarize available research about the effects of work-related interventions for people on long-term sick leave and those at risk of long-term sick leave. This review included 20 RCTs published from 2000 to 2020 that examined different types of return-to-work interventions for people on sick leave in Denmark, the Netherlands, Norway, and Sweden. Very low- to moderate-quality evidence suggested mostly no, or marginal, benefits of the return-to-work interventions. This is in line with twelve related systematic reviews published since 2012, specifically in relation to 'long-term sick leave’. Despite the overall conclusion, there were promising results, with a few RCTs showing effect for the outcome RTW and minimal effects
on symptom reduction, function, and cost-effectiveness with an explanation that the interventions were often compared to other active interventions with a health-related evidence-based approach. The authors were not able to conduct meta-analyses, given study heterogeneity, inconsistent measurement, and reporting. This meant that it was neither possible to increase precision to a greater extent on the pooled RTW outcome/result to answer if it was more precise than the results from the individual studies. Nor was it statistically possible to assess potential differences across groups (diagnoses, dosages, length of SA or geographical settings).

In the above reviews not all the original principles are supported equally, although the most often supported are that the employer considers amended job demands through work modification and employers and HCPs communicating with each other. However, these may be supported in countries that require mandatory workplace or systemic practices aimed at reducing work disability within their health systems, unlike the UK which does not have universal access to OH or work-rehabilitation.

The process of RTW is complex and not merely dependent on the effectiveness of interventions, rather it involves an interplay of many factors beyond the health condition. In addition, sustainable RTW is difficult to define as there is heterogeneity in duration for outcome measures because of the difference in absence duration recorded in the studies. Personal and social factors play a role in facilitating RTW but support from leaders and co-workers, positive attitude, high self-efficacy, young age and higher education levels were found to be the most consistent factors for sustainable RTW.

2.18.2 Sickness absence (SA) in the UK

It is now important to view the setting of FCPs when discussing work and health, SA certification and FFW. This section will consider the SA arena, FFW and work-related discussions, SA costs, GPs as authorities of SA and the benefits system, AHP health and work report and a summary of the evidence base.
2.18.3 SA certification

HCPs play an essential role in SA management. Employees in the UK are generally expected to provide certification from an HCP (historically this has been the GP) who provide rehabilitation, recommend ongoing or long-term absence from work and advice (Black and Frost, 2011). This review suggested that early access to health services and receiving rehabilitation can positively impact on RTW success (Black and Frost, 2011).

Employees in the early 20th century were only entitled to paid wages if they were ‘ready, able and willing to work’, most are now entitled to at least basic pay if they are unable to work due to ill health. Sick pay is of two forms: Statutory Sick Pay (SSP) under the Social Security and Contribution and Benefits Act 1992, and contractual sick pay under the contract of employment. A UK employer is obliged to pay SSP to those who qualify under the Statutory Sick Pay (General) Regulations 1982 (amended) for up to 28 weeks, and additional sick pay as provided in the contract of employment. For those that are low paid, they may only be in receipt of SSP, which in 2022 amounts to £99.35 per week: one of the lowest entitlements in Europe. SSP is not paid for the first three qualifying days in any period of incapacity for work and only employees whose average gross weekly earnings are at, or above, the lower earnings limit for the payment of National Insurance contributions (currently £120 per week) can claim. Those who are unemployed and self-employed do not qualify for SSP.

To corroborate this, employers are entitled to ask for evidence that an employee is incapable of work. Procedurally this involves self-certification up to 7 days absence and after that by means of a Fit Note (Med 3 / Statement of Fitness for Work). Prior to April 2010 GPs signed patients off from work; after this date, a new sickness certificate was introduced (the ‘Fit Note’) enabling GPs to recommend tasks that a patient can perform in the workplace, to help an individual, remain within the workplace (Black, 2008).

2.18.4 Historical overview

The necessity to certify sickness absence, when an individual employee felt too ill to work has been commonplace for over a century in the UK. In 1911 David Lloyd George, the
Chancellor of the Exchequer at the time passed the National Insurance Act 1911 that provided a system of national insurance for people in employment to cover the risks of illness and unemployment. This system was funded by statutory contributions from the employee, their employer, and the state (Clarke, 1913). Although labelled as an overall state scheme, it was administered by approved societies, who were registered under the Act and operated by ‘Friendly Societies,’ made up of trade unions and insurance companies. The scheme had access to treatment from panel doctors, who had a therapeutic role but also provided initial SA certification.

The early attempts at gatekeeping access to benefit were largely ineffective as the payments were greater than those predicted by the actuaries and an inquiry was set up in 1914 to ‘enquire into and report upon the excessive claims’ of the SA scheme. The inquiry heard evidence for six months with various ethical challenges apparent. For example, there was no universal definition of ‘incapacity for work,’ nor an understanding of the extent to which it applies to an employee’s job and what constituted ‘work.’

The inquiry reported that doctors were inconsistent in their approach, with contradictory information on certificates prevalent to protect the patient’s confidence, challenges in social motives of the time such as unmarried pregnant women and sexually transmitted diseases and an overarching theme of moral hazards for doctors. This scheme paid doctors on a capitation basis, with more patients and more pay. Therefore, a conflict arose with some doctors readily issuing SA certification to attract more patients. To resolve the conflict, there was a recommendation from the report to urge ‘a regard for the interest of the patient, therefore, involves a duty to see that the underserving do not receive benefit to the detriment of the deserving’ (Clarke, 1913). Subsequently, government became more stringent in its approach of oversight of the societies administering SA benefits. Guidance was produced about claims assessment, claimants who were accepted onto the scheme were visited at home by ‘sick visitors,’ to try and assess those malingering, and those who were deemed undeserving were referred to regional medical officers (Gulland, 2011).

The ‘Friendly Societies’ of the 1911 Act provided a blueprint that was becoming a bureaucratic and costly exercise for stakeholders, with amounts being paid out more than financial modelling budgets at the time. During this time, SA rates continued to increase,
and more stringent measures were brought in to arrest the rise, with a significant number of local panel doctors referring into regional medical officers and ‘sick visitors’ resorting to policing of the approach, without medical assessments. Despite the information that this was ineffective and inefficient, Beveridge incorporated the same mechanism into the new welfare state (Beveridge, 1906).

The NHS required family doctors to issue sick certificates for the Ministry of National Insurance. The rationale behind this was to make treatments widely available and in making individuals healthier, preventing unnecessary SA the NHS may fund its own service by increasing the gross domestic product (Beveridge, 1906). This notion was limited and undermined in the evidence of effectiveness of these initial directives, from the first National Insurance Act. Despite this, simplistic and reductionistic beliefs continue to hold true for the nature of illness and sickness, with a mindset that both are invariably and simply the consequence of disease. Evidence at the time reports that the BMA and Ministry of Health had a poor working relationship, with doctors intensely disliking the prospect of becoming employees of the state (HMG, 1948). In fact, in a 1948 poll, just 4735 out of 45549 doctors supported the NHS with the labour minister for health, Nye Bevan, famously admitting that he had ‘stuffed their mouths with gold’ to broker a deal between the MOH and BMA after 1.5 years of wrangling (Webster, 2002). The challenge for doctors can be summed up in the BMA report on the NHS service bill (BMA, 1946):

‘For the medical profession to be converted into a technical branch of central or local government would be disastrous both to medicine and to the public it service. The doctor’s primary loyalty and responsibility should be to his patient. The interest of the demands that he should be free to act, speak and write on professional matters according to the dictates of his conscience. He should never be required, or be in a position to be required, to modify his standards of medical certification at the behest of the state. This independence of professional judgment and responsibly of action, evolved over centuries, is inconsistent with the conception of the doctor as a civil servant or local government officer. Valuable though these forms of organisation and control are in many fields of human activity, they would be fatal to the personal doctor-patient relations which lies at the heart of good medicine. The doctor should be the patient’s doctor and not the government’s doctor’.
Again, the central tenant for central government planning rested on the assumption that the doctors’ skills in diagnosing and treating disease were transferable to the assessment and management of sickness.

2.18.5 Sickness absence systems

The vast majority of Organisation for Economic Co-operation and Development (OECD) countries have statutory paid sick-leave systems (Raub et al., 2018). However, national sick-pay policies differ significantly across these countries and comparative analysis can highlight an understanding and interplay between statutory, corporate, and private forms of income protection for employees on SA (Ose et al., 2022). There are notable differences in international SA rates due to differences in the legitimation of work incapacity, sick-pay levels, and criteria to transfer to ill-health insurance (Ose et al., 2022). In the UK, SSP (see glossary) is the same for all employees, while company sick pay varies from employer to employer. Like Denmark, a fixed amount per week is paid to all sick-listed employees in the UK as discussed above. However, there is considerable variation in compensation after the employer period, from 0% in the UK (no SA benefits provided by the social protection procedure).

The employer decides if a medical SA certificate is required in Denmark and Iceland, this is a requirement after 3 days in Germany, 3-8 days in Norway and after 7 days in the UK. In Holland, there is no requirement for SA certification from a medical expert at all, only self-certification where the employee reports sickness to the employer and provides a reason for this to the occupational physician. In the majority, the GP issues SA certification, with a review of the latest system in the UK below. In Germany and Norway, chiropractors and physiotherapists can issue sick notes, and in Sweden and every German state, dentists. None of the countries have a requirement concerning the OH qualifications for the SA certifiers. In Holland, there is a robust follow-up post SA certification with the employer responsible in covering all costs during the first 2 years for their absent employee. The employer is obliged to fund a problem analysis of the SA episode by an occupational physician within the first 6 weeks and at 8 weeks, the employer and employee are expected to plan for a RTW with any interventions needed. At 1 year, a reintegration consultant may be hired to consider redeployment into another job role and organisation and at 2 years, a
disability benefit may be applied from the social security system. This is only granted if the loss of earning capacity due to the disability is more than 35% of the former income.

**2.18.6 Fit Note: Fit for purpose?**

As previously discussed, long-term SA has negative consequences for working age adults, their families, communities, and society, leading to social exclusion, adverse health impacts and financial insecurity (Henderson, 2012). In 2008, Dame Carol Black released a UK government published report that suggested that the process of SA by GPs was a contributor to the problem of long-term SA (Black, 2008).

An estimated 149.3 million working days were lost in the UK in 2021 through SA; over 2% of total working time and an equivalent to 4.6 days per worker (ONS, 2022). The associated direct costs in state benefit were more than £13 billion, plus £9 billion to employers in sickness benefits. Similar rates of SA are found in many of the other European countries and in the UK most episodes are short (<4 weeks) with 30% of the total self-certifying their SA. However, a proportion of episodes may last longer than necessary, and an estimated 300,000 individuals move onto health-related benefits annually (Gabbay, 2010). The longer individuals are absent from the labour market, the harder it is to return to the workforce, in any capacity (Gabbay et al., 2015).

Due to these significant concerns, and especially the extent of long-term SA and flow into worklessness, key recommendations in the Black report (2008) centred on: case management services, greater OH support for employers and GPs, and the introduction 2 years later of a new universal Medical Statement of Fitness to Work, the ‘Fit Note’ (to replace the ‘Sick Note’).

For primarily social security and SSP purposes, the new Fit Note introduced optional advice that the GP or hospital doctor could give to employers, stating that the individual ‘may be fit for work taking account of the following advice’, with check boxes for the doctor to use to suggest strategies such as a phased RTW, amended duties, altered hours or workplace adaptations. The clinician could add written comments with the expanded ‘fit to work, ‘not fit to work’ and ‘may be fit’ options and consider circumstances under which the patient could work and identify work solutions (Gabbay, 2010). Rather than being an adjudicator
this could enable the GP to be an advisor on work and offer guidance for the employee (patient) and employer (Byng et al., 2015). The GP can extend the period of SA prescribed on the first Fit Note by providing further Fit Notes, each valid for a specified period. The ‘fit to work,’ ‘not fit to work’ or ‘maybe fit’ option chosen when the Fit Note is prescribed applies to the patient’s presentation at that time, and it may change on future Fit Notes according to the factors such as illness severity and employment type (Dorrington et al., 2018).

The problem with even the amended Fit Note from 2010, is that the system still seemed not to work as effectively as it should. Evidence suggested that more than one-third of Fit Notes were issued for five weeks or longer (NHS Digital, 2020), yet stakeholders appreciated the challenges of the longer someone is off work the chances of them returning decreases (Black and Frost, 2011). The Fit Note seems to be is rarely used to its full potential, with Fit Notes focussing on the ‘not fit for work’ option, rather than the ‘may be fit for work’ option. Of the 8.8 million Fit Notes issued by GPs in 2020, a full 10 years since the amended Fit Note went live, 94% advised that the patient was ‘not fit for work’ without suggesting adjustments or advice for the work conducted (NHS Digital, 2020), with an argument that most patients present in primary care with common mental and physical health problems of low risk and suitable for some form of work. This evidence also suggests that FCPs would not need another GP appointment for that time period rather than numerous review appointments to deal with a Fit Note.

The Fit Note was introduced as described to allow clinicians to provide their patients with advice on FFW and to encourage them to resume some work as soon as they had recovered sufficiently. Despite this, clinicians do not provide FFW advice on most Fit Notes and, in 2016, this led the UK government to declare that the Fit Note was ‘not full achieving what it set out to do’ (DWP, 2016).

2.18.7 Revised rules on issuing Fit Notes

A government consultation resulted in the decision to broaden the range of HCPs who could complete the Fit Note and remove the requirement for the doctor to sign the form in ink. The so-called digital Fit Note was introduced in April 2022, with the certifying HCP required
to simply enter their name and profession on the new form. As of July 2022, nurses, occupational therapists, pharmacists, and physiotherapists can certify the Fit Note, a significant change and one that may mark a major improvement in the utility of Fit Notes in supporting RTW and job retention (DWP, 2022). In the UK there is no legal obligation for employers to observe GP recommendations or for GPs to recommend adjustments to workers (Dorrington, 2018), but primary care should be an ideal environment to influence these work-related outcomes for those living with MSK conditions in the community, as it acts as the first point of contact in the healthcare system and ‘front door’ of the NHS.

The relationship between SA and health status is non-linear and many people with significant disability participate in the workplace (Dame and Davies, 2013). Thus, due to a distinct lack of correlation between disease severity and SA, an argument suggests that SA in general is not an inevitable consequence of common health problems (Boot et al., 2005; Fleten et al., 2004). To overcome these barriers the premise of replacing the old ‘sick note’ with the Fit Note centred on the mindset of what patients can do (ability), rather than what they were incapable of doing (disability) (Black, 2008). However, this functional assessment is often not translated into the Fit Note provided to the employee and employer, as evidenced through the current Fit Note data. GPs report that they are inadequately prepared to consider functional assessment and have time constraints during a patient consultation. Therefore, certifying a patient ‘not fit for work’ is often the path of least resistance in a routine GP consultation that lasts 10 minutes at best.

In announcing that a wider range of HCPs are now able to certify Fit Notes, the UK government said that it would ‘help reduce pressure on doctors, particularly GPs, while simplifying the process of issuing and receiving a Fit Note, potentially reducing bureaucracy for employer and the NHS (DWP, 2022). Furthermore, the changes would ‘enable patients to see the most relevant HCP and have better conversations about work and health.’ This is arguably the biggest change since the Fit Note’s inception and the new format could empower HCPs to engage in better conversations about work and health. The change will see its wide implementation across general practice and hospital settings from 2022. Although these HCPs can, in comparison to GPs, potentially spend more time with patients, have the ability to assess MSK function related to a physical health presentation, they have not traditionally conducted this work-and-health role. This is a key driver for the current
thesis, namely, to understand the training and development needed to carry out FFW and SA certification in primary care settings for FCPs.

Evidence suggests that many AHPs and other HCPs still report inconsistent use of the existing AHP Health and Work Report, which was designed for use by AHPs to support people to remain in, or return to, work (AHPf, 2019). Changing the culture of the traditional role of therapeutic intervention, including FCP assessment, diagnosis, and treatment, to one that consistently considers FFW and SA advice and viewing work as a health outcome will take time. This is especially challenging when Fit Note receipt for patients in primary care is likely to be influenced by non-health factors associated with SA, for example, job type, management style, supportive work environment, past experiences, perceptions of work and social pressures outside of work (Harvey et al., 2018). In addition, it is also liable to change depending on the geographic and socioeconomic status of patients, with lower skilled work associated with low job control, lower satisfaction, financial difficulties, and increased SA risk (Dorrington et al., 2015).

Despite the scale and importance of Fit Note policy, there has been surprisingly no independent research found in this scoping review into the use of the Fit Note and training needed to effectively complete it (Dorrington et al., 2018). It is difficult to generalise and make explicit recommendations as previous studies have largely utilised aggregated routine data, which suffers from the ecological fallacy, when an inference is made about an individual based on aggregate data for a group (NHS Digital, 2022) or a reliance on directly collected information from Fit Notes, with a lack of information on long-term MSK presentations and individual demographic variables (Shiels et al., 2013).

This chapter acknowledges that the challenges mentioned above does not only exist within the world of MSK physiotherapy (primary or secondary care) but that it applies to a variety of settings, professions and specialities within healthcare. The fundamental management of those with work issues lies with effective communication between stakeholders and the specific content provided to patients, applying to any profession and setting that has direct contact with those at risk of avoidable SA. Although this chapter has a strong MSK bias due to the primary care setting of FCPs, they are expected to see and accurately refer on non-MSK and provide advice on undiagnosed conditions, some of which may be medical.
Therefore, it is appropriate to highlight that these other non-MSK problems can equally impact on work and health. Other professionals could have the ability to overcome and manage the non-medical issues faced, such as the perception that a diagnosis alone justifies work absence, other problems such as job dissatisfaction, anger, fear, or other psychological factors, poor information flow or inadequate communication or procedural delay (ACOEM, 2006). Although health related absence from work is common, illness only explains small proportion of the variance in SA, this chapter suggests it is important to recognise the contribution of other non-MSK factors. Evidence of the benefit of early intervention to support absent workers absent is increasing, yet patients may not get evidence-based advice on resuming work from the specialist treating their illness, if a return to work plan is needed it should be it should determine the level type and frequency of interventions and services needed. Therefore, it is not only the process of the ‘doing’ in FFW and SA but also the content (i.e., What is being said and advised). This review also suggests that employee engagement, line manager attitudes and behaviour, the provision of good work, measuring, monitoring, and managing SA, prompt OH or healthcare referral, good advice on a Fit Note, application of policy and procedure, timely rehabilitation interventions, case management, communication with key stakeholders and access to health care are all non-MSK/medical factors related to successful SA management. It is important to not overlook these factors, but the review is unable to go into significant depth in discussing and critiquing the evidence base for each factor and reinforces that FCPs and other HCPs should focus on considering modifiable factors in reducing SA, both intrinsic and extrinsic, medical, and non-medical. All HCPs have a role to play in FFW and SA management and this evidence base is equally applicable to them, but the focus of this thesis is on FCPs within primary care settings.

Overall, three models of SA management have been found in the literature: the expected utility model of absenteeism, the stress model, and the organisation model. The expected utility model assumes that workers have some choice whether or not they will report sick and that they consider the costs and rewards in making a decision to attend or not. Approaches based on this model should aim to set a high threshold for being absent and a low threshold for resuming work when absent. The occupational stress model focuses on the negative effects of the work environment and the coping abilities of workers. Some people are more resilient and have better coping strategies than others. Approaches based
on this model focus on reducing stressors, improving social support, and building resilience. The organisational model focuses on rewarding work, including job content, fairness, status, and social relationships, to improve satisfaction and motivation. Approaches based on this model focus on promoting well-being. These three models all have merit. In practice, they are often combined to form an integrated model which aims to alter the balance of costs and rewards, reduce stress, and promote resilience and well-being (Steensma, 2011).

2.19 Summary of evidence base

Whilst systematic reviews sit at the top of the evidence pyramid, the types of research questions they address are not suitable for every application. Many characteristics more appropriately require a scoping review. This narrative and scoping review has sought to explore the extent and nature of the body of FCP literature, summaries of existing research on the work and health topic, FFW and SA certification, an overview of primary healthcare, advanced practice, funding, work competencies for physiotherapists that exist, SA and the Fit Note practice, to identify evidence gaps. The evidence on FCP is widely dispersed but not extensive and the vast majority is emergent and not yet amenable to effectiveness questions. The major issues and gaps that have arisen concern both empirical and non-empirical evidence on (i) the FCP role (ii) the concepts of work and health (iii) the specific strategies and data on sickness absence, (iv) the significance of the Fit Note and recent changes to legislation, (v) narrative reviews, perspective studies and discussion pieces on work and health competencies mainly and (vi) obstacles and barriers to implementation of work and health competencies.

That there is a clear gap in the work and health research agenda for widening access to FCP education, and by extension therefore the consideration of current and undergraduate and postgraduate learning and development needs to accomplishing this end, has emerged as a significant conclusion to this explorative review. To that end, the initial broad questions have been answered in understanding the research base on the FCP model of practice, the paucity of learning and development needs (none) investigated for FCPs on the FFW and SA
certification topics and promising research avenues on the health and work topic for FCPs and other HCPs. The work and health competency section in this review suggests that additional research is needed to focus on further clarifying the competencies that exist from an empirical study but also to re-evaluate the obstacles identified.

Therefore, the review provides evidence of the need to consider the learning and development needs of FCPs, especially as legislation is newly changed, FCPs training and development is embryonic, and HCPs do not seem to consider the work and health topic. More conceptual knowledge is required, to identify and map existing capabilities and understand deficiencies. As the lack of research data on the competencies for FCPs is frequently alluded to in the existing research or is mostly absent overall, there is evidence to suggest that a consensus project would add to the emerging body of research with a main aim of constructing work and health competencies that underpin a FCP’s role in FFW and SA certification in UK primary care settings. Therefore, the research question (s) for the studies were developed and constructed based on the findings from this chapter. The new competencies will have three practical purposes: (1) as a set of educational goals for FCPs working in primary care stings; (2) as a guide to developing work and health competence in primary care settings; and (3) appeal to educational and governing body stakeholders to include these in future under-, post-graduate training, national competency frameworks and clinical guidance for FCPs and physiotherapists.

The specific objective of the thesis is to construct new competencies that underpin a FCP’s role in providing FFW recommendations and SA certification in primary care. Taking an overview of all the issues, the main research question is: ‘What knowledge and skill competencies are required to conduct SA certification and give FFW recommendations in UK primary care settings?’ The thesis is split into three studies with the following objectives, to address the main issue:

1. Test a consensus building methodology in a group of HCPs to identify design issues and evaluate a study’s feasibility, practicality, resources, time, and cost prior to the main research being conducted (Pilot Study).
2. Explore FCPs opinion and identify competencies on this work and health topic and determine whether consensus can be reached on the learning and development
needs of FCPs for FFW recommendations and SA certification, and the
challenges/obstacles to implementation (Study 1).

3. Explore OH physiotherapist’s opinion and identify competencies on this work and
health topic and determine whether consensus can be reached on the learning and
development needs of FCPs for FFW recommendations and SA certification, and the
challenges/obstacles to implementation (Study 2).

4. Determine and reach consensus on a final core competency set for FCPs to complete
FFW recommendations and SA certification in primary care by engaging FCPs
through a national formal competency study (Study 3).

2.20 Conclusion

From this review of the literature, there is a focus on the competencies that FCPs need to
deliver work and health information to patients with MSK conditions. Within the available
literature, there is a gap in the FCPs role regarding health and work and empirical derived
competencies for practice, which will be addressed in the subsequent studies. However, the
challenges and obstacles that hinder implementing work and health education highlighted
earlier in this chapters also must be considered in the studies. Often both competencies and
obstacles documented in the literature are not based on empirical evidence but eminence-
based opinion and perspective study. In the next chapter, the concept of competencies and
their relationship to physiotherapy will be presented.
Chapter 3. Competency overview: concepts, expertise development and learning theory for Physiotherapy

3.1 Chapter overview

Chapters 1 and 2 have introduced the background, context, rationale, and justification of the thesis and provided an overview of the FCP model of practice. It is clear from these Chapters that there is a gap on the knowledge and skills that FCPs need to deliver the work and health agenda for patients within primary healthcare in the UK. This chapter focuses on the concept of competency, specially related to FCP and other HCPs professional competence and competency within the healthcare system. This is important as it is likely that competence includes some aspect of knowledge, skills, and attitudes and these are deemed essential for HCP clinical practice and safe patient care (Cant et al., 2013). This chapter will provide a detailed explanation of two major components of competency important for clinical practice: knowledge and skills. An overview of the underlying definition of competencies is made with the work and health competencies that exist explored and highlighted within the previous chapter. This chapter highlights the meaning of competency frameworks and their propensity for quality and evidence-based healthcare. Lastly, educational theory will be presented related to competency and how this is supported within this study. To consider these aspects, the researcher conducted a review of the educational, methodological, and competency-based medical and therapy education literature. This Chapter continues to outline the literature relevant to this research project and the professional development of physiotherapy within the NHS in the UK.

3.2 The concept of competence

3.2.1 Defining competency

The primary goal of FCP model of practice is to assess and manage undifferentiated and undiagnosed MSK presentations in primary care within the FCP’s agreed scope of practice. Integral to assuring patient safety of FCPs is the concept of competency. At a simple level, it
can be viewed as something a professional should be able to do in a particular job. However, it has been described and defined in a multitude of ways in scientific discourse and this makes the concept a challenging prospect. Its relationship to other concepts such as ‘capability,’ ‘performance’ and ‘expertise’ is unclear (Eraut, 1994) and it has been used in specialist fields to give precise meaning that are unrelated (Weinert, 1999). For example, it is not understood whether a competence is a personal attribute, an act, or an outcome of action. Both competency and competence are used within the employment setting but the difference in meaning has not been agreed (Harrison, 1992). There is suggestion that while competence refers to behaviour a person should be able to demonstrate (UK based), competency is defined as an underlying set of personal characteristics that facilitate superior performance (USA based). There is also divergence in international understandings of competence, in France, for example, it refers to knowledge-based performance that integrates practical and theoretical knowledge (Brockmann et al., 2008) and in England a skills-based performance of narrowly defined tasks.

Competency as a concept continues to be a contentious discussion point within HCP disciplines and is a key topic of interest. The term ‘competence’ originates from the Latin word for cognisance or responsibility (Weinert, 1999). In medical education ‘competency’ refers to a ‘complex set of behaviours built on the components of knowledge, skills and attitudes, and refers simply to personal ability’ (Carraccio et al., 2002). Historically, McCelland (1973), Dreyfus and Dreyfus (1980), Benner (1984), Eraut (1994, 2004), Gonzi (1994) and Miller’ (1990) have long considered and attempted to define professional competence and competency, some exclusively within the nursing settings. These classic works are now used as the basis for current competency frameworks and consistently contain similar elements: practical skills, knowledge, and important attributes. Benner’s and Dreyfus’ models for frameworks of competency were critiqued by Thompson (1990), as they were perceived to be formulated with a distinct lack of social structure or knowledge, in that they were lacking recognition of how professional practice depends on social knowledge and social conventions.

Gonzi, (1994) reinforced the view that tasks or skills are the key specifics to competence so that there is no dispute as to what comprises acceptable levels of performance. This approach to competence however is not without critics, in that the concern is more with
what needs to be done to perform rather than with learning and knowledge. Others within
the business community have also argued that there is too much emphasis on assessment
and not enough on learning (Beardwell and Thompson, 2017, p. 272). McCelland (1973)
used the term ‘competency’ rather than ‘competence’ and viewed it more as a person’s
underlying attribute that enables effective performance in a job tasks, role or situation. This
author’s work is often regarded as the emergence of modern reasoning into competency-
based education and training (Manley and Garbett, 2000). This work laid the foundation to
suggest that traditional academic examinations were not predictors of job performance and
suggested that competencies would better predict success, when compared to intelligence
scores or aptitude tests. This seminal work has been built on by other psychologists who
viewed competency as relating to the ability to apply knowledge, skills, abilities, behaviours,
and personal attributes into effective work performance. This group considers the personal
attributes needed to performance the job, namely cognitive, attitudinal, and psychomotor
(Hay Group, 2003).

These attributes are like Bloom’s Taxonomy system of hierarchical models used to
categorise learning objectives into varying levels of complexity. This system does consider
the three domains as mentioned in the form of cognitive (acquisition and application of
knowledge), affective (feelings and emotion) and psychomotor domain (skilled behaviour
e.g., manual, or physical skills) (Bloom et al., 1956). The domains aforementioned are
mirrored in Gonczi’s (1990) influential article on a competency-based approach to education
and development of professionals. Gonczi (1990) argued that this approach is more valid, in
that it can ensure any profession the ability to assess professional capacity through the
connection of task related skills, generic attributes to effective performance and general
attributes in practice-based environments. Knowledge is described by Winterton et al
(2006) as a result of an interaction between intelligence (the capacity to learn) and situation
(the opportunity to do so). It involves theory and practice understanding of a subject and is
embedded in principles, procedure, and fact. Knowledge can be acquired through formal
learning (e.g., FCP knowledge in taught module route to accreditation) or through informal
practice-based learning experiences. Skills refer to the learned capacity to perform pre-
arranged job tasks. This is an activity of acquired knowledge and how such knowledge is
applied (Winterton et al., 2006). It is defined within a goal-oriented behaviour that is
acquired through practice and performed with ‘economy of effort’ (Winterton et al., 2006; p.7). It can quantify expertise and is often used as a proxy measure to ascertain the suitability for minimal supervision compared to a novice employee (Cowan, 1997). **Abilities** alternatively are acquired attributes that a person brings to a new task. This can be attained through previous exposure in the specific domain of practice or could refer to a conferred ability to carry out these tasks. Ability involves a reasoning process and recall memory for solving unique problems (Fernandez et al., 2012). **Attributes** are not necessarily part of the core knowledge or skill requirements of a job but are necessary for on-the-job success, they may include FCP professional practice and ethics issues within primary care. These do also include components that cannot be formally taught but are acquired through training. This study is particularly concerned on the health and work knowledge and skills aspects for FCPs within primary care. Consequently, components that describe competency as increasingly seen in education and healthcare research literature are those described through knowledge, skills, abilities, and attitudes based on judgment and values (Carraccio et al., 2002; Fernandez et al., 2012; Winterton et al., 2006).

Competencies tend to be dynamic and in a constant state of flux, summated in the CSPs definition (2011):

> ‘Competence is the synthesis of knowledge, skills, values, behaviours, and attributes that enables members to work safely, effectively, and legally within their particular scope of practice at any point in time. It involves awareness of the limits of personal practice and the practice of the profession and depends on members engaging in individualised, structured, career-long learning to meet their identified development needs.’

This suggests that competency can be assumed via a transitory state of proficiency on the way to become an ‘expert,’ or it can already represent a level of expertise. Indeed, some HCPs will argue that competency may not be enough in specialist surgical procedures, whereby some are technically so difficult, expertise rather than competence is required.
3.2.2 Competency as a movement

Competencies in the work environment can be seen as instances of practical knowledge that have been specifically constructed to meet the purposes of employers. This fits with the expectation of meeting organisational goals and ‘aligning what people can offer against the demands of customers rather than against ill-fitting and ill-designed demands of jobs’ (Martin, 1995). Employers have put effort into identifying and defining competencies related to their business and significantly, how to express them in measurable terms. They are now the cornerstone of a comprehensive and contemporary national framework that is consistent and agreed across all sectors and job roles in which components in a person’s learning and development, within formal institutions, training, or experiential learning across the lifetime, are pinpointed and appraised against nationally agreed standards. The same framework is applied by organisation in recruitment, assessment and in the design of training for their employees. However, this institutionalised, and employer focused framework has taken competencies from their context and essentially tacit knowledge that characterises practical knowledge.

Competency as a movement has been all important in healthcare settings potentially due to its association with accountability in professionals (Dunn, Hamilton and Harden, 1985). A FCP judged competent and accredited provides a guarantee to society that they would be able to always perform to acceptable standards within primary care. This approach for education stresses the importance that the learner demonstrates competency to perform the required tasks more than the processes by which they learn (Iobst et al., 2010). Thus, the goal is in knowledge application rather than pure acquisition, and assessment involves a variety of objective measures in a realistic clinical setting.

Eraut (1994) suggested that competency-based learning in healthcare harboured a political motive by the medical profession to protect its knowledge base. Professions tend to have a monopoly over their expert knowledge and competency base (Yielder, 2006). However, the idea of competency is not unique to healthcare fields, for example in complex human resource (HR) management, research suggests that HR professionals need to develop a wide-ranging skill set if they are to meet the challenges facing business today (CIPD, 2009). The emphasis on key behaviours has led to exceptional growth in HR competency models.
(Caldwell, 2008) and some authors identifying new roles that HR professionals need to adopt to manage the challenges faced by employees and organisations (Ulrich et al., 2012). Indeed, in the UK, the CIPD has developed a Profession map, which, it is claimed, determines ‘what the best HR professionals are doing, what they know and understand, to make a difference and is relevant to HR professionals operating anywhere in the world. The map covers 10 professional areas, 8 behaviours and 4 bands of competence (CIPD, 2022).

The incoherence and divergence of common competence-related terminology paved the way for the Royal College of Physicians and Surgeons of Canada in 2009 to convene a conference (International Competency-based Medical Education Collaborators (ICBME)) and propose consensus definition of competency-based education terms for medical education stakeholders globally (Frank et al., 2010). They found that physician competence is multidimensional, dynamic, ever-changing contextual construct and developmental (Frank et al., 2010). For example, a surgeon certified as ‘competent’ in an urban academic teaching hospital after graduation may find it difficult to manage in a rural hospital in a developing country. The idea of ‘progression of competence’ speaks to this conception of competence as dynamic, developing or receding over time, and as grounded in the environment of practice or learning. Furthermore, they proposed that competencies be viewed as ingredients of competence, which can be assembled from smaller elements of learning (Frank et al., 2010). They proposed the following definitions of CBME and related terms (Frank et al., 2010):

- **Competence**: The array of abilities across multiple domains or aspects of physician performance in a certain context. Statements about competence require descriptive qualifiers to define the relevant abilities, context, and stage of training. Competence is multi-dimensional and dynamic. It changes with time, experience, and setting.

- **Competency**: An observable ability of a health professional, integrating multiple components such as knowledge, skills, values, and attitudes. Since competencies are observable, they can be measured and assessed to ensure their acquisition. Competencies can be assembled like building blocks to facilitate progressive development.
• **Competency-based medical education**: An outcomes-based approach to the design, implementation, assessment, and evaluation of medical education programs, using an organizing framework of competencies.

• **Competent**: Possessing the required abilities in all domains in a certain context at a defined stage of medical education or practice.

### 3.3 Healthcare education

Medical education stresses the notions of *performance*, *competency* and more recently *capability* which alludes to applied knowledge. How other HCPs consider and connote these areas in the literature is important and may offer valid comparisons for others in how they are used. Capability can be defined as ‘the extent to which individuals adapt to change, generate new knowledge, and continue to improve their performance (Fraser and Greenhalgh, 2001). Further definitions are considered below.

Those who proposed the concept of competence within the ICBME and examined the conceptual issues and current debates within the field suggest that within the framework there are five core components: framework, progression, tailored experiences, competency-focused instruction, and programmatic assessment (Van Melle, 2016). These researchers suggest that competence is multi-dimensional, dynamic, contextual, and developmental (Franke et al., 2010). Thus, competence is an ever-changing concept acquired over time through rigorous training and experience. It is a critical timepoint in relation to a task, skill or knowledge that has been achieved by a professional (Frank et al., 2010). Again, the collaborators recognise that competence can develop or regress over time because of an individual’s experience of practice or learning environment and a change in their proficiency. This can be mediated via a mix of processes, training, on-the-job learning, directive assessment and formal vocation qualifications (Franke et al., 2010).

Performance is described as the observable part of competence or the behavioural outcome that results from competence (Fraser and Greenhalgh, 2001). This is seen as a vital component for patient safety and clinical quality of care in the health sector. Nevertheless, the relationship between competence and performance seems to be a complex one as what
a professional ‘does do’ in practice termed ‘performance’ may be dependent on several factors. In Miller’s pyramid (1990), a clear distinction is posited between cognition and actual performance, with ‘shows how’ and ‘does’ higher echelons of the pyramid linked to actual performance and associated with knowledge and skills behaviour.

The competency-approach to education and training has its roots in the theories of scientific management by Taylor, behaviourism by Thorndike and Dewey’s theory of progressive education (McCown, 1998). The competency-based education of medical professionals has been suggested to ensure that graduates fulfil the ever-changing patients' needs in the population. The performance characteristics within the model de-emphasises time-based training and promises greater accountability and learner-centeredness (Frank et al., 2010). This objective model, based on measurable standards, is used extensively in vocational and technical training in the Western world. The competency-based education and training has also been used within teacher training due to concerns of poor student performance and inadequate programmes in the USA during the 1970s (Koetting, 2010) and in Europe for their workers within the global economy in the 1980s to offer a consistent learning outcome approach (Winterton et al., 2006).

Historical and recent population health issues necessitate the goal of educating and preparing a transdisciplinary workforce with population health knowledge and competence to be able to develop, implement, and evaluate innovative and feasible solutions that not only address multifaceted community health problems downstream but also to be able to predict and prevent those factors that contribute to an inequitable health burden upstream. This fits with a UK notion contained with the Long-Term plan on prevention. Caron et al., (2023) completed a study to identify where population health education is already shared among multiple disciplines, and the Centers for Disease Control and Prevention's Academic Partnerships to Improve Health program in the USA conceptualized the Health In All Education initiative that was implemented in partnership with the Association for Prevention Teaching and Research. The following domains were identified as having transdisciplinary applicability on the basis of established public health curricula, competency, and learning outcome models: determinants of health, evidence-based approaches, population health focus, interprofessional practice, community collaboration, environmental health, occupational health, global health, diversity/cultural competence,
health systems, finance and budgeting, and health law and policy (Caron et al., 2023).

Specifically for FCP practice, the MSK core competency document (HEE, 2018) and IFOMPT standards document (IFOMPT, 2016) explicitly document relevant and specific capabilities and this is presented much later in the thesis (Table 20). A welcome step from eLearning for Healthcare (part of HEE) is to provide an e-learning Fit Note module (e-lfh, 2022), created in conjunction with the Royal College of General Practitioners, Chartered Society of Physiotherapy, Royal College of Occupational Therapists, Royal College of Nursing and Royal Pharmaceutical Society. All NHS HCPs can access the four modules below and for non-NHS employees, through an Open Athens account:

- An enabling approach which explains the aims and importance of the fit note
- Key legislation and guidance to help understand the context and dispel any myths
- Making recommendations using case studies and examples of completed fit notes
- Application of the fit note which brings together the knowledge gained to apply to case studies and the final assessment of your knowledge.

This training is available for the new professionals signing the Fit Note but is not mandatory. For doctors, they may receive training the equips them to address various aspects of work and health, but this training is inconsistent geographically in the UK and potentially not extensive enough to address the work and health agenda. In subsequent chapters, evidence highlights that doctors and GPs report that they do not receive adequate training in this area. Anecdotal evidence also supports the notion that true work and health knowledge and skills are only developed through speciality training such as the DipOccMed course or in-depth knowledge and practical skills when specialising in Occupational Medicine training for a minimum of six years.

It is suggested that the above competencies for HCPs are not enough in delivering the work and health agenda, especially within primary care, as 95% of patients continue to be signed unfit for work (NHS Digital, 2023). These statistics have not improved since the legislation changes in July 2022 and show an alarmingly high level of ‘sickness’ certification by healthcare professionals, with the Fit note being used as a tool to certify absence. We need the Fit note to be used as a tool to support early return to work, or to help people to remain in work whilst managing their health condition. Therefore, further training is required to
understand the concepts involved for FCPs and highlight the knowledge and skills needed in this area. Beyond the non-mandatory NHSE and IFOMPT specific work and health competencies, the UK has training for FCPs to access on work and health and the Fit Note (as of January, 2024): ‘eLearning for Healthcare - The Fit note’

‘AHP Health and Work Training (CSP members only)’

‘AHP Health and Work Report: Guidance for AHP practitioners on the use and completion of the Report’

‘ACPOHE Work and Health Hub’

‘DWP Fit note guidance for healthcare professionals’ and

‘DWP Fit note guidance for healthcare professionals and their employers’

The competency-based approach for physiotherapists in the education and training of future accredited physiotherapists, FCPs and advanced practice physiotherapists has also been advocated and is considered later in the chapter.

### 3.3.1 Limitations of competency-based education and training (CBET)

Although CBET has been actively implemented and advocated in the education of professionals through research and practice, it has several criticisms levelled against the approach:

- The first relates to the argument that checklists of behaviours may be too superficial. CBET encourages the application of knowledge, skills, values, and attitudes in an actual practice setting, however, these are predetermined in the curriculum and are often based on minimum acceptable standards and may not promote critical thinking, performance excellence and clinical learner expertise (Leung, 2002). Proponents have argued that modern approaches now encompass ‘acceptable standards,’ therefore, in the right context, they do provide a roadmap towards expert status attainment and excellence in practice (Coombes et al., 2011).
• The fundamental analysis of job roles suggests a degree of uniformity and the assumptions therein. The tasks associated with professional work may be able to be carried out using a variety of methods from experiences. The critics suggest that competency frameworks over-emphasis specificity and unilateral methods for work tasks, which may be limiting (Talbot, 2004). Again, proponents suggest that contemporary competency practice is changing, with a delineating of outcomes rather than a strict adherence to vocational skills and specific performance methods (RCPSC, 2015).

• There is one line of criticism that argues that abstracting competencies into discrete behaviours may lead to limitless checklists that are complex, ill-defined and time intensive. This can lead to learner burnout of both clinician and teacher (Gonczi et al., 1990).

• This approach relies on a functional assessment of vocational roles to identify the fundamental competencies needed for success in that role. Despite this, simple statements may not be able to encapsulate the complex nature of professional practice, especially in healthcare. The sum of the individual tasks performed may not incapsulate the complex nature of subjectively gathering and processing information, judging this, how interactions affect this and a myriad of attributes that influence a positive outcome in practice. It seems difficult to identify all the competencies, behaviours and knowledge that truly and comprehensively cover all work roles. Leung (2002) suggests that this may limit the feasibility and reduce knowledge content in the curriculum. Recent research on CBET suggests that this can be overcome with the development of dynamic and ever-changing frameworks containing core competencies that are developed from needs-based assessments of the population (HEE, 2021).

The last critique is the review of discrete observable behaviours and the complex interplay of factors that dominate real-life professional practice (Leung, 2002). As mentioned previously, this assessment is often not value free and normally owned by that professional body. Despite this, the competency approach still holds significant weight for professional development and fitness to practice and the global healthcare trend of emphasising a learning-centred and outcome-based approach for now.
3.4 Physiotherapy practice and healthcare quality

3.4.1 Competency frameworks

A collection of competencies and their corresponding behaviour(s) is called a competency framework. It has been argued that providing a map of competencies is required for individuals to perform their roles effectively (IDS, 2012). Competency frameworks often contain similar constituent parts organised in a consistent way. Related competencies and their corresponding elements are grouped together. The CSP’s Physiotherapy Framework (CSP, 2020) is a resource designed to promote and develop professional practice through its definitions and descriptions of behaviours, knowledge and skills required of practice. This is consistent for contemporary practice across all occupational roles and settings and at all levels. The Physiotherapy Framework is described by the CSP as ‘based on the idea of physiotherapy being a complex intervention. It therefore goes beyond the task-based focus of existing generic competency frameworks and defines the unique blend of behaviours, knowledge and skills used by the physiotherapy workforce. The framework’s content is based on an analysis of policy drivers across the UK and sources describing the behaviours, knowledge and skills used in physiotherapy practice.’ (CSP, 2020). The approach from the CSP is a multi-method-oriented approach to integrate the work- and work-oriented approach through linking job roles, tasks, and sub-tasks of practice with the general attributes of the practitioner as proposed in Wright and Morgan’s evaluation of frameworks in pharmacy (2012).

3.4.2 Physiotherapy and competency

Physiotherapists use their professional knowledge and practical skills, together with thinking skills and skills for interaction in their day-to-day practice. Their combination of knowledge and skills means that clinicians can work in partnership with the individual and stakeholders involved with that person. The evidence-base underpinning physiotherapy is constantly evolving as practitioners develop new knowledge and understanding through critical reflection, evaluation, and research. This evolving evidence base supports the use and development of physiotherapy’s scope of practice and stresses the professions autonomy,
meaning they can accept referrals and self-referrals for assessment from a range of sources instead of historically from only GPs or medical doctors.

A preliminary scoping search using the key words ‘competency frameworks,’ ‘physiotherapy’ and ‘practice standards’ in physiotherapy returned an extensive array of published literature. The search covered several frameworks developed and available for most healthcare professionals: doctors, nurses, physiotherapists, pharmacists, podiatrists, paramedics, and other allied health professionals. It also yielded national, organisational, and international competency frameworks for physiotherapy in Australia, USA, Canada, Ireland, Thailand, Singapore, UK, and New Zealand.

Doctors’ early and postgraduate career development is well defined, as evidenced by the number of published medical specialty training curricula (GMC, 2022). A new system of medical training was introduced in the form of a foundation programme in 2005, and specialty training was introduced in 2007 (Gompels et al., 2011). The introduction of the Modernising Medical Careers programme in 2007 (MMC, 2009) produced a shift towards a competency-based system for training and assessment in postgraduate medical education in the UK and the GMC now approves curricula and assessment for 65 specialties and 31 subspecialities. These are designed and preceded by Royal Colleges and Faculties. In the nursing profession, there is a nationally agreed competency framework for advanced nursing practitioners (RCN, 2018) and is encompassed within, and regulated by, the NMC Code (2015). The RCN’s competencies for advanced nurse practitioners were first mapped in the early 2000s against, and informed by, the NHS Knowledge and Skills Framework (DH, 2004). The competences were devised and researched collaboratively with HEIs, professional organisations and service providers. They have standardised clinical outcomes and are a tool that HEIs can use to map and validate their curriculum outcomes as well as audit fitness to practice at this level. They also inform the RCN accreditation of Advanced Level Nursing Practice programmes being run by several HEIs.

The domains within the CSP’s framework have been ‘mapped’ to 6 other competency frameworks relevant to the practices of the physiotherapy community, namely (CSP, 2011):

• Skills for Health (2008) Career Framework
• NHS Leadership Academy (2011) Leadership Framework
• Public Health Resource Unit/Skills for Health (2008)
• VITAE (2011) Researcher Development Framework

It is noted within all the healthcare professions, as well as physiotherapy practice, that professional practice is complex. Healthcare sits on the current backdrop of a combination of increasing technological advancements, rising expectations and demand for sustainability, magnified by staff shortages, turnover, migration, and geopolitical instabilities. This has led to an increase in international professional regulation and improved competency requirements (Muller, 2012; WHO, 2015). Henceforth, the above references suggest and reinforce those frameworks deliver reassurance that help patients believe in and accept healthcare practice, and ensure organisations involved in delivery support practice standard. Furthermore, a competency framework is an educational document that provides the detail required to comprehend the exact nature of training that will be required, as well as creating a basis for employers to construct and provide a monitoring system to observe a professional's performance level (Talbot, 2004).

In the last few decades, the scope of physiotherapy practice has developed with increased autonomy and the emergence of advanced practice in many countries (Taiwah et al., 2021). Advanced practice roles bring new challenges and additional levels of responsibility and accountability, but also offer great opportunities to physiotherapists to support and influence the management of patients and delivery of high-quality services, especially within MSK services. Along with it, stakeholders have published competency documents to fully appreciate the qualities needed for clinicians faced with increased risk of uncertainty with patients presenting with undifferentiated and undiagnosed conditions, which may or may not be MSK in origin (Bhise et al., 2017). Managing patients requires clinical reasoning, knowledge, and skills commensurate to mitigating the potential risks associated with undifferentiated diagnoses (Langridge 2019). Managing this risk is an integral part of safe and quality practice (Olson et al., 2021) and is formulated within competency frameworks.
The MSK frameworks have been discussed in the previous chapter, but it must be stressed that although they have been formulated to consider modern practice and contemporary population trends, they tend to focus on a classical sense of understanding, learning and structure. This was considered with the models of traditional research as documented earlier in the chapter, McCelland (1973), Dreyfus and Dreyfus (1980), Benner (1984, 2001, 2004), Eraut (1994, 2004), Gonzi (1994) and Miller (1990).

3.4.3 The Concept of clinical expertise

The quality of care delivered within the healthcare setting is dependent on several factors, one of which is the clinical expertise of the employees that work within an organisation and who are wholly responsibly in care delivery. Understanding which learning approaches are successful in developing clinical expertise in the MSK and FCP models of care is a professional research priority (Rushton and Moore, 2010). Within the UK, the CSP supports this as a priority and as such seeks a to understand which training approaches effectively develop physiotherapists’ knowledge and skills to meet our populations ever changing needs amongst the top 65 requirements for the profession (CSP, 2018).

One challenge within the competency literature on professional education is its limited promotion of the concept of ‘expertise’ (Leung, 2002) and the debate continues as to how it is acquired, developed and whether it derives from cognitive ability or clinical experience or a combination of complex skill acquisitions. Within healthcare and the evidence-based medicine (EBM) agenda, there is a necessity to integrate the highest available evidence with clinical expertise and patient values (Straus et al., 2011). An understanding of the nature of expertise and how it can be pursued and achieve within the FCP model of practice is therefore important. In addition, if the concept is clearly defined and understood, it could provide a framework for the development of practitioner from ‘novice to expert’ and thus at all levels of practice.

3.4.3.1 Historical origins of expertise

The concept of expertise is not a new concept, despite it a recent phenomenon in modern healthcare and EBM. In medieval Europe, professionals formed city guilds to control the number of individuals and the training and development of individuals in job roles such as
shoemaking, blacksmithing, tailoring, and baking. The progression with the system was clear, starting as an *apprentice*, then a *journeyman* after around 7 years, and then an achievement of *master level*, several years later (Epstein, 1991). In recent times job roles have become increasingly complex, dynamic, and uncertain and several life-course occupational changes may now not be viewed as outside the norm. The guild system has largely stayed during this time and has been commonplace in some occupations, while in other domains it has given way to a system based on the notion of natural ‘aptitude’ for certain job roles (Schneider, 2019). According to this model, intelligence and aptitude testing offer insight to which roles are most appropriate for professionals to consider.

### 3.4.3.2 Expertise definition

The term expertise is synonymous with performance in the literature. It is defined consistently with superior performance, optimal performance, or exceeding requirements, on a specified set of representative tasks for a domain and is one of the cornerstones of the integrative principles within evidence-based healthcare. The original definitions of expertise from Sackett et al. (1996) and the *Evidence Based Medicine Working Group* (1992) suggested that clinical experience within healthcare could be unsystematic and subjective, whereas a more positive notion emerged in the late 1990s and early 2000s, through the thought that it should be integrated with the best available evidence in decision-making (Howick, 2011). These later definitions considered clinical experience and then clinical expertise as the central foundation to evidence-based healthcare and a shift away to no longer affording best research evidence primacy in decision-making, Sackett et al (2000) clarified their expertise definition with this explanatory text in their article:

> ‘By clinical expertise, we mean the ability to use our clinical skills and past experience to rapidly identify each patient’s unique health state and diagnosis, their individual risks and benefits of potential interventions, and their personal values and expectations.’

The above text considers that expertise in healthcare may broadly refer to the knowledge, skills, attributes to perform specific tasks, quality in decision-making by the ‘expert’ and the
process through which the tasks are undertaken and the mechanisms that underpin better performance (Ericsson, 2000).

### 3.4.3.3 Expertise development

The underpinning approaches to expertise development rely on the absolute and relative approaches (Chi, 2006). Both have implications for the understanding of expertise development. The absolute approach to expertise development, consider the impact of genetic inheritance in cognitive or physical ability and suggest that we harbour an innate talent or ability for exceptional performance (Ackerman, 2014). There is an assumption that only a small number of individuals can reach the highest level of performance, and this is based on evidence linking variation in developmental trajectory between individuals and the hours of practice needed to master a skill in practice (Campitelli and Gobet, 2008). In contrast, the relative approach suggests experts are on a proficiency continuum from novice to expert and that most individuals can attain expertise through learning (Ericsson, 1998; Ericsson, 2006). This approach reinforces that expertise is ‘attained’ through developmental processes shaped by the environment in which a novice becomes more skilled (Chi, 2006). Both concepts are informed or provide the basis for the numerous expertise definitions in a variety of settings in the literature. Upon a review of the expertise literature, within healthcare, expertise definitions are a useful starting point but may not fully explain the complex and nuanced facets of FCP practice. To provide an overview, psychological and sociological perspectives need to be considered to encourage development expertise in primary care settings. Like the competency views of understanding, expertise is rooted in a psychological perspective, with an expert possessing extensive knowledge that is represented and organised differently from a novice.

Within complex clinical practice, an expert may efficiently apply physiotherapy knowledge and problem-solving strategies to certain situations (Feltovich et al., 2018). Domain-specific knowledge is considered a critical consideration to this expertise and a deeper and richer base of physiotherapy knowledge provides the ‘cognitive architecture’ to draw upon for cognitive processing and rapid problem-solving (Dane, 2010). Central to this psychological theme is the premise that domain specific knowledge processing is not transferable to other domains (Glaser et al., 1988). This theme may be a limited concept as it does not consider
the context of the given domain in complex clinical situations. The sociological perspective emphasises the social and attributional aspects and the constant changing of an expert’s domain knowledge (Mieg, 2006). Authors in this area suggest that expertise is based on their relationship to stakeholders and the expert’s social function in a clinical setting. Relative expertise does not view expertise as an absolute endpoint or status, but as a journey that can be undertaken by less proficient practitioners to develop their practice over the course of a professional career (Alderson, 2010; Chi, 2006). It reflects the idea that knowledge and skill levels ‘differ in society, as well as the level of knowledge and skill necessary to serve a function in a certain setting’ (Mieg, 2006). Furthermore, the relative approach views expert knowledge as composed of context-driven, functional, and imperfect abstractions (Agnew et al., 1994).

The modern knowledge-based economy is characterised by an increase of knowledge and information that is often not subject to empirical study in the real world. Thus, social selection and personal interpretation on experience play a role in constructing expert knowledge in specific clinical settings (e.g., mass opinion and a clinician’s opinion). It seems that there are contextual fluctuations in expert performances as they journey from novice to expert, as well as some alternating of roles in workplaces (Orland-Barak and Yinon, 2005). Within the FCP context, it is important to support these new experts as they redefine their new roles and identities against the demands of a primary care population, their employer and physiotherapy professions to which they belong. As mentioned later in this chapter (Section 3.4.3), psychological perspectives of expertise are the basis of the older competency concepts of repetition and practice of domain-specific skills whereas sociological models are useful in explaining flexible and adaptive forms of expertise and a ‘boundary-less’ career.

Ericsson (1998;2006) suggests that deliberate practice is a necessary implement to higher level performance and expertise. His deliberate practice notion rebuffs learning and development theory that ignores problem-skills development for both practical and other forms of knowledge (Hodge, 2016). He argues that intentional practice preserves continuous advancements to improve performance and develop expertise (Ericsson, 2006). In practice, this means rather than routine series of actions and experience, an extensive amount of deliberate practice leads to improved performance levels.
The studies were conducted in fields where objective measures of expert performance were readily available; notably, in the game of chess where expert performance is measurable using the Elo scale (Chase and Simon, 1973; de Groot, 1946; de Groot and Gobet, 1996; Simon and Chase, 1973). Studies of absolute expertise were also conducted in sports, music, and arts—where a clearly defined criteria for measuring expert performance exists (Baker et al., 2003; Ericsson, 2000, 1996; Taylor, 1975). Therefore, deliberate practice is seen as a separate construct from a work activity and authors suggest it is indistinguishable from an enjoyable or playful activity (Baker et al., 2003). Despite this, numerous researchers have examined the effect of deliberate practice in diverse fields of sport, chess, writing, computer programming, insurance selling and education, to compare and contrast expert and novice performance in the same domains and on the same task. One meta-analysis paper argued that deliberate practice leaves the majority of variance unexplained, agreeing that although it is necessary, it is not sufficient in developing expertise (Hambrick et al., 2014). In traditional skill-based domains of chess and music, deliberate practice explained only 30-34% of variance, with lower levels seen in education (4%) and airline piloting, sports referring and insurance selling (less than 1%) (Macnamara et al., 2014).

This research evidence highlights that the relative importance of deliberate practice varies depending on domains, but also the type of deliberate practice, for example, classic musicians gained from direct instruction whereas jazz guitarists valued hearing and analysis from exposure to a community of expert musicians (Gruber et al., 2004).

There is a growing evidence base on expertise development in physiotherapy, with some evidence specifically on FCPs. The educational approaches used in developing clinical expertise in the physiotherapy workforce is a professional research priority (Rushton and Moore, 2010). The CSP have also identified a priority to understand which training approaches effectively develop physiotherapists’ and FCP’s skills to meet their patients’ needs amongst the top knowledge requirements for the profession (CSP, 2018). A narrative review of postgraduate development in physiotherapy found that a range of educational approaches are used to advance individual expertise in the profession (French and Dowds, 2008). It suggested a limited understanding to the success these approaches had on improving clinical practice or clinical outcomes for patients. Although dated, no subsequent reviews to identify more contemporary educational approaches to development of clinical
expertise have been published. For FCPs, one study was conducted to develop a capability framework with representatives from the whole MSK community in England (Chance-Larsen, 2019). This study used a modified three-round Delphi study with a multi-professional panel of 41 experts nominated through 18 national professional and patient organisations. Qualitative data from an open-ended question in round one was analysed using a thematic approach and combined with existing literature to shape a draft framework. Participants rated their agreement with each of the proposed 142 outcomes within 14 capabilities on a 10-point Likert scale in round two. The final round combined round two results with a wider online survey. The 4 domains and 14 capabilities produced provides clarity on the expected standards, knowledge, skills, and behaviours of practitioners dealing with patients who have MSK conditions at the first point of contact. Those capabilities that specifically mention work and health across domains are presented below.

2b) Engage with the impact of persistent pain and disability on individuals’ lives, including on their relationships, self-esteem, and ability to participate in what they need and want to do (including paid and unpaid work).

3c) Assess the impact of individuals’ presenting symptoms, including the impairment of function, limitation of activities and restriction on participation, including work.

3e) Explore and appraise with individuals’ perceptions, ideas or beliefs about their symptoms and condition and whether these may act as a driver or form a barrier to recovery or a return to usual activity or work.

3f) Appraise factors affecting individuals’ ability to participate in life situations, including work and social activities, and their perceptions of the relationship between their work and health.

6c) Promote the importance of physical activity (e.g., continuing work/exercise participation) for MSK health and advise on what people with MSK conditions can and should do
6f) Advise individuals and relevant agencies on how MSK related work loss can be prevented through acting on effective risk assessments and providing appropriate working conditions, including adaptation to meet the individual’s needs.

7g) Advise individuals on the effects of their MSK condition and their response to it, including the causal links between absence from work, prolonged absence, reduced return to work and subsequent loss of employment.

7i) Advise and assist individuals to identify and use strategies to address work instability and to improve work retention.

11h) Make recommendations to employers regarding individuals’ fitness to work, including through the appropriate use of fit notes and seeking of appropriate occupational health advice.

The full framework document can be accessed from:
http://www.skillsforhealth.org.uk/services/item/574-musculoskeletal-core-skills-framework

There are a few limitations of the study in that it is focused on the specialist knowledge and skills required for those managing adults, yet FCPs may see some patients that are paediatric. The authors acknowledged that developing a framework of this nature is fraught with inherent complexity and is reliant on expert responses, but they did offer transparency on the development process. The modified Delphi did include an array of stakeholders, but it could be argued that it did not adequately represent the full spectrum of views across all professions involved in MSK condition management. The study also does not report how many specific professionals participated within their group and what proportion of the overall group they formed; it is broken down into what profession was represented only. This may be important if more of a professional group constitutes the overall group of participants, resulting in over-representation. It is unknown whether any FCPs or equivalent first point of contact professionals were involved in data collection. The attrition rate was 73% for the final round (Chance-Larsen, 2019) which is comparable to figures reported in a systematic review of the Delphi method (Boulkedid et al., 2011). Due to the pragmatic nature of the study, the authors did not establish an \textit{a priori} definition of consensus for the
first two rounds of the Delphi study. Lastly, patient voice was little represented in the Delphi survey, although it was better represented in the development process and project management group to contribute to the ‘patient journey’ section, with four focus groups conducted from service users.

For MSK physiotherapy, evidence suggests that observed practice with feedback from a clinical mentor can be a productive approach to develop clinical expertise (Petty et al., 2011). In this study observed clinical practice within their postgraduate education programme was acknowledged by MSc students as the main reason to improve practice (Petty et al., 2011). However, this knowledge did not seem to transfer to MSK physiotherapists developing outside of formal postgraduate settings. Despite observed practice a powerful and readily available method to implement within practice-based education for the MSK physiotherapy workforce (Petty and Morley, 2009), there is limited evidence that explores the view of clinicians on how the approach can be utilised within practice settings.

Observed clinical practice that is applied in the workplace is suggested as one of the most appropriate learning activities to develop clinical expertise as it allows the clinician to demonstrate, and the mentor to observe, a range of knowledge types required for practice. Scientific knowledge is described as ‘technical and rational’ and traditionally grounded in positivist inquiry (Greenfield et al., 2015). This type of knowledge is considered as an aspect of physiotherapy practice that clinicians are well developed in and allows a mentor to view the application of such knowledge by the learner within observed practice (Jensen, 2011). This can be summated as ‘professional craft knowledge,’ described as being rooted in reflection on practice experiences (Higgs and Titchen, 2001). This considers a clinician’s level of phronesis (type of wisdom/intelligence relevant to practical action in particular situations) by recognising their ability to integrate scientific knowledge to the context of the care, with practical issues will impact on this care (Greenfield et al., 2015). This is supported within existing professional opinion and practice-based learning theory, which suggests (currently) that when learning is situated within the context in which it is created is most likely to result in knowledge acquisition (Cross et al., 2006; Kolb, 1984; Lave and Wenger, 1991).
3.4.3.4 Work-based learning

Research on medical expertise has been conducted in the fields of nursing, anaesthesia, radiology, therapies, and medicine (Cuthbert et al., 1999; Eraut and Boulay, 2001; Schmidt and Boshuizen, 1993). These studies were based on the concept of relative expertise (Cuthbert et al., 1999; Eraut and Boulay, 2001) and involved the analysis of expert performance in select tasks, compared to novice practitioners (Alderson, 2010; Arocha and Patel, 1995; Boshuizen and Schmidt, 1992; Hobus et al., 1987; Lesgold et al., 1988; Patel and Groen, 1991; Raufaste et al., 1998; Schmidt and Boshuizen, 1993). Others involved the study of knowledge organisation and decision-making processes of expert practitioners (Crandall and Getchell-Reiter, 1993; Elstein et al., 1978; Elstein and Schwarz, 2002; Gale and Marsden, 1983; Xiao et al., 1997).

Beyond acquiring advanced skills and knowledge outwith their immediate needs, clinicians can develop a general and conceptual foundation of expertise by an exposure to new situations, scenarios, and contexts (Grenier, 2009). HCPs often critically reflect and link their learning from clinical work to broader contexts that focus on theory, ideas, and research. Their definition of expert and expertise continues to evolve with new ideas within the literature. Although the limits of skill acquisition models have been identified and a new sociological perspective with adaptability in its approach has been expanded, the characteristics of expertise remain connected within a work-based learning environment (Dragoni et al., 2011; Grenier, 2009).

Lave and Wenger (1991) suggested that situated learning in the workplace is a key element of expertise development, through one on one interactions and practice across their clinical networks (Brown and Duguid, 2001). This concept of participation in group activities, within professional networks, is well described (Eraut, 2004) and network growth is reported as an indicator of expertise development (Gruber et al., 2008). Workplace learning reinforces for experts the role of being mentored or working with esteemed experts in the process of becoming an expert, often outside their current comfort zone (Winkelen and McDermott, 2010). The type of interaction provides formative value in this process, with developmental work elements potentially enhancing expertise development through expanding depth and width of practice (Goldman, 2008).
There is some evidence to suggest that task variety, variety in experience, taking on high value and challenging tasks, dealing with atypical work circumstances, and exploring new strategies for onerous problems (Paloniemi, 2006; Eraut et al., 2004; Billett, 2008; O’Shea and Buckley, 2010) encourage learners to develop competence and expertise. It is only through these experiences that experts can better adapt in their environment, described as situated knowledge, and guide them on focusing on the most important information.

As mentioned earlier, relative expertise fits with this concept in that the absolute is de-emphasised for functional roles of a clinician in a certain context (Mieg, 2006). Further evidence supports this with a demonstration of contextual fluctuations in experts’ performances when comparing those at an expert and novice level and periods of alternating roles in the workplace (Grenier and Kehrhagn, 2008). Mieg (2009) suggests that professionalism is a key component of expertise development, along with their commitment and engagement to the profession at large, often taking on responsibility for their discipline, with an underlying high level of communicative and organisational skills (Mieg and Evetts, 2018). As the performance criteria for FCP practice has only recently been established, this premise of ‘professionalism’ becomes important for not only developing the FCP model and professional excellence but re-defining and guiding individual expertise in primary care.

Chapter 2 presented expertise development in physiotherapy, including the strategy and models used for practitioner development, recognition, and a credentialing process for FCP starters and ongoing development. This section has highlighted clinical expertise and its relevancy for practice. This affirmed that experts pursue ‘exceptional performance’ and the developmental processes involved in the journey to expert status are applicable to FCPs.

The last consideration for expertise development is the area of transferring, fusing and transitioning expertise, a modern area of exploration for academics interested in the topic. As an example, a ‘Model of Expertise Renewal’ process is proposed for professionals to create and integrate new expertise within their existing one (Frie et al., 2019). They described in detail three well-defined activities that involved; exploring the new expertise through idea generation, then testing the ideas values and then concentrating on a select few ideas to acquire new knowledge and skills. The second phase involves creating an engaging context through claiming the new expertise, creating network ambassadors (who
can support and help develop the new expertise) and creating space through resources (time and financial assistance).

The final step operationalises the process through activities that fine-tune the new idea or expertise with experts and embedding it within procedural ways of working. In terms of transition, Gegenfurtner (2013) considers a horizontal transition of expertise at variance with vertical development of expertise from novel learner to expert. Vertical transitions are commonplace in healthcare and medicine, typically stable domains at full maturity in contrast to dynamic areas of IT and computer science, that require diverse domains of information to associate and combine. The author contents that it is the cognitive and social process that provides a transfer and generalisability of expertise. Emergent evidence suggests that knowledge restructuring through case processing theory is applicable to various work areas (Boshuizen et al., 2020).

Their pivotal argument centred on learners from medicine, psychotherapy, business management, law and psychology managing complex cases, developing expertise in these professions, and cognitively adapting to both routine and non-routine contexts (through knowledge restructuring). The above studies provide promising new directions for understanding FCP expertise in primary care. This expertise section builds on the Chapter 2 information on FCP development, and the developmental processes involved are applicable for a variety of healthcare settings. Although the traditional concept of expertise through deliberate practice is important, it is limited as it does not consider the myriad complexity in primary care and other elements of expertise needed for a dynamic healthcare system.

The learning theory underpinning competency frameworks is now considered.

3.5 Brief overview of learning theory

To work towards identifying the competencies of FCPs regarding the health and work agenda, especially in the determination of FFW and SA certification, there is a need to examine the underpinning learning theories and the philosophical constructs of competence.
Learning can be defined simply as ‘acquiring knowledge of (a subject) or skill in (an art, etc.) as a result of study, experience, or teaching. Also, to commit to memory’ (OED, 2022). In a practical sense the learner considers a process in which they attend to the event and are changed by the exposure to it. An understanding of how adults learn can provide a theoretical framework for the design of educational documents that promote learning (Norman, 1999). Adult learning theory is a broad group of educational theories that focus on the characteristics of adult learners, the influence of their current situation on their own learning, and how they construct meaning from their unique experience (Merriam, 1987). Adult learning theories are related to several educational, social, philosophical, and psychological theories. Adult learning theories have been recommended to influence all aspects of health professional education, from organisational statements, outcomes, implementation, and evaluation (Mukhalalati and Taylor, 2019). This section provides a brief overview of adult learning theories that may be useful for FCP practice.

3.5.1 Instrumental learning theories: individual experience

Instrumental learning theories tend to focus on individual experience and include behaviourist and cognitive learning theories. A behavioural approach is commonly seen within the competency-based curricula and training of healthcare professionals (Thorndike, 1911; Skinner, 1954). The major consideration for this is that an impetus in the environment leads to behavioural change and when the theory is applied it usually results in outcome standardisation. The critique of behavioural theories is centred around who determines the endpoint and how are they measured. The cognitive theories focus on the mental and psychological processes of the mind and not on behaviour per se, they are focused on the perceptions and processing of this information (Piaget, 1952). Experiential learning has influenced the adult learning environment by making teachers responsible for creating, facilitating the environment, and organising experiences to facilitate learning, this is presented in Bruner’s (1966) discovery learning and Piaget’s (1952) theory of cognitive development.

Experiential learning has been criticised for focusing fundamentally on developing individual knowledge and limiting the social context (Hart, 1992). Its application in FCP education is relevant because it focuses on developing competences and practising skills in specific
context (behaviour in practice: Yardley et al., 2012). Towards the end of the twentieth century, it was suggested that adults learn differently from children, as evidence that ‘andragogy’ facilitation was better than ‘pedagogy’ teaching emerged, which related to the method or approach of teaching built on differing motivations to learn. The term ‘andragogy’ was developed by Alexander Kapp and was later linked to the work of Knowles, with particular emphasis on identifying and dealing with differences between what learners already know and what they learn within the experiential component of their programmes.

Although the dichotomy between these terms may not seem so clear, the differences are summated in the six respects or assumptions below. These observations, in association with Kolb’s experiential learning model (Kolb, 1984), consider the learning and teaching strategies appropriate for adult learners. In Kolb’s experiential learning model, ‘knowledge is created through transformation of experience’ (Kolb, 1984). In this model, the learner has solid experience in which they reflect. The learning cycle is proposed in a 4-stage cyclical process (Figure 6).

![Figure 6. Kolb’s learning cycle.](image)

According to the theory, the cycle begins with the learner experiencing an activity in the learning environment. Through their reflection they can formulate abstract concepts and make appropriate generalisations. They then consolidate their understanding by testing the
implications of their knowledge in new situations. This then provides them with a concrete experience, and the cycle continues. Within the cycle, learners with different learning preferences will have different strengths in each of the quadrants. Kolb considered:

- **Activists** who feel and do, who learn through concrete experience and testing implications of concepts. They learn better when they participate and are involved in ‘hands-on’ experiences.

- **Reflectors** who feel and watch, who learn through concrete experiences and observations and reflections. They learn better through reflective watching and reviewing and generating ideas and concepts from their experiences.

- **Theorists** who watch and think and learn through reflection and abstract conceptualisation and generalisation. They can create theory from this and can apply these new theoretical models to new experiences.

- **Pragmatists** who think and do, who learn through formalisation of abstract concepts and testing implications of concepts in different contexts. They learn better when abstract concepts and ideas are applied to professional practice.

Although this cycle is often referenced, and is easily understood, the learning style inventory developed from the learning cycle has poor reliability and validity, despite it being used in a variety of setting from health sciences to engineering and economics (Coffield et al., 2004). Although research is limited on physiotherapists’ and FCPs’ preferred learning style and learning approach, evidence from a systematic scoping review (Stander et al., 2019) suggests that there is some consistency in their preferred learning style of and how teaching was delivered. Both physiotherapy learners and physiotherapists have learning styles of active participation, underpinned with practical examples of theoretical concepts (Stander et al., 2019). Despite this no experimental studies were identified, thus the examination of the effectiveness of the different learning approaches is still outstanding. Most of the data on physiotherapists learning is based on observational studies with heterogeneous samples of students, in mostly undergraduate learners (Stander et al., 2019).

In the nine studies that applied Kolb’s theory, there was consistency about their learning styles; theorists and pragmatists, which both utilise an abstract conceptualisation approach (thinking) as the dominant learning approach. The pragmatist learning style of
physiotherapists is like other ‘scientific’ disciplines, including doctors, engineers, and scientists (Wessel et al., 1999). However, caution should be in providing a definitive answer on the learning style as although the majority used Kolb’s theory, two studies used the Gregorc model of cognition, one applied Honey and Mumford’s approach and three did not report any underlying theory (Stander et al., 2019). Research in the field of medicine suggests that GPs are predominantly assimilators (Robinson, 2002) and accommodators (Christensen et al., 1985) while neurosurgeons and physician residents favour the assimilating and diverging learning styles (Lai et al., 2014). Other studies show that medical students and undergraduate nurses have a penchant for converging and assimilating learning styles (Gupinar et al., 2011; D’Amore et al., 2012). These are based on Kolb’s learning style model, although there are more than 70 different models published in the literature (Coffield et al., 2004).

3.5.2 Humanistic theory: Andragogy

This is the most widely applied approach to learning and has significantly influenced medical education. The seminal work ‘The Adult Learner’ by Knowles et al (1980) defined it as ‘the art and science of helping adults learn’. Grounded in the idea of experience, Knowles’ theory originally included four principles, and this was later expanded to six. Andragogy as proposed by Knowles provides a theoretical framework on adult learning based on several assumptions below:

- Adult learners are recognised as independent and self-directed learners. As they mature, they become self-determining and can identify their own learning needs, or to identify ways to meet them.
- Adults accumulate an array of past experience. This is an on-going resource for learning and will have an influence on any current learning context. Thus, learning activities should be designed in a way that acknowledges the influence of experience.
- Adults value learning that integrates with the demands placed on them in practice. This orientation will enable them to be more willing to learn. Learning experiences should be concentrated on activities that are immediately relevant
to real-life, pragmatic problems. Subject matters that have no link on the life situation of the learner should not be considered.

- Adults are motivated by internal (such as the desire to succeed, or satisfaction of new knowledge or attaining personal goals) and not external drivers (such as incentives or rewards). Programmes should consider self-recognition, self-actualisation and self-confidence motivating factors.

- Adults are ready to learn when they self-recognise their knowledge gaps to improve effectiveness or performance. Role models and career planning can encourage a ‘readiness to learn’ (Knowles, 1980).

- Adults need to know why they need to learn something.

Merriam recognises andragogy as ‘probably the best-known set of principles or assumptions to guide adult learning practice’ and a cornerstone of adult education theory. However, researchers often treat Knowles’ andragogy more as foundational truth than theory. Merriam, for example, argues that andragogy describes the characteristics of adult learners more than the actual nature of adult learning. Therefore, these characteristics, while significant to andragogy, also generally apply to pedagogy, the biggest difference being adults have a larger reservoir of experience to draw from. As adults pull from their extensive life experience, it continues to grow and consistently serves as a resource for learning (McCray, 2016). They suggested that more emphasis was placed in educational theory for children, rather than that of adults (Knowles, 2005).

The assumptions of andragogy were mostly philosophical and are based on years of observation and practice data in adult learners (Knowles, 1980). McMaster University designed their whole new medical curriculum (Neville and Norman, 2007), when opening the new University in 1969, by combining the self-directed learning principle from adult learning theory and the Harvard Business School case-study method (Davies, 2000) to produce the Problem Based Learning model (Boud and Fellitti, 2013). It has now been applied to a variety of adult learning settings.
3.5.3  Humanistic theories: Self-directed learning

Humanistic theories promote development at the individual level and focus on learner-centredness. The goal is to produce professionals who have the potential for self-actualisation, and who are self-directed in their learning and internally motivated. Knowles (1998) support this by popularising the concept of andragogy but it excluded context and the social mechanism of constructing meaning and knowledge. For many involved in adult learning, context and social factors are crucial in healthcare education (Durning and Artino, 2011).

Self-directed learning suggests that adults prefer planning, conducting, directing, and evaluating their own learning. This concept emphasises autonomy and individual freedom and although it is axiomatic to adult learning, some critics doubt the extent to which self-directed learning, rather than directed self-learning is truly possible (Hoban et al., 2005). Like andragogy, the concepts main limitation is a failure to take into consideration the social context of learning. It also may not fully recognise or appreciate the value of other forms of learning such as a collaborative or assimilator approach.

3.5.4  Transformative learning theory

Transformative learning theory explores the way in which critical reflection can be used to question the professional learners’ beliefs and assumptions (Mezirow 1995). The process of challenging perspectives and changing them includes a disorienting dilemma as a trigger to view your own practice, for example, ‘knowing that you don’t know something.’ After this, the context is considered for this new information, a critical reflection occurs which may take the form of meaning, context, or process and finally, reflection occurs with a critical re-examination of the long-held view (Brookfield, 2000).

3.5.5  Social theories of learning

The two main characteristics that are crucial to social learning theory are context and community (Choi and Hannafin, 1995; Durning and Artino, 2011). These were devolved by Wenger (Lave and Wenger 1991; Wenger, 1998) who emphasised the importance of ‘communities of practice’ in guiding and encouraging the learner. This is a theory that is
familiar for the researcher as a doctoral candidate and member of a doctoral cohort, throughout the professional doctoral journey. The way in which the learner’s experience is shaped by their context and community is fundamentally influenced and developed by situativity theory (Durning and Artino, 2011) and is based on the premise that learning is social, thinking and learning are structured by the tools available within a given context and overall thinking is influenced by the learning setting.

3.5.6 Motivational models

Most of the theoretical models discussed above tend to explain and relate adult learning to educational theory by learner motivation and reflection themes. One additional theory based on a motivational model is self-determination theory (Tyan and Deci, 2000, Kusurkar and ten Cate, 2013). With a focus on intrinsic learner motivation, it suggests that autonomy, competence, and a feeling of belonging or ‘relatedness’ are basic needs to be cultivated to ensure sustainability. This model suggests that if learners have a low expectation of success, then this will result in poor motivation to learn, unless the perceived value of success is the mainstay. The model is associated with Maslow’s theory of needs (Maslow, 1954) but may not fully encompass the conflicts of interest (expectations and perceptions) when compared to the time and effort needed.

3.5.7 Reflective models

These consider that reflective change enables action and ensuing change. Reflective learning has an important relevancy to FCP and physiotherapy education (Schön, 1987; Archer, 2012). In addition, the role of deliberate practice, which uses reflection and feedback to develop knowledge and skills, has provided teachers with a heightened skillset in helping students autonomously learn (Duvivier et al., 2011). The above models have their individual strengths and weaknesses and are incomplete in their entirety without the others.

Most of the seminal works discussed above are framed under the social constructivism nomenclature. As research developed, social constructivists, like Vygotsky (1978) focussed on the way that the learning community, social interaction, and culture supports learning.
He described the type of social interaction as **collaborative dialogue** in learning (Vygotsky, 1978). A key idea in this social constructivism is that of the Zone of Proximal Development, whereby a learner can only acquire new knowledge if they can link it in with existing knowledge. This suggests that there is a difference between what a professional can achieve on their own and what is achievable with guidance from a partner who is more experienced (Vygotsky, 1978). Conversations with ‘more knowledgeable others’ such as a tutor, coach, mentor, or colleague, can extend the zone of proximal development by putting these ideas into the context of current understanding. This is often referred to as guided feedback or instructional, thereby enabling higher mental capacity and capability. This is commonly observed in apprenticeships, internships, and other instructional techniques. This idea has been progressed with the social learning theory by Bandura (1977) and Wenger (1998) as discussed. Bandura (1971) pointed out that human behaviour is shaped through experience, observation and by copying peers within a social environment. Consequently, the role model that the learner is exposed to and observes will be modelled in their future behaviour. This theory suggests that the learner needs to be active in the process, retain, store information, and consciously attend to positive behaviours to be imitated. The observed behaviour can be reinforced through incentives or punishment, and it is at this stage that an observed behaviour change is said to have occurred (Bandura, 1971).

It is important to recognise that there is a dissonance between new knowledge and concrete experience that is provided within a learning opportunity. When confronted with novel information, learners tend to compare this to what they know and reflect (as per the reflective models). This allows the learner to process and make sense of the information. One criticism of this method is the absence of reflection on action as proposed by Taylor and Hamdy (2013). They suggest that the learner should consider the processes used, whether they were rigorous or appropriate in the use of the material as fundamental to learning. The teacher can provide encouragement through the provision of written feedback with relative strengths and weaknesses, or with performance appraisal or portfolio material. The key is to consider explicit possibilities for future development rather than right/wrong feedback that does not enable the learner to gain a deeper understanding.

The primary care clinical setting and teaching environment may be an ideal learning environment for using the adult learning theories presented in this chapter and
demonstrating their versatility and advantages. Evidence from Loewen et al., (2014) and van
den Berg (2015) indicates that learning styles may change over time along with the learning
environment. Gupinar et al., (2011) suggests that medical students can change from
diversers to assimilators as they progress from undergraduate to the practice clinical
environment. In other HCPs, evidence suggests they can move from a preferred leaning
approach of surface learning to a deep reflective approach that actively solves problems.
FCPs may be inclined to partake in lifelong learning and developmental and educational
activity when teaching methods are diverse and when it is be applied to their learning style
(Tsingos et al., 2014).

3.6 Chapter conclusion

This chapter has built on the evidence presented in chapter 2. It reports on the existence of
different definitions for competence that is attributed to the many theoretical and
epistemological assumptions distinct to the different contexts in which competence has been
conceptualised (Winterton et al., 2006). As a result, competence could mean different things
to stakeholders depending on the context to which it is utilised or applied in practice. Taken
together, studies demonstrate a relationship between training activities and increased and
sustained improvement in performance (Ericsson, 2004). This implies that clearly defined,
continuous and guided practice with feedback from other experts promotes learning and
development of expertise in novice practitioners (Ericsson, 2004). However, deliberate
practice solely is insufficient in explaining the variance seen within a wide range of job roles,
domains, and sports. In addition, there is a lack of consensus in the definition of competence
as well as inconsistencies in the meaning of the terminology used, which suggests another
limiting factor in the advancement of competency-related debate within the health
professions (Brownie et al., 2011b; Rethans et al., 2002). This limitation may be a reason for a
lack of full integration of competency-related approaches in education and training
development in these professions (Brownie et al., 2011a; Frank et al., 2010). Several
stakeholders have attempted to clarify terminology in healthcare professional training and
development and to influence educational policy goals, thereby advancing the professions.
One such group were the ICBME collaboration to propose competency-based education terms
through a consensus conference to be used by global medical educators (Frank et al., 2010).
The term expertise is synonymous with performance in the literature. It is defined consistently with superior performance, optimal performance, or exceeding requirements, on a specified set of representative tasks for a domain and is one of the cornerstones of the integrative principles within evidence-based healthcare. Physiotherapists, including FCPs in a distinct area of practice should work within their scope and meet competencies outlined in relevant competency frameworks, e.g., FCPs adhering to stage 1 of the core competencies outlined in the core competencies framework (HEE, 2020).

This chapter has considered in detail the expertise notion and how it is developed in practice. The last consideration of expertise development is in transferring, fusing and transitioning expertise, a ‘Model of Expertise Renewal’ process is proposed from the evidence base for professionals to create and integrate new expertise within their existing one (Frie et al., 2019).

Adult learning theory is also important in this sphere and theories are related to several educational, psychological, philosophical, and social suppositions. The most widely accessible and cited were combined by Knowles (2005) and called andragogy, clarifying how adults learn effectively and their attitude towards learning. Adult learning theories should influence all aspects of health profession education, from mission and vision statements, outcomes, implementation, and evaluation.

Overall, this chapter has provided an outline of the concept of competence, competency-based education and training and the use of frameworks in the education of HCPs, an overview of adult learning theory alongside a narrative review of the development of expertise and its theories, were also provided.
Chapter 4. Methodology

4.1 Chapter Overview

This chapter will present the methodological approach employed within this research study. It will consider a rationale for the selection of pragmatism as the study’s theoretical framework, the research design and an explanation of the methods used for achieving formal consensus. The ontological and epistemological assumptions underpinning the methodological approaches used in this study are presented. Finally, the ethical considerations and requirements of this study are discussed.

The researcher’s assumptions about the nature of reality and knowledge are considered, as these underpin all empirical investigations, understanding how these influences and guides the methodology and subsequently, the proposed methods (Creswell, 2018).

4.2 Philosophical stance: Epistemology and Ontology and personal perspective

Despite influencing research practice, philosophical ideas are often hidden in the primary literature field and write up (Slife and Williams, 1995). Philosophical ideas are described differently by authors, namely, as epistemologies (understanding the nature and construction of knowledge) and ontologies (understanding the nature of being and reality) (Crotty, 1998), paradigms (Lincoln et al., 2011), worldviews (Guba, 1990) and broadly conceived research methodologies (Neuman, 2009). Johnson and Christensen (2008) suggest that a paradigm is a perspective used that is based on a common set of assumptions, values, and practice, while Denzin and Lincoln (2000) define it specifically as ‘the basic beliefs, systems, or the world view that guide the investigation, not only in choice of methods, but in ontologically and epistemologically fundamental ways’. These key paradigms in literature can be broadly categorized as positivism, constructivism, pragmatism and transformative (Guba and Lincoln, 2005). Research paradigms and philosophy are a considerable influence on research methodology. It is important to explore
them in order to select and use the appropriate research design and data collection strategies.

In this study the researcher approached his enquiries primarily within a post-positivist paradigm as he aligns with its epistemological positioning of knowledge as conjectural, imperfect, and fallible (Phillips and Burbules, 2000). This worldview is important, as along with the design and methods, it contributed to the research approach. Post-positivism’s assumptions reflect the thinking after positivism, challenging the traditional notion of absolute truth (or nomothetic knowledge) (Phillips and Burbules, 2000) and recognises that as a researcher it may be difficult to be vehement in our claims of knowledge when studying the behavior and actions of humans.

The researcher holds a deterministic philosophy in which he believes causes (probably) determine outcomes in research and practice, thus, he believes it is important to identify and assess causes that influence outcomes, such as the scientific method and in empirical observation and measurement. However, he also acknowledges the pragmatism paradigm that emphasises the research problem and quest to understand this problem (Morgan, 2007). As an experienced clinician he is conscious of the consequences of actions in practice and stresses the importance of problem-centred and real-world orientated outcomes (Phillips and Burbules, 2000). In a research context these assumptions additionally consider refining or changing claims if they are robustly refuted and that data, evidence, and rational considerations shape knowledge. The pragmatism paradigm also acknowledges that any research investigation sits in a social, historical, and political context (Patton, 1990), as the proposed project does and the significance of which is discussed below.

Many studies in OH are quantitative in nature, based on interventional research and clinicians in practice are often trained to think mechanistically based on pathophysiology or biomedical rationale using deductive reasoning. Although the quantitative literature in this field reflects this, there has been an extensive expansion of the naturalistic enquiry within esteemed journals such as the British Medical Journal, Nature and the Lancet (Loder et al., 2016). This mechanistic view is particularly evident when an individual feels unwell in the UK as GPs issue sickness certification after one week of a patient self-certifying sickness absence. This is based on a doctor’s role of providing primary medical services under the
National Health Services Acts and Social Security Contributions and Benefits Act (1992) to issue sickness certification for patients in their care. The fundamental basis of the ‘Fit Note’ (2010) is to enable patients to remain away from work without losing pay but also to encourage them to remain in work, especially in the first six months of illness (Morrison, 2010). This process is primarily based on a patho-anatomical disorder (disease) and should be considered within the reductionist biomedical model (Morrison, 2010). However, it is acknowledged now that a substantial majority of MSK conditions are influenced by different combinations of physical, psychological, anatomical, genetic, social and lifestyle factors that are often unique for each individual (O’Sullivan et al., 2018).

In addition, it is increasingly prevalent for ageing people with MSK conditions to be pain free (Brinjikji et al., 2015), yet have objective findings of a patho-anatomical disorder through magnetic resonance imaging (MRI). This is particularly evident in the most prevalent MSK condition of low back pain (LBP) and positive findings on MRIs for LBP also correlate poorly with levels of pain intensity and overall disability for patients with LBP (Steffens et al., 2014). In fact, in the majority of patients with LBP (90-95%) a single patho-anatomical cause of pain cannot be accurately determined clinically (Maher et al., 2017).

This reflects that the underpinning clinical paradigm has shifted for clinicians that manage disabling MSK, to now consider a multi-dimensional approach, especially in those with persistent pain. The evidence now comes from research with pragmatic and post-positivist orientations reflected, where it supports clinicians in considering a wide range of modifiable and non-modifiable factors in practice, such as: cognitive factors (positive beliefs, self-efficacy); emotional factors (low anxiety, stress resilience) and coping responses (adaptive coping); physical factors; genetic and epigenetic factors; lifestyle factors (physical activity, sleep, healthy body weight, non-smoking) and work-related factors (perceptions about the work and health relationship) (O’Sullivan et al., 2018). Consequently, it could be argued that the axiom of SA certification and what it provides, framed primarily within a legal and biomedical model, may not fully capture the complexity of illness verification for GPs. For instance, GPs are patient advocates with a therapeutic relationship, in which they spend only 600 seconds (about 10 minutes) in consultation and often have no objective measurements or assessments that can verify illness or predict future SA (Bockerman and Laukkanen, 2010). It is within this complex and intersecting healthcare, legal (employment law), political, social,
and individual context that this study sits, and influences a need for a post-positivist and pragmatic methodological direction. Combined with this, it is also acknowledged that the researcher has not adopted a purely neutral position due to his OH professional background, commitment to ethical healthcare values and practice experience and this will likely permeate through the study.

A researcher’s theoretical perspective arises from assumptions about the human world, social life, and professional practice (Crotty, 1998). The research design to be employed in this study to address the research problem is through the use of formal consensus techniques, including the Delphi Method (Bowling, 2009) and nominal group technique (NGT) (Harvey and Holmes, 2012), allowing the pragmatic considerations discussed above to be addressed and to add depth to the phenomenon under investigation (Clayton and Gorman, 2005). This study is exploratory to generate theory from data derived from direct interaction with a range of FCPs in primary care practice OH/ACPOHE experts in the OH setting.

Epistemologically, formal consensus techniques can enable the construction of knowledge that is based on the ontological perspective that multiple realities exist, for this proposed study those that govern FCP behaviour in practice. It is apparent that the world of experience is acquired through engagement in multiple perspectives (social) and by the individual themselves (constructivism) (Peck and Mummery, 2018). Indeed, one FCP’s reality may be different from another’s because of age, ethnicity, knowledge, skills, social-economic class, and gender. By using consensus building methodology, all FCPs are allowed an equal voice that can assess a range of tacit clinical and professional knowledge gaps often difficult to assess in clinical practice (Nachev, 2010).

### 4.3 The pragmatic approach

From the early 1950s to the mid-1970s, research was dominated by the positivist paradigm, which is linked with quantitative methodologies as described. This progressed to the establishment of the constructivist paradigm until around the 1990s, associated with qualitative methodologies (Morgan, 2007). This led to a debate as to the hierarchy of the paradigm approaches within social and behavioural sciences, namely superiority of constructivism/interpretivism versus the positivism/realism approach (Morgan, 2014).
Mixed methods research became prominent in the late 1980s to early 1990s (Denscombe, 2008). Tashakkori and Creswell (2007b, p. 7) have defined mixed methods as ‘research in which the investigator collects data and integrates the findings and draws inferences using both qualitative and quantitative approaches or methods in a single study or program of inquiry’. Andrew and Halcomb (2009) state that ‘mixed methods’ is a third major methodological approach, which provides an alternative to purely quantitative or qualitative methodologies. This methodological approach resulted due to the paradigm war. It uses a combination of quantitative and qualitative approaches and mixed data. Furthermore, it highlights similarities and differences, triangulates data, and allows theory development (Creswell, 2013). The modern research literature acknowledges the co-existence of the three major philosophical worldviews: 1) postpositivism, 2) constructivism and 3) pragmatism and they are not as discrete as they seem. Although they are aligned methodologically respectively with quantitative, qualitative, and mixed methods research and thus could be viewed as rigid, distinct categories or dichotomies, Creswell (2015) argues they represent different ends on a continuum. The other widely discussed worldview (basic set of beliefs that guide action) is transformative and the major elements of each position are presented below.

### 4.3.1 The post-positivist paradigm

The positivist ontology assumes the existence of a single, external reality that is governed by natural laws and is directly observable in the physical work (Teddlie and Tashakkori, 2009). This worldview is often described as the scientific method or doing science research. Initially, the selection of this paradigm to explore multiple and subjective perspective (expert opinion), in part, seems to be in contrast with the belief in a single and objective reality, but it does recognise that we cannot be vehement in our claims of knowledge when studying adult behaviour (Phillips and Burbules, 2000). Applying this view rigidly, may not offer the complexity needed for this study as it reduces context from meaning in the process of quantified deterministic measures for a phenomenon (Guba and Lincoln, 2005) and excludes an interpretive approach from data collection to provide theory verification (Gephart, 1999).
4.3.2 The Constructivist paradigm

In contrast, the constructivist or social constructivism paradigm (often combined with interpretivism) is characterised by the ontological assumption that reality is varied and multiple and subjective (Nicholls, 2009a); not fixed, but dynamic and mentally constructed (Polit and Beck, 2014). Individuals develop subjective meanings of their experiences, and these are directed toward certain objects or things. Researchers in this paradigm look for the complexity of views in broad and general terms, rather than narrow meanings categorised into a few components or ideas. Studies that focus on social interactions are referred to as social constructionism (Berger and Luckmann, 1967; Lincoln and Guba, 1985; Lincoln and colleagues, 2011; Mertens, 2010 and Crotty, 1998). The researcher’s intent is to make sense of the meaning’s others have about the work, rather than starting with a theory that needs disproved, researchers generate or inductively develop a pattern of meaning. Crotty (1998) summates this through the assumptions of:

- Humans construct meaning as they engage with the world they are interpreting. This qualitative approach uses open-ended questions to allow participant viewpoints. Note, the use of participant rather than ‘subject,’ reinforcing the reciprocal nature of the relationship (Nicholls, 2009b).
- Humans engage with their world and make sense of it based on their historical and social perspectives, for example, we are born into a world of meaning provided by our culture and society. Thus, researchers seek to engage within this context and gather information, and their interpretations is influenced by their own experiences and background.
- The generation of meaning is always social, emerging in and out of human interaction. It is an inductive process whereby the researcher derives meaning from the data collection in the field.

This paradigm’s flexibility and holistic approach to understanding the experiences of FCPs was appealing due to the little evidence on FCP perspectives on practice competencies, but the researcher considered whether an alternative approach might offer a new and different perspective. This was considered as this approach imposes knowledge and meaning as acts of interpretation solely; hence, there is no objective knowledge that is independent of
thinking, reasoning humans (Guba and Lincoln, 1994). Within the constructivist paradigm, as knowledge is socially constructed by active participants in the research process, it puts pressure on researchers to attempt to understand the complex world of lived experience from the point of view of those who live it. The study of interpretive understanding or meaning or hermeneutics may be not fit this thesis as it only considers the understanding of multiple social constructions of meaning and knowledge, focussing on what meaning participants attribute to competencies and how that relates to their clinical behaviour. Also, the methodological implication of having multiple realities is that the research questions cannot be definitively established before the study begins; evolving and changing as the study progresses.

### 4.3.3 The Transformative paradigm

This position started to emerge during the 1980s from researchers who considered that the postpositivist assumptions imposed structural laws and theories that did not fit marginalised citizens in our society or issues of power, social justice, discrimination and oppressed (Cresswell and Cresswell, 2018). Inquiry situated in the transformative paradigm values human perspectives on reality but is based on the ontological assumption of a single reality, perceived in a variety of ways by different people (Mertens, 2010). It suggests that it needs to be intertwined with politics and a political change agenda to confront social oppression (Mertens, 2010). Mertens (2009) suggests that uncovering the means that privilege some and discriminate others leads to action and change. Thus, the research contains an action agenda for reform that may change practice for FCPs, the organisations in which they work and situating the study in this paradigm may have gained an insight into the broader factors that influence the FFW and SA agenda within the NHS and CSP.

Mertens (2010) emphasises the priority placed on interaction with the participants and the need to directly engage with them in all stages of the research process to ensure all viewpoints are represented and avoid discriminating against any individual or group. This collaborative approach suggests that FCPs could help design questions, collect data, analyse the information, or reap the rewards of the research, providing a voice and advancing the agenda for FCPs. Combining these epistemological stances has the potential to mitigate some of the limitations discussed above in relation to the post-positivist and constructivist
paradigms while building on their respective strengths. Mertens (2010) also argues that axiological considerations of social justice and human rights are fundamental and underpin all the other assumptions of the transformative paradigm. Despite ensuring that the professional group do not become marginalised or disenfranchised within primary care, it is not strictly true that they are a diverse, marginalised group at risk of subservient constraint. This paradigm does not fit as the thesis does not place central importance on the lives and experiences of diverse groups that, traditionally, have been marginalized. In contrast, it wants to consider consensus within a professional group of expert FCPs and OH physiotherapists, without any analyses on inequities based on gender, race, ethnicity, disability etc. It also will examine how social inquiry on these inequities are linked to political, social action nor consider why an explicit power or justice problem occurs.

4.3.4 The Pragmatic paradigm

As mentioned above, the pragmatic paradigm resulted from the paradigm war and for many researchers it arises out of the need for action, situations, and a consideration of consequence rather than antecedent, postpositivist conditions. This approach considers what works in a particular context and the solution to problems through an application of need (Patton, 1990). Researchers in this position focus on the research problem and question and use all approaches available to understand the problem rather than methods per se (Morgan, 2007). In the social sciences, Tashakkori and Teddlie (2010) and Morgan (2007) highlight this position within mixed methods social science research, whereby pluralistic approaches derive knowledge about a particularly important problem. Using Morgan (2007), my clinical expertise view, pragmatism provides a philosophical basis for this research as it:

- Is not committed to any one system of philosophy or reality. Researchers can draw from quantitative and qualitative assumptions
- Researchers have a freedom of choice for methods and procedures of research to best fit with the question posed
- Pragmatists do not see the world as an absolute unity
• The term ‘pragmatic approach’ is recommended rather than ‘paradigm,’ which considers the move away from the Kuhnian view of paradigms, which focuses on ontology and epistemology level of practice and research

• Truth is what works at the time, it is not based in a duality between reality independent of the mind or within the mind

• Research occurs in social, historical, and political contexts. The theoretical lens can incorporate a postmodernist turn of social justice and political aims

This paradigm, as mentioned earlier in this chapter, has personal resonance, and seems to facilitate and encapsulate the decision-making process for the study. It opens the door to multiple methods, different worldviews, and different assumptions, as well as a variety of data collection and analyses forms. Debating the nature of reality has little practical utility in complex, real-world situations that affect people’s lives. Morgan (2014) exemplifies this by stating that pragmatism is ‘rooted in life itself’ and that ‘Knowing cannot be separated from doing because beliefs depend on actions and actions depend on beliefs’. Some pragmatic researchers who follow the metaphysical definition of paradigms argue that the pragmatist ontology relates to the belief of an external world that is independent of the mind as well as located in the mind (Creswell, 2014). Morgan agrees that a pragmatist views reality as existing apart from human experience, but it can only be encountered through human experience (Morgan, 2007; Morgan, 2014).

The previous chapter was concerned with competency, reflection, expertise and learning theory, these themes seem to fit well within a pragmatist viewpoint as they emphasise actual behaviour. This is described by Morgan (2007) as ‘lines of action’, with the beliefs that stand behind those behaviours (warranted assertions) and the consequences that are likely to follow from different behaviours (workability) (Morgan, 2007). The notion that the ethical goal of research should gain knowledge in the pursuit of desired ends (Morgan, 2007) resonates with the researcher. The researcher holds the opinion that there is a single ‘real world’ and that all individuals have their own unique interpretations of it. As this thesis in the initial chapters has identified a specific problem that the researcher seeks resolution of, it therefore is incumbent to consider results that ‘work’ to change policy, process and enhance practice. This contrasts ontologically with the other paradigms emphasis on the
nature of reality and possibility of objective trust. Instead, as Morgan (2007) points out, of the defining considerations of pragmatism is the emphasis on ‘what difference its makes’ to believe one thing versus another or to act in a certain way compared to another. As opposed to positioning oneself as a relational, socially, or historically contextualised researcher or a distanced observer, the pragmatist can freely ‘study what interests and is of value to you and study it in different ways that are appropriate (Tashakkori and Teddlie, 1998). Therefore, the criterion for judging the appropriateness of a method, is if it achieves its purpose (Maxcy, 2003) and the method (or combination of methods) should be decided by the purpose of the research and what works best to answer the research questions.

4.4 Research approach

Research designs are types of inquiry within qualitative, quantitative, or mixed methods approaches that provide specific direction for procedures in a research study (Creswell and Creswell, 2018) or strategies of inquiry (Denzin and Lincoln, 2011). The pragmatic view about methodology tends to be made based on what is most appropriate to answer the research questions and may involve a qualitative and quantitative combination. Thus, pragmatists reject the suggestion that qualitative and quantitative methodologies are incompatible (Morgan, 2014). This author refers to pragmatism as rejecting the top-down privileging of ontological assumptions over epistemology, methodology and methods (Morgan, 2014). Indeed, Morgan (2014) suggests that pragmatism gives precedence to reinforcing action as the key in discerning whether knowledge is useful in guiding behaviour to produce considered outcomes. In this, pragmatism is considered in the middle of the continuum between constructivism and realism metaphysical paradigms. To that end, it seems that to answer the research questions within a pragmatism paradigm, a consensus method is most suitable.

In planning this research study, the researcher has considered the philosophical worldview assumptions that they have brought to the study, the research design that is related to this worldview and the consensus methods that translate the approach into practice. Saunders (2007) used the metaphor of a ‘research onion’ to help formulate the idea of an effective research methodology. This metaphor consists of six layers, the outside layer the research
philosophy, the second layer the research approach, the third the research strategy, the fourth the choices made, the fifth the time horizons and the innermost the data collection and analysis. Figure 7 is briefly discussed to explain why each element was selected to assist in answering the research aim and objectives of the study. It also provides a clear overview of the theory previously mentioned and a concept to design the research methodology. As the four philosophical assumptions of ontology, epistemology, axiology, and methodology were not incorporated into the research onion model, they have been described earlier in the chapter (Denzin and Lincoln, 2011).

![Figure 7. Research Onion (Saunders et al., 2007).](image)

### 4.4.1 Research philosophy (stage 1)

Researchers’ decisions and actions are guided by their view and understanding of the world. Therefore, as a clinical academic, I have a personal view of what constitutes actable knowledge, and the process by which it is developed and thus the direction needed to conduct the study. Saunders (2007) discusses two main research philosophies, as mentioned previously positivism and interpretivism. In this study, the approach is closely aligned with the pragmatist view of conducting meaningful research.
4.4.2 Research approaches (stage 2)

According to Saunders (2007) the two main types of research approach, namely deductive and inductive. A deductive approach to research is the one that researchers associate with scientific investigation, where a theory is considered and tested. On the other hand, the inductive approach starts with relevant data on the topic, patterns are considered, and a theory is developed to potentially explain those patterns. This study could be viewed as a mixed methods approach and justification of the methods is provided later in this chapter. Identifying the number of methodological approaches in this study was problematic, as authors on NGT and Delphi methodology report that they do not ‘fit’ completely into conventional ‘purist’ ideas of qualitative or quantitative research (and thus a deductive or inductive approach). Further justification in this chapter will answer the preceding ‘research onion’ levels and the data collection and analysis. This approach affords the ability to answer all the research questions, which leads to increased trustworthiness and generalizability of the research (Saunders et al., 2009). A potential advantage of mixed methods is that a combination can add more credibility to the research, as a qualitative approach provides more explanation to a quantitative study by adding depth of meaning through the inclusion of expert narrative and dialogue, new ideas, while the quantitative elements add precision to group choice.

4.4.3 Strategies (stage 3)

This stage considers the way to collect and analyse data, with Saunders et al., (2007) suggesting experiment, survey, archival research, case study, ethnography, action research, grounded theory and narrative inquiry to be the main strategies for research. This can be referred to the general way which helps to choose main data collection methods to answer the research question and meet the research objectives. As mentioned, quantitative and qualitative are distinguished as the two main types of research methods (List, 2005). Kosow and Gaßner (2008), Puglisi (2001) distinguish explorative and normative groups of research methods, in addition to the two main types listed above. Explorative methods are aimed at studying multiple futures and exploration of developments, while normative methods aim to shape the desirable/undesirable future and build the pathways or chain of events for
reaching it. This thesis’ research strategy may be distinguished further as descriptive, normative (prescriptive) and explorative as it combines experimental study with participant opinion and text.

### 4.4.4 Methodological choices (stage 4)

Saunders et al. (2007) consider choices with reference to the use of qualitative and quantitative methods, as well as a simple or complex mix of both or the use of mono methods. This thesis has considered a range of possibilities of data collection and how to organise them, for example, by their degree of predetermined nature (problem and research questions) and an emerging topic, the use of closed-ended and open questions, and the focus on numeric and non-numeric data analysis (statistics and text). As this section considers the general study and understanding of method, the specific way of doing and the defined procedures is documented and developed further in the study chapters later in this thesis.

### 4.4.5 Time Horizons (stage 5)

The fifth layer of the ‘research onion’ is known as Time Horizons. Saunders et al (2007) argue that time horizons are required for the research design, out with the research methodology used. There are two types of time horizons, namely Longitudinal and Cross-sectional. Longitudinal studies data collection points are repeated over an extended period; cross sectional studies are limited to a specific time frame. This present study had time constraints and the data collection phase was expedited over a short period of time. Therefore, according to the definition, a cross sectional study was undertaken.

This research opportunity examines the opinion of FCP and OH experts on a specific issue, in the present, but allowing them to draw on experiences in their clinical past and present to apply outcomes to future work. It, therefore, relates to a specific chronological context. As a result, the data is collected at specific points in time but with several data collection stages. This could be considered as a multiple cross-sectional time frame (Creswell and Creswell, 2018).
4.4.6 Techniques and procedures (stage 6)

This final layer considers the techniques and procedures, moving the research design towards data collection and analysis. The previous choices have determined the type of basic data collection and analysis and are considered below. Beyond this, the researchers own personal training and experiences have influenced the choice of approach and the time and resources to collect and analyse the data. Finally, as it is anticipated that the research will add work and health competencies for FCPs, it is important that the audience accept the research. The audience is physiotherapists, GPs, AHPs, journal editors, academics, managers, and readers and those involved in OH and other healthcare settings. Therefore, the experiences of the audience with similar studies that help add to the MSK competency field have shaped the decision about the choice of the design below.

4.4.7 Overview of formal consensus methods

As the thesis considers the use of a consensus method, it is important to explain what group consensus methods are, and to discuss the range of methods that are available, before outlining the specific techniques employed to answer the research questions. Group consensus methods are systematic methods for developing group consensus that ensure participant anonymity, the provision of controlled feedback, iteration, and a statistical group response (Jones and Hunter, 1995). They can try to assess the extent of agreement (measurement) and resolve disagreement (development) (Jones and Hunter, 2000). There are several used in planning programmes and organizing decision-making: formal approaches such as the consensus development panels (CDPs), nominal group technique (NGT) and the Delphi technique and informal approaches such as the interactive group method and committee (Jones and Hunter, 2000). A decision was made to employ a formal approach (Delphi and NGT) in the present thesis, to answer the main research question of “What knowledge and skill competencies are required for FCPs to conduct SA certification and provide FFW recommendations in UK primary care settings?” To answer the first three objectives (pilot, study 1 and study 2), a NGT was considered face to face and for objective 4 (study 3), a Delphi study to confirm the final core competency set for FCPs.
Primary care with the UK often must deal with the problem of trying to make decisions for MSK patients in situations where there is often insufficient (or contradictory) information (ECDC, 2011). In this work and health arena, FCPs may need to decide on an individual case that has a risk of SA that requires FFW advice, but they have few empirical data to guide them. Although the existing data is not controversial, the research on this clinician group on the work and health topic within primary care is absent. Meta-analyses and randomised controlled trials can provide powerful evidence with which to support decision making, but often medical educators in this field need to make decisions without such information. Clinicians do this every day in clinical practice, which explains the proliferation of consensus guidance.

The initial broad questions within the literature review on ‘what learning and development needs have been investigated for FCPs in the healthcare literature on the FFW and SA certification topics’, ‘what are the main gaps in this literature?’, ‘what are examples of promising research avenues on the health and work topic for FCP clinicians and other HCPs?’ are types of questions that require mechanisms to help make decisions in the absence of conclusive best practice recommendations. Consensus group methods were chosen as a systematic means of measuring, developing, and reaching consensus on the learning and development needs of FCPs for FFW recommendations and SA certification, and the challenges/obstacles to implementation.

There is a myriad of approaches that could be taken to answer the research questions and provide evidence-based methods in the absence of, or where, published information is inadequate. On review of the literature these include profiling, surveys, task analyses, focus groups, questionnaires, critical incident interviews and direct observation of clinical practice (Galbraith et al., 2017). There is currently insufficient evidence (in the form of rigorously conducted empirical studies) on the role of FCPs in determining FFW and SA in primary care and no systematic reviews on the topic, therefore it was decided to consider consensus methods to support future decision-making and actions in this area.

There are several consensus methods as mentioned, Delphi, modified Delphi, NGT and CDPs with a fourth, the RAND approach a hybrid that starts like a Delphi and involves a face-to-face meeting, as per Table 5 and Table 6 (Bowling, 2009).
Table 5. Methods of Formal Consensus (amended from Nair, Aggarwal and Khanna, 2011).

<table>
<thead>
<tr>
<th>Consensus Method</th>
<th>Face to Face?</th>
<th>Structured Interaction?</th>
<th>Freethinking Decisions made prior to Group Meeting</th>
<th>Evidence Based</th>
<th>Utilises Questionnaires (electronic, post or fax)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGT</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>+</td>
<td>No</td>
</tr>
<tr>
<td>Delphi</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>+</td>
<td>Yes</td>
</tr>
<tr>
<td>CDP</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>+</td>
<td>No</td>
</tr>
<tr>
<td>RAND Approach</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>+++ (laden)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 6. Overview of Three Main Approaches to Consensus Research as suggested in Literature (amended from Waggoner et al., 2016).

<table>
<thead>
<tr>
<th>Attribute</th>
<th>NGT</th>
<th>CDP</th>
<th>Delphi Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel Composition</td>
<td>Professionals- multi-discipline expert</td>
<td>Professionals- multi-discipline expert</td>
<td>Professionals- multi-discipline expert</td>
</tr>
<tr>
<td>Panel Size</td>
<td>5-9</td>
<td>5-10</td>
<td>6-11</td>
</tr>
<tr>
<td>Face to Face?</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Literature Provided?</td>
<td>As necessary</td>
<td>Yes- experts in field presentation</td>
<td>Yes- overview of literature provided</td>
</tr>
<tr>
<td>Iterative Number of Rounds</td>
<td>4 sessions</td>
<td>Variable- as required</td>
<td>At least 2</td>
</tr>
</tbody>
</table>

Each of these involves measuring consensus, with CDP and NGT two methods that are also concerned with developing consensus (Jones and Hunter, 1995). This is important as with little information on the topic, the first two studies were used to develop consensus and provide novel data to answer the research questions. The Delphi and NGT methods were chosen as they offer unique interpretive and textual data and a quantitative judgement that solitary quantitative methods cannot. This interpretive outlook considers the ‘what,’ ‘how’ and ‘why’ (Maxwell, 2012) and aligns with the researcher’s current practice within OH, as it is described as both a mechanistic science and interpretive art (Loder et al., 2013). This theoretical framework recognizes the relativity and context-dependent nature of knowledge,
suggesting that multiple realities may exist in society and there is unlikely to be one ‘universal truth’ (Bowling, 2014). Thus, to view the main research question within the whole SA context for FCPs as MSK experts, the answers to the research phenomenon under investigation are unlikely to be entirely value-free or fully objective. However, theoretical perspectives on interpretation (hermeneutics) and human experience (phenomenology) can be viewed as complementary rather than incomparable to quantitative methods (Creswell, 2015). It has been argued that the epistemological basis for consensus methods favours the positivist paradigm due to the use of a quantitative approach to data collection and that the inclusion of ‘expert’ FCPs assumes an ontological position of a single reality that experts agree (Vazquez-Ramos et al., 2007, p.112).

Conversely others suggest that consensus methods are purely interpretive as they are concerned solely with ideas and opinions, such as Powell (2003, p.381) who reported that Delphi methods represent ‘expert opinion rather than indisputable fact’. Howick (CEBM, 2009) defines expert opinion as level five evidence (the lowest in the hierarchy), describing it as ‘without explicit critical appraisal, or based on physiology, bench research or first principles’. However, purely describing the proposed research in these terms fails to recognize the significance of the three elements of evidence-based medicine (EBM) as the ‘integration of best research evidence, clinical expertise, and patient values’ (Sackett, 1996, p71). This study fits well within the well-established EBM paradigm, as it will bridge the gap between research and clinical practice though the use of experts (Sprenkle and Piercy, 2005).

This thesis and studies within offer one facet of EBM, not necessarily new and primary scientific theory solely, but progresses it as a heuristic structure for improving and optimizing primary care through explicit and conscientious group consensus (ECDC, 2011). Furthermore, it will offer two important epistemological principles in the form of evidence that will enable clinicians as decision makers to consider evidence within their environment and context and based on their own patients’ values and preferences (Van der Weijden et al., 2010).

### 4.4.8 Group-decision making and consensus methods

All consensus development methods are group facilitation techniques that aim to gather consensus, judgement, or choice (Hasson et al, 2000; Keeney et al, 2001). Consensus is a
method of determining the level of agreement among experts in each subject area under investigation (Jones and Hunter, 1995).

Informal consensus methods can be defined as unstructured groups using open discussion with individuals agreeing on a topic, such as a jury (Murphy et al., 1998). In groups, decision-making via informal consensus has been found to be biased to a variety of process influences, also called ‘process losses’ (Steiner, 1972). In certain situations, groups may be less likely to present a viewpoint that is controversial due to the observed tendency of participants to agree with the majority or an expert’s perceived professional group, an effect of ‘conforming to the norm’ or ‘compliance’ (Woudenber, 1991). In fact, individuals may be more inclined to propose information that is common within a group rather than non-shared information that supports an alternate view (Wittenbaum and Stasser, 1996). Evidence suggests that individuals tend to receive and give shared versus unshared information, and those that provide shared information are perceived by the group as more credible, proficient, and knowledgeable (Wittenbaum et al., 1999).

Group consensus methods rely on the collective judgement of experts to achieve a decision that is considered more credible and defensible than that of an individual or working group. This format appealed to the researcher as it brings together a wide range of knowledge and experience and allows equal consideration of multiple perspectives and thus the creation of opportunities to challenge long-standing practice (Murphy et al., 1998).

It also could be argued that with an absence of evidence related to the work and health topic in primary care, expertise will allow for an appreciation of learning needs and immediate responses to problems not previously considered. It could be argued that emphasis will be placed on experts who have OH experience or greater general perceived knowledge, expertise and confidence on the topic (Neal et al., 2012). This is why it was deemed essential to generate and reach consensus from an expert OH group (objective 3/study 2). Relying on a collective judgement through an increased group participation of all individuals may reduce the likelihood of biased opinion sharing. Also, reducing the impact of powerful or dominant experts in driving group decision-making is particularly important for group representation, especially in healthcare staff that may function in hierarchies within professionals (Humphrey-Murto, 2017).
Formal consensus methods consider a structured and systematic approach to mitigate some of the group pressures above that lead to poor decision-making (Murphy et al., 1998). The methods discussed previously are commonly used in healthcare. Delphi and NGT methods have their individual strengths and weaknesses (Jones and Hunter, 1995) and have been used extensively in physiotherapy research and in healthcare settings previously (Waggoner et al., 2016).

4.4.9 Delphi

The Delphi method was developed by Norman Dalkey and Olaf Helmer in the 1950s and found publication (1963) at the Rand Corporation to structure group communication. It is a widely used and accepted form for achieving convergence of opinion concerning practice knowledge gained from experts within specific topic areas. This is described by Dalkey (1972, p. 15) as ‘two heads are better than one, or...(n) heads area better than one’ and implies that the opinion of a group is more valid and reliable than that of one individual. It was originally used to gather expert opinion to predict the probability of enemy attacks in wartime. During this time of the Cold War, the idea was to create a systematic interactive forecasting method, relying on a panel of experts answering questionnaires in several rounds. After each round, a moderator presents an anonymous synthesis and justification of the experts’ forecast, encouraging the experts to subsequently revise their opinions for the following round until a pre-defined end point is reached (Rowe, 1999).

The format is designed as a group communication process that aims to discuss specific concerns of an issue to direct goal setting, policy considerations or predict future events (Ludwig, 1997). To use the Delphi method, a facilitator selects members who have some expertise on a topic to a group. Next, the facilitator generates a set of statements that the experts rate for agreement. The responses from the members are gathered by the facilitator, and the facilitator gives anonymous individual feedback on how the group member’s responses compare to the rest of the group. Following this, the group members are given the option to revise their responses. Statistical criteria are used to define consensus, and the responses converge across rounds of questionnaires, most commonly after two or three rounds. It allows for the efficient collection of views from a large group of participants that are geographically dispersed and is praised for its production of meaningful
research outcomes where consensus was challenging to reach or too resource-intensive to achieve with other methodological approaches (Hsu and Sandford, 2007).

A main limitation is that experts may not directly be able to resolve discrepancies through the discussion of controversial or ambiguous ideas. Several variations on the original technique have been developed and utilised, but the four main features of the technique remain unchanged:

- **Anonymity of participants** to eliminate or reduce dominant voices within face-to-face meetings, the pressure to agree with knowledgeable experts (the underdog effect)
- **Controlled feedback** to reduce the effect of noise and bias in the process. It also acts to ascertain the reasoning behind a viewpoint and re-appraise the items that comprised the answer, leading to a considered and revised answer in subsequent rounds (Dalkey and Helmer, 1963)
- **Iteration** which allows an achievement of group agreement of opinion over several rounds, especially when the central question or topic is complex and uncertain (Powell, 2003)
- **Statistical group response** turning qualitative data into quantitative data, the statistical analysis provides an objective and impartial analysis (Hsu and Sandford, 2007).

Due to the heterogeneity of Delphi variants which could undermine scientific rigour, the researcher has drawn upon published guidelines within the literature to construct their iteration of Delphi. This is developed further and explained in detail in study 3 of chapter 8.

### 4.4.10 NGT

The NGT is a group decision-making (Potter et al, 2004) and consensus development research method that was developed in 1968 by Andre Delbecq and Andrew Van de Ven (Delbecq and Van de Ven, 1971; Delbecq et al., 1975). It has been used widely in healthcare research (Potter, 2003; Trickey et al., 1998; Vella et al., 2000; Parke & McCusker, 2008), education (Lloyd-Jones et al., 1999; Lancaster et al., 2002; Dobbie et al., 2004; Short et al., 2010), and consumer groups (Dewar et al., 2003; Tuffrey-Wijne et al., 2007).
Moore (1987, p13) describes the NGT as a method for structuring small group meetings that allows individual judgments to be pooled effectively and can be used in situations in which uncertainty or disagreement exists about the nature of a problem or possible solutions. The NGT facilitates groups in the generation of ideas, clarification of issues and setting of priorities (Aspinal et al., 2006). However, Campbell and Cantrill (2001) contend that the NGT is not a consensus development method in and of itself but part of the consensus process, during which ideas are generated and prioritised, to be used subsequently as part of, for example, a Delphi study.

The NGT is highly structured and follows a step-by-step process that is outlined in detail by the original authors (Delbecq and Van de Ven, 1975) and revised further by Fox (1993), who describes the Improved NGT. The term ‘nominal’ derives from the fact that the participants in the group work in the presence of one another but only interact minimally (i.e., in name only). Studies consistently have identified that, when compared to groups in which members interact with one another, nominal groups produce a larger number of problem dimensions; high quality suggestions; and varied solutions (Delbecq and Van de Ven, 1971; Van de Ven and Delbecq, 1974; Herbert and Yost, 1979; Mullin et al., 1991). Hence, this was one of the foremost reasons for using this method in this current study. The NGT shares several features of the Delphi, but in contrast is a structured face-to-face interaction usually involving a smaller number of participants.

The features of the NGT, in common with other consensus development methods, are:

- **anonymity** - to avoid dominance of any group member;
- **iteration** - processes occur in ‘rounds,’ allowing individuals to change their opinions;
- **controlled feedback** - showing the distribution of the group’s response in terms of both individual and pooled judgements (Jones & Hunter, 1995).

In designing a study using the NGT decisions must be made concerning the following: the question posed to the nominal group; the method in which the NGT is conducted; the selection of experts and type of group facilitator; and the methods of data analysis. These are considered in the following sections for the individual studies.
On evaluation of the methods theory, the NGT was selected initially (for Studies 1 and 2) over focus groups or Delphi due to its combined strengths:

- has been shown to be more effective than focus groups for the number and quality of ideas generated;
- enables consensus development;
- can be conducted in a short time scale;
- has a structured format;
- prevents dominant members controlling or over-influencing decisions;
- emphasises idea quality rather than participant’s status;
- facilitates maximal engagement of all group members, even quieter ones;
- protects participants’ views;
- generates quantitative data;
- produces a sense of closure and participant satisfaction once finished (Murphy et al., 1998; Potter et al., 2004)

In terms of the NGT’s limitations, the researcher’s main concerns in using the method related to the facts that it can only deal with one issue at a time; views of participants are collected at a singular time point; and as it involves a face-to-face meeting it tends to restrict participant recruitment to a limited geographical area. However, given the strengths of the technique, as outlined above, it was deemed the most appropriate method to address the study’s research questions within studies 1 and 2. Study 1 was a NGT with a FCP expert group, Study 2 was a NGT with an OH expert group and Study 3 was a modified Delphi on a national FCP expert group. The attributes of consensus methods are presented in Table 7.

Table 7. Key features of consensus research methods (adapted from Moore, 1987; Fox, 1993; Fitzpatrick and Boulton, 1994; Williams and Webb, 1994; Brahm and Kleiner, 1996; Murphy et al., 1998; Sim, 1998; Hasson et al., 2000; Campbell and Cantrill., 2001; Potter et al., 2004)
<table>
<thead>
<tr>
<th>Attribute</th>
<th>Focus Group</th>
<th>Delphi Technique</th>
<th>Nominal Group Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>In depth exploration of topic area</td>
<td>Ideas generation, priority selection &amp; consensus seeking</td>
<td>Ideas generation, priority selection &amp; consensus seeking</td>
</tr>
<tr>
<td>Generates a large number of ideas</td>
<td>Maybe</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Can addresses several research questions simultaneously</td>
<td>Yes</td>
<td>Yes</td>
<td>No - generally, one carefully constructed question/ topic</td>
</tr>
<tr>
<td>Preparation time prior to group</td>
<td>Can be set up quite quickly</td>
<td>Significant preparation</td>
<td>Significant preparation</td>
</tr>
<tr>
<td>Time taken to collect data</td>
<td>Around 1.5 hours per group</td>
<td>Several months</td>
<td>Around 1.5 hours per group</td>
</tr>
<tr>
<td>Face to face contact</td>
<td>Yes</td>
<td>No – mailed questionnaires</td>
<td>Yes</td>
</tr>
<tr>
<td>Level of structure employed</td>
<td>Low</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Role of facilitator during group</td>
<td>Guides discussions</td>
<td>Administers questionnaires &amp; collates group responses</td>
<td>Guides group, paces discussions &amp; collates group responses</td>
</tr>
<tr>
<td>Interaction between participants</td>
<td>Yes</td>
<td>No</td>
<td>Limited</td>
</tr>
<tr>
<td>Encourages equal input from all participants</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Avoids ‘quick’ decision making</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Private individual judgments elicited</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>High degree of task completion</td>
<td>Maybe</td>
<td>Maybe</td>
<td>Yes</td>
</tr>
<tr>
<td>Potential for influence of dominant members</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Risk of social desirability response bias</td>
<td>High</td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Use of audio-recordings</td>
<td>Usually</td>
<td>No</td>
<td>Maybe</td>
</tr>
<tr>
<td>Attribute</td>
<td>Focus Group</td>
<td>Delphi Technique</td>
<td>Nominal Group Technique</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>----------------------------------------------</td>
<td>--------------------------------------------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>Types of data generated</td>
<td>Textual &amp; conceptual (qualitative)</td>
<td>Textual, conceptual &amp; numerical (qualitative &amp; quantitative)</td>
<td>Textual, conceptual &amp; numerical (qualitative &amp; quantitative)</td>
</tr>
<tr>
<td>Aggregation method</td>
<td>Implicit (interpretative)</td>
<td>Explicit (employs statistical methods)</td>
<td>Explicit (employs statistical methods)</td>
</tr>
<tr>
<td>Measures the relative importance of ideas generated</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Data analysis</td>
<td>Intensive post group conceptual analysis</td>
<td>Fairly intensive contextual &amp; numerical analysis between &amp; after Delphi rounds (includes descriptive/ inferential statistics)</td>
<td>Initial numerical analysis can be completed during group &amp; results provided to participants (includes descriptive statistics)</td>
</tr>
<tr>
<td>Provision of immediate feedback to group</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Advantages</td>
<td>Group members can ‘spark off’ each other/ focus groups encourage a degree of spontaneity in the expression of views/ can provide a ‘safe’ forum for the expression of views/ participants may feel supported and empowered by a sense of group membership &amp; cohesiveness</td>
<td>Provides consensus of expert opinion without the risk of peer group pressure/ flexible/ views can be altered between rounds/ enables participation of larger groups of people than cannot be brought together face to face/ relatively cost effective (mailed questionnaires)/</td>
<td>Face to face format online or in person/ generates large number &amp; quality of ideas/ carefully considered responses/ appropriate for addressing technical or complex issues/ prevents controlling by dominant members/ quieter members more likely to participate/ ensures relatively equal participation/ decreases tension during group decision-making/ produces sense of closure at end/ structure mitigates status of group members/ protects participants’ views/ since participants are directly involved in both data collection &amp; analysis, researcher-bias is minimised/ emphasises idea quality more than presenter status</td>
</tr>
<tr>
<td>Disadvantages</td>
<td>Focus group data may be a poor indicator of</td>
<td>Time-consuming/ possible bias introduced</td>
<td>Structure may feel constraining/ little</td>
</tr>
</tbody>
</table>
### Attribute

**Focus Group**
- attitudinal consensus, though they may reveal a divergence of opinion and the extent to which certain issues recur across groups/ dependent on researcher’s interpretation of results/ less effective for ideas generation

**Delphi Technique**
- by researcher in interpretation of findings/ response bias/ uncertain reliability/ possible lack of methodological rigour/ requires considerable commitment from participants/ no opportunity for participants to elaborate on their views/ possible ‘response exhaustion’ – attrition between rounds

**Nominal Group Technique**
- ‘sparking off’ group members/ deals with only one issue at a time/ inflexibility/ less spontaneous/ considerable preparation required/ criticised for superficial understanding of a phenomenon/ limited by time—only a few questions can be discussed & agreed on/ economic and time costs associated with face-to-face meeting

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### 4.4.11 UCLA/RAND Appropriateness method (RAND)

This approach was developed to assess the uptake of appropriate medical and surgical procedures (Fitch et al., 2001). An appropriate procedure is one in which ‘the expected health benefit (e.g., increased life expectancy, relief of pain, reduction in anxiety, improved functional capacity) exceeds the expected negative consequences (e.g., mortality, morbidity, anxiety, pain, time lost from work) by a sufficiently wide margin that the procedure is worth doing, exclusive of cost’ (Brook et al., 1986; Park et al., 1986). Robert H. Brook, who identified the need for a tool to measure the appropriateness of care, explained that "it was motivated by the concern that the increasing complexity of medical care was resulting in some patients not undergoing procedures that they needed, and others undergoing procedures that they did not need" (Brook, 1994). The rationale behind the method is that randomised clinical trials, described as the ‘gold standard’ experimental tool to control factors not under direct experimental control for EBM, often are not available or cannot provide evidence at a level of detail to sufficiently apply to the wide range of patients seen in daily practice. Although robust scientific evidence about the benefits of many procedures is lacking, clinicians must nonetheless make decisions every day about when to apply them. It is seen as a form of NGT whereby a committee of experts are
brought together, often a multi-disciplinary ‘expert’ panel and a separate ‘core’ panel of technical members.

The core members are responsible for providing information to the expert panel in the form of a synthesis of relevant research (e.g., a literature review) and the development of scenarios or statements that manipulate the critical factors or cues relevant to intervention decision-making (e.g., describing a patient with clinical signs or symptoms). The experts rate the chosen interventions on a nine-point scale ranging from extremely appropriate to extremely inappropriate. Ratings are initially done privately by individuals before aggregating the votes together for discussion and dissemination as a group in-person. Next, participants re-rate the scenarios privately and individually without discussion. The appropriateness score can be defined as the median rating. The UCLA/RAND method is not intended for the creative generation of ideas, as it assumes pre-existing data is available to compile the scenarios and statements (Fitch et al., 2001). The outcome normally is concerned with the development of clinical guidelines or to seek and implement expert opinion. This method is primarily used as an instrument to enable the measurement of the overuse and underuse of medical and surgical procedures, therefore as this thesis is not concerned about the relative weight of the benefits and harms of a medical or surgical intervention, it was deemed not to be an appropriate method to be used.

4.5 Ethical considerations

During the research process, a researcher has responsibilities to their participants, colleagues, supervisors, organisations, and any others who are indirectly or directly involved. Glasgow Caledonian University’s School of Health and Life Sciences Research Ethics Committee granted ethical approval of the three studies contained within this thesis, (Appendix 3) NHS ethical approval was not required by the University SLHS ethics committee.

Ethics may be considered a summation of morals, values and codified laws governing research behaviour (Meffert, 2009) and is like the researcher’s core values in current practice as a human being and expert in healthcare. These consist of non-maleficence (do no harm), autonomy (act intentionally), beneficence (consider benefit for participants) and participate
voluntarily (Gaufberg and Batalden, 2014). De Vaus (2001) also suggests informed consent, confidentiality, and privacy.

Any research project involving human participants and their personal data has ethical implications for research, especially through forms of internet data collection (Gilbert and Stoneman, 2016). A researcher within this area should protect participants, develop trust with them, ensure research integrity, guard against misconduct and impropriety that would reflect on Glasgow Caledonian University (GCU) or my current employer and cope with contemporary and challenging problems (Israel and Hay, 2006). Therefore, the researcher has attempted to actively address at all stages of his research and in different phases of inquiry, any ethical issues that may arise during proposal stage, data collection, analysis and in reporting, sharing, and storing of data (Creswell and Creswell, 2018).

The studies adhered to the ethical principles as laid out in the Declaration of Helsinki for research involving human subjects (World Medical Association, 2013). Adherence to the EU General Data Protection Regulation (GDPR, 2018) and UK Data Protection Act (2018) data protection principles and safeguards will ensure that data processing is lawful, fair, and transparent. This will also be supported through GCU’s own research governance systems and assurances including, ethical approval, risk assessment and the RDC process (GCU, 2019).

Participants’ needs will take precedence over the actual process of the research. While the success and completion of the study depends upon the expert’s willingness to participate, if such participation placed an individual at risk or caused deleterious effects, participation was not pursued (justice). Participants were not coerced or put under undue influence to participate and volunteered to take part (ESRC, 2019). Informed consent was obtained during the NGT and Delphi data collection phases (Eynon et al., 2008). The NGT’s were conducted online due to the digital pivot because of the COVID-19 pandemic response. Ethical approval was granted for this digital pivot, without a need to change the details of data collection apart from the online format (Appendix 4). Due to the online face-to-face nature of the NGTs, participants discussed and debated with fellow group members, and they were invited to provide considered responses, this may have been uncomfortable for some and if deemed unsuitable they were free to refuse participation or withdraw at any point in the meeting without consequence. The language used in the Delphi was piloted and revised if necessary.
Although the importance of completing all rounds of the Delphi questionnaire were highlighted to the participants it was made clear they could withdraw at any time with no consequences.

4.5.1.1 Avoiding harm from participation

Every effort was taken to minimise participant burden during the NGTs and Delphi study. The researcher was acutely aware of the digital pivot during COVID-19 and the risk of fatigue and unnatural patterns of working associated with the recent change to fully remote and digital format. It was anticipated that the meetings and questionnaires would bring no physical or psychological harm to the participants or bear any reference on the experts, their employers or HEI’s reputation (Fowler, 2009). For the Delphi study, the time taken to complete the questionnaire was recorded by the research team and online function, so that participants could see the time needed to undertake the rounds, this was not deemed excessive. No Delphi round took longer than 15 minutes to complete (Detailed in Chapter 5).

4.5.2 Informed consent

Potential participants were informed that by responding to the Delphi questionnaire, they will be adjudged to have consented (implied) to participate and have their anonymized responses included in any analyses. Despite this, full confidentiality cannot be guaranteed, as there is the possibility that participant quotes may be reported in the final project publication. This is important as questionnaires are considered ‘intrusive research’ by the ESRC (2019) and every attempt was made to sensitively word questions. The consensus study requested demographic but not personal data and the pilot study provided ethical feedback to consider. Everyone who participated in the Delphi questionnaires had to be informed about their role and responsibilities and had freely to consent to participate without any unfair pressure. Therefore, all participants were well informed before receiving the questionnaire about what participation entailed and were reassured that deciding not to participate would not affect their work. All participants received information about the studies nature and purpose so they could make an informed choice about participation (prior to consenting to participate) (Appendices 4 and 5). Information sheets provided a detailed explanation of assurances made to protect both confidentiality and maintain
anonymity for all participants in all studies of the project, and the extent of participant involvement was outlined. All aspects of the participants’ right to privacy, dignity, confidentiality and anonymity were addressed through the provision of thoroughly detailed covering letters and participant information sheets within each individual study.

Further clarification was encouraged through principal investigator communication via email or phone call if there are any queries, disquiet, or concern about the proposed research. Prior to this implied consent, written consent was given. It was deemed unlikely that the topic would cause disquiet or stress for participants; however, the ability to communicate and raise issues with the research team provided an opportunity to discuss concerns early.

Although participation was voluntary, the researcher accepts that participants may have felt obliged to participate in their chosen field and specialty. For some it may have been an advantageous learning experience with peers for their clinical setting.

4.5.3 Confidentiality and data protection

It is essential to maintain confidentiality during the whole process of data collection. All raw data was kept on a computer which was password encrypted, in line with university regulation and will be destroyed in accordance with current data protection guidelines (GCU, 2020). Only the researcher and supervisory team had access to the data and information sheets and consent forms provided during the NGT and Delphi and dissemination period. All data from the questionnaires were anonymized. There was no participant specific data completed online. The information sheet and consent form stressed that the results were intended to be used only for the academic award of the Professional Doctorate and future academic publications.

4.6 Chapter conclusion

This chapter has discussed a broad range of issues from the methodological approach employed with this research study, the rationale for the selection of pragmatism as the study’s theoretical framework, the research design, methods for formal consensus, the
ontological and epistemological assumptions underpinning the methodological approaches used in this study and the ethical considerations involved.

Overall, it is likely that the proposed study’s ontological assumption about the nature of FFW and SA certification competencies for FCPs lies on a continuum from realism to relativism and that the epistemological assumption about the topic lies on a continuum from positivism to subjectivism (Major and Savin-Baden, 2011). A decision-making consensus methodology was viewed as most suitable for the initial studies on the topic because of its ability to generate a large quantity of ideas and provide group consensus. Three decision-making methodologies were considered for this task: The Nominal Group Technique (NGT), Delphi and a Brainstorming group. NGT was selected for several reasons. It is time efficient; it is possible to collect a large amount of data within one session, and it is useful for studies working with a limited budget in a geographically dispersed expert population. Additionally, the process allows for results from different groups to be amalgamated during an online session, thus instantly producing a final set of ideas and an outcome that is live and final.

The ability to utilise group dynamics whilst limiting the possibility of a dominant participant influencing the group is also very appealing, especially as the work and health agenda is emotive and can have personal resonance. Some authors consider these methods to sit within both qualitative and quantitative methodologies (De Villiers, 2005). If one believes that the Delphi method supports a constructivist enquiry, then rigour should be defined in terms of trustworthiness criteria used in qualitative research (confirmability, credibility, transferability, and dependability) and not by positivist criteria of objectivity, namely validity and reliability (Campbell et al., 2001). The absence of an appropriate philosophical foundation in the argument for an approach can result in inconsistent conceptualizations of the methods and may contribute to the inconsistency in methodology (Guzys, 2015).

Decisions on what to study and how to do so are informed by the researcher’s personal values and feelings about what is important as a clinician, educator and academic, fitting with the pragmatist approach (Teddlie and Tashakkori, 2009). It is by looking through this lens that a decision on ‘what works best’ to answer the research questions, aim and objectives is considered. Pragmatism is concerned with real world situations and places an
emphasis on learning and action, which is ideally suited to this study of FCPs learning and development needs to complete FFW and SA certification in primary care. Epistemologically, there appears to be general agreement that the relationship between the researcher and the researched can be both objective and subjective, and that knowledge is concerned with practical understanding and application (Teddlie and Tashakkori, 2009). Lastly, pragmatism provides an opportunity to adopt quantitative and qualitative methods consistently and coherently to fit the outcome needed and therefore is selected as the theoretical framework to base all stages of the research process.
Chapter 5. Study 1 and 2 Methods

5.1 Introduction

To reiterate, the four objectives of the thesis with the first three objectives applicable to Studies 1 and 2 were:

1. Test a consensus building methodology in a group of HCPs to identify design issues and evaluate a study’s feasibility, practicality, resources, time, and cost prior to the main research being conducted (Pilot Study).
2. Explore FCPs opinion and identify competencies on this work and health topic and determine whether consensus can be reached on the learning and development needs of FCPs for FFW recommendations and SA certification, and the challenges/obstacles to implementation (Study 1).
3. Explore OH physiotherapist’s opinion and identify competencies on this work and health topic and determine whether consensus can be reached on the learning and development needs of FCPs for FFW recommendations and SA certification, and the challenges/obstacles to implementation (Study 2).
4. Determine and reach consensus on a final core competency set for FCPs to complete FFW recommendations and SA certification in primary care by engaging FCPs through a national formal competency study (Study 3).

As outlined in Chapter 2, FCPs are now the first point of contact for working-age adults with MSK conditions in the UK primary care setting. This model of practice may be amenable for FCPs to engage in the assessment of FFW and SA certification, providing legislative changes are made to the current system. However, there is some evidence to suggest that HCPs in general do not effectively conduct work-related conversations related to health and indeed many report, especially in GPs, that they are inadequately trained in the work and health agenda. Therefore, the purpose of the first study of this thesis was to explore some of the reasons for this in FCPs. For competencies related to the topic to be implemented, it is important they are perceived as credible. Therefore, it was deemed to be an important first exploratory step to generate and prioritise ideas and to achieve group consensus on the
topic based on a group of FCPs and OH physiotherapists. The search strategy and synthesis of the available literature in Chapter Two indicates that few research studies have considered FCPs and OH physiotherapist views of FFW recommendations and SA certification competencies requires to improve the utility of the Fit Note and work advice in primary care settings. This is crucial, as FCPs need to have input and ownership of these work and health competencies based on best available evidence, and if they are not deemed applicable or not involve, it may be difficult to change or further develop practice in this area. Moreover, it is timely to elicit FCPs views given that they are now commonplace in many primary care settings and have been legislated for the certification of sickness absence. The research methods described below are context-specific to the UK, and within each county its own distinctive healthcare landscape. Also, as documented, the research was undertaken during the start of the COVID-19 pandemic, and this limited the ability to meet in-person. Therefore, the adaptability of the NGT was additionally suitable for the Doctorate as it could be modified to online contact with experts, meaning it was not necessary to meet the geographically dispersed groups together.

The World Health Organisation (2014) recognised the need to use formal consensus methods in the development of clinical practice guidelines and frequently the NGT to identify key priorities for integration into healthcare practice. If specific barriers to and facilitators of change have been assessed in the target group, solutions then can be examined. In the case of this first study the target group consisted solely of FCPs that were working currently in primary care. This was important as individuals tend to prefer both receiving and giving shared versus unshared information, and that those giving shared information are perceived as more credible, proficient, and knowledgeable by other members of the group (Wittenbaum et al., 1999).

Group methods, such as the NGT, that increase the participation of such individuals therefore could serve to reduce the biased sharing of opinions. It was thought that by using FCPs as participants in Study 1 (NGT) it would allow for an appraisal of the work and health topic, including first-hand experience from FCPs on how a change in legislation may apply to primary care settings, including the challenges and benefits, and policy priorities that might impact on implementation (Schunemann et al., 2006). There is an inclination to share similar information if groups are homogenous, since group conformity is increased in groups that
are perceived to be more similar. Group agreement increases if groups are comprised of a single profession, and thus alternative explanations are not as fully explored (Murphy et al., 1998). Thus, it was deemed important to consider the opinion of a group of OH physiotherapists who are used to the health and work topic, although there is a risk of decision-making bias, whereby members tend to interpret evidence in light of already held beliefs and assumptions on a topic (Raine et al., 2004) and show bias towards theories on their own knowledge or experience.

For studies 1 and 2, the importance of incorporating clinical expertise and expert experience within primary care when making competencies to encourage a meaningful translation of evidence was deemed important. The development of competencies usually involves face-to-face meetings of experts and professionals, which is a setting in accordance with a NGT study. Increasing the transparency of the decision-making process may also reduce inadvertent biases to be delineated from deliberately contributed primary care expertise. This could be achieved though recording statement revisions and in ensuring they are sourced progressively. There has only been a single qualitative study that captured the views of eight clinicians involved in MSK assessment and pathway management on the themes that underpin the competence, capability, and training requirements for FCPs (Langridge et al., 2019).

In summary, the application of formal consensus methods to generate and reach consensus on healthcare competencies requires careful consideration. This is because the process of applying scant health and work literature to the development of competencies requires the mobilisation of a particular set of skills as applied to imperfect evidence from participants from homogenous and hierarchically organised professional backgrounds. NGT through formal consensus was selected to increase transparency of these processes, as it supports groups to use expertise in a more clear, conscious, and informed way and allow participants to participate equally. This is achieved though the pooling of their views, which is helpful as there is a tendency for groups to avoid discussing unshared information. There was a concern that unanimous agreement on the implications of contested and limited evidence would be unlikely, but the NGT would allow a process that participants could agree on ‘accountability for reasonableness’ (Daniels and Sabin, 2008). This suggests that decision making processes should follow transparently and consistently based on reasoned
argument. Study 1 and 2 (NGTs with FCPs and OH physiotherapist) would be a useful method for an area with limited and low-quality evidence since it allows for the incorporation of a variety of data types, including experiential (from experts) and lower quality evidence (Black et al., 1999).

5.2 Study Design Rationale

In order to answer the research questions and objectives, a decision was required regarding the most suitable research method with which to address it. The study aim was not to attain in-depth explorations of individuals’ experience or attitudes on the topic but was to achieve a group decision, or consensus, on the key factors that make FFW and SA challenging in primary care and what their learning and development needs are in conducting them.

5.2.1 Group-based research methods

As mentioned in the previous chapter, there are several group-based research methods available to determine the views of individuals in relation to specific health-related topic areas. The purpose of such methods is to increase the depth and scope of discussion, ensure wide coverage of ideas, involve the whole group in selecting priorities, and seek group agreement on the topic when a state of uncertainty exists (Potter et al., 2004). Using the NGT as a method of consensus generates a diverse range of views and ideas in a structured manner, ensuring that the opinions of all group members are considered, and prevents the discussion and process from being dominated by an individual participant. Thus, for the initial two studies, it was decided to proceed with its use due to its combined strengths and that it:

- is more effective when compared to focus groups in the number and quality of ideas generated
- is a structured format for participants
- enables consensus development
- can be conducted in a short time frame
- prevents dominant participants controlling or influencing decisions
- emphasises idea quality rather than participant status
- facilitates maximal engagement of all group members, even those who are not vocal
• has a confidential voting process with results fed back to the group in aggregate (anonymously)
• generates quantitative and qualitative data
• produces a sense of closure by way of a final group decision on the topic, meaning each idea is discussed in turn and clarification provided, individuals then further discuss and debate and finally vote on competencies. This provides a tangible answer to a research question based on democratic group consensus.

(Potter et al., 2004)

The researcher’s main concerns in using the method related to its inability to deal with more than one issue at a time and at a singular timepoint. As the NGT is a structure interaction, every idea/item is discussed in turn, with similar ideas grouped together. The entire process may last from 1.5 to up to six hours (Campbell et al., 2001) with others suggesting that it typically lasts between 60 and 90 minutes (Manera et al., 2018) and therefore can only consider a few questions on an issue at maximum in the meeting. NGT assures a balanced input from all participants and takes advantage of each person’s knowledge and experience, again consistent with the pragmatist paradigm of this thesis.

NGT can be compared with other consensus methods, such as the Delphi technique. The Delphi technique, although highly structured, is an isolated thinking and communication process among group members not providing the combination of individual thoughts, expressions, and experiences through a group discussion, which is offered by the NGT.

The alternative to the NGT would have been to have rounds of the Delphi until no changes in responses were noted. However, it is recognised firstly, that NGT groups make more accurate judgments than Delphi groups (Manera et al., 2018). Secondly, that responder fatigue occurs with increasing rounds of the Delphi (Humphrey-Murto and de Wit, 2018), and a lower response rate has the potential to lessen the validity of results. Additionally, if an item achieves low consensus because of ambiguity or lack of understanding by the panel, there is no opportunity in repeated Delphi rounds to seek clarification. Hence, the clarification and discussion process found in the NGT is, again, is not easy to be achieved in a
remote Delphi process. What is more, face-to-face contact and discussion, offered by the NGT, is an aspect that is embedded in the pragmatist paradigm adopted in the thesis.

Before study 1 and 2 commenced a feasibility pilot study of the use and evaluation of NGT in a group of OH experts were used and published (Black et al., 2021). Although this was on a different topic, it allowed the researcher to check with participations how they understood terminology, to ensure emotive and leading questions were not used, pretesting the interview format and to assess from a time perspective the practicality and feasibility of the main studies. Overall, this pilot study enabled the researcher to develop consistent practices and a familiarization with the procedures in the NGT method. Although a beneficial undertaking, the researcher was acutely aware that this was undertaken before social lockdowns as an in-person meeting and in hindsight with a digital pivot to online methods, it did not fully guarantee the success of the main studies.

5.3 Methods

5.3.1 Ethical considerations and approval

Ethical approval was granted by Glasgow Caledonian University’s Health and Life Sciences Research Ethics Committee (Reference: HLS/PSWAHS/19/144), including a COVID-19 amendment to reduce risk as far as reasonably practicable for participants (Appendix 4). This amendment was requested and was authorised for a pivot to full digital methods in view of the COVID-19 pandemic and national social restrictions. In-person meetings were deemed to be in breach of national restrictions when data collection commenced, and a pivot to digital methods circumvented this problematic context. Thus, instead of a group in-person meeting, the two NGTs (study 1 and 2) were conducted online. The pilot study was conducted just prior to the pandemic restrictions and was conducted in-person.

Polit and Beck (2014) highlight the need to address ethical considerations in research. These considerations concern not only the participants but also the researcher and the quality of the research itself. Key ethical requirements for the two studies were identified as follows: respect participants right to dignity, privacy, confidentiality, and anonymity; avoiding harm arising from participation in the NGTs; ensuring transparency and consistency of the aims of
the studies, procedure, intention to publish and disseminate the data generated; participating with honesty, integrity and professionalism; and data collection, storage, analysis and presentation (Cohen et al., 2000).

Details relating to the intended use of all data obtained were provided in the respective information sheets and consent forms (Appendices 4, 5 and 6). Participants were fully informed of the nature and purpose of the research (prior to consenting to participation) (Eynon et al., 2009). All aspects of the participants’ right to privacy, dignity, confidentiality, and anonymity were published through the provision of detailed cover emails, participant information sheets for study 1 and 2 (Appendices 4, 6 and 7). Information sheets provided a detailed explanation of assurances made to protect both confidentiality and anonymity in both studies, and the extent of participation involvement was outlined. Ethical considerations are further documented in the GCU SLHS’s Application for externally approved research projects (COVID-19 Amendment Form) (Appendix 4).

In terms of ensuring that participants did not suffer any psychological harm from taking part in the study, ground rules were set regarding the expected way individuals conducted themselves, e.g., digressions or personal criticism were not permitted, and the author of nominal group items had the option of identifying him or herself, voluntarily, but this was not necessary. Due to the digital face-to-face nature, participants were discussing and debating with fellow group members, and were invited to provide considered responses, this may have been uncomfortable for some and if deemed unsuitable they were free to refuse participation or withdraw at any point in the meeting without consequence. However, none of the invited participants requested further information nor withdrew their data in either of the NGTs. It was therefore important that a de-brief and summary by the researcher after each group was completed and at the end of their participation.

Although stated that the study participation was voluntary, it may be that participants may have felt obliged to participate as the topic was new and aimed to change professional practice. Therefore, volunteering to participate in the studies may have been perceived by experts as an advantageous experience for their professional practice or in delivering learning and development resources. Cleary et al. (2014) note that some participants may experience peer pressure to decline or agree to professional issues. Regardless of whether
coercion exists or is intended, it may be that the perception of coercion is what matters. To
minimise the risk to autonomy, particular care was taken to ensure potential participants
understood what participation involved and the voluntary nature of their participation
(Anderson, 2011). This was reinforced in every interaction between researcher and
participants. Regarding benefits, Beauchamp and Childress (2009, p. 255) explain that
potential participants may perceive coercion when “undue inducement” is used. No
monetary or similar inducements were offered in return for participation, although
participants were advised at the initial approach that the competencies generated were
likely to appeal to stakeholders and improve practice. Other ethical consideration in relation
to beneficence (obligation to do good), were primarily concerned with the potential benefits
for FCP learning and enhancement of professional practice of a new topic. The risk for this
type of researcher may ‘appear tipped towards potential benefit for practice’ because the
risks are normally ‘minimal’ (Chen, 2011). It may be a perception for FCPs and OH
physiotherapists that participation enhanced their experiences in practice and allowed them
time out from busy clinical practice to reflect, a key strategy in enhancing professional
practice.

The contact details of the researcher were provided in the email invitation, information
sheets, from which participants were able to seek further information or to ask questions
related to the study. The researcher identified himself as a student, secondly as a researcher
and provided his own student email address as the contact address and used this for all
correspondence.

Every effort was taken to minimise participant burden during the NGTs (avoid harm) (Cohen
et al., 2000). It was anticipated that the NGTs would bring no physical or psychological harm
to the participants at the time or bear any reference on the participants, their organisations
or HEI’s reputation (Fowler, 2009). The researcher conducted the researcher during the first
lockdown in 2020 and was aware of the amount of digital research being conducted at this
time. Cleary et al. (2014) highlight the importance of groups not being burdened with
research participation because of their availability. This was a significant consideration in
this study because of the volume of research activity in the university and the frequency of
requests for participation during the pandemic. The doodle poll and ability for participants
to offer data asynchronously (padlet) also helped reduce the burden on participants.
Participants were informed of the total expected duration of participation (2-hour NGT and pre-reading) so that they could include this in their decision-making about where or not to participate.

The initial open questions directly related to the study’s aims and had no bearing on specific professional contexts. The 2-hour time taken to complete the NGTs was not deemed excessive, and participants were given short breaks and comfort breaks when needed. Separate storage of coding and data files was undertaken as recommended by the Medical Research Council’s Good Research Practice Guidance (MRC, 2022). All electronic files were password protected and data backed-up on a password protected online data storage device through the University networked central storage. Only the research team had direct access to the data collected. This was remotely accessed via VPN and remote desktop when not on site. All storage complied with the GDPR guidance applicable at the time (GDPR, 2019). All modifications/revisions were clearly identified online by the researchers and dated. All analysed data have been presented in an anonymous manner and will be stored in accordance with GCU’s records retentions schedule.

In relation to non-maleficence (the obligation to do no harm) (Beauchamp and Childress, 2009) the researcher focused on the potential breaches in anonymity and confidentiality. Participants were not identifiable. Only basic demographic details were collected – age, gender, professional details – to help prevent breaches of anonymity. Bradbuty-Jones et al. (2007) suggest researchers should refrain from collating even the above details because such defining characteristics could reveal identity. However, this was deemed low risk due to the geographical spread of FCPs and OH experts. Corbin and Strauss (2015) note there is a researcher obligation to report behaviour that has the potential to harm others. This was significant because the researcher – a registered physiotherapist- is accountable to the HCPC and CSP (HCPC, 2023; CSP, 2019). If an expert in either NGT described a professional context that raised question regarding conduct of them and/or other individuals involved, he would have needed to take further action (Bradbury-Jones and Alcock, 2010). This may have involved support for the professionals concerned to referral to the HCPC.
5.4 Study 1 and 2 NGT methods

This section focuses on the research methods within studies 1 and 2 to address the main research question of: ‘What knowledge and skill competencies are required for FCPs to provide FFW recommendations and conduct SA certification in UK primary care settings.’

The main aim of studies 1 and 2 was: To generate and reach consensus on competencies that underpin FCPs role in providing health and work advice in UK primary care settings. The first three objectives are documented at the start of this chapter. Prior to study 1, the challenges/obstacles/barriers (RQ1) and learning and development needs (RQ2) related to FFW recommendations and SA certification within FCPs in primary care in the UK was unknown. The research design, data collection methods and methods of data analysis are presented. The same methods were undertaken for study 1 and 2 NGTs; thus, the information has been combined throughout this chapter in relation to the design, participants, instrumentation, procedures, and data analysis. The NGT developers advocate that both personal and organisational level issues should be considered when designing the research question for nominal groups to obtain a more comprehensive view of the issue (Van de Ven and Delbecq, 1972). Therefore, in these studies the questions posed to the NGT participants required them to consider both intrinsic and extrinsic factors that influenced them in providing FFW and SA certification in primary care and obstacles for implementation. This section adds to the initial debate presented in Chapter 2 highlighting that non-medical or non-MSK issues can be reasons for individuals taking SA, and that HCPs should acknowledge and consider strategies aimed at mitigating or modifying these reasons.

A factor was any idea/item that was generated by the participants in relation to the research question.
5.4.1 Study 1 and 2 research questions

**Research question 1**
• What do you feel are the challenges you face in meeting this multi-stakeholder ambition?
• N.B., these could be intrinsic or extrinsic, e.g., systems, time, pathways, training, resources, signposting, culture, professional identity, lack of training

**Background for participants:**
It is anticipated that FCPs will be able to provide fitness for work recommendations and sickness certification for patients with MSK conditions within primary care from 2020/21, with stakeholders awaiting extended legislation for AHPs. In addition, the CSP and NHS have the ambition for FCPs to have conversations with patients about entering/returning to/remaining in work.

**Research question 2**
• What do you feel are your key learning and development needs in response to this ambition?
• N.B., these can relate to asking the work question, screening, record keeping, using the AHP Health and Work Report, advice etc.

Figure 8. Study 1 and 2 research questions.

5.4.2 Study 1 and 2 Research design

A consensus development methodology that consisted of a novel online modification of the NGT was used in two separate expert groups. Due to the limited body of evidence in this area, to offer unique interpretive and textual data and to develop and reach consensus from this expert opinion, it was decided to conduct the two separate NGTs in a group of FCP and OH/ACPOHE experts. I considered the advantages and disadvantages of the online format and deemed it to be the most suitable and feasible option to address both professional populations, during the COVID-19 pandemic context. It then became apparent that it was the only option due to the societal lockdown at the time. The digital format needed strategies such as time allocation and pre-reading on the new topic to allow for independent thought and a thorough review, which is difficult to achieve in real time, although it gave geographically dispersed participants choices to agree on suitable dates to minimise clinical disruption. Fowler (2009) suggests that in well-educated populations, such as the experts interested in research within this study, digital methods can become more attractive for the researcher.
5.4.3 Participant recruitment and data collection process

The NGT seeks to generate and reach group agreement on a range of ideas on a specific topic, thus key informants (those with relevant expertise) should be selected to participate. Therefore, data were gathered from experts, defined as FCPs involved in the management of MSK conditions in primary care and OH/ACPOHE members involved in OH physiotherapy practice. No criteria exist for who should be included as panel members on a NGT, except that each must be justifiable as in some way as an ‘expert’ on the matter under discussion (Humphrey-Murto, 2019). To allow for an in-depth and appropriate exploration of the research topic study participants were sought throughout the UK. The knowledge and expertise of these participants would be fundamental in producing a comprehensive picture of the topic to select practice-rich information for ongoing detailed study (Creswell and Creswell, 2018). Due to the internal logic of the studies and general principles of the specific issues in the population (especially the experts focused locality), the generalizability of the findings was not the main expected attribute of the studies. There is no set standard for sample size of a NGT, but it is agreed that more participants will increase reliability and achieve better results (Powell, 2003). However, a careful balance was needed as too many people in a homogenous group may generate fewer new ideas and could make a group harder to run (Powell, 2003). For in-person meetings it has been suggested that NGT groups should not exceed ten to twelve participants with the most favourable sample size in the range from five to nine participants (Manera et al., 2018).

Identical recruitment methods were undertaken for both NGTs in studies 1 and 2, with different target populations. To obtain two groups in different specialties was deemed important to provide an exclusive body of physiotherapy knowledge from each groups practice context, i.e., OH physiotherapy and primary care FCP practice insights. Participants were recruited online via advertising in the Chartered Society of Physiotherapy’s online interactive CSP (iCSP) Research Network and shared within the FCP and OH/ACPOHE Professional Networks through that avenue. All Physiotherapists involved in the delivery of an FCP and OH service was invited to participate through iCSP. This recruitment approach is cited by Dillman (2007, p.20) as ‘sponsorship by legitimate authority’ and the support from the professional body through the professional body when authorised, on reflection, seemed to increase recruitment. ICSP
represents around 28,000 registered users that actively participate in the physiotherapy online community. In addition, potential participants were contacted by the researcher through email at the CSP’s Conference and Trade Exhibition PhysioUK 2019, this served as a conduit through which the project was also promoted. In 2019, a key focus of the conference was ‘fit for work’ and it was anticipated that experts would be in attendance during FCP sessions and in networking. Some of these individuals assisted in recruitment via snowballing (Heckathorn, 2011) by sharing the studies within their local networks and via social media. This may lead to selection bias (Steurer, 2011), although some authors consider these types of samples as more representative, especially when the FCP target population is difficult to access (Dattalo, 2008). The NGT studies were also advertised via social media on Twitter (@black_cameron). The inclusion and exclusion criteria for the NGTs have been presented in Table 9 and the RQs and Format in Figure 8 and Figure 9.

The number of participants per group usually ranges from 6-8 in the literature, although groups have been run with as few as two and as many as 14 participants (McMillan et al., 2015). Some authors suggest that too few participants may reduce the potential for idea generation and discussion, especially when the group dynamic is lacking (Manera et al., 2018). Due to the scant literature on the topic, it was decided to run the NGTs with higher numbers to generate new empirical data. In hindsight, this may have made the groups difficult to manage and at the time to overcome this, two researchers were used to co-facilitate along with the main researcher as main facilitator. This purposive sampling technique allowed the researcher to select the participants for the NGT based on their specific characteristics. Also, this is commonly used when a small number of people have expertise in the research topic (Robson, 2011). Balance, or representation of multiple viewpoints and expertise, is more important than size (Bloor et al. 2015).

Expert opinion sits at the base of the evidence pyramid but when experts gather, and take research evidence into account, their output; consensus methods can be given great weight. Consensus publications often some of the most downloaded and cited publications and can inform state and public policy, which can impact clinician behaviour and eventually patient outcomes. In this study, the initial RQs were authored by the researcher and were informed by the research in the area. This was then posed to a geographically diverse expert group in a variety of public, private and independent sectors prior to the NGTs taking place.
It is acknowledged that consensus methods depend upon the use of experts; however, controversial debate rages over the use and definition of the term ‘expert’ (Hasson et al., 2000). Some prefer terms such as: ‘informed advocate’ (Baker et al., 2006); ‘informed individual’, ‘specialist in the field’ or ‘someone who has knowledge about a specific subject’ (Keeney et al., 2001). In this current study the experts were defined using the latter description as ‘someone who has knowledge about a specific subject,’ thereby, creating a homogeneous group, which is preferable if the study aim is to define common ground on an issue (Murphy et al., 1998). Some authors suggest that a balance is needed when selecting experts, between relative impartiality, so that the information obtained reflects current knowledge and/or perceptions, and yet also have sufficient interest in the research topic (Hasson et al., 2000). This may not always be possible to achieve in practice; however, by having specific inclusion criteria for participation it was hoped that this might be attained (Table 8).

Table 8: Eligibility Criteria

<table>
<thead>
<tr>
<th>Inclusion Criteria</th>
<th>Exclusion Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Completion of a UK qualifying programme in Physiotherapy</td>
<td>• Those who meet the inclusion criteria, but are excluded for a different reason, e.g., already enrolled in another study</td>
</tr>
<tr>
<td>• Member of the Chartered Society of Physiotherapy (CSP) and Health and Care Professions Council Registered (HCPC)</td>
<td></td>
</tr>
<tr>
<td>• Currently employed as a first contact practitioner within primary care or OH physiotherapist model of practice</td>
<td></td>
</tr>
<tr>
<td>• Ability to read and understand English and willing to complete an online NGT</td>
<td></td>
</tr>
<tr>
<td>• Be committed to the project duration – pre-reading, day, and de-brief, 1 day maximum</td>
<td></td>
</tr>
<tr>
<td>• Ability to use digital software such as padlet, blackboard collaborate with instruction</td>
<td></td>
</tr>
</tbody>
</table>

5.4.4 The NGT facilitator

The facilitator (moderator) plays a significant role in the NGTS as their primary task is to guide the participants through the stages of the NGT and to help and encourage participants
contribute their ideas. They act as a group leader and pace the discussion so that the focus is not unduly placed on a particular idea or dominant participants rule the group (Van de Ven and Delbecq, 1972). There are several types of group facilitation; facilitators can be an expert on the topic under investigation and understand the informational goals (the Delbecq technique) or a non-expert, who has credibility and leadership skills with participants (the Glaser technique) (Campbell and Cantril, 2001). In this study the researcher, who had expert knowledge of the topic area, facilitated the NGTs, i.e., the Delbecq technique. The advantage of using this technique is that an expert often frames questions in a way that will impact the quality, breadth, and depth of responses (Elliott and Shewchuk, 2002). They can also engage knowledgeably in discussion and assist them in articulating their ideas. The disadvantage of this is the possibility of the researcher introducing their own biases. To overcome this, the researcher tried to encourage respectful debate but endeavoured to be as nonjudgmental and impartial of participants’ views while ensuring confidentiality of the discussion. Many authors discuss facilitation explicitly and there appears to be wide agreement that the facilitator should be a ‘neutral receiver of ideas’ (Porter, 2012).

5.4.5 The NGT method

The NGT typically lasts between 60 and 90 minutes and involves the steps of: silent generation of ideas, whereby participants individually and silently write down their responses to ideas, round-robin recording of ideas, whereby participants are asked one at a time to contribute a single idea to the group, serial discussion of the ideas listed to clarify and analyse and explore the rationale of their perspectives and voting, consisting of individually prioritizing the ideas on what they believe to be the most important. The NGTs in our study ran for around 120 minutes but included a detailed introduction and summation/thanks. The silent generation of ideas allows adequate time for thinking and reflection through recall, promotes social facilitation, avoids interruptions, undue focus on one factor, and competition; and promotes a problem-centred focus (Delbecq et al., 1975).

When using the NGT, two or more voting rounds are strongly recommended, as this increases the likelihood of resulting in some convergence of individual judgements, though it is unclear whether this increases the accuracy of the group decision (Murphy et al., 1998).
In response to some of the limitations of the NGT, this study’s NGT was modified by the substitution of the ‘round robin’ listing of factors in-person to submitting the group responses to the research questions prior to attending the group. This modification allowed participants to reflect on their items in their own time; thereby, potentially, increasing the validity of the results and maximising the time for group discussion and consideration of ranking and scoring. Typically, the phases most modified in the NGT literature are phase one (silent generation of ideas) and phase four (voting) (Hiligsmann et al., 2013; Vella et al., 2000). The researcher still included the silent generation of ideas, but the time spent during NGT study 1 and 2 was much reduced compared to the pilot study and allowed for more debate in the subsequent discussion step of the NGT.

![Figure 9. Online NGT process detailing the stages of the meeting (Black et al., 2022).](image)

Participants for the NGTs were sent an email that included an email invitation and were provided with an information sheet (Appendix 5), informed consent form (Appendix 7), and completed a Doodle™ poll to confirm when they could attend the online nominal group. Based on a reply to the above, it was decided to run two meetings for each of the NGT studies due to the large number of participants and because it was difficult to confirm all experts for an agreed day. This was because some clinicians were re-deployed professionally
to meet the COVID-19 response and had other significant strategic and management obligations at the time.

An online digital pre-session information guide and instructions was provided one week before via email for the respective groups (FCP or OH/ACPOHE) (Appendix 9), including information on the NGT questions, demographic data questionnaire, a welcome statement and information on meeting joining instructions. Blackboard Collaborate<sup>TM</sup> was the real-time video conferencing tool used to conduct the online meetings. From the pre-session email, participants started the NGT first step of idea generation by sharing content on their initial ideas on the topic via a digital canvas software (Padlet<sup>TM</sup>). The 2-hour structured online nominal groups involved structured moderator led discussion to confirm items pre-populated on the Padlet, silent further idea generation, followed by individual ranking of these items, thereby allowing all experts to contribute equally (Appendix 10). The meeting focused on problem-solving and idea-generating strategies to answer the two RQs.

Information for the group started with a brief overview via PowerPoint (Appendix 11).

In summary, the format of the online meeting consisted of four phases and an introduction and reporting / summary (Table 9):

**Table 9. Overview of NGT Structure.**

<table>
<thead>
<tr>
<th>Task</th>
<th>Time (minutes)</th>
<th>By whom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to the NGT and discussion of pre-prepared list of items</td>
<td>15 minutes</td>
<td>facilitator</td>
</tr>
<tr>
<td>Phase 1. Silent idea generation</td>
<td>5 minutes</td>
<td>participants</td>
</tr>
<tr>
<td>Phase 2. Round robin</td>
<td>30 minutes</td>
<td>participants</td>
</tr>
<tr>
<td>Phase 3. Discussion and clarification</td>
<td>30 minutes</td>
<td>participants</td>
</tr>
<tr>
<td>Phase 4. Individual ranking of the importance of each item via an</td>
<td>30 minutes</td>
<td>participants</td>
</tr>
<tr>
<td>electronic spreadsheet (amalgamated items documented on Google Sheet)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>reporting on votes</td>
<td>10 minutes</td>
<td>facilitator</td>
</tr>
</tbody>
</table>
During the introduction phase the above research questions were presented again to the group. The following phases then took place for each question and in both NGTs;

5.4.5.1 Phase 1- Silent generation

Only 5 minutes were given for participants to record their individual ideas, privately, in response to the questions. They were asked to write one individual idea on the padlet provided, especially those who did not complete the pre-population prior to the NGT taking place. This phase was completed with no talking or interaction from participants, the facilitator ensured that silence was kept and prevented any discussion taking place. (Van de Ven and Delbecq, 1972).

5.4.5.2 Phase 2. Round Robin

Ideas and items were collected from the documented padlet using the round-robin approach. Thus, asking each expert, in turn, to state one single idea to the group. This was continued until there were no more ideas through the round robin. No discussion or explanation of ideas took place at this stage (Bamford and Warder, 2001). However, Bamford and Warder (2001, p. 318) identify ‘hitch hiking’ where participants record any new ideas triggered by the ideas of other members of the group as a valuable feature of this stage. Each idea is recorded by a facilitator until all ideas have been listed or, where time is restricted, there has been an equal opportunity for each participant to express their ideas (Carney et al., 1996). The padlet was live and updated for all participants to see.

5.4.5.3 Phase 3. Discussion and clarification

With all ideas collected on the padlet, a structured discussion was held to identify any overlap or need for clarification with every effort made to ensure the discussion was ‘value-neutral’ (Harvey and Holmes, 2012). This clarification phase provided each participant an opportunity to clarify what was meant by the ideas they had provided. During this stage, the facilitator allowed the group to eliminate duplication, alter similar items, clarify, and eliminate any misunderstandings.
5.4.5.4 Phase 4. Individual ranking

This was completed by the participants prioritizing the ideas presented in stage 2. A google sheet was used to produce the top 5 ideas with the most important being 1 and the least important being 5. The rankings were then scored. This phase was intended to ensure that all group members had an equal opportunity to participate and no one expert dominated the discussion (Porter, 2012).

Finally, the facilitator reported to the group the ranking order for the items on the topics. The ranking showed the order of importance of the challenges and competencies as chosen by the participants. The highest ranking with group agreement (a priori consensus levels reached) through to the lowest was shown. The top 5 from each research question along with all those items that reached consensus would be included in study 3 of this thesis.

Three researchers were involved in the NGTs, two impartial observers that assisted in data collection and the amalgamation of items, with one facilitator running the NGT. The two other researchers had significant experience in running NGTs previously and they taught the facilitator in a one-off session prior to the start of the process, to ensure consistency. In addition, the facilitator was a participant in a separate student GCU NGT run by the two researchers, which allowed further familiarization and training pre-NGTs. Together with the initial pilot NGT, the researcher was familiar with the process in how to run the NGTs and gained significant insight and experience in managing group discussions. They were also an expert in the subject area. Each NGT was recorded to provide clarification of the items as needed. Groups were convened until no further items or insights were identified and the NGT proceeded to the final ranking stage.

5.4.6 Demographics of experts

Seventy-five experts responded to the circulated invitation expressing an interest in participating. Forty-four experts committed to attending one of the NGTs in their professional grouping; two, subsequently, were unable to attend, which left a total of 42 (n=21 each for the two groups). In the FCP group (n=21), the age range was 28-49 and 75% were female and 25% male. They had a mean of 14.5 years professional physiotherapy practice, and all had been working in an FCP role for less than 1 year (see hours worked in
FCP role in Table 10). Of these participants, most were based in England (86%, n=18); 10% (n=2) were based in Scotland and 4% (n=1) in Wales.

Four nominal groups, two groups of ten and two groups of eleven, were conducted on four separate days within a two-month period in March 2020 and April 2020 online. The atmosphere set for the group was unpressured and informal.

Table 10. Number of hours per week worked in FCP role (n=21 responses).

<table>
<thead>
<tr>
<th>Hours worked per week</th>
<th>Count (number)</th>
<th>Lowest to Highest hours worked in category (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>11-20</td>
<td>2</td>
<td>14-20</td>
</tr>
<tr>
<td>21-36</td>
<td>4</td>
<td>22-32</td>
</tr>
<tr>
<td>37+</td>
<td>15</td>
<td>37.5</td>
</tr>
</tbody>
</table>

In the OH group, the 21 experts had a mean age of 44 years, age range 29-58 years, 14 were female and 7 male and participated across 2 nominal groups. Most participants were registered members of the ACPOHE (90% of the total participants in the group, the remainder worked in NHS or private OH providers but were not registered with ACPOHE (10%)). All had been working in an OH role for on average (mean) of 15.5 years (years range 5-26). None of the experts worked within an FCP physiotherapy role.

5.4.7 Data analysis

There are variations in the ways in which a NGT is recorded and analysed. Some have suggested that field notes are used during the discussion and clarification phases (Manthorpe et al., 2010). Audio-recording and transcription have also been utilised (Cooke and Tackray, 2012, Dening et al., 2013). However, some authors neglect to discuss any recording methods other than the rankings and listing of items produced during the voting and round robin phases (Porter, 2012; Van de Ven and Delbecq, 1972). Indeed, one author suggests that there is no need to make any other recordings and states that this is a key advantage of the NGT (MacPhail, 2001).
The NGT elicits both qualitative and quantitative data through the group discussions and voting process, respectively. In this study all items that received a rank and score were thematically analysed, independently, by the researcher (CB) and second researcher (HG) and checked for content validity by the third researcher (SS), who suggested a few minor changes to improve cohesion. This was an interpretive and iterative process of data reduction in which meaningful sections of group discussion were transformed into concepts. The summary and organisation of data was then grouped into themes to inform on the qualitative/free text data. This was not completed in the initial pilot study due to time constraints and due to the lack of depth and breadth of qualitative data.

Descriptive analyses were conducted to present demographic data. The level of consensus (% of participants that ranked an item) was defined a priori to be at the 60% consensus level in keeping with criterion for accepted consensus levels within other consensus methods in the published literature (McMillan et al., 2016). Some authors consider how consensus was defined as one of the most sensitive methodological issues and should occur a priori (Boulkedid et al., 2011; Diamond et al., 2014). There is great variability in the definition, with a range of 51-80% (Hasson et al., 2000). As the two NGTs were not directly related to a life-or-death issue, this was deemed suitable to develop work and health competencies to be used by FCPs. It is difficult to gain full agreement on all issues covered in a study from all participants (McMillan et al., 2016) and the percentage agreement that a researcher accepts as being synonymous with consensus is related to the importance of the research topic. Therefore, research involving life-and-death issues should seek 100 per cent consensus, whereas for others, a 51 per cent consensus is acceptable (Keeney et al., 2006).

Items were generated ‘live’ and compiled by the two co-facilitators on a master sheet which was inputted into a Google Forms datasheet and automatically populated into a master electronic spreadsheet.

The items generated in the NGT meeting were ranked as mentioned (1 = most important, 5 = least important). Participants could choose not to rank any items that they did not consider relevant to the question. A median rank score and the number of times participants scored a specific item (frequency) were also recorded. The frequency was used to calculate the percentage of experts who ranked an item (Manera et al., 2019).
An importance score for each item was computed as the average of the reciprocal rankings, this process is proposed by Cho et al. (2017) and through a similar rationale to the Expected Reciprocal Rank Evaluation proposed in a different context (Chapelle et al., 2009). To calculate this measure, the distribution of the ranking for each outcome was obtained by calculating the probability of each rank for each outcome, the probability has two components: (1) the importance given to the outcome by the ranking and (2) the consistency of being nominated by the participants. These probabilities and the computed weighted sum of the inverted ranking are used to obtain the importance score. The reason for inverting the ranks is to give more weight to top ranks and less to lower ranks. Higher values of the score identify outcomes that are more valued by the participants. For example, if all five individuals in a pilot study group ranked a specific item 1, 1, 1, 1, 1 respectively, this would mean 100% consensus and an importance score of 1. In other words, the group not only fully agreed on the item’s inclusion in the final consensus, but also ranked it as the most important item.

In practice the importance score (0-1) was ascertained for each item from its mean reciprocal rank (MRR), with scores closer to 1 deemed more important. The MRR is 1 divided by the ranking by each participant – 1 for the item ranked in first place, 1/2 for second place, 1/3 for third place, and so on. For example, if communication as an item was ranked first by one participant and fourth by another, the reciprocal rankings would be 1 and 1/4, respectively. If an item was not ranked, it was assigned a zero (Cho et al., 2017). It is suggested that items should be assessed in terms of the score as well as the frequency of votes, as this may be more representative of overall group priority of items (Manera et al., 2019). The qualitative data were compared to the priority scores (quantitative data) and used to contextualize and justify group priorities (McMillan et al., 2014). Anonymous quotations from individual participants were extracted, presented, and used to help provide explanations for individual and group priorities (Potter et al., 2004).

5.4.8 Validity and reliability

Measures taken by the researcher to increase the validity and reliability, to add credibility to the research process and ensuing results included the provision of a clear purpose for the studies, the provision of research-based written and online material prior to the group
meetings, standardised group structure and instructions, copies of operational definitions and research questions online for live review by participants, written notes taken during the group discussion and the use of scores in addition to ranking.

The consensus group method employed within the above studies was the NGT. Consensus group methods are described as systematic methods for reaching group consensus that ensure patient anonymity, iteration, provision of controlled feedback and a statistical group response (Jones and Hunter, 1995). The challenge within NGT methods is that it manipulates a qualitative method of data collection to mimic a quantitative approach (Aspinal et al., 2006) and with an absence of detailed data analysis instructions from the original developers, many researchers adopt their own technique to analyse data.

The researcher conducted a review of studies that employed NGT in healthcare, to assist in this decision-making process. It was decided to use qualitative data analysis to provide context and rational for the generated and prioritised items (Braun and Clarke, 2006) and quantitatively items were assessed in terms of the score as well as the frequency of votes, as this may be more representative of overall group priority of items (Manera et al., 2019), as mentioned previously. Audio recordings were transcribed verbatim for the purpose of sense checking the data gathered through the group interactions. Quotes from participants could be extracted from the transcripts to help explain both individual and group thinking. Information related to how validity and reliability was achieved is listed in Table 11 below and it considers the strategies used to add credibility to the research process and ensuing results.

Table 11. Additional measures taken to demonstrate methodological rigour for NGT studies.

<table>
<thead>
<tr>
<th>Recommendation (amended from Humphrey-Murto et al., 2017)</th>
<th>Description</th>
<th>Measures taken within current NGTs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition of the purpose of the studies</td>
<td>Clear purpose for the studies to guide future decision-making in the selection of appropriate consensus method</td>
<td>NGTs justified in the absence of suitable research in order to generate and reach consensus on the topic at hand</td>
</tr>
<tr>
<td>Recommendation (amended from Humphrey-Murto et al., 2017)</td>
<td>Description</td>
<td>Measures taken within current NGTs</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>-------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Process steps outlined and why modification chosen</td>
<td>Clear description in suitable detail of the modifications and standardisation of group methods</td>
<td>Good research reporting of the steps used in the digital method, sufficient explanation of the actual process to improve quality of research. Justification for the choices made. Flow diagrams used to summarize steps and participants as per best practice (e.g., CoBaTrICE Collaboration, 2011)</td>
</tr>
<tr>
<td>Description of the selection and preparation of the scientific evidence for participants</td>
<td>Information provided to all participants</td>
<td>Research-based information was provided to all participants early on in the process (Murphy et al., 1998). This information was provided in a summarized form to facilitate review. Of the scant literature available, it was graded to reduce potential bias. The existing literature was searched, and the extent of the search provided was documented, due to the little existing evidence. Different participants groups were used but the information provided to each group was standardised.</td>
</tr>
<tr>
<td>Description of the initial research questions</td>
<td>Initial questions and items carefully worded to ensure clarity</td>
<td>Began with an open-ended question to avoid biasing the participants (Sinha et al., 2011) NGT items generated, literature review and expert discussion provided Delphi items. NGT consisted of idea generation protocol vs predetermined list. Methods and item selection process described. The initial questions were carefully worded to ensure clarity. Pilot testing with a small group of OH experts was completed before implementation of NGT data collection.</td>
</tr>
<tr>
<td>Description of how the participants were selected</td>
<td>Careful consideration of selection of expert participants for consensus group methods</td>
<td>Expert definition considered. Participants were individuals who were knowledgeable, representative of the area of inquiry and had practical experience. Studies have demonstrated that the composition of the group can impact results and raises methodological concerns (Hutchings et al., 2006). Balance between diversity in panel (better performance) and</td>
</tr>
<tr>
<td>Recommendation (amended from Humphrey-Murto et al., 2017)</td>
<td>Description</td>
<td>Measures taken within current NGTs</td>
</tr>
<tr>
<td>---------------------------------------------------------</td>
<td>-------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Heterogeneity (irreconcilable conflict. Higher numbers in NGT due to little evidence on the topic, balance and representation of multiple viewpoints and expertise was deemed more important than size (Bloor et al., 2015). The facilitators were a recognized expert in the field and 2 credible research experts, that ensured all viewpoints were equally discussed (Campbell et al. 2001).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clear description of how consensus was defined</td>
<td>A consensus is an opinion or position reached by a group of individuals acting as a whole; it is also considered general agreement</td>
<td>Definition of agreement set out a priori at 60% threshold level in NGTs. There is great variability in the definition, with a range of 51–80% in other consensus studies (Hasson et al., 2000)</td>
</tr>
<tr>
<td>Transparent reporting of results</td>
<td>This relates to participation rates and completing the groups and the finalised list of NGT results</td>
<td>A summary of the group decision was provided for participants post NGT</td>
</tr>
<tr>
<td>Description of how anonymity was maintained</td>
<td>Important aspect of consensus group methods is the maintenance of anonymity</td>
<td>Private ranking of items in process. Clear statements of anonymity rules.</td>
</tr>
<tr>
<td>How were potential methodological issues addressed</td>
<td>Ensuring a systematic means for reaching and measuring consensus through structured interaction.</td>
<td>Review of the literature and ways to improve methods. Addressing of responses during the meeting and participation during the group. Consideration of items where there was a lack of consensus, to inform future research agenda.</td>
</tr>
</tbody>
</table>

**5.4.9 Conclusion**

This chapter has presented the research design, data collection methods, data analysis methods employed in study 1 and 2 (for the two NGTs) and ethical considerations. The respective research questions and strategies to maintain credibility have also been stated. Study 1 and 2 results are now presented in Chapter 6.
Chapter 6. Results of Study 1 and 2

6.1 Introduction

This chapter presents the research findings from both national NGTs in a group of expert FCPs and OH/ACPOHE physiotherapists.

6.2 Items generated and ranked

In total 82 items were submitted across the NGTs for the first questions regarding the (perceived) challenges faces when working as a FCP and providing FFW advice, SA certification and work-related conversations (RQ1) (n=40 items for the FCP group and n=42 items for the OH/ACPOHE group), with each expert submitting an average (mean) of 9 (range 4-18) items. Following the removal of duplicates and amalgamation of similar items during the nominal group discussions the final 82 items were considered by the groups for ranking and scoring. This process and results for both FCP and OH/ACPOHE NGT’s for RQ1 is presented in Figure 10 and Figure 11.
Figure 10. NGT RQ1 presenting FCP group results.
Figure 11. NGT RQ1 in OH/ACPOHE presenting group results.
6.3 Items reaching consensus

Following the application of the decision rule to the ranked and scored items, out of a total of 40 items generated in the FCP group response to RQ1, nine items reached the required 60% threshold consensus level (Figure 11). The challenges identified included the skills, knowledge and training needed to have focussed conversations, intrinsic factors, such as confidence, and extrinsic factors, such as governance and legislative aspects.

The nine items reaching consensus were (Table 12): ‘Confidence in having challenging conversations about RTW’, ‘FCP training through a Framework similar to GP training’, ‘Lack of knowledge of legislative and legal requirements’, ‘Lack of overall governance, clinical supervision and competencies on a national scale’, ‘Educational requirements of Fit Note [sickness certification] requirements’, ‘Professional liability aspects of Fit Note [sickness certification]’, ‘Patients’ and workplaces’ opinion on FCP vs GP Guidance in relation to professional standing’, ‘Political support from Legislation allowing AHPs to sign Fit Notes’ and ‘Non-clinical time in primary care to allow for administrative tasks, Fit Note paperwork and OH advice’. The OH/ACPOHE Physiotherapy group identified the following challenges (Figure 12): ‘the lack of knowledge of OH topics’ and ‘understanding needed to have focussed conversations’; intrinsic factors such as the ‘FCP therapeutic role’ and extrinsic factors such as ‘time’; stakeholder ‘understanding of FCP roles’ and ‘pressure from patients’.

Nine items ultimately reached the required 60% threshold consensus level (% of participants that ranked an item) from the OH expert group’s original 42 items generated (Table 14): ‘Time’, ‘Lack of knowledge’, ‘Lack of understanding’, ‘Stakeholder engagement’, ‘FCP focus’, ‘Fit note’, ‘Pressure from patients’, ‘FCP experience’ and ‘Limited information on patient’s job demands’. Of these items, five reached full consensus (100% of participants ranking the item) and two items (‘Time’ and ‘Lack of knowledge’) were deemed the most important items (based on the importance score/average of the reciprocal rankings).

For RQ2, 43 items were generated in the FCP expert group (Figure 13) for the key learning and developmental needs, with nine reaching the threshold consensus level (Table 13): ‘Educational standard for Fit Note competency and training’, ‘Shared decision making and guiding patients to independently manage their conditions’, ‘Training on legal and legislative
aspects of the Fit Note’, ‘Communicating complex topics such as pain in the absence of pathology to employers’, ‘Understanding the medical model and sickness certification framework’, ‘Understanding the service assessment with regards to the time needed for Fit Notes’, ‘Long term sickness absence management’, ‘Further knowledge and skills in ‘Blue Flag’ assessment, biopsychosocial flags and occupational systems’ and ‘Understanding the ‘benefits system’ and Government support for patients unfit for work’. The OH/ACPOHE experts generated 34 items (Figure 14) for RQ2 with six reaching the required consensus level: ‘Work conversations’, ‘Training in OH topics’, ‘Understanding support and signposting’, ‘Communication’, ‘Screening tools’ and ‘Guidance’ (Table 15, page 215). All six of these items reached full consensus from the group (100% of participants that ranked an item) and two of these items (‘Work conversations’ and ‘Training in OH topics’) reached full consensus from the group and were deemed the most important items (based on the importance score/average of the reciprocal rankings).

Consensus level is determined by the percentage of participants agreeing that an item should be included (% of the overall group), the Importance score and Median rank are described in detail on pages 202 and 203 in this chapter.

Table 12. FCP expert-defined items that reached consensus for RQ1.

<table>
<thead>
<tr>
<th>Items for question 1</th>
<th>Consensus level (% of participants)</th>
<th>Importance score (mean reciprocal rank [MRR])</th>
<th>Median rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-clinical time in primary care to allow for administrative tasks, fit note paperwork and to provide OH advice</td>
<td>100*</td>
<td>0.6*</td>
<td>2.5</td>
</tr>
<tr>
<td>Educational requirements of Fit Note requirements</td>
<td>100*</td>
<td>0.6*</td>
<td>2</td>
</tr>
<tr>
<td>Professional Liability aspects of Fit Note requirements</td>
<td>100*</td>
<td>0.5</td>
<td>2</td>
</tr>
<tr>
<td>FCP training through a framework similar to GP training</td>
<td>100*</td>
<td>0.4</td>
<td>4</td>
</tr>
<tr>
<td>Patient and workplace’s opinion on FCP vs GP guidance in relation to professional standing</td>
<td>100*</td>
<td>0.2</td>
<td>5</td>
</tr>
<tr>
<td>Items for question 1</td>
<td>Consensus level (% of participants)</td>
<td>Importance score (mean reciprocal rank [MRR])</td>
<td>Median rank</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------------</td>
<td>-------------------------------------</td>
<td>-----------------------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Confidence in having challenging conversations about RTW</td>
<td>78</td>
<td>0.6*</td>
<td>4</td>
</tr>
<tr>
<td>Political support from Legislation allowing AHPs to sign Fit Notes</td>
<td>78</td>
<td>0.4</td>
<td>3</td>
</tr>
<tr>
<td>Lack of overall governance, clinical supervision, and competencies on a national scale</td>
<td>78</td>
<td>0.4</td>
<td>3.5</td>
</tr>
<tr>
<td>Lack of knowledge of legislative and legal requirements</td>
<td>67</td>
<td>0.5</td>
<td>3</td>
</tr>
</tbody>
</table>

* Most important item(s)  † Full consensus on item(s)
Figure 12. NGT RQ2 in FCP group results.
Figure 13. NGT RQ2 in ACPOHE group results.
Table 13. FCP expert-defined items that reached consensus for RQ2.

<table>
<thead>
<tr>
<th>Items for question 2</th>
<th>Consensus level (% of participants)</th>
<th>Importance score (mean reciprocal rank [MRR])</th>
<th>Median rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training on legal and legislative aspects of the Fit Note</td>
<td>100*</td>
<td>0.8*</td>
<td>1</td>
</tr>
<tr>
<td>Understanding the service assessment with regards to the time needed for Fit Notes</td>
<td>100*</td>
<td>0.5</td>
<td>2</td>
</tr>
<tr>
<td>Long term sickness absence management</td>
<td>100*</td>
<td>0.4</td>
<td>3</td>
</tr>
<tr>
<td>Further knowledge and skills in ‘blue flag’ assessment, biopsychosocial flags, and occupational systems</td>
<td>100*</td>
<td>0.4</td>
<td>4</td>
</tr>
<tr>
<td>Understanding the benefits system and Government support for patients unfit for work</td>
<td>100*</td>
<td>0.3</td>
<td>4</td>
</tr>
<tr>
<td>Understanding the medical model and sickness certification Framework</td>
<td>89</td>
<td>0.5</td>
<td>2</td>
</tr>
<tr>
<td>Shared decision making and guiding patients to independently manage their conditions</td>
<td>89</td>
<td>0.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Educational standard for Fit Note competency and training</td>
<td>89</td>
<td>0.5</td>
<td>3</td>
</tr>
<tr>
<td>Communicating complex topics such as pain in the absence of pathology to employers</td>
<td>67</td>
<td>0.6</td>
<td>2</td>
</tr>
</tbody>
</table>

* Most important item(s)  + Full consensus on item(s)

Table 14. OH/ACPOHE expert-defined items that reached consensus for RQ1

<table>
<thead>
<tr>
<th>Items for question 1</th>
<th>Consensus level (% of participants)</th>
<th>Importance score (mean reciprocal rank [MRR])</th>
<th>Median rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time for assessment, treatment, assessment of barriers and solutions for RTW, signpost and referral, time constraints variation within primary care network (PCN)</td>
<td>100*</td>
<td>0.7*</td>
<td>1</td>
</tr>
<tr>
<td>Lack of knowledge of RTW planning, graded return, stakeholder, and workplace engagement</td>
<td>100*</td>
<td>0.7*</td>
<td>1</td>
</tr>
<tr>
<td>Lack of understanding of FCP role from stakeholders, e.g., employer</td>
<td>100*</td>
<td>0.6</td>
<td>2</td>
</tr>
</tbody>
</table>
### Items for question 1

<table>
<thead>
<tr>
<th>Consensus level (% of participants)</th>
<th>Importance score (mean reciprocal rank [MRR])</th>
<th>Median rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stakeholder engagement; through FCP, employer and employee</td>
<td>100*</td>
<td>0.4</td>
</tr>
<tr>
<td>FCP focus; therapeutic and biomedical approach versus multi-dimensional focus of perceptions of work and health and system or contextual barriers of work</td>
<td>100*</td>
<td>0.4</td>
</tr>
<tr>
<td>Fit Note; absence policy of employer may not accept AHP Fit Note, legislation aspects for AHPs, unable to use AHP Fit Note for absence benefits</td>
<td>78</td>
<td>0.3</td>
</tr>
<tr>
<td>Pressure from patients; unwilling to RTW (multifactorial) and one view of the workplace. Therapeutic ethics suggests in primary care patient comes first</td>
<td>78</td>
<td>0.4</td>
</tr>
<tr>
<td>FCP experience; variable levels</td>
<td>67</td>
<td>0.2</td>
</tr>
<tr>
<td>Limited information on patient’s job demands</td>
<td>67</td>
<td>0.2</td>
</tr>
</tbody>
</table>

* Most important item(s)  * Full consensus on item(s).

### Items for question 2

<table>
<thead>
<tr>
<th>Consensus level (% of participants)</th>
<th>Importance score (mean reciprocal rank [MRR])</th>
<th>Median rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work conversations; work being a routine and consistent factor in every consultation</td>
<td>100*</td>
<td>0.6*</td>
</tr>
<tr>
<td>Training in Occupational Health topics; Fit Note, sickness absence, job demands and work-related questions, access beyond primary care for OH support, reasonable adjustments, and policy</td>
<td>100*</td>
<td>0.6*</td>
</tr>
<tr>
<td>Understanding support and signposting; work adaption recommendations, additional work-related advice e.g., SOM, Access to work, ACPOHE, Council for work and Health etc</td>
<td>100*</td>
<td>0.4</td>
</tr>
<tr>
<td>Communication; influencing challenging work-related conversation, motivational interview, art and science of RTW advice, multi-stakeholder communication</td>
<td>100*</td>
<td>0.4</td>
</tr>
<tr>
<td>Screening tools; rapid tools for protracted absence or impaired work performance e.g., those at risk of disability or work instability</td>
<td>100*</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Table 15. OH/ACPOHE expert-defined items that reached consensus for RQ2.
Guidance; Scaled up guidance for clinical practice dependent on time available e.g., brief contact for 10 mins, more detail if longer contact. Clinical practice guidelines for RTW for MSK conditions, a clinical reasoning guide for FCPs

| 100* | 0.3 | 5 |

* Most important item(s) † Full consensus on item(s)

### 6.4 Conclusion

This chapter has synthesised and presented the research findings for RQs 1 and 2, which were addressed by the national NGT meetings comprised of FCP and OH/ACPOHE physiotherapy experts. The NGT meetings highlighted the need for training, development, competency, and addressing the challenges involved for FCPs in taking up the work and health agenda in primary care. The findings highlighted 18 items related to the challenges involved in providing FFW recommendations and SA certification and 15 key learning and development needs.

This provides the initial empirical data for the Study 3 national Delphi study from an NGT with expert FCPs and an NGT with expert OH/ACPOHE physiotherapists. If the barriers to giving FFW recommendations and in providing SA certification can be considered it may overcome some of the challenges involved in primary care practice as identified in Chapter 2. Chapter 7 will discuss these findings with reference to the existing literature.
Chapter 7. Study 1 and 2 Discussion

7.1 Introduction

The UK’s NHS is committed to implementing FCP practice across all primary care settings (UK Government, 2017) and this will involve support for skill development, training, and an increase in knowledge of topics not previously considered within the traditional therapeutic approach of managing MSK conditions, such as managing FFW and SA advice in those with complex MSK and medical needs. The proportion of the working age population aged between 50 and the state pension age will increase from 26% in 2012 to 34% in 2050 – an increase of over 5.5 million people (Government Office for Science, 2016). With this ageing population, the prevalence of those with MSK conditions is expected to rise further, potentially impacting on the UK’s productivity and economic success (ONS, 2018). As primary care is the first ‘step’ and ‘cornerstone’ of the NHS system, it may be an ideal target to encourage older people to remain in work to help society support growing numbers of dependents, with FCPs being the right professional at first healthcare contact for those with MSK conditions. Central to this proposition is to ensure that patients maintain stable employment for good MSK health, and they see work as a health outcome when recovering from or managing a MSK-related problem.

There is robust evidence to suggest that a lack of work-focused healthcare to address work issues within a clinical encounter is an obstacle to work participation (Steenstra et al., 2017). Physiotherapist FCPs are becoming the MSK gatekeepers in primary care settings; however, challenges and solutions exist in FCP practice when considering work and health specific advice for patients presenting with MSK conditions in primary care. This role has been traditionally conducted by the General Practitioner and FCPs in this study have developed and reached consensus on items related to the challenges involved and their learning and development needs that could overcome the known Fit Note and work and health difficulties experienced in primary care. FCPs may be ideally suited to provide and prompt supportive conversations about work, at an early stage (as most of the population’s health needs are addressed by primary care as the first point of contact and ‘cornerstone’ in the NHS system) if identified challenges and learning and development needs are considered.
Prior to the studies, the training and development needs and challenges involved in practice for FCPs had not been readily identified in the literature, not only on the health and work topic, but evidence provided on a range of competencies needed for primary care. The two national NGTs provided a unique insight into the challenges and educational needs of FCPs and offered evidence for the Study 3 Delphi study. These studies provide the first known published evidence regarding the challenges faced in delivering sickness absence certification and fitness for work advice within primary care practice with FCP expert consensus. SA certification processes have wide-ranging theoretical implications for FCP practice and societal benefit including patient welfare, health economics and the socioeconomic impact of reduced sick leave.

7.2 NGTs in FCP and Occupational Health / Association of Chartered Physios in Ergonomics and Occupational Health experts

The NGT proved to be a highly effective research method for generating and prioritising many items that act as challenges to FCPs in their assessment of FFW and in providing SA certification and their learning and development needs to overcome these challenges. The expert groups generated many items, with each group generating an average (mean) 41 items for RQ1 and 38.5 items for RQ2. These figures are much higher than the suggested 12 items by the NGT’s developers (Delbecq et al., 1975), the 16 items per group in a study by Williams et al. (2006) and 24 items per group generated in a study by Perry and Linsley (2006). However, higher item generation seems to occur across a heterogenous group of health care professionals in a variety of settings (Peña et al., 2012) or across international boundaries in larger groups when considering clinical outcomes (Manera et al., 2019) or consensus statements provided by large organisations influencing research direction and clinical practice (IOC, 2021). Indeed, the International Olympic Committee has published around 27 ‘consensus statements’ as of 2022, many of them heavily download, highly cited and providing large numbers of items on sporting injuries such as concussion, groin pain and return to play guidance. The majority were based on Delphi studies with several hybrid consensus methods or NGTs used in the process.
The considerable number of items in the NGT groups is likely due to experts considering the research questions and pre-populated items both prior to and during the group meeting; thereby giving participants more time to reflect on their responses. The benefit of generating such a vast number of items was that it enabled the collection of rich data encompassing a breadth of different issues, with little research to guide in this area.

The eighteen challenges identified across the groups related to two themes of FCP’s knowledge and skills and three extrinsic factors concerning the time needed within a primary care consultation, professional liability, and a lack of overall governance (clinical supervision, and competencies on a national scale). There appeared to be relationships between these intrinsic and extrinsic factors, in that, the experts felt that their deficits in knowledge and skills were a direct result of insufficiencies in the scientific evidence base and their undergraduate, postgraduate education and credentialling FCP process of the taught MSc modules or portfolio route of practice. Some of this was also described as a lack of governance from stakeholders in terms of training in this area and an awareness of the health and work agenda for FCPs. This data was presented within the qualitative quotations from the free text options provided within the Padlet function, directly provided from FCP opinion and experience.

The NGT was an effective and time efficient method for generating items for the main topic discussions and allowing FCP and OH/ACPOHE physiotherapy experts to share their perspectives. Of these items, for RQ1, FCPs rated ‘Confidence in having challenging conversations about RTW’, ‘Educational requirements and professional liability of Fit Note requirements’ and ‘Non-clinical time requirements for Fit Note paperwork and to provide OH specific advice’ as the most important challenges in meeting stakeholder work focussed healthcare, with item ‘Patient and workplaces opinion on FCP vs GP guidance in relation to professional standing’ gaining full consensus but not deemed as important. OH physiotherapy experts rated ‘Time’ pressures related to the assessment, treatment and in signposting and/or referring patients on along with a ‘Lack of knowledge’ in areas such as RTW planning, graded returns and in stakeholder and workplace engagements as the two most important items and reaching full consensus from the group. For RQ2, they rated ‘Work conversations’ and ‘Training in Occupational Health topics’ as the most important items and gaining full consensus, with four other items gaining full consensus whereas FCP
experts rated ‘Training on legal and legislative aspects of the Fit Note’ as their most important item and with full consensus from the group. The difference between groups in terms of different items and perspectives was highly likely due to the heterogeneity between groups, i.e., expert group of FCPs and OH/ACPOHE physiotherapists. The OH experts had been clinical for an average (mean) of 22 years’ OH professional practice with the FCPs 14.5 years professional practice but all FCPs had been working in an FCP role for less than one year. The OH experts were clear in what they believe was needed for this type of role and applied their own competencies to primary care or the pitfalls that they saw with GPs and the system at the time of data collection.

It is likely that the OH experts rated ‘Lack of knowledge’ highly due to the newness of the FCP role and not having exposure to this type of work and health role. FCPs tended to agree in having ‘Confidence in having challenging conversations’ and ‘FCP training through a Framework similar to GP training’ and it is noteworthy that at the time of data collection, national competencies were in their infancy for FCP practice and providers were still trying to consider the overall governance, credentialling process and clinical supervision needed for such role, highlighted in several items. FCPs also seemed to default to safety, with a concern over professional liability aspects of the Fit Note and how FFW or SA advice would be viewed compared to that given through GP advice. In fact, training on legal and legislative aspects of the Fit Note was their most important item, with full consensus suggesting a need to fully understand the legislative aspects and advisory nature of the information provided in a consultation. With some duplication of responses and noted differences, it provided information for scale for the national Delphi study 3 and vindicated the approach of purposeful sampling for the two professional groups.

7.3 Generalisability of study findings

Since the physiotherapists in both studies were purposively sampled and were experienced clinicians working, primarily, within England, care must be taken in generalising the results beyond the study population. For most of the FCP and OH experts, their working career had been limited in primary care, especially reflecting the FCP job role as novel within the whole UK healthcare system. However, the purpose of this study was exploratory rather than explanatory; therefore, generalisability was not of primary importance. That said, the items
and themes that emerged from the study findings were not dissimilar to those from other studies, thereby, providing a facet of face and content validity.

7.4 Application to research and practice

Stakeholders and policy decision makers want healthcare professionals to receive work-related advice and supportive engagement as part of making work a health outcome, which is based on the understanding that good work is good for health (UK Government, 2017). However, the lack of OH training in general medical education and general practice (acknowledging GPs as current gatekeepers of SA when this thesis write up began) is well documented (Bartys et al., 2019). As mentioned, this lack of training and awareness within this sphere is not unique to physiotherapists and is likely across all HCPs. There is stark evidence in primary care that despite approximately 2.3 million Fit Notes certificates being issued in quarter 1 in 2019/20 by GPs, data indicates that only 75% of GPs are confident in dealing with issues around RTW and 29% feel comfortable in dealing with Fit Note requests for individuals already in the welfare system (Dorrington et al., 2018). In addition, research suggests that 2 in 3 GPs feel obliged to give Fit Notes for non-medical reasons and only 7% received training related to this topic in the past 12 months (Coole et al., 2015). Finally, only a small minority of GPs use the ‘maybe fit’ recommendation rendering most patients as ‘unfit for work,’ despite most presenting with minor mental and physical health problems.

Nevertheless, the AHP health and work report and Med 3/Fit Note can still be powerful tools in supporting employees in work and in returning to work (Dorrington et al., 2018). There is convincing evidence to suggest that appropriately conducted work focussed conversations result in positive effects on patients’ mental and physical health and overall wellbeing (Steenstra et al., 2017). OH experts suggested that ‘Work conversations’ was a most important item with full consensus, supporting the notion of more HCPs meeting this need and FCPs, although not explicitly rating this item, did identity specific contextual and system factors that might act as barriers to ‘work conversations’ in primary care. Conversely, worklessness and the resultant risk of unemployment is associated with poorer physical and mental wellbeing, with increased GP consultations and higher mortality rates (Wynne-Jones et al., 2009). This continues to be a valid concern, as if the barriers are not
addressed and learning needs not met, FCPs will continue to offer limited work and health advice and continue to provide limited detail in this area. Therefore, there is a real risk that FCPs in the future, despite being legislated for the role, fall into the same way of working as GPs, with the same expected outcome.

FCPs have now assumed the role of MSK gatekeeper in primary care. Multi-stakeholder agenda suggests that work advice is needed for employed people at risk of avoidable sickness absence, this is especially true if Fit-Note certification is extended to other allied healthcare professionals (UK Government, 2017). Despite this, a national evaluation of the FCP model in primary care suggests that only 29% of employed patients surveyed reported receiving specific work advice from an FCP (with a predefined service success criterion target of ≥75%) (Stynes et al., 2020). In fact, this specific criterion was the only criterion out of twelve not met in the evaluation, with less than half of patients receiving advice about work, even when they solely reported MSK-related days-off-work. The authors concluded that supporting FCPs to deliver work advice is an unmet need and that training in the use of work-related advice is inconsistent. They also acknowledged that further work was needed to explore barriers to FCPs providing work advice. This is important as studies suggest that up to 35% of MSK consultations in primary care necessitate the use of Med3/Fit Notes and therefore may need work focussed conversations (Wynne-Jones, 2018). Without adequately understanding the individual training and system barriers to delivery of this health and work agenda topic, the specific FCP contextual and system factors will continue to limit work conversations, the use of the ‘Fit Note’ and work participation outcomes.

Most people’s health needs are addressed within UK primary care. Early ‘light touch’ work-related support for most MSK conditions can be addressed for the vast majority, and complex cases can be referred to other specialist services. This fits with the UK’s initiatives on ‘work as a health outcome programme,’ ‘Make Every Contact Count’ and ‘prevention is better than cure’ by Public Health England and the Department of Health and Social Care.

Evidence suggests a small cultural shift has occurred in the understanding of health-related aspects of work, in which the ‘Fit Note’ has facilitated ‘light touch’ work-related discussions, but the detail and quality of these varies within GPs and other HCPs (DWP, 2011). Indeed, some physiotherapists may already provide this in practice, as one study found that
physiotherapists used a structured approach (proforma/protocol-driven) to routinely consider work and job difficulties whereas GPs rarely used such structured measures to enquire about work unless it was raised by the patient themselves (Wynne-Jones et al., 2018). In the Netherlands, one study found that physiotherapists acknowledged the importance of work for their patients, but a limited knowledge about laws and regulations were a common barrier to offering work conversations (Oswald et al., 2017). Positive impacts are more likely to be reported by healthcare professionals with higher levels of confidence in dealing with patient issues around RTW, and those with more training in health-work in the past year are more confident in dealing with such issues, influencing the quality of consultations and outcomes for patients (DWP, 2011). Some experts in the FCP NGT group had prior OH job experience and reported an increased confidence and readiness to take on this key role. Others were enthused about the role but lacked detail of how to practically conduct it and the remainder (approximately 65%) lacked any knowledge, detail or even understood that they were likely to be legislated for this key role.

Several studies have suggested how competency in this area can be reached and evaluated (Parker et al., 2015; Martin et al., 2018). They suggested that training, with special interest group support summing speciality competencies on the topic. This may be further managed by health and work champions to implement theory into primary care practice. A key aspect of training should focus on addressing FCPs beliefs and attitudes about the importance of the topic, for example, having confidence in discussing the work issues and signposting to evidence-informed information. If FCPs are to address work issues and provide Fit Notes, they need to have sufficient knowledge, along with the support of guidance, checklists, and tools to respond to patient related questions and initiate actions (Tran, 2018). FCPs need clear information on the purpose of such work conversations, including universal information initially and increased detail depending on the time available in primary care. The challenges listed are specifically targeted to providers, implementation stakeholders and governing bodies of FCP practice and it would be beneficial for the learning and development needs listed need to be embedded within undergraduate physiotherapy practice and postgraduate education (including FCP modules) as part of normal practice rather than a standalone OH topic. This can influence practice and support data collection in the area, but it was deemed important to complete a final Delphi
consensus study to confirm this. As mentioned previously, health providers and educators face the problem of trying to make decisions in situations where there is insufficient information or contradictory information in the area. For example, the current system of providing FFW advice and SA certification does not seem to work as 95% of the time the Fit Note is used as a ‘Sick Note’ for patients. It is unlikely that 95% of all primary care patients are too ill to work but are deemed to be by GPs currently, it is assumed that with correct support and a focus on work adjustments, they may be fit for work in some capacity. The wider range of information from the NGTs is noted compared to data that is common in statistical methods, where published information for FCPs is non-existent. As the above items are new to the published literature and have been generated from insights from appropriate experts, it is important that they were put to a national FCP group for corroboration and sense checking, for a final list that could be embedded in national curricula and appeal to stakeholders.

Evidence from Public Health England (PHE) (PHE, 2019) on work conversations in the form of 59 surveys across a variety of healthcare professionals in primary, secondary and private and non-clinical settings suggested that measurement should be of the process rather than outcomes per se. They identified ‘taking up training,’ ‘having the conversation’ and ‘providing work-related support’ as important aspects that can be measured if it is included in routine documentation and audited. However, other respondents from surveys within the PHE study did consider measuring direct work outcomes such as work status at the first presentation and end of management, or through surrogate outcomes of return-to-work planning, self-referral to work-related advice and patient-focused outcomes such as confidence about returning to work and their rating of a work conversation. At this time, there is no best evidence to establish how content, supportive conversations about work and health or the outcomes from any other work-related components can be measured. This may, in part, be an indication of the significant barriers reported in conducting SA certification and FFW advice especially common in UK primary healthcare.

It is evident from the free text comments in the initial two NGT studies and other work on HCPs in the field (PHE, 2019) that work outcomes were not currently seen as a goal within FCP consultations, with many professionals seeing these as a conflict, as they tend to frame conversations based on clinical considerations only. This is despite evidence-based guidance
suggesting it should occur. Indeed, one systematic review and meta-analysis found that HCPs report a lack of knowledge and confidence in such clinical guidance, as well as not necessarily agreeing with guidance recommendations for work or activity for patients (Slade et al., 2015).

This PHE evidence also suggests that brief interventions, consistent evidence-based positive messaging, and advice on work may be concepts that can enhance MSK recovery. It is also argued that most patients with MSK conditions may be suitable for some form of work with short-term adjustments. Indeed, it seems clinicians currently are not implementing clinical practice guidelines which results in a lack of work-focused healthcare, a likelihood to advise on work avoidance and thus obstacles to work participation (PHE, 2019). In sum, people with MSK conditions are less likely to be in work, are more likely to retire early, yet many want to work with the right support. FCPs may be ideally suited to overcome the current barriers that patients face in their recovery journey and work absence domains. They have more time with patients than GPs, without a waiting list and have an ability to book follow ups with individuals who may need more support or onward referral. However, it is noteworthy that both groups identify Time and Non-clinical time as legitimate concerns for taking on the role of FFW and SA certification. Anecdotally, some FCPs suggested that some FCP providers were shortening clinical consult times so that they could see more people and reduce waiting lists further for GPs in their local area, with obvious concerns for clinical quality. If this were the case, it is unlikely that a productive conversation and a patient’s work ability, their health and its impact on work could be had in a 10-minute consultation.

In relation to FCP’s knowledge, skills, and training, it is recommended that FCPs cohere to the recently published _Primary Care Educational Roadmap_ and within this, specific work, and health related competencies (HEE, 2021). The NGT results indicate that FCPs report deficiencies in the aforementioned advanced knowledge and skills items. Furthermore, OH experts have provided specialised expertise to another clinician group in a specific context. They pointed to six solutions to the current challenges with ‘work conversations’ and ‘training in OH topics’ the most important items. These solutions will be the embryonic items that are taken to a wider FCP audience in study 3 to be confirmed as the final list of competences for FCPs.
Deficiencies in the health and work agenda, may limit FCPs ability to assist individuals in preventing MSK-related work loss by utilising an AHP Health and Work Report or Fit Note, have challenging conversations about work and in considering the time needed to effectively promote work participation. For RQ2, ‘Training on legal and legislative aspects of the Fit Note’ was ranked as the most important item within the FCP group, with four other items gaining full consensus. The Med3/Fit Note has been in use in the UK since 2010, when it was implemented following the UK Government commissioned *Working for a Healthier Tomorrow* Report (Black, 2008) and the results suggest that FCPs both feel the need for extended training in its use and the use of the AHP Health and Work Report (CSP, 2019). The consensus levels within the expert group suggest their learning needs encompass the whole UK SA arena, including legislation and how to effectively manage those at risk of, or experiencing long term absence.

It is incumbent on HEE, supervisors through the portfolio route and HEIs to incorporate the learning and development needs into their curricula and HEE’s ‘Roadmap to Practice/Advanced Practice document.’ Due to the importance of the topic and the multi-stakeholder agenda of seeing ‘work as a health outcome,’ FCPs working in primary care as non-medical diagnostic clinicians could overcome the known issues faced by GPs. It is likely though the Roadmap/Advanced Clinical Practice Framework, supervision, (portfolio route) and M level modules (taught route) that this can be addressed as they have been created to ensure a standard of practice, proof of capability in primary care so that patients are safe, and roles governed.

Application to research

Triangulation is sometimes used within consensus studies as a way of enhancing the quality of the results and verifying the information gathered. One way for the current studies to achieve external validation would be to consider a post consensus conference with relevant stakeholders to refine and agree on competency items, e.g., OH physicians, GPs, commissioners, pharmacists, nurses and OTs. This study’s results represent the views of two expert groups at one point in time (during the COVID-19 pandemic) when FCP practice was being established. Therefore, the groups could be repeated with a different, but comparable, expert group. Some of the competencies generated in this study require
further discussion, especially items that did not reach consensus. Another option for exploration could be to ask a randomised group of FCPs to self-rate their knowledge and skills against the NGT items with a variety of self-rating scales. The validity of this may be poor as it may be more a representation of FCPs perceptions of their ideal or potential performance and confidence level, rather than observed practice. It may be that since the research has been conducted, further research is needed to reflect and distinguish new job specific and FCP specific competencies, and as FCPs may have changed their competency level as they are now more experienced and have undertaken more training since data collection. In addition, the roles are likely to have changed, with more (since the pandemic) face to face clinic-based work completed and new research should reflect this.

As FCPs have been legislated for this role, it is important that researchers, stakeholders, clinicians, and commissioners deliver the new roles and new ways of working (including adopting the work and health agenda) to optimise the scope of practice. It is likely that the results presented will assist FCPs to work with their line managers to identify areas of training and development required for the delivery of the local service and integrating work and health competences through supervision, CPD should be part of a sustainable job plan to support the delivery and maintenance of clinical standards (HEE, 2022). For stakeholders, line managers/supervisors and general practice surgeries, FCPs will need access (digital) to the Fit Note or the AHP Advisory Fitness for Work Report. Lastly, as regulated HCPs, FCPS will be required to engage in appropriate CPD activities and if work and health competencies are deficient professional development areas, further ACPOHE and CSP courses are likely to assist in addressing this gap.

7.5 Strengths and limitations

The strengths of Studies 1 and 2 were the fact that the experts were highly committed in their participation and a comprehensive range of items was generated that provided previously unknown insights as to the challenges involved and learning and development needs of FCPs providing FFW and SA certification in UK primary care settings. The findings from the two studies are not a definitive end point but may be viewed as an exploratory initial step to provide initial data on the topic and to contribute to the evidence base for
Study 3 and the National Delphi study described in subsequent chapters. Additionally, methodologically, the digital format and novel use of having the electronic spreadsheet displayed in real time on the screen during the nominal groups enabled immediate editing of items during the discussions, increasing the validity of the results. The mixed methods design enabled quantification of the relative importance of items, as well as subtle insights into participant perspectives and reasoning of choices.

However, there were several limitations to the study, the two studies had to be completed on non-consecutive days due to participants being mobilised during the COVID-19 pandemic response. As the padlet™ response data were pre-populated, this may have overcome some of the difficulties from running the days non-consecutively in one large group, as the whole group assisted in pre-populating items. This means participants could give responses in the first instance and follow up with the in-person digital meeting. Also, it was unknown whether all the participants read the NGT pre-reading materials, although this was not critical to their participation as the lists of items considered during the groups were exceptionally long, meaning that not every item was discussed in the same level detail. Some experts may have been precluded participation due to the COVID-19 pandemic response, but higher numbers may have made running the meetings and data collection more difficult. As a novel researcher, the NGT was initially resource intensive, in terms of time to conduct it, but also in the learning of the new process of group moderation. It was a challenging skill to ensure that the meetings were highly structured but considerate to group member’s feelings so that they felt they had adequate time to express meaning and their point of view. In the literature as NGTs are highly structured, they may be viewed as less stimulating than other group techniques such as a focus group where participants can debate and communicate to provide a breadth of understanding of thoughts and experiences. This was a balancing act as too much debate would mean reduced group performance and decision-making ability.

As mentioned, the primary strength of the NGT is the structure of the group which ensures equal participation by each member and prevents dominant or outspoken participants from controlling the discussion, resulting in a balance of influence (Carney et al., 1996). This strength, however, relies on the skill of the facilitator to effectively moderate the group discussion as explained above. On reflection this was challenging but the risk of non-
participation was mitigated through the two assistant academics who had significant expertise in developing, moderating, and running NGTs themselves. They provided guidance during the NGTs to the facilitator but did not run the sessions and provided a de-brief post session to allow for smooth running of the next NGT data collection. As mentioned, completing a pilot NGT and assisting in a GCU NGT within students allowed the researcher to understand the process and reflect and practice the skills of facilitation.

The NGT may also be more suitable compared to other consensus methods, such as the Delphi technique, for people who may feel more comfortable participating in an in-person meeting than in a relatively complex multi-round survey (McMillan et al. 2016). Unlike the Delphi technique, the NGT enables the opportunity to explore reasons for disagreement in opinions through group discussion, and participants can revise their views by exploring and considering the opinions of others (Allen et al., 2004). Methodologically, there is not a standardised method for data reduction and analysis when combining the results from multiple nominal groups held sequentially; therefore, the researcher had to develop their own method guided by what was reported in other studies. Previous research has discussed the additional resources required by formal consensus methods and suggests that participants receive proper additional resources to support their implementation (Yang, 2013). This additional support, although comprehensive and needed initially, made subsequent NGTs seamless and easier to conduct.

The results are broadly in accordance with that for other formal consensus methods, with high numbers of items and feedback during the individual rating system (Van de Ven and Delbecq, 1974). There was no evidence of ‘production blocking’ when the numbers of ideas decrease when participants are required to organise discourse through social turn taking as opposed to offering them concurrently (Powell, 2003). Social turn taking was considered as part of the process, but participants were not pressurised to speak if they did not want to, they would document in the chat or use the ‘hand up’ function online. Therefore, the facilitator did not make it as strict as set out in Van De Ven and Delbecq’s original process (1974). This in turn is another factor in producing the high number of items and feedback.

Some participants in their feedback, documented about wanting to follow up on all items listed and to have a longer discussion. This is supported in research with discussion used in
NGTs to share expertise, promote effectiveness, and discern reliable from unreliable expertise (Klein and Epley, 2015). It may have been that a lack of agreement reduced some elements of the process, with restrictions limiting the extra time needed for clarification and deliberations through discussion. Other feedback from the NGTs stressed the importance of equal participation in the evaluation of items generated as positive feedback. The group overall felt that it was ‘them’ that produced the results, and they were happy with the items generated and documented information. This is also supported in research evidence, especially when participants are encouraged to reveal information that is unshared with other participants, therefore improving the group’s decision-making and attitude change (Wittenbaum et al., 1999). As mentioned, as the NGT participants numbers were large, there were only 1-2 participants that felt a reduced sense of involvement in the group decision or a ‘lack of closure’ for those less involved in the process and outcome. As a positive, participants reported overall satisfaction with the process and a reduced certainty of their personal view when exposed to more group ideas. Although this was not an explicit aim or objective of the NGTs, it provides feedback to show that the process seemed to work productively.

Lastly, the digital format may have reduced the burdensome nature of in-person meetings that can lead to nonattendance. Rupert et al., (2017) in a comparison study, reviewed differences in recruitment and logistics of online focus groups and in-person meetings. The authors concluded that in-person meetings were less diverse in terms of participant’s education, ethnicity, and health and although this was conducted in a different population, there may be some implications for any NGT’s group dynamics and findings. Online group techniques are commonly used throughout health and social research (see, e.g., Evans et al., 2017), although very few have involved NGT within OH and physiotherapy. The researcher is of the opinion of this as another benefit for the overall health and work topic.

### 7.6 Chapter summary

This chapter has established through consensus the main challenges and learning and development needs for FCPs as physiotherapists working in primary care to consider FFW and SA certification through two exclusive NGTs. The experts confirmed a range of intrinsic
and extrinsic items that act as training barriers and solutions to considering FFW and SA certification. The items generated and those that reached consensus were taken forward to the Study 3 national Delphi study (chapter 8).

The two NGT studies discussed above provide new evidence regarding the challenges and learning and development needs identified by a group of FCP and ACPOHE clinicians working within primary care and OH settings with regards to the OH specific topic. Thus far, the only other study to consider a summary of skills, knowledge and attributes needed to work as a FCP within primary healthcare was a qualitative study that explored eight clinicians’ views using a think-aloud method and focus group, did not identify any work-related competencies or themes (Langridge, 2019). Despite several clinical practice guidelines, capability frameworks and the professional body and trade union for UK physiotherapists (CSP) recommend as a key principle that ‘FCPs routinely have conversations with patients about staying in or returning to work, appropriately using the AHP Health and Work report or Fit Note to facilitate return to work. This should be recorded and measured at a local level.’ This population health approach is reinforced through a variety of stakeholders such as the BMA, RCGP and local NHS MSK service providers so that FCP services operate effectively to optimise outcomes for patients and the healthcare system. Therefore, a lack of data guiding training in this area will limit the expected outcomes from providers and commissioners.

Also, this is also despite the CSP’s FCP project team and FCP evaluation steering group reporting that supporting patients to remain in and RTW is one of their key success criterions. OH, specific topics are also supported within the core capabilities document (HEE, 2018), roadmap to practice capabilities (HEE, 2021) and in the wider UK Government and employer context of empowering sick listed patients to be supported in work. The vast majority of MSK condition specific practice guidelines and grey literature report that work should be considered in a consultation, but that HCPs report a lack of knowledge of, and confidence in, this guidance, as well as not necessarily agreeing with RTW recommendations (Slade et al., 2015).

The asynchronous nature of the study is a key limitation of the current NGT studies. The studies were conducted early in the COVID-19 pandemic response and experts had to be
flexible to meet service demands, this resulted in some needing to contribute at an alternative meeting, thus the whole group did not contribute at the same time. In addition, the format was fully online which can influence group dynamics when compared to an ‘in-person’ meeting. However, this approach allowed the NGT meeting to be accessed and completed quickly by busy, hard-to-reach professionals during one of the most challenging times in UK healthcare practice. NGT’s optimally run with between 8 and 12 participants, which is below these studies 21 participants. This may have made the NGT meetings more challenging to run, especially during the digital pivot because of the COVID-19 pandemic. As the researcher was involved in mostly observation of the university NGT prior and facilitating a smaller NGT in professionals, his experience was limited but the higher numbers were more challenging to run from a technical side rather than a group dynamics side, e.g., internet speeds, connections dropping, issues with logging in at the start of meetings etc. Despite this, the depth and richness of the data and number of items that reached consensus did not seem to be influenced by the above dynamics.

Qualitative feedback from participants described feelings of finding the process enjoyable, having a sense of accomplishment, finding the process interesting and a cathartic experience. This supports formal consensus methods as favourable from the perspective of participants, with some evidence reporting that task accomplishment has been linked to satisfaction in group decision-making.

Studies 1 and 2 provide evidence to suggest that the Fit Note can become an enabler for conversations about health and work, if FCPs have the challenges/barriers for its use in practice considered and comprehensive training and development needs supported. This will improve the competency of HCPs dealing with MSK health and will empower them to provide work-related advice, as work is seen as a health outcome. The above items should be integrated into future undergraduate, postgraduate and portfolio education and competency frameworks so that FCPs can become OH champions in primary care.

If FCPs can become competent in this area, it will ensure light coverage for now (not comprehensive OH services) of work-related advice for the vast majority of MSK conditions in the UK, to potentially reduce the burden of work-related ill health. More focused interventions could be considered with more specialised training. The initial identification of
the research problem from the NGT groups of experts who shared an interest in seeking solutions to the problem is now translated into the Study 3 study so that the final competency list can be generated and voted on. This was deemed important to corroborate and confirm the items within the target FCP group (with a wide geographical mix), as ultimately, they need to have a voice and co-produce their own competencies so that they can take on this key role.
Chapter 8. Study 3: Consensus on occupational health competencies for UK First Contact Practitioners

8.1 Introduction

The preceding chapter 7 has established through consensus the main challenges and learning and development needs for FCPs as physiotherapists working in primary care to consider FFW and SA certification through two NGTs. The experts confirmed a range of intrinsic and extrinsic items that act as barriers and solutions to considering FFW recommendations and SA certification. The items generated and those that reached consensus are now considered within this chapter through a national Delphi Study. The aim of this was to identify a final set of work and health competencies for FCPs that underpin their new role in providing FFW recommendations and SA certification.

As mentioned in the initial introductory chapters and alluded to in the previous chapter 7, primary care may be an ideal environment to influence work-related outcomes for those living with undifferentiated and undiagnosed conditions in the community, as it acts as the first point of contact in the healthcare system and the ‘front door’ of the National Health Service (NHSE, 2021). Despite this, SA management and FFW recommendations are not consistently approached within a General Practitioner’s consultation and GPs rarely use structured measures to enquire about patients’ work situation unless it is raised (Wynne-Jones et al., 2018). Indeed, many GPs perceive their role being more a support and management role (‘therapeutic relationship’) for health-related conditions rather than one that can consider pragmatic work-related advice (Wynne-Jones et al., 2018). Some also deliberately do not initiate work-related conversations in fear of raising patient expectations for a Med3/Statement of Fitness for Work (Fit Note) as they do not feel adequately informed to offer advice or have the time to initiate discussions (Wynne-Jones et al., 2018).

In the UK and previously mentioned in this thesis, the Departments of Health and Work and Pensions have outlined Legislation for extension of Fit Note sickness absence certification to other non-medical Allied Health Professionals (UK Government, 2017) to encourage patients to resume some work while managing a common health problem. This legislation came to
fruition in July 2022, with nurses, occupational therapists, pharmacists, and physiotherapists being able to legally certify Fit Notes.

More recently, AHPs have been increasingly using the UK’s AHP Health and Work report to provide information to the employee and employer on the functional impact of a patient’s reported problem. However, the data is lacking in this area, as NHS digital does not break down the data sets on sickness certification by HCP, therefore it is unknown how many Fit Notes are completed by the different professions and what advice is given. To the best of current knowledge, providing FFW recommendations and SA certification that is evidence-based is still an unmet need. This is because 95% of Fit Notes provided are still used as a sick note, yet many patients may be fit for some kind of work, even in a limited capacity.

Traditionally, as GPs have been the ‘gatekeepers’ within primary care for SA certification, this role has been seen as outside of the role and responsibility of the majority of AHPs, beyond those AHPs in OH settings. Although this may still be the case for many, within primary care, the role of certification and providing FFW advice is potentially amenable within the FCP model of care. This model provides patients with direct access to diagnostic physiotherapists at the top of their scope, to assess and manage musculoskeletal (MSK) conditions and is supported within the NHS’s Long-Term Plan and the Five-Year Framework for GP Contract Reform (NHS, 2019; NHSE and BMA, 2019). This is important as MSK conditions in the UK cause around 28 million days lost in work as the second largest cause of sickness absence, and they account for approximately £4.76 billion spending each year and around 20-30% of England’s GP consultations each year (ONS, 2018; PHE, 2019). It could be argued that the FCP model of care could be used to provide OH advice and to overcome some of the challenges of the Fit Note (only 6% of Fit Notes are documented as ‘may be fit for work’) (Dorrington et al., 2018), it is unknown as to whether FCPs have the sufficient skills and knowledge to assess, manage and influence the OH aspects associated in patients at risk of nonessential and preventable SA with a MSK condition (See Chapter 6).

8.1.1 Research question and aim

A methodological review paper summarised the experiences of using qualitative methods in the pre-Delphi stage for three different core outcome sets (Keeley et al., 2016). It showed
that qualitative research can aid identification of outcomes important to stakeholders, help with prioritisation of outcomes, determine the scope of outcomes, identify the best language for use in Delphi surveys and inform comparisons between stakeholder data and other sources such as systematic reviews (Keeley et al., 2016). In line with the pragmatist philosophy (as described in Chapter 4), it is now appreciated that using a qualitative approach to inform competency development is a beneficial and justified route but that in addressing certain combinations of research questions, both quantitative and qualitative approaches are feasible, desirable, and required. The NGTs developed the competency lists that provided the initial data set for this national Delphi study. There is some debate on whether consensus group methods such as the NGT or Delphi are “quantitative or qualitative” with the methods spanning both qualitative and quantitative methodologies (Humphrey-Murto et al., 2018). The philosophical foundation has resulted in a consistent conceptualisation of the methods for both the NGTs and Delphi and consistent methodology. In sum, the Delphi is often not used in isolation and the literature suggests that studies that have included it in combination with a NGT or focus group have provided highly relevant and valid outcomes. The qualitative and quantitative data seems to have added depth and explored areas of contention.

Many HCPs understand that their role can be powerful in helping patients return to or stay in work and prevent further work-related absence, but this confidence is strongly associated with prior training, education and exposure to work-related themes and conversations (Martin et al., 2018). Therefore, the final main aim of this UK study was: to generate and identify and reach final expert consensus on the work-related competencies (knowledge and skills) needed to reduce the risk of preventable sickness in primary care, based on the recent legislative changes for FCP practice. This may allow FCPs to embed work conversations in routine practice and assume the role ‘health and work’ champions within primary care.

This study would provide the final and definitive list of competencies needed to assume the above-described role from the clinician-centred outcomes previously generated through the NGTs in two expert groups (Black C, 2022).
8.2 Study 3 methods

8.3 Ethical considerations and approval

Ethical approval was granted by Glasgow Caledonian University’s Health and Life Sciences Research Ethics Committee (Reference: HLS/PSWAHS/19/144). No risk of harm was envisaged for the study. All responses were anonymised as far as reasonably possible, and they were not traceable back to the respondent except by the immediate research team. Also, the language used in the Delphi was piloted by three HCPs and revised, if necessary, by the researcher.

Although the importance of completing all rounds of the Delphi questionnaire were highlighted to the participants it was made clear they could withdraw at any time without consequence. The participants who entered their name and email address on the registration page were indicating agreement to participate in the Delphi process as per research guidance.

Ethics may be considered a summation of morals, values and codified laws governing research behaviour (Meffert, 2009) and is like the researcher’s core values in current practice as a human being and expert in healthcare. These consist of non-maleficence (do no harm), autonomy (act intentionally), beneficence (consider benefit for participants) and participate voluntarily (Gaufberg and Batalden, 2014). De Vaus (2001) also suggests informed consent, confidentiality and privacy. Any research project involving human participants and their personal data has ethical implications for research, especially through forms of Internet data collection (Gilbert and Stoneman, 2016). A researcher within this area should protect participants, develop trust with them, ensure research integrity, guard against misconduct and impropriety that would reflect on Glasgow Caledonian University (GCU) or the researcher’s employer, and cope with contemporary and challenging problems (Israel and Hay, 2006). Therefore, the researcher attempted to actively address at all stages of his research and in different phases of inquiry, any ethical issues that arose during data collection, analysis and in reporting, sharing, and storing of data for both the NGT and Delphi studies (Creswell and Creswell, 2018).
This Delphi study adhered to the ethical principles as laid out in the Declaration of Helsinki for research involving human subjects (World Medical Association, 2013). Adherence to the EU General Data Protection Regulation (UK Government on GDPR, 2022) and UK Data Protection Act (2018) data protection principles and safeguards ensured that the data processing is lawful, fair, and transparent. This was also supported through GCU’s own research governance systems and assurances including, ethical approval, risk assessment and the RDC process (GCU, 2019).

Participants’ needs took precedence over the actual process of the research. While the success and completion of the study depended upon the expert’s willingness to participate, if such participation placed an individual at risk or causes deleterious effects, participation would be paused (justice). Participants were not coerced or put under undue influence to participate and volunteered to take part (ESRC, 2019).

Potential participants were informed that by responding to the Delphi questionnaire, they were adjudged to have consented (implied) to participate and have their anonymised responses included in any analyses. Despite this, full confidentiality was not guaranteed, as there was the possibility that participant quotes were reported in the final project publication. That said, it was unlikely that the quotes themselves would identify participants as they were anonymised. This is important as questionnaires are considered ‘intrusive research’ by the ESRC (2019), and every attempt was made to sensitively word questions and anonymise responses. The study requested demographic but not personal data and the pilot study provided feedback to consider on the process solely. Further clarification on the process, including how the Delphi would be run could be given by principal investigator communication via email, especially if there were any queries about the research format or participation expectations.

8.4 Study design

The search strategy and literature synthesis in Chapter 2 indicated that no research studies, until the researchers NGTs, had considered FCPs views of their challenges and learning and development needs in primary care in meeting the health and work agenda for patients. In
addition, only one study has been found where FCP’s have been able to input and indirectly own competencies pertaining to this clinical work (Langridge, 2019). Moreover, it is timely to elicit FCP views given that FCPs roles are now well established and evolving at the time of this write-up to meet the healthcare needs of their populations. Also, the fundamental issue identified in Chapter 2 was that no studies evaluated specific, work and health-focused topics, despite documentation in role-, condition- and service-specific clinical guidance that is also reinforced through stakeholder and professional body priority.

A consensus development methodology that consisted of the Delphi technique was used to provide consensual guidance and resolve uncertainty on the topic that has a lack of published guidance (Nair et al., 2011). It was decided that the Delphi process offered the most transparent and unbiased method to achieve consensus and was chosen as: a) it enabled the involvement of experts throughout the UK, irrespective of their geographical location, b) feedback was anonymous to avoid social pressure and conformity to a dominant FCP’s view, c) due to the emergent themes, iterative rounds of enquiry allowed an exploration of the topic and d) the design of rounds was flexible and informed by the FCP expert response in the previous round.

The Delphi technique was appealing during the COVID-19 pandemic especially due to the fact it does not involve face-to-face contact with experts found in other consensus methods, so it was not necessary to meet as a group for data collection. The study by Keeney et al., (2010) suggests that several key factors are required when planning a Delphi study, most notably the appropriateness of the technique, the level and definition of consensus and resource availability when conducting the research. The detail of this study is summarised in Figure 14. Chapter 4 considered the justification of this technique and its use with the NGT and now a brief overview is given to set the technique in context and consider the application of the technique. The suitability of the technique was deemed a fit with the scope and nature of the topic to answer the problem.

8.4.1 Delphi method

Like the NGT, Delphi method is a process for achieving group convergence of opinion garnered from experts in a specific field (Haynes et al., 1996). The principal researcher acted
as a facilitator, with the help of two others in the ‘monitor team’ of fellow researchers, to
design the questionnaire which was sent to a preselected panel of experts (Linstone and
Turoff, 1975). The monitor team (including principal researcher) collate and summarise
responses, develop a new questionnaire based on the findings and send it to the panel of
experts for another iteration. The group is normally given an opportunity to reassess their
opinions and make a revised judgement considering the overall response. Anonymous
opinions are maintained throughout, thus removing the potential for dominant members to
exert disproportionate voices and allows participants the freedom to express controversial
opinions. The number of rounds is variable, though it is often not more than two iterations,
by which time most of the change in participant responses is expected to have occurred
(Hasson et al., 2000). It is advisable that at least one member of the monitor team has some
knowledge of the topic considered, as an expert panel that feels the Delphi team are
unfamiliar with the discipline under discussion are less likely to commit to the process
(Hasson et al., 2000).

Small numbers of experts are recommended, and the literature suggests 10 to 15 is
adequate when they are homogenous; larger numbers is appropriate when the experts are
drawn from several different disciplines or vary markedly for some other defining
characteristic (Jünger et al., 2017). There are many variations of the Delphi process, and
there are no universally accepted guidelines for its complete although best practice
recommendations exist (Jünger et a., 2017). For example, a panel may be asked in Round 1
to rank a series of items according to a criterion, such as importance, or level of agreement.
Or their opinion could be solicited in response to a series of open-ended questions. The
Round 2 questionnaire may be identical to that presented in Round 1 but accompanied by a
summary of the whole panel’s Round 1 responses; or the Round 2 questionnaire could be
designed differently from Round 1, considering an assessment of the expert’s responses.
There is no standard approach to data analysis from Delphi rounds and qualitative and
quantitative methods of analysis may be employed, and data combined (Hasson et al.,
2000). When interpreting the results of a Delphi study, it needs to be considered that
consensus does not necessarily imply that the ‘correct’ answer or judgement has been
found (Mitroff and Turoff, 2002).
The value of stable disagreement (or non-consensus) may not be underestimated and requires critical reflection since it can provide informative suggestions and highlight different perspectives on a complex issue (Scheele, 2002). The method has been used extensively in health care; it is particularly useful where there is insufficient evidence on the problem, and where there is little information on present and future developments (Keeney et al, 2011).

| Stage 1 | • Review of available guidance on Occupational Health (OH) training and competencies for FCPs  
• OH is a type of healthcare service interested on the effect of work on health and health on work for an individual  
• Discussion with Expert Researchers, Research Team and OH clinicians  
• Synthesis of existing published competencies into categories  
• 2 NGTs conducted in 2021  
• Pilot in 10 Physiotherapists and the Research Team  
• Round 1 questionnaire initial list of priority competency items generated (principal domains, knowledge and skills)  
• Construction of Round 1 questionnaire to generate items and reach consensus and made live |
| Stage 2 | • Round 1 questionnaire to rate items compiled and evaluate level of agreement and to explore if any competencies were missing  
• At 70% level of group agreement, principle competencies at strong level of agreement instantaneously accepted and items with low agreement discarded  
• Items at bordeline level of agreement (moderate) were amalgamated for Round 2 consideration  
• Feedback from Round 1 provided to participants in the form of summary tables  
• Rating via Agree/No opinion/Disagree |
| Stage 3 | • Round 2 questionnaire used to consider amalgamed/reduced items or items that were consistently mentioned in free text (>20% of the group)  
• Level of agreement identified via a 5-point Likert Scale  
• To explore whether any further competencies still missing  
• Feedback from Round 2 in the form of summary tables |
| Stage 4 | • Round 2 questionnaire feedback for further clarification  
• Round 3 questionnaire used to evaluate the level of agreement for final clinical OH competencies in primary care  
• Level of agreement identified via Agree/Disagree for final rating  
• FCP expert consensus declaration  
• Consensus of OH competencies in expert group |

Figure 14. The modified Delphi Technique detailed.
This study followed the recommendations of Conducting and Reporting Delphi Studies (Jünger et al., 2017) and aimed to follow best practice from empirical evidence. To produce a definitive list of competencies the ‘modified’ Delphi method without a consensus meeting (Keeley et al., 2015) was used in comparison to the ‘traditional’ Delphi method (Hasson et al., 2000). The ‘traditional’ Delphi was developed in the 1950s by the RAND Air Force Corporation to structure interactive group communication and systematically increase accuracy of forecasts, at a time where they were concerned with estimating key nuclear targets in America (Campbell, 2001).

Traditionally, a Delphi study, involves asking participants open questions in the first round to avoid bias to items already mentioned and to prevent participants being guided by the facilitator (Sinha et al., 2011). However, if there are skewed group items initially, this could enter bias when those items are then rated. Therefore, the NGT studies 1 and 2 that elicited items from a sampling frame was believed to introduce less risk of bias. In addition, as stated below, free text allowed the option to suggest additional items if a participant felt these were not covered, which was then considered by the researcher. The level of anonymity was that of ‘full anonymisation’ (Sinha et al., 2011), so participants did not know the identities of other experts in the group and did not meet online or interact directly.

### 8.4.2 Participant recruitment and data collection process

A purposeful sampling approach was employed, and the approach was like the NGT recruitment strategy. Data were gathered from experts, defined as FCPs involved in the management of MSK conditions in primary care with the expectation of providing SA certification and FFW advice and therefore the professional stakeholder group in the relevant clinical setting. If experts are well matched to the topic being studied then face validity will be high, and if consensus is reached there will additionally be high concurrent validity (Creswell and Creswell, 2018). Some Delphi studies suggest that using ‘experts’ fundamentally conveys a degree of reliability and validity. These participants were representative of those facing the real-world challenges of primary care practice such as time constraints and patients’ expectations.
Participants were recruited online via advertising in the Chartered Society of Physiotherapy’s online interactive CSP Research Network and shared within the FCP Professional Network; all of those involved in the delivery of a FCP service in primary care were invited to participate. Some FCPs assisted in recruitment via snowballing by sharing within their local networks and via social media. The Delphi study was also advertised via social media on Twitter (@black_cameron). The invitation to participate in the study was sent by email (Appendix 8) and all details of the study including design, aims and procedures (the estimated time to answer the questionnaire, the importance of completing all rounds and nomination of candidates eligible for the study). After reading the information sheet (Appendix 6) and signing the consent form (Appendix 7), a second email was sent containing the link to access the questionnaire of the respective round (Microsoft Forms). Background information was deemed a vital component often neglected in other Delphi studies (Humphrey-Murto et al., 2017) and information was provided after each round due to the longevity of the research and reduction in recall of the background information and purpose.

All participants were invited to the three rounds of the questionnaires, including those who did not respond in the preceding rounds (exception for those who had chosen not to participate). No incentives were offered to participants.

### 8.4.3 Inclusion Criteria

Participants were eligible to take part if they were currently working in FCP services in which they contributed to the management or co-ordination of primary clinical care related to MSK conditions. This included practitioners who had recent experience of managing MSK and were employed as a FCP. The evidence base on FCP practice was considered an incomplete state of knowledge and these experts were deemed important to provide individual judgements in the absence of empirical evidence.

### 8.4.4 Exclusion Criteria

Participants were excluded based on self-reported insufficient experience or not currently employed within a FCP service. An arbitrary number of cases or years of experience was not
set to ensure the study was as inclusive as possible. The remaining inclusion and exclusion criteria are the same as the criteria in Chapter 5 for the FCP NGT.

8.4.5  Panel selection and composition

For consensus studies of a clinical nature, several studies recommend that it is appropriate to utilise expert’s specialist knowledge in the area (Jones and Hunter, 1995). The participants who met the inclusion criteria were defined as an ‘expert’ as a specialist physiotherapist undertaking the FCP credentialling process by HEE and working in the primary care setting (HEE, 2021). This FCP specialisation recognises physiotherapists with advanced and specialized knowledge and clinical skills in a MSK setting, who can manage undiagnosed and undifferentiated conditions in primary care.

The number of participants in Delphi studies has ranged from 4 to 3000 (Campbell et al., 2001). A minimum number of ten panellists is recommended by some authors (Turoff and Linstone, 2002), with recognition that larger panel sizes may reduce outcome reliability and increase the intensiveness of data gathering and distribution. Larger group sizes in homogenous groups also run the risk of providing no new ideas but do provide for an effect to be noticed. It was decided to appeal to higher numbers, like the NGTs, to continue to provide additional information where little existed on the topic.

As there is no standardised advice on how many experts to recruit and, as the Delphi group size depends on group consensus among experts rather than statistical power, at minimum the study aimed for between 15-30 participants from the field with an additional 20% invited to allow for an adequate rejection rate, as suggested by Linstone and Turoff (1975). However, despite some authors recommending an ideal of between 6-11 experts (Bloor et al., 2015) or a minimum of 12 members for validity (Murphy et al., 1998), on review of the literature, other Delphi competency studies have recruited between 40 and 70 participants. As an example, Suckley (2012) recruited 72 experts within a variety of clinical areas to identify core clinical competencies for extended-scope physiotherapists. Therefore, the minimum numbers seem to lie as an average in the literature and can be deemed as acceptable.
A priori criterion or cut-off for consensus was at the 70% percentage of group agreement and deemed the end point (Rowe and Wright, 1999). Consensus was conceptualized using statistical measures (percentage of ratings for Rounds 1 and 2 and median and interquartile range for Round 3). This study operationalized the definition of consensus by its achievement as stated and in making the decision to terminate the process (Diamond et al., 2014). The number of rounds was 3 over 5 weeks and the purpose of these rounds is presented in Figure 14.

8.4.6 Pilot testing

The first task was to pilot-test an initial draft of the questionnaire. Because of ongoing logistic difficulty in meeting face-to-face, it was decided to complete this online through Microsoft forms and email contact. No further information was provided through a review of OH training and competencies for FCPs and a discussion with experts outside of FCP practice. Thus, the draft Round 1 questionnaire was comprised solely of NGT items that were synthesized by the research team, and these were sent to two members of the team. Feedback was received on the wording of the cover letter, design of the questionnaire, its wording and accessibility on mobile (Android and iPhone) and computer operating systems (Windows and Mac). One revision was piloted by 10 physiotherapists and the research team until a final version was agreed upon and then rolled out in a larger convenience sample of 19 physiotherapists.

One concern of the researcher was attrition over subsequent and multi-various rounds that could lead to ‘false’ consensus as described in the literature, as experts with dissenting views drop out and decreasing response rates are seen with successive rounds (Tammela, 2013). This ‘false consensus’ occurs when participants become fatigued and agree just to end the process. Consequently, participants were instructed on; the importance of completing all rounds, their ability not to conform if indicated and to consider truly agreeing rather than agreeing to make the process end (Sinha et al., 2011). Again, like the a priori level of consensus, it was clear to participants that the number of rounds for the Delphi was pre-determined before they participated. However, they were also informed that if a priori agreement had been reached, no new items were generated and there was stability of responses within a round, the process would be stopped (Diamond et al., 2014).
Accordingly, stability was key to suggest that participant responses to each question across rounds is not changing and it required a prior definition statistically of a change in the mean below our threshold (Vazquez-Ramos et al., 2007). The currently recommended number of rounds in the literature is two to three; however, this is based on very little scientific evidence (Boulkedid et al., 2011). A minimum of two rounds is considered due to the need to have at least one round of feedback (Williamson et al., 2017). The rounds would have been kept open for longer than 4 weeks if response rates were low and to minimize the risk of attrition bias. Subsequently, no rounds were open for longer than 4 weeks, with all rounds completed within 14D. Participants who did not complete a round were sent reminders via email when they had 1 week, 48 and 24 hours remaining for completion. Attrition rates from other research are reported to be between 16-28% (Hanafin and Brooks, 2005).

The setup and running of the Delphi, including reminder, was managed by the researcher via automated Microsoft forms. The researcher included open-ended free text boxes, allowing participants to explain their disagreement or consider new competencies for group review. This allowed for a structured flow with feedback. Feedback strategies have been examined in the literature. After each Delphi round, responses for each item are normally summarized and fed back within the subsequent questionnaire to enable experts to consider the view of other participants before re-rating. MacLennan et al. (2018) compared different forms of feedback: from peers only, multiple stakeholders separately and combined. They found no difference in the number of items retained for reduction in variability of opinion, although they did concede that a very high level of pre-existing agreement from the first round may have accounted for this. A limited number of studies suggest that giving stakeholder feedback separately may influence the final core items and improve consensus between groups.

Questionnaires were circulated in English using a Microsoft Forms link via electronic mail and piloted in advance with four Physiotherapists and the Research Team. A participant information sheet was included, and consent was required prior to completion. The anonymised and synthesised data were stored and analysed using Microsoft Forms. The response options of the expert panel were presented by absolute and relative frequencies.
The results of the three rounds were analysed and a suggested OH core competency for FCPs in primary care was established.

8.4.7 Scoring

The Delphi consisted of three rounds in line with other studies citing this as sufficient for consensus generation (Hsu and Sandford, 2007). In Round one, demographic information was collected, and first round questions were formatted onto the online MS forms and sent via a link within the email sent to each participant. This list was generated via the literature review, work and health competencies in educational documents for the role, discussion with experts in the field and the two NGTs. The protocol, therefore, was a mix of a pre-determined list and idea generation and allowed for competencies outside of the two NGT generated lists for further evaluation in succeeding rounds. Instructions of how to complete the questionnaire were included at the beginning of each round. For each question, participants were asked to select either Agree/ No opinion / Disagree and if they disagreed, they were asked to explain why or to provide alternative wording (Appendix 12).

As mentioned, the first-round questionnaire underwent several revisions and was piloted using a live convenience sample of 19 physiotherapists (age range 30 to 59) from musculoskeletal \( (n=7) \), OH \( (n=2) \) and orthopaedics \( (n=1) \) areas who did not participate in the Delphi study. This was used to gain feedback on the structure, content, and flow of the round questionnaire to ensure an adequate number of items could be generated from the questionnaire for data analysis. Feedback resulted in minor wording changes and editing to ensure clarity. This refinement resulted in a removal of some technical terms and jargon and Round 1 then went live (10\(^{th}\) March 2021) post pilot review cycle of 2 weeks in duration as per above. Feedback suggested that the length (15 mins) and complexity was acceptable and MS forms provided an estimated time for completion tool. Creswell (2007) states that content validity is conducted by asking these experts who are familiar with the topic to make judgement on the selection of the tool for data collection.

For a competency to be included there must be a majority agreement of the critical importance of the outcome and minority agreement that the outcome is not important (Jaeschke et al., 2008). This corresponds with the GRADE (Grading of Recommendations
Assessment, Development and Evaluation) Working Group advice (Guyatt et al., 2008). The criteria of consensus were percentage of group agreement ≥ 70% (Agree/No opinion/Disagree). As this study is not directly related to a high risk or life-or-death issue, a consensus value of 70 per cent or more was considered suitable (Niederberger and Köberich, 2021). However, others have suggested that consensus should seek agreement from 51% of respondents (Loughlin and Moore, 1979). In practice, gaining full agreement on all issues covered is difficult to achieve and the percentage agreement (≥ 70%) that the researcher has accepted is synonymous with consensus related to the importance of the topic at hand (Niederberger and Köberich, 2021). The mere fact of conducting a Delphi study does not automatically imply consensus as its outcome (Diamond et al., 2014). In specialist's fields perfect agreement may not be realistic as experts possess different values, ethics, world views and clinical dilemmas concerning the treatment of patients. Therefore, the definition of consensus for this study included procedures to be followed when consensus was not reach after several iterations. Clearly and transparently, items for the next round were deleted from the list if they did not reach consensus and none were refined to attain higher consensus. Consensus was defined as the percentage of ratings for Round 1 and median and interquartile range for Rounds 2 and 3.

A variety of different scoring systems have been used in healthcare Delphi studies to rate the importance of outcomes. Most studies have used Likert scales although others have used ranking of outcomes and allocation of points (Humphrey-Murto et al., 2017). In rounds two and three, participants were again asked to rate their agreement with the statement series, using a 5-point Likert Scale (Likert, 1932) by selecting (strongly agree, agree, neutral, disagree or strongly disagree) and an example of a question is presented in Appendix 13. This scoring system was chosen after previous studies showed that it differentiates between questionnaire items, is easier to use, within a reduced response time compared to 7- or 9-point Likert scale (COMET, 2018). The reliability increases when moving from 3- to 5-point Likert’s and less is gained as you exceed 7- or 11-points (Lozano et al., 2008). However, more scale points in general results in better reliability and identification of extreme attitudes. Lozano et al. (2008) suggested that as the ‘number of response alternatives increases, both validity and reliability increase…. The optimum number is between four and
seven alternatives’. They reinforce that from 7-point alternative onwards psychometric properties of the scale scarcely improve further.

In sum, a careful mix was necessitated between reliability, validity, time, and ability for participations to express their opinion on the competencies. The researcher decided on an optimal route with adequate validity and reliability to answer the research question and the Likert scale provided a simple measure to discriminate each item in the questionnaire. Using the 5-point Likert scale provided sufficient discrimination among the levels of agreement.

### 8.5 Round 1 questionnaire

Commonly, the first round of a Delphi study begins with open-ended questions to enable participants to respond freely, which will allow the research team to create themes and ideas linked to the research topic. It is, however, acknowledged that this approach could result in bias in the response, or the options available to be limited. It was decided to implement a structured questionnaire for Round 1 that was solely based on the NGTs conducted so that rounds could continue until agreement is established on a final competency list (Keeney et al., 2000). The first round of the Delphi questionnaire (Appendix 12) was used to identify participants opinions about what items should be included within work and health competencies based on the two previous NGTs by selecting either Agree/No opinion/Disagree. As discussed, competency frameworks, several research articles and key texts relating to the questionnaires were used as reference material for the participants (Osborne et al., 2007).

The questionnaire consisted of two main sections (knowledge and skills), with each section being concerned with critical items for FCPs to complete FFW judgements and SA certification of primary care patients. After the completion of Round 1, data were coded and entered onto a computer. The variables were scored (1) for Agree and (0) for No opinion/Disagree. The data was reviewed and assessed for correction of any errors during data entry. The consensus rule used in this study stated that items scoring 70% or more in the ‘Agree’ category should be included and retained and not sent through to the next round for re-rating.
The process of analysis of Round 1 data and developing Round 2 data took 4 weeks, with the incorporation of two reminders, including a statement to reinforce the importance of complete participation. Non-responders were reminded to participate in subsequent rounds unless they explicitly expressed to withdraw.

Consensus in Delphi studies is said to have been achieved when a given proportion of participants agree on an item (competency) under debate; this proportion varies in the literature. For this study, achievement of ‘good’ consensus was assumed when ≥70% of participants agreed (Niederberger and Köberich, 2021) and was considered definitive for the final competency list (Round 3). Descriptive syntheses and statistics were reported for demographic characteristics, response rates, withdrawals, and items Likert scale ratings [mean, standard deviation (SD), percentage agreement] for each item. The final and definitive list of competencies was then determined.

Open text comments from all rounds were subjected to framework analysis as recommended for Delphi studies (Sinha et al., 2011) using Nvivo version 12 (QSR International) (Nvivo, 2018). Data were coded and codes with similar meaning were grouped under descriptive headings. Practical limitations dictated that the principal research was the only investigator in the research team available to code the data. The reliability of coding was tested by coding the data a second time after an interval of 7 days, again by the principal researcher only. In hindsight and with more time, inter-rater reliability (IRR) would have been used for the qualitative data to ensure consistency in coding, minimising bias from the individual coder and strengthen the research’s rigour. This would have measured how much agreement there is between different coders on how they coded the same data and apply a statistical measure (e.g., Cohen’s Kappa) calculated based on the level of agreement beyond chance between them. Therefore, no reliability score was assessed.

The researcher debated this applicability, and deemed that subjectivity and interpretation played a larger role to quantifying data with predefined categories. The resultant flexibility in interpretation ensured a richness in the analysis that data with a high IRR may lack (Armstrong et al., 1997).
The next stage was more interpretive than descriptive (Gough et al., 2012). For each descriptive heading, the question was asked: ‘How do these data address the question: ‘What competencies are needed in primary care FCP practice?’ This exercise resulted in a series of statements as per the next chapter’s results. These statements were themselves organised into a set of overarching themes. The principal researcher checked the credibility of each theme against the quantitative findings allowing for a transparent and consistent approach to the qualitative-quantitative synthesis.

The principal researcher familiarised himself with the data and read all data multiple times to sensitise to the meanings ascribed to FFW and SA knowledge and skills-based practice competencies. Each potential theme was then discussed by the research team. This summary of qualitative comments was deemed important to ensure that expert views were recorded, with valuable expert judgments on further challenges, including implicit and tacit knowledge, pertaining to FCP practice and the topic overall. The depth of free text responses may have provided expert rationale and experiential expertise that highlighted their arrival at justifiable, valid, and credible competencies for FCPs. Items that reached a moderate degree of consensus (between 51%-69% of group agreement) were included for Round 2. There is debate on how to accurately handle items that reach and do not reach consensus in the proceeding rounds. Keeney et al., (2011) suggest that some Delphi studies remove statements which reach consensus, retained, and held separately from the next round. Statements that have not reached a priori level of group consensus were included (between 51%-69%) for the group to re-consider their response, items at ≤50% consensus level of agreement were to be removed. This was deemed important, as excluding items that have reached consensus shortens the questionnaire, which may encourage experts to complete subsequent rounds. Therefore, it was decided to follow this approach in the present Delphi study. Conversely, by including all items and responses in all rounds, every item and response has an equal chance to gain the highest level of consensus and importance rating. As with a plethora of decisions to be made on the Delphi study, this was an added decision made by the principal researcher when considering all factors and permutations related to this specific study.
8.6 Round 2 questionnaire

In round 2 (Appendix 13), expert panellists used a 5-point Likert scale (5-\textit{strongly agree}, 4-\textit{agree}, 3-\textit{neutral}, 2-\textit{disagree} or 1-\textit{strongly disagree} where 1= strong disagreement, 3= no agreement, 5= strong agreement) to rate the level of their agreement on the competencies and were shown summary results from Round 1 to allow re-evaluation of responses in light of those of their peers (Powell, 2003). The questionnaire used in Round 2 was based on the results of round one, but it was more structured than the first one around 8 items only that did not reach consensus and were retained from Round 1. Round 2 was used to further clarify and evaluate the level of agreement for the underlying competencies identified from Round 1 data analysis. It was also used to explore whether any additional competencies were required. This Likert scale is a simple psychometric measure for respondents due to the different levels of discrimination for each item in the questionnaire. It is the most widely used scale in surveys across all disciplines (Keeney et al., 2010). The Likert scale is ideal to use within a Delphi questionnaire as it is synonymous with helping participants indicating their level of Agreement with a statement. Although using extra points on the scale, such as 9 or 11, could increase the time required to complete the questionnaire, especially if it has many variables to be measured. Michie (2014) suggests that using more than 5-points in a Likert scale (7, 9 or 11) makes it challenging for participants to discriminate, in contrast to a 5-point Likert scale where it is still easy to distinguish between moderate and strong choices. Round 2 was distributed through email with a MS forms link and was open for 4 weeks, with a remainder to complete after 1 week of going live.

8.7 Round 3 questionnaire

The purpose of Round 3 was to evaluate and verify the final level of agreement of the competencies from previous rounds, with competencies not reaching a priori level of agreement omitted. In round 3, participants were shown summary results from round 2 (mean Likert score, percentage agreement of ratings and de-identified comments on items) to allow for further clarification and enable them to make an informed final decision that contributed to the expert group’s collective opinion. Participants were encouraged to refer
to the Round 2 data during rating in Round 3. Round 3 (final) included competencies that reached consensus from the two preceding rounds.

Participant responses to Round Two were collected, and percentage agreements for each competency calculated. Data were coded and entered into a spreadsheet. The scoring system for the statistical test requires that each variable should be dichotomous. The variables are scored (1) for strongly agree or agree, and (0) for neutral, disagree or strongly disagree. The researcher decided for this final competency list, it was not essential to determine the importance level of the items in the competency, rather the aim was to identify the competencies regardless of their importance. Expert panellists rated the level of their agreement on the competencies/items and were shown summary results from Round 1 to allow re-evaluation of responses considering those of their peers (Powell, 2003).

For Round Three, individualised questionnaires were created for each participant, displaying their Likert scale response compared with the group percentage agreements, and all qualitative comments for each competency displayed anonymously. Where multiple comments from different participants indicated competencies should be shortened or combined, the research team presented a new or amended competency for rating by the panel in Round 3, with another option for free text commentary. Suggestions were made regarding the structure and organisation of the competencies based on observed themes.

### 8.8 Response rate

No specific guidance exists for an acceptable response rate for Delphi studies, but it is obviously important to try and maximise response rates to minimise potential attrition bias. A review of the literature reveals range variations in response rates (%) for core outcome sets studies of between 24-100% (Gargon et al., 2019). A response rate of 75% for each round was considered to maintain rigour and this was monitored after each round (Hasson et al., 2000). Attrition may be influenced on the timing of Delphi rounds, the length of the Delphi and time elapsed between rounds (Williamson et al., 2017). To reduce this and improve response rates, personalised emails were used, and thorough feedback was provided after each round to ensure participants were engaged. Non-responders were
reminded to participate in subsequent rounds unless they explicitly expressed to withdraw, in which case they were allowed to without reason.

8.9 Data use and storage

Descriptive syntheses and statistics were reported for demographic characteristics, response rates, withdrawals, and items Likert scale ratings [mean, standard deviation (SD), percentage agreement] for each item. Open text comments from all rounds were subjected to framework analysis as recommended for Delphi studies (Krippendorff, 2018) using Nvivo version 12 (QSR International) (Nvivo, 2018). The principal researcher familiarised themselves with the data and read all data multiple times to sensitise themselves to the meanings ascribed to SA and FFW knowledge and skills-based practice competencies. Each potential theme was then discussed by the research team. This summary of qualitative comments was deemed important to ensure that expert views were recorded, with valuable expert judgments on further challenges, including implicit and tacit knowledge, pertaining to FCP practice and the topic overall. The depth of free text responses may have provided expert rationale and experiential expertise that highlighted their arrival at justifiable, valid, and credible competencies for FCPs. Data will be retained in line with GCU’s retention policy for five years in an appropriate format and storage facility. The study adhered to GCU data security and data protection and GDPR legislation at the time.

8.10 Conclusion

This chapter has presented the research design, ethics, data collection methods, pilot information and data analysis methods employed in Study 3 for the described national Delphi Study. The strategies to maintain credibility have also been stated. The Delphi technique was explained, and its application presented, its use was also justified within this research study earlier in Chapter 2. A quantitative version of the Delphi was employed with qualitative textual data used for an understanding of opinion, based upon positivist assumptions with acknowledgement of the pragmatist paradigm. Study 3 results are now presented in Chapter 9.
Chapter 9. Results of Study 3

9.1 Introduction

This chapter presents the research findings from the national Delphi study 3 in a group of expert participant FCP physiotherapists.

9.2 Participant characteristics

By the end of the recruitment phase the original target for the overall sample size \( n=15-30 \) had been well exceeded, and the initial digital offer to participate returned 89 physiotherapists (Table 16) from all home nations of the UK to take part in the Delphi study. After email invitation, 7 (8%) individuals refused to participate in the study, 5(6%) did not answer and 13 did not meet the inclusion criteria of working as a FCP in primary care.

Table 16. Demographic and professional characteristics of the expert group.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Round 1 n=64 (%)</th>
<th>Round 2 n=62 (%)</th>
<th>Round 3 n=64 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-29</td>
<td>12 (19)</td>
<td>10 (16)</td>
<td>12 (19)</td>
</tr>
<tr>
<td>30-44</td>
<td>41 (64)</td>
<td>41 (66)</td>
<td>41 (64)</td>
</tr>
<tr>
<td>45-59</td>
<td>10 (16)</td>
<td>10 (16)</td>
<td>10 (16)</td>
</tr>
<tr>
<td>≥60</td>
<td>1 (2)</td>
<td>1 (2)</td>
<td>1 (2)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>38 (59)</td>
<td>37 (60)</td>
<td>38 (59)</td>
</tr>
<tr>
<td>Male</td>
<td>26 (41)</td>
<td>25 (40)</td>
<td>26 (41)</td>
</tr>
<tr>
<td>Other</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Highest qualification</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PGCert</td>
<td>3 (5)</td>
<td>3 (5)</td>
<td>3 (5)</td>
</tr>
<tr>
<td>BSc</td>
<td>30 (47)</td>
<td>28 (44)</td>
<td>30 (47)</td>
</tr>
<tr>
<td>MSc</td>
<td>28 (44)</td>
<td>28 (44)</td>
<td>28 (44)</td>
</tr>
<tr>
<td>MA</td>
<td>1 (2)</td>
<td>1 (2)</td>
<td>1 (2)</td>
</tr>
</tbody>
</table>
A total of 64 (72% of original 89 responses) individuals with expertise in the topic agreed to participate and the final sample of the expert panel’s characteristics are presented in Table 16. Most of the participants in the final round were female (n=38; 59%), aged between 30 and 44 years (n=41, 64%) and from England (n=46, 72%). Most experts professionally held a BSc degree (n=30, 46%) and were working at least 6 months in post as a FCP or Advanced Practice Physiotherapist (n=16, 25%) and 16 (25%) had between 15-20 years working as a physiotherapist. Regarding participation in the rounds, 64 experts participated in the first and third round and in round 2, 62 experts participated (97% overall retention rate).
9.3 Results: Round 1

Of the initial 30 competencies (knowledge and skills) judged by the expert panel, 22 (73%) reached an a priori defined strong degree of consensus (≥70% of group agreement) and 8 (27%) reached a moderate degree of consensus (between 51%–69% of group agreement). These 8 items were included for the second round and no items were excluded at the ≤50% of agreement. None of the new competencies were suggested by >10% of the participants and were therefore not included in the next round. There were only 2 new competencies suggested that were 1 knowledge and 1 skill based respectively: Knowledge of the ethical principles relevant to professional practice in work and health AND perform structured workplace assessments using an ergonomic approach.

The response rate was 64/64 (100%). For Round 2, the 2 non-responders were followed-up and reasons for their not responding related to operational pandemic/clinical pressures. The reminder emails and digital format for work at the time may partly explain the extremely high retention rate.

9.4 Results: Round 2

The five-point Likert scale (higher values mean higher importance) was used, and no further competencies were included using the following definition of consensus; median ≥ 3.5, third quartile (Q3) ≥ 4, interquartile range ≤ 2 and competencies greater or equal to 70% level of agreement (definitively included see Table 17). The five-point Likert scale is an ordinal scale and descriptive statistics including median, IQR, quartile and percentage of agreement was used to assess consensus in this Round. The eight items which did not reach consensus in Round 1 were included in the second round of Delphi in accordance with Delphi guidelines and discussed in the previous chapter. The experts rated items according to their perceived importance. The items were ranked from (1) to (5) using a Likert scale (strongly agree, agree, neutral, disagree, strongly disagree). No competencies reached between 51% and 69% of agreement to be included for the next round and no new competencies were suggested.
Eight competencies were excluded due to low group level of agreement. Specifically, these were:

1. Knowledge of graded and paced occupational and vocational rehabilitation. (Graduated return to work, rehabilitation plans),
2. Knowledge of ergonomic advice. (Adaption of a technique, work process or as a prevention strategy, e.g., display screen equipment for computer tasks, ergonomic equipment for job tasks),
3. Using a range of behavioural and specialist techniques to challenge beliefs, behaviours, movement, work activities to achieve beneficial outcome. (E.g., cognitive behavioural therapy and motivational interviewing),
4. Knowledge of risk assessment. (MSK risk assessment, ergonomic factors and assessments related to upper limb, spine, or lower limb work),
5. Application of thinking and reflection strategies. (E.g., Grounding and mind-mapping techniques to reduce symptoms in patients),
6. Common health problems are often short-lived, and most people can stay at work or need only a short time off, it is also known that work is usually good for our health and wellbeing, therefore should we: Ensure work is a routine and consistent focus in every consultation,
7. Engage stakeholders to assist individual’s work performance, return to, or stay in work. (Therapeutic management, rehabilitation, and non-clinical services such as Access to Work),
8. Select and use a work-related outcome measure or screening tool. (E.g., for those at risk of disability, absence, or work instability).

Table 17. Items rated through a 5-point Likert scale in Round 2.

<table>
<thead>
<tr>
<th>Item</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strong disagree</th>
<th>Median</th>
<th>IQR</th>
<th>Third quartile (Q3)</th>
<th>% (no) of agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>10</td>
<td>5</td>
<td>45</td>
<td>40</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>5</td>
<td>10</td>
<td>40</td>
<td>40</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>50</td>
<td>50</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Item</td>
<td>Strongly agree</td>
<td>Agree</td>
<td>Neutral</td>
<td>Disagree</td>
<td>Strong disagree</td>
<td>Median</td>
<td>IQR</td>
<td>Third quartile (Q3)</td>
<td>% (no) of agreement</td>
</tr>
<tr>
<td>------</td>
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<tr>
<td>4</td>
<td>20</td>
<td>20</td>
<td>10</td>
<td>10</td>
<td>40</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>40</td>
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<tr>
<td>5</td>
<td>20</td>
<td>25</td>
<td>10</td>
<td>20</td>
<td>25</td>
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<td>2</td>
<td>4</td>
<td>45</td>
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<tr>
<td>6</td>
<td>40</td>
<td>5</td>
<td>20</td>
<td>25</td>
<td>10</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>45</td>
</tr>
<tr>
<td>7</td>
<td>45</td>
<td>0</td>
<td>30</td>
<td>15</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>45</td>
</tr>
<tr>
<td>8</td>
<td>0</td>
<td>10</td>
<td>30</td>
<td>5</td>
<td>55</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

The response rate for this round was 62/64 (97%). Anonymous feedback from this round is summarized in Appendix 14.

### 9.5 Results: Round 3 final establishment on competency items

Round 3 (Appendix 15) allowed experts to review Round 2 feedback for further clarification and enable them to make an individual final decision that contributed to the expert group’s collective opinion on the topic. The degree of consensus in this final round was classified as strong in 20 competencies (91%) and moderate for 2 others (10%) with 4 competencies gaining maximum level of group agreement at 100%. The final competency list is documented in Table 18. Two competencies at the moderate level of agreement were excluded. The response rate for this round was 64/64 (100%). Individualised questionnaires were created for each participant, displaying their Likert scale response compared with the group percentage agreements, and all qualitative comments for each competency displayed anonymously. Where multiple comments from different participants indicated competencies should be shortened or combined, the research team presented a new or amended competency for rating by the panel in Round 3, with another option for free text commentary. Despite this, there were no consistent comments on shortening or combining items in any of the Rounds completed. Suggestions were made regarding the structure and organisation of the competencies based on observed themes.
Table 18. Final competency list of learning and development needs for UK-based FCPs within primary care

<table>
<thead>
<tr>
<th>Competency</th>
<th>Consensus Level % (Number of Participants)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Knowledge-based Competency</strong></td>
<td></td>
</tr>
<tr>
<td>The sickness absence framework within the UK. (Including policy, procedure, benefits system, statutory sick pay, legal aspects of fitness for work – statute and common law aspects, employer sickness absence policy, Equality Act 2010 etc.).</td>
<td>100% (64)</td>
</tr>
<tr>
<td>Knowledge of temporary disability and health-related work advice and return to work. (Including rehabilitation, re-integration into work and advice post-surgery).</td>
<td>100% (64)</td>
</tr>
<tr>
<td>Knowledge of the AHP Health and Work report and GP’s statement of Fitness for Work ‘Fit Note’/ Med 3.</td>
<td>91% (58)</td>
</tr>
<tr>
<td>Knowledge of health promotion and preventative care programmes (Behaviour and lifestyle services, promoting workplace good health and wellbeing, better relationships, mental and physical health).</td>
<td>84% (54)</td>
</tr>
<tr>
<td>Using best evidence and patient preferences to influence fitness for work decisions.</td>
<td>81% (52)</td>
</tr>
<tr>
<td>Knowledge of the biopsychosocial (BSP) model and its application to work and disability. (BSP assessment and management of those who are off work, predictors of poor outcome or trigger to change outcome through management).</td>
<td>80% (51)</td>
</tr>
<tr>
<td>Knowledge of employer factors and their impact on work and health. (System or contextual factors e.g., reasonable adjustments, job demands, job content, social support at work, management support, employer legislation and/or policy related to return to work).</td>
<td>80% (51)</td>
</tr>
<tr>
<td>Knowledge of ergonomic advice. (Adaption of a technique, work process or as a prevention strategy, e.g., display screen equipment for computer tasks, ergonomic equipment for job tasks)</td>
<td>68% (43)</td>
</tr>
<tr>
<td>Knowledge of graded and paced occupational and vocational rehabilitation. (Graduated return to work, rehabilitation plans)</td>
<td>64% (41)</td>
</tr>
<tr>
<td>Select and use a work-related outcome measure or screening tool. (E.g., for those at risk of disability, absence, or work instability)</td>
<td>62% (40)</td>
</tr>
<tr>
<td>Competency</td>
<td>Consensus Level % (Number of Participants)</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Knowledge of risk assessment. (MSK risk assessment, ergonomic factors and assessments related to upper limb, spine, or lower limb work)</td>
<td>R1 61% (39)  R2 45%* (29)  R3 45%* (29)</td>
</tr>
<tr>
<td>Ensure work is a routine and consistent focus in every consultation</td>
<td>R1 59% (38)  R2 45%* (29)</td>
</tr>
<tr>
<td><strong>Skill-based Competency</strong></td>
<td>R1 100% (64)  R2 100%+ (64)</td>
</tr>
<tr>
<td>Use interpersonal communication skills. (Communicating complex topics such as pain in the absence of pathology to employers or patients/employee, adaptation as needed, use of advanced communication skills, empathy etc.).</td>
<td></td>
</tr>
<tr>
<td>Advise individuals on how work can be part of rehabilitation for a MSK condition. (E.g., work is an outcome, prolonged absence to be discouraged due to risk of longer term worklessness).</td>
<td>R1 100% (64)  R2 100%+ (64)</td>
</tr>
<tr>
<td>Identify psychosocial factors that influence fitness for work.</td>
<td>R1 97% (62)  R2 97% (62)</td>
</tr>
<tr>
<td>Assess a patient’s fitness for work. (E.g., physical, and psychosocial health, general medical review, job demands, factors influencing performance etc.).</td>
<td>R1 95% (61)  R2 95% (61)</td>
</tr>
<tr>
<td>Promote the importance of physical activity. (E.g., continuing ‘good’ work, MSK best practice guidance relating to staying active).</td>
<td>R1 88% (59)  R2 94% (60)</td>
</tr>
<tr>
<td>Gather, synthesize, and appraise information relating to the MSK condition(s) and work performance.</td>
<td>R1 75% (48)  R2 92% (59)</td>
</tr>
<tr>
<td>Share decision making process and guide patients to independently manage their own conditions as appropriate.</td>
<td>R1 75% (48)  R2 92% (59)</td>
</tr>
<tr>
<td>Make recommendations to employers regarding individuals’ fitness to work. (AHP fitness for work report, impairment of function, reasonable adjustments, work accommodation and capability).</td>
<td>R1 70% (45)  R2 88% (56)</td>
</tr>
<tr>
<td>Ascertained the impact of persistent pain and MSK-related disability on an individual’s work participation and risk of worklessness.</td>
<td>R1 70% (45)  R2 86% (54)</td>
</tr>
<tr>
<td>Identify other factors affecting an individual’s ability to participate in work and their perceptions of work and health. (E.g., cognition,</td>
<td>R1 75% (48)  R2 84% (53)</td>
</tr>
<tr>
<td>Competency</td>
<td>Consensus Level % (Number of Participants)</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>R1</td>
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<tr>
<td>mental state, attitude &amp; motivation, work demands and social determinants of health).</td>
<td></td>
</tr>
<tr>
<td>Review and apply evidence to promote health, support behavioural change and support individual(s) in work.</td>
<td>73%</td>
</tr>
<tr>
<td></td>
<td>(47)</td>
</tr>
<tr>
<td>Encourage employers to risk assess and refer to an Occupational Health provider for specialist intervention.</td>
<td>70%</td>
</tr>
<tr>
<td></td>
<td>(45)</td>
</tr>
<tr>
<td>Use of technology, social media, and applications. (Attract the attention and reinforce positive health behaviours, information signpost).</td>
<td>70%</td>
</tr>
<tr>
<td></td>
<td>(45)</td>
</tr>
<tr>
<td>Use of coaching techniques. (To influence movement, graded loading, physical activity, healthy living, social and work engagement)</td>
<td>70%</td>
</tr>
<tr>
<td></td>
<td>(45)</td>
</tr>
<tr>
<td>Effectively manage time so that work-related advice can be provided in primary care</td>
<td>70%</td>
</tr>
<tr>
<td></td>
<td>(45)</td>
</tr>
<tr>
<td>Engage stakeholders to assist individual’s work performance, return to, or stay in work. (Therapeutic management, rehabilitation, and non-clinical services such as Access to Work)</td>
<td>68%</td>
</tr>
<tr>
<td></td>
<td>(43)</td>
</tr>
<tr>
<td>Using a range of behavioural and specialist techniques to challenge beliefs, behaviours, movement, work activities to achieve beneficial outcome. (e.g., cognitive behavioural therapy and motivational interviewing)</td>
<td>61%</td>
</tr>
<tr>
<td></td>
<td>(39)</td>
</tr>
<tr>
<td>Application of thinking and reflection strategies. (e.g., Grounding and mind-mapping techniques to reduce symptoms in patients)</td>
<td>52%</td>
</tr>
<tr>
<td></td>
<td>(33)</td>
</tr>
</tbody>
</table>

*Denotes items excluded from Delphi +Denotes full group level of agreement

Competencies with the highest frequency counts were: the Sickness Absence Framework in the UK, Knowledge of temporary disability and health-related work advice and RTW, use interpersonal communication skills and advise individuals on how work can be part of rehabilitation for MSK condition. The researcher found the data reduction process needed a balance on the content analysis. The free-text comments contextualized and explained individual responses, mostly on the challenges involved in providing SA and FFW recommendations. If there are too many participant statements or if too much citation is
used, then analysis can be incomplete, conversely, if they are excluded then the richness of
the data may be lost, and the researcher may risk inaccurately representing the data
(Humphrey-Murto, 2018). Some of the free text comments from Round 1 represented
strong clinical opinion and this made the data reduction challenging, although it was
important to encapsulate the essence of these statements by being non-judgmental or risk
interpreting them. These text units ranged in size from sentences to several paragraphs, and
all were individual not already covered by other free text comments; therefore, collapsing
them was not appropriate. The researcher had to maintain validity of the study and ensured
that the free text comments did not lose their intended meaning or impact. Instead, they
were retained as verbatim statements listed in Appendix 14. These statements covered
several factors facing FCPs in primary care practice. In Round 1, 9 quotes were provided and
in Round 2, 18 quotes were provided.

As explained in the previous Chapter 8, the principal researcher familiarised himself with the
data and read all data multiple times to sensitise to the meanings ascribed to FFW and SA
knowledge and skills-based practice competencies. Each potential theme was then
discussed by the research team. Again, this summary of qualitative comments was deemed
important to ensure that expert views were recorded, with valuable expert judgments on
further challenges, including implicit and tacit knowledge, pertaining to FCP practice and the
topic overall. The depth of free text responses may have provided expert rationale and
experiential expertise that highlighted their arrival at justifiable, valid, and credible
competencies for FCPs. This summary of qualitative comments was deemed important to
ensure that expert views were recorded, with valuable expert judgments on further
challenges, including implicit and tacit knowledge, pertaining to FCP practice and the topic
overall. The depth of free text responses may have provided expert rationale and
experiential expertise that highlighted their arrival at justifiable, valid, and credible
competencies for FCPs. Data will be retained in line with GCU’s retention policy for five
years in an appropriate format and storage facility. The study adhered to GCU data security
and data protection and GDPR legislation at the time.

Four themes were identified from the group response, which reflected the reasons,
changes, and differences in the rating of outcomes (time constraints, depth of expertise,
work-related rehabilitation, and communication). The subthemes are described herein and
reflect the perspectives of expert FCPs. The group suggested that time constraints (n=34, 53%) and depth of expertise (n=32, 50%) may be limiting factors for the expectation of providing SA certification and FFW recommendations. An awareness of work-related rehabilitation was acknowledged in around 10%, and many reported that communication (n=50, 78%) was important, but overall work-related rehabilitation may be too in depth to be considered by FCPs. For examples, some of the qualitative data presented arguments on the themes are below:

‘I do think FCPs are best placed to issue fitness to work as, although we only have 20 min appointments, we have longer with the patient that the GP does’

‘Making sure we get the accurate data off the patient to provide a plan for their workplace and also have the resources to refer the patient onto other services like psychosocial CBT and wellness’

‘In the absence of an active OH then agree that it is the role of PC professional to facilitate and guide pts back to work asap’

‘Sickness Absence Certification and Fitness for Work Recommendations should be universally accepted across the health professions. The competencies, training, and standards for [FCP’s] should be the same as those for nurses and doctors’

‘A key part of this [work] advice is the embedding of the FCP post within a primary care team where there is evidence of good relationships and communication between professional colleagues’

The group also suggested that FCPs need to collaborate and communicate within the primary care team, so that further roles and responsibilities can be conducted and assessed. They questioned what other training primary healthcare professionals receive, e.g., GPs. They questioned what organizations and stakeholders were doing to address this, e.g., Health Education England, NHS Education for Scotland, Medical Training or Schools etc. Overall, experts suggested that it is the patient’s own individual expectations as to whether they return to work, i.e., it may not be the injury, condition, job role per se, more the individual assessing whether they can be accommodated with the injury, condition etc. This
may reinforce the evidence on the challenges of managing the patient within a ‘therapeutic relationship’ solely rather than with the dual ethics of occupational health, i.e., dual loyalties and duties to employer and employee, previously described as ‘two-master ethics’, and now generally known as ‘dual obligations’.

Some experts suggested that patient’s employment status would influence this, e.g., self-employment, policy related to employment, sedentary behaviour, certain job demands. Two experts suggested that patients within manual industries may require higher resourced support and ongoing follow ups. Twenty-seven of the anonymous verbatim statements (Appendix 13) were chosen as they were representative of most of the statements generated; all items or statements were not included, especially short documentation as it would have made the questionnaire rounds unacceptably long. They were included in the final feedback round and experts indicated that they were broadly in agreement of the statements. The Final 21 competencies reaching a priori level of group agreement are presented in Table 19

Table 19. Final competency list from FCP Delphi study.

<table>
<thead>
<tr>
<th>Competency</th>
<th>Knowledge-based Competency</th>
</tr>
</thead>
<tbody>
<tr>
<td>The sickness absence framework within the UK. (Including policy, procedure, benefits system, statutory sick pay, legal aspects of fitness for work – statute and common law aspects, employer sickness absence policy, Equality Act 2010 etc.).</td>
<td></td>
</tr>
<tr>
<td>Knowledge of temporary disability and health-related work advice and return to work. (Including rehabilitation, re-integration into work and advice post-surgery).</td>
<td></td>
</tr>
<tr>
<td>Knowledge of health promotion and preventative care programmes (Behaviour and lifestyle services, promoting workplace good health and wellbeing, better relationships, mental and physical health).</td>
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<tr>
<td>Using best evidence and patient preferences to influence fitness for work decisions.</td>
<td></td>
</tr>
<tr>
<td>Knowledge of the biopsychosocial (BSP) model and its application to work and disability. (BSP assessment and management of those who are off work, predictors of poor outcome or trigger to change outcome through management).</td>
<td></td>
</tr>
<tr>
<td>Knowledge of employer factors and their impact on work and health. (System or contextual factors e.g., reasonable adjustments, job demands, job content, social support at work, management support, employer legislation and/or policy related to return to work).</td>
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<td></td>
</tr>
<tr>
<td><strong>Skill-based Competency</strong></td>
<td></td>
</tr>
<tr>
<td>Use interpersonal communication skills. (Communicating complex topics such as pain in the absence of pathology to employers or patients/employee, adaption as needed, use of advanced communication skills, empathy etc.).</td>
<td></td>
</tr>
<tr>
<td>Advise individuals on how work can be part of rehabilitation for a MSK condition. (E.g., work is an outcome, prolonged absence to be discouraged due to risk of longer term worklessness).</td>
<td></td>
</tr>
<tr>
<td>Identify psychosocial factors that influence fitness for work.</td>
<td></td>
</tr>
<tr>
<td>Assess a patient’s fitness for work. (E.g., physical, and psychosocial health, general medical review, job demands, factors influencing performance etc.).</td>
<td></td>
</tr>
<tr>
<td>Promote the importance of physical activity. (E.g., continuing ‘good’ work, MSK best practice guidance relating to staying active).</td>
<td></td>
</tr>
<tr>
<td>Gather, synthesize, and appraise information relating to the MSK condition(s) and work performance.</td>
<td></td>
</tr>
<tr>
<td>Share decision making process and guide patients to independently manage their own conditions as appropriate.</td>
<td></td>
</tr>
<tr>
<td>Make recommendations to employers regarding individuals’ fitness to work. (AHP fitness for work report, impairment of function, reasonable adjustments, work accommodation and capability).</td>
<td></td>
</tr>
<tr>
<td>Ascertain the impact of persistent pain and MSK-related disability on an individual’s work participation and risk of worklessness.</td>
<td></td>
</tr>
<tr>
<td>Identify other factors affecting an individual’s ability to participate in work and their perceptions of work and health. (E.g., cognition, mental state, attitude &amp; motivation, work demands and social determinants of health).</td>
<td></td>
</tr>
<tr>
<td>Review and apply evidence to promote health, support behavioural change and support individual(s) in work.</td>
<td></td>
</tr>
<tr>
<td>Encourage employers to risk assess and refer to an Occupational Health provider for specialist intervention.</td>
<td></td>
</tr>
<tr>
<td>Use of technology, social media, and applications. (Attract the attention and reinforce positive health behaviours, information signpost).</td>
<td></td>
</tr>
</tbody>
</table>
9.6 Conclusion

This chapter has produced a summary of the key research findings from the Study 3 national Delphi study in a group of expert participants FCP physiotherapists (see Table 19). A final 20-item competency list is documented (7 knowledge based and 13 skills-based competencies). Chapter 10 will discuss the overall Study 3 findings and strengths and limitations of the study and those findings not previous discussed in Chapter 7 with reference to the existing literature.
Chapter 10. Overall discussion

10.1 Introduction

This chapter will discuss the findings with reference to the existing literature. Prior to studies 1 and 2 of this project, little was known on the competencies needed for FCP practice, especially the work and health competencies needed for primary care. As documented in Chapters 1 and 5, the main aim of the project overall was to identify the competencies that underpin the FCP’s role in providing FFW recommendations and SA certification within primary care settings and to enable realisation of the overarching aim and objectives:

Objective 1. Test a consensus building methodology in a group of HCPs to identify design issues and evaluate a study’s feasibility, practicality, resources, time, and cost prior to the main research being conducted (Pilot Study).

Objective 2. Explore FCPs opinion and identify competencies on this work and health topic and determine whether consensus can be reached on the learning and development needs of FCPs for FFW recommendations and SA certification, and the challenges/obstacles to implementation (Study 1).

Objective 3: Explore OH physiotherapist’s opinion and identify competencies on this work and health topic and determine whether consensus can be reached on the learning and development needs of FCPs for FFW recommendations and SA certification, and the challenges/obstacles to implementation (Study 2).

Objective 4: Determine and reach consensus on a final core competency set for FCPs to complete FFW recommendations and SA certification in primary care by engaging FCPs through a national formal competency study (Study 3).

The two national NGTs, studies 1 and 2, provided a unique insight into the views of FCPs and OH/ACPOHE Physiotherapists as to the competencies required. This chapter presents a summary of the key findings of studies 1 and 2 and a comparison with existing literature.
where possible, the methodological strengths and challenges, and implications for FCP educational practice, policy, and further research.

Figure 15 below summarizes the key findings from the national NGTs.

- Physiotherapist FCPs are now the MSK gatekeepers in primary care settings; however, challenges and solutions exist in FCP practice when considering work and health specific advice for patients presenting with MSK conditions in primary care.

- The main challenges that OH experts deemed FCPs face in delivering FFW advice and SA certification centred on the ‘Non-clinical time’ in primary care to carry out tasks related to administration, documenting a Fit Note and in providing evidence informed fitness for work advice and a ‘Lack of knowledge’ of RTW planning, graded return, stakeholder and workplace engagement.

- The main challenges FCPs deemed FCPs face in delivering FFW advice and SA certification centred on the non-clinical time in primary care to carry out tasks related to administration, documenting a Fit Note and in providing evidence informed FFW advice.

- The key learning and development needs for FCPs from OH experts centred on ‘Work conversations’ and ‘Training in OH topics’, and from FCPs on FCPs centred on the legal and legislative aspects of the Fit Note.

- FCPs may be ideally suited to provide and prompt supportive conversations about work, at an early stage (as most of the population’s health needs are addressed by primary care as the first point of contact and ‘cornerstone’ in the NHS system).

- If FCPs have the challenges/barriers addressed, this may improve their competency in dealing with MSK health and will empower them to provide work-related advice.

- FCPs training and development should integrate the above items into future undergraduate and postgraduate education and competency frameworks so that FCPs can become occupational health champions in primary care.

Figure 15. Summary Of the key findings from Studies 1 and 2.
10.1.1 Comparison with the literature

The findings of the NGTs will be discussed in relation to the literature. The extent to which competencies of work and health, FFW and SA certification using the Fit Note or AHP Health and Work report is inconsistent within pre-registration and undergraduate physiotherapy curricula in the UK. The following will consider the main NGT competency outcomes with regard to the published literature on the topic, including the main challenges and learning and development needs.

10.1.2 Non-clinical time

The FCP and OH/ACPOHE NGTs highlighted ‘Non-clinical time’ and ‘Time’ as the most important barrier factor in each, with full group agreement.

Work-relevant MSK conditions are burdensome to patients, employers, and society, as summated in Chapter 2, as they are the main cause of disability, high absenteeism rates, presenteeism, loss of productivity and worker’s compensation costs. There is an argument to suggest that FCPs who manage MSK conditions in primary care should adopt a work-focused approach, with sufficient evidence showing that being employed is associated with better health and health-related quality of life (Waddell and Burton, 2006). Thus, HCPs have been encouraged to consider work as a health outcome and to participate in work-focused health conversations and tackle obstacles to work participation (Bartys et al., 2019). However, these conversations about work have not been clearly defined or embedded within clinical practice and this is despite physiotherapists acknowledging the importance of their patient’s work and work ability (Oswald et al., 2017). In the previously mentioned narrative review (Bartys et al., 2019), the barriers documented for clinicians do not address work elements in a healthcare consultation are numerous, with a major one being a ‘lack of time’.

The majority of FCP services provide a 20-minute appointment, to allow for a ‘safe and effective consultation’ (HEE, 2022). In addition, they should have additional time for administrative activities. Although an optimal time to allow for an exploration of OH related information does not exist, FCPs may have more time than GPs to consider it. After the Fit
Note changes in April 2010 (DWP, 2010), initial reports suggested mixed evaluations, initially largely positive from GP’s perspective (Shiels et al., 2013) but less so from industry and employers (Thomson et al., 2012). The significant change that occurred at this time to the certification system produced obstacles for GPs, and they reported that this area of their job role was both complex and challenging (Money et al., 2010). Given the focus on ability, it was essential for GPs to understand work tasks and how ill-health can impact on work (Coole et al., 2013). This requires work-related recommendations of how to therapeutically manage the condition while the patient stays in work or returns to work as safely and quickly as possible post sickness absence.

A study undertaken from the 7th National GP Worklife study of 4361 GPs covering approximately 10% of all GPs in England, Scotland and Wales (Money et al., 2015) suggested that the majority of GPs reported positive impacts of the Fit Note on consultation quality (Q11, Q12: 65.6%, 64.1%) and on patient outcomes of Fit Note consults in making a RTW (Q14: 84.5%). GPs were evenly split on whether Fit Notes had lengthened consultations times or not (Q15: 52.1%) while a minority reported that it had made very little change to their practice (Q16:28.9%). GPs who had undertaken training in work and health within the previous year were more likely to agree, than GPs without specific training, that the introduction of the Fit Note had increased their consultation times. This finding may be because of the recent health and work training, with more onus of the patients’ work demands and how adjustments can positively impact on RTW outcomes, thus contributing to a more extensive review.

Hiscock and Ritchie (2001) in a DWP funded study to inform policy and training for GPs, reported that although some GPs find this topic straightforward, more often GPs found the judgement of whether a patient is FFW an overly complex and complicated process. They reported via qualitative interviews in a group of regionally represented 33 GPs, that several factors influenced the FFW assessment, including patients’ behaviour and busy primary care GP surgeries, results in concerted time pressures. This combination may lead to a GP taking the ‘path of least resistance’ and ‘sign a Fit Note’ rather than be drawn into a discussion with a patient. Interestingly, despite the time pressures, they also reported more difficulty in assessing LBP and anxiety (common health conditions), compared to a condition like dermatitis, that is more ‘objective’ (Hiscock and Ritchie, 2001). Like other studies in the
field, those GPs with an OH specialist interest tend to have longer consultations to complete a thorough work-related assessment.

Although the consultation and non-clinical time allowance, pressures and recommendations are lacking for FCPs, researchers in the USA found that a lack of time was as important as inadequate knowledge when studying barriers to recognising occupational health conditions in doctors (Harber et al., 2001). The study wanted to identify the specific barriers to occupational disease recognition in clinical practitioners. A questionnaire was developed to ask physicians about their perceived barriers to the recognition of OH. They questioned 136 doctors in three subgroups (primary care clinicians, OH-oriented medicine clinicians and Mexican occupational medicine specialists about possible barriers to recognising work-related conditions. They identified knowledge, time, and unpleasant aspects (e.g., legal, or extra administration) and important OH components. Results reinforced that lack of time was as important as lack of knowledge, and these issues were generally comparable for primary care and OH medicine doctors. However, the OH medicine-oriented doctors felt that the unpleasant aspects and lack of importance of OH components were more important than primary care doctors, perhaps reflecting the OH experience in dealing with these complex issues. The authors finally stated that increasing training in OH medicine is not sufficient unless time constraints are overcome, to allow for OH subjective assessment and a thorough case history (Harber et al., 2001).

This theme is supported by research from Sweden, in which Ljungquist et al. (2015) suggests that doctors who recommended SA and had problems related to SA certification was caused because not enough time was allocated to manage the tasks within a busy primary care day. Research has also shown that an inability to extend assessment times when managing complex cases leads to an increase in the number of SA certificates issued (Gerner et al., 2009; Bremander et al., 2012). There is also evidence that SA certification is greater, causes added stress to the clinician and is more time consuming when a GP is less experienced (Walter et al., 2012). In Sweden, this was studied by Norrmen et al. (2006) with the odds of being SA certified increased by 14% per year of doctors’ experience. However, it is difficult to ascertain the difference between years of practice versus doctors’ experience, with the argument that an experienced GP may be able to recognise patterns and be less objective in their decision making.
The evidence above reports on other HCPs traditionally involved in SA generalization, with an acknowledgement of time pressures and workload impact as inhibitory factors in effective OH management of a patient. It also suggests that OH issues are rarely considered in clinical encounters, but evidence remains sparse and requires more detailed exploration, especially for FCPs within primary care.

10.1.3 Fit note, legislative aspects and FFW advice

Both NGTs supported the items ‘Education requirements of the Fit Note’ (100% group consensus level FCPs and 0.6 MRR), ‘Professional liability aspects of Fit Note’ (100% group consensus level FCPs and 0.5 MRR) and ‘Fit Note: employer policy, legislation and AHP Fit Note use’ (78% group consensus level OH/ACPOHE and 0.3 MRR). At the time of research, the group considered the 2010 Fit Note/Med 3 Statement for Fitness for Work as recommended by Dame Carol Black, and the AHP Health and Work Report as the expectation was that other HCPs would be able to certify SA via the Fit Note/Med 3 in time, without the need of a GP.

The Fit Note is designed to enable the GP to be an advisor and expert, rather than an adjudicator/arbiter (Byng et al., 2015). As mentioned in the literature review, it was designed to address the problem of long-term SA in the UK by advising individuals on what they could do if work could be adapted or amended (Dorrington et al., 2018). This was further built on by offering clinicians the ability to recommend work adjustments and a ‘maybe fit’ option compared to the binary ‘fit’ versus ‘not fit for work’ option on the sick note. There is an argument to suggest that adequate time is needed to address these aspects and ultimately as it is a new role for FCPs, it will take time for them to see value in and develop knowledge and skills to complete. The AHP Health and Work Report and Fit Note/Med 3/Statement of Fitness for Work samples are presented in Figure 17 and Figure 17.
Figure 16. Sample copy of the Fit Note (Med3 2022 template).
It could be argued that the education requirements remain an unmet need for HCPs working within healthcare settings in the UK. In Dorrington et al.’s review (2017) that aimed to evaluate the percentage of Fit Notes utilizing the ‘may be fit for work’ option found that ‘maybe Fit Notes’ made up just 6.6% of all Fit Notes issued by GPs. This suggests that GPs continued to not use the changes in the way they were meant to, barriers exist that preclude providing evidence-informed advice or GPs remained unaware of the concepts behind these changes. Of the limited evidence that exists on this topic, there is a mixed
There is currently limited evidence on the education of AHPs, nurses and pharmacists in this arena. A lack of training in SA certification and occupational health is of concern to GPs (Hiscock and Ritchie, 2001), with limited published information as to what training GPs have received in the past, whether this impacts their certification behaviour, and what training needs the GPs themselves are identifying in relation to certification. In a cross-sectional postal survey study by Wynne-Jones et al. (2010) almost three-quarters of GPs reported that they had not received any training in sickness certification (71.0%; n = 618). Of those who had received training, this was typically informal and included as part of standard GP vocational training, although there were some individuals who had taken more intensive training such as an OH course. Of those who had received training in sickness certification, the vast majority (95.2%; n = 236) reported that the training increased their knowledge about certification.

Training improved confidence in certification in more than 75% of the GPs 87.3% (n = 213); 90.2% (n = 221) of GPs reported that training did not encourage them to issue more sickness certificates. Training generally encouraged GPs to issue more appropriate certificates, with 79.4% (n = 197) reporting their certification was more appropriate following training. Most GPs responding to the questionnaire reported that they would like additional training in sickness certification (55.3%; n = 466). Of those who said that they would like additional training, 66.9% wanted more on the use of specific certificates, 76.3% would like training in dealing with patients demanding certificates and 74.1% wanted training in aiding patients about work. Interestingly, the SA certification process was considered easy or very easy to use by only 29.7% (n = 259) of the GPs but 71.4% of the GPs surveyed though there were opportunities to improve the system (Wynne-Jones et al., 2010).

This study in GPs highlighted that although the majority did ask about a patient’s work situation, they believed that they lacked training the process as a whole and in addressing work issues with primary care patients during the consultation. Evidence suggests they GPs often learn to issue certificates based on trial and error (Hiscock and Ritchie, 2001; Larsen and Jenkins, 2005) and the findings of this study reinforced this suggestion. Although training in this study increased GPs’ confidence to issue certificates and encouraged the
majority to issue certificates, they considered more appropriate; but it did not alter the total number of certificates issued.

In a qualitative interview study of GPs based in different geographical locations across the UK (Welsh et al., 2012), the Fit Note was deemed to be well received, with GPs recognising that work is generally good for health and that it tended to facilitate work conversations. The sample of 15 GPs provided conflicting information compared to the study by Wynne-Jones et al. (2010) on training, with a mix of feeling that there was insufficient training for some but for others reporting that sufficient training material did exist, but that time pressures and the low priority of SA certification restricted its use. The findings reflected the study by Hiscock and Ritchie, who found little enthusiasm among GPs for highlighting SA certification as a formal part of postgraduate training (Hiscock and Ritchie, 2001) and Cohen et al., who identified SA certification as being of low training priority (Cohen et al., 2009).

Health problems can impact significantly upon patient’s ability to work, and work can impact on a patient’s health problem, influencing their employment and life. The assessment of FFW is a cornerstone of OH practice, but less so healthcare settings of primary and secondary care. Not only does this assessment depend upon clinical reasoning and evaluation but the knowledge of the workplace and its risks. FCPs are likely now to be called upon to give advice to their patients about work, and a clear understanding of the principles and legislative framework which underpin the health and work relationship is needed.

From study 2 the key learning and development needs for FCPs from OH experts centred on ‘Work conversations’ and ‘Training in OH topics’, and from FCPs on FCPs centred on the legal and legislative aspects of the Fit Note. Training in OH topics / aspects will be scrutinised further in the Study 3 / overall discussion.

10.1.4 Work conversations (training and development needs)

Work conversations: work being a routine and consistent factor in every consultation was generated and reached full consensus (100%) from the NGT with OH/ACPOHE physiotherapists and was deemed their most important item (MRR 0.6). There is evidence, presented in Chapter 8, that suggests that ‘good’ quality conversations in a health context
are ‘work-focussed’ from several stakeholders. Bartys et al. (2019) suggest that this can involve posing simple questions about a patient’s job, identifying psychosocial barriers to work participation, communicating with the employee and employer about job accommodations, and confirming a RTW date (Bartys and Stochkendahl, 2018). Evidence from a focus group study on this area suggests a ‘give-and-take’ approach to alliance-building and mutual understanding, then focussing on early RTW with other stakeholders as needed (Nilsen et al., 2015). An observational study of work disability review training reported that communicative issues were focused to empathy and the clarity of the information provided for individuals (Schrooten and De Jong, 2017).

Other research suggests that the language that HCPs can be important for patients, and that common clinical terminology can have negative connotations for them. It is likely that the health-work conversation, being a routine and consistent factor in consultations should be conducted carefully, positively, empathetically and in a way that avoids a reduction in patient self-efficacy and adversely affecting outcomes (Williams and Birkin, 2011). As previously mentioned in chapter 7, some physiotherapists may already be using a structured approach which enables them to routinely ask patients about work and health compared to GPs, however, it is unknown whether this is commonplace within FCP practice.

FCPs should be encouraged to have work-focused conversations with their patients and this study corroborates that FCPs report it as an important topic. The evidence from Bartys et al. (2019) suggests that these conversations are still not taking place within healthcare, even though stakeholders have recognised this for more than a decade with the notion of ‘work as a health outcome’. Their realist best evidence synthesis, 59 stakeholder surveys and 16 telephone interviews highlighted that HCPs accept the concept that (good) work is good for health, and with perceptions on clinical practice, it may still inhibit engaging in this topic. Their recommendations were to consider concepts such as cultural awareness (work and health positive link understanding), conversation starters (simple, inexpensive, consistent, practical guidance on how to initiate and conduct a ‘good-quality’ (evidence-informed) conversation about work) and integrated practice (embedding work and health training across the undergraduate and postgraduate as standard). Their recommendations are not dissimilar to the evidence presented from the NGTs and in chapter 9 from the national FCP Delphi study and highlight that shorter-term, practical, less costly policy solutions exist and
can be implemented to overcome the current barriers to SA certification, FFW advice and in having effective work conversations in healthcare.

**10.1.5 Legal and legislative aspects of the Fit Note**

The sickness absence framework within the UK (legal and legislative aspects) reached full group consensus in the final national Delphi study 3 (100%). In relation to the literature, this legal topic area was briefly covered within the literature review earlier in the thesis, but it is important to consider this in depth again as FCPs agreed that it was their most important item, with full group consensus. The legal standpoint of the Fit Note relates to statutory sick pay payable to employees off sick for more than seven days on certification of unfitness to work by a GP, FCP (new), hospital doctor or another AHP.

The first consideration is that during data collection FCPs and OH physiotherapists were concerned with the immediate challenge that FCPs were not legislated to provide a Fit Note. The Department of Health and Social Care (DHSC) and the Department for Work and Pensions (DWP) convened an implementation group with representatives from the four UK Governments, relevant professional bodies, regulators, and statutory education bodies to provide expert input and advice on implementing reforms to the fit note system. Health Education England (HEE) was commissioned to work with similar stakeholders to coordinate the development of UK wide, non-statutory guidance to support both healthcare professionals (HCPs) and their employers in understanding who is best placed to certify fit notes. This resulted in the DWP publicly confirming their intention to reform fit notes in 2017 and providing the following legislative amendment:

‘Extension of certification of fit notes to a wider group of HCPs – nurses, occupational therapists, pharmacists, and physiotherapists. This change legally enabled any statutorily registered member of these professions, to certify a legally valid fit note.’

The legislation (SS and SSP Regulations, 2022) is permissive, meaning that it does not mandate these HCPs to certify Fit Notes. As with any clinical task, and in line with professional regulation, individual HCPs should consider their scope of practice before undertaking health and work conversations and making decisions around certifying fit notes. Legal, regulatory, and professional frameworks underpin FCP practice with the CSP.
describing these as ‘cornerstones of practice’ (CSP, 2022). It is therefore unsurprising that the legal and legislative information of this new role has been considered from FCPs as their most important item.

To reiterate, the law relating to employment is concerned with the relationship between the employer, the employee and the employee’s trade union. As the CSP states (2022) ‘the law of the land which overarches everything we do, we can begin to define scope by asking what the basic legal framework for the ‘practice’ being considered’. The law sets the boundaries for what can and cannot be done within society and for some areas what FCPs can and cannot do in practice. Accordingly, HCPC considers the legal and government landscape and publishes regular guidance. Regulators have powers to impose fines or penalties, or restrict a FCP’s ability to practice, so while these are closely linked to the legal quadrant, they have a more specialist focus on controlling parts of the law.

The HCPC controls who can practice with a given protected title, and what standards that person must uphold to remain registered. Therefore, it is fundamentally important to know and apply HCPC requirements. Professionally, the CSP considers the law and regulatory requirements and interprets the impact of these for the profession in a range of advice, guidance, and other professional services. This is evidenced through its lobbying and influence the development of law, such as in its appeal to stakeholders to legislate for physiotherapists to be able to certify the Fit Note. The CSP’s advice and guidance is designed to apply the law and regulatory requirements to specific physiotherapy scenarios to enable clinicians to understand their responsibilities. Where there is a range of ways to apply the law or regulatory requirements, they set out a framework to support individuals and organisations to reach appropriate decisions for their circumstances.

In this way, the CSP suggests that the scope of the profession evolves appropriately and within the four pillars/cornerstones of practice (Figure 18). Lastly, the workplace/employer delivers activity in the context of the legal and regulatory obligations set out in contracts, job descriptions, policies, and procedures.
Figure 18. The consideration of legal, regulatory, professional and workplace cornerstones to enable FCPs to decide whether the practice of a tasks sits within the scope of the profession (CSP, 2022).

10.1.6 Legislation

To reiterate, a Statement of fitness for work, commonly known as a Fit Note or ‘Med 3’ (Figure 17), is a form of medical evidence that can enable an individual to access health-related benefits or evidence eligibility for statutory sick pay (SSP). Its purpose, format and requirements are set out in regulations which cover England, Wales, and Scotland. The Fit Note contains options to assess a person as ‘not fit for work’ or ‘may be fit for work taking account of the following advice’ as detailed in the introductory chapters of this thesis.

Before 1982, an employee who was absent from work for more than three days required a medical certificate from their GP to claim sickness benefit. This certificate was then used to claim contractual sick pay from the employer. In 1982 the DHSS adopted the seven-day self-certification procedure and the GPs’ contracts with the Family Health Services Authorities were changed so that they were no longer obligated to give a free medical certificate for SA from work less than seven days. In practice, most employers now rely on this self-certification procedure for the first seven days for all purposes.
The new legislation requires the HCP to undertake an assessment to complete a Fit Note, which is a consultation between the patient and HCP or consideration of a written report by another HCP. The view of many OH professionals is that it is important to clarify the new role of FCPs in SA certification, hence the NGT in OH and ACPOHE professionals was of benefit to ascertain their views on this topic. The legislation supports the view that it is used for the purpose of access to State benefits, not for the purpose of assisting employers to manage their attendance issues. It is stressed that it should provide advice about the functional effects of their health condition on their FFW in general and it is beyond the scope of FCPs to provide specialist knowledge of workplaces or OH, and thus, no need to suggest possible changes their workplace or job (UK government, 2022). It may be important to note some legal cases below for FCPs, so that they understand the legal aspects overall, but do not need to be concerned or apprehensive on assessing the patient in front of them.

Employers are advised not to oppose a HCP’s Fit Note unless they have clear evidence to the contrary. In Hutchinson v. Enfield Rolling Mills (1981), the employee, a maintenance electrician, was diagnosed by his GP as suffering from sciatica and was advised that he was unfit for work for 7D. Two days later, he was seen by one of the directors taking part in a union demonstration in Brighton. He was dismissed for gross misconduct after consultation with the employer’s doctor. The Employment Appeal Tribunal disagreed with the industrial tribunal’s refusal to support the sick note:

‘The employer is concerned to see that his employees are working, when fit to do so, and if they are doing things away from the business which suggest that they are fit to work, then that is a matter which concerns him.’

This does not mean that an employee while off sick (if deemed so by a GP or FCP) must remain at home in bed continuously. It might be the case that an employee convalescing from a serious MSK injury, but still unfit to work, could without any misconduct be sunning on holiday, for example. A more recent example is Merseyrail Electrics Ltd v. Taylor (2007). The employee was dejected about having to walk home through a rough area of the city late at night when their shift ended and asked for a taxi or someone to accompany them. When the employer refused, they took SA and were certified by the GP as unable to work due to
stress. The employer thought they were not legitimate and withheld the employee’s contractual pay. The Employment Appeal Tribunal withheld that, where an employee has a sick / Fit Note from their GP, the employer must accept that the employee is ill unless there is evidence to contradict it (e.g., from OH advice). Here, there was no such evidence and therefore the employer acted unlawfully.

Again, not directly related to FCPs or practice, those suspected of abuse of self-certification may be refused SSP; they may appeal to HMRC which, with the DWP has a contract with an independent provider to give advice on medical aspects for state benefits claims. Medical advice may also be sought from the OH service, GP or FCP, with the employee’s consent. Good practice for employers is to anticipate these matters in the contract of employment and include contractual obligations to submit medical reports after periods of absence. If the employer can prove that an employee lied on the SA certificate, this may be treated as misconduct and give rise to disciplinary action, but action of this kind based on suspicion alone without comprehensive investigation can amount to a constructive dismissal. A self-certification case was Bailey v. BP (1980). The employee worked on an oil refinery who certified that he had been suffering from a ‘gastric stomach’ when in fact he had been on holiday to Majorca. Unfortunately, he had been viewed in Majorca by the assistant maintenance engineer and his summary dismissal was upheld as fair by the Court of Appeal. After an FCP, an employer may refer an employee for further advice about their SA (if they have OH coverage), adjustments and a likely date of RTW. In some cases, the OH professional may disagree with the FP or FCP and give conflicting advice. If this is the case, practitioners are recommended to try to resolve differences informally (with, of course, the employee’s consent) (Kloss, 2020). The difficulty is that in the UK, OH services are excluded from what the NHS provides, and evidence suggests only 50% of employees have access to OH through their employer (DWP, 2015).

The key messages for the FCP and OH / ACPOHE physiotherapists concerns around the Fit Note, despite the above complex cases, centres around the Fit Note and FFW advice being advisory in nature, a FCP can undertake FFW and SA certification for any health conditions as long as it is within their scope, the Fit Note/ Med 3 is now legislated for FCP and physiotherapist use and the AHP Health and Work Report can be used for SSP but no other benefits. The UK Government (2022) further added to this to suggest:
• A FCP assessment about whether a patient is fit for work is about their FFW in general and is not job-specific
• If a patient’s FFW is not impaired by a health condition, they are fit for work and do not need a Fit Note
• Fit Note is used to give advice about the functional effects of a condition on their FFW in general, no specialist or OH advice is needed
• FCPs should always consider if their patients could do some form of work before advising that they are not fit for any work. This is due to the known long-term health risks of worklessness
• When stating ‘may be Fit for Work’ FCPs should tick whichever RTW box relates to the advice. The comments section is to be used to give further information. If the FCP has specialist OH knowledge they can go into further detail about possible adaptations if you think this would help.
• Fit notes can be completed and sent digitally, or a copy printed and handed to patients if you have access to relevant GP IT systems. If required, clerical fit notes pads or sheets can still be ordered through the DWP ordering websites
• HCPs providing primary medical services under the National Health Services Act are required, under the Social Security Acts, to issue free of charge a Fit Note (Statement of FFW) to patients for whom they provide clinical care

The ability to discuss a Fit Note with a FCP rather than book a separate GP appointment is more efficient and allows continuity for patients and HCPs. However, viewing the recent changes in regulation simply as a reduction in bureaucracy is limited and unlikely to lead to good practice in use of the Fit Note (Shemtob and Asanati, 2022). There is an opportunity for FCPs to address the gap in UK OH provision, but the changes could perpetuate under-use of the Fit Note to its full potential. For some FCPs, the OH skill set required to undertake an occupational history has not been covered in their professional training and although training has been offered, it is not mandatory, and GPs may need further resources to support and teach their team’s best practice. The recent legislative changes have been portrayed in the media as a low priority area, given to clinicians such as FCPs to save GPs time. There is a danger that some stakeholders may view this as an administrative task, and not one that adds significant value through data review, negotiation, and shared decision
making to achieve a positive outcome for an employee’s health presentation through work (Shemtob and Asanati, 2022). There is an opportunity to address the NHS OH provision gap through FCPs, but it remains to be seen whether most GPs, managers or FCPs have the resource, training, and interest to lead on this Fit Note transition.

10.2 Study 3 – National Delphi Study

This thesis describes the generation and consensus development of a core competency set for FCPs to conduct SA certification and provide FFW recommendations. It is the first time in the literature health and work competencies have been developed for FCPs in primary care. It was created using a scoping literature review, consensus methods of the nominal group technique and Delphi questionnaires, with national participation from FCP and OH/ACPOHE HCPs. The final Study involved the national Delphi study and a national group of FCPs.

The scoping review showed that there was a clear gap in the research agenda for widening access to FCP education and providing evidence of the need to consider the learning and development needs of FCPS, especially as legislation is newly changed. Most research supported the view that HCPs generally do not seem to consider the work and health topic, reinforced by the national FCP evaluation and data from our GP and other HCP colleagues. As the lack of research data on the competencies for FCPs is frequently alluded to in the existing research or is mostly absent overall, there was evidence to suggest that a consensus project would sufficiently add to the emerging body of research to justify this methodological approach.

10.3 Final competency list and implications

The national Delphi study and culmination of this project, established current competency priorities for OH practice for UK-based FCP physiotherapists within primary care, determined by an expert FCP physiotherapist panel using an empirical approach to reach consensus. A total of 20 competencies were generated through a three-round Delphi process using UK-based FCPs in primary care. This study provides an important foundation for knowledge of these roles and OH competencies of physiotherapists in MSK first point of
contact primary care. An explicit set of competencies in this new and exciting area provides a common language for FCP training, and potential to have a shared understanding of outcomes for SA management and FFW recommendations. The results of this study may enable stakeholders to pursue competency-based curricula design and develop relevant measures to conduct work-relevant conversations in primary care.

Several themes are prominent throughout the competency list that have not been considered in the primary literature previously.

The knowledge and skills-based competencies include a mix of sickness absence framework considerations and how to effectively manage a MSK presentation and work-related aspects in primary care through skills-based management, such as ‘interpersonal communication skills,’ ‘advising that work can be part of rehab’ and ‘identify psychosocial factors that influence fitness for work.’ Competencies are consistent with the current FCP educational pathway, ‘A Roadmap to Practice’ (HEE, 2020) but a range of competencies outside of patient centred MSK care are considered, including to ‘make recommendations to employers regarding individuals’ fitness to work’ and ‘knowledge of employer factors and their impact on work and health’. Furthermore, the selected illustrative quotations present opinion based on current clinical practice and highlight potential solutions to the current challenges for primary care practice.

The findings suggest that FCPs report deficiencies in the advanced knowledge and skill items presented in the final competency list and the OH topic itself outside the traditional therapeutic role of physiotherapy, and one that has been conducted by GPs in primary care settings. FCPs have now assumed the role of MSK gatekeeper and advisor in primary and FCPs are now able to certify sickness through the Statement for Fitness for Work (DWP, 2017). Despite this, a national evaluation of the FCP model in primary care suggests that only 29% of employed patients surveyed reported receiving specific work advice from an FCP (with a predefined service success criterion target of ≥75%) (Stynes et al., 2020) as per Chapter 2. In fact, this specific criterion was the only criterion out of twelve not met in the evaluation, with less than half of patients receiving advice about work, even when they solely reported MSK-related days-off-work. The authors concluded that supporting FCPs to deliver work advice is an unmet need and that training in the use of the AHP health and Work Report is inconsistent.
This is important as studies suggest that up to 35% of MSK consultations in primary care necessitate the use of GP Fit Notes and therefore may need work focussed conversations (Black, 2022). In fact, many studies suggest that GPs are reluctant to give work-related advice and it is seen as outside of their scope, yet there is robust evidence to suggest that a lack of work-focused healthcare to address work issues within a clinical encounter is an obstacle to work participation (Coole, 2015). Therefore, with adequate training and skill development in the national FCP consensus competencies identified here, there is great potential for clinicians to take on the roles and responsibilities traditionally seen as outside their breadth of scope, such as fitness for work and sickness absence certification. Thus far, the only other study to consider a summary of skills, knowledge and attributes needed to work as a FCP in MSK healthcare did not identify any qualitative work-related themes (Langridge, 2019). This is despite the CSP’s FCP project team and FCP evaluation steering group reporting that supporting patients to remain in and return to work is a key success criterion. Occupational health specific topics are also supported within the core capabilities document (NHSE, 2018), a roadmap to practice capabilities (HEE, 2021) and in the wider UK Government and employer context of empowering sick patients to be supported in work.

Lastly, there is a paucity of evidence on the complexity of FCP roles in general, the experiences of FCPs and whether they feel ready and prepared to offer higher breadth of practice information and complex work-related decision making. The free text illustrative quotations suggests that they feel they can take on this role with further support through training and development.

Several government policies have embedded work as a health outcome by encouraging healthcare professionals to provide work-focused health conversations and tackle obstacles to work participation (Bartys et al., 2019). This is important as it has been estimated that MSK conditions are the greatest contributor of lost productivity life years in the workplace (Schofield et al., 2015) and healthcare providers may have a key role in preventing unnecessary work loss. Despite this, evidence suggests that work and work-focused conversations are no incorporated into clinical encounters and healthcare professionals experience many barriers to adopting a work-focused approach (Oswald, 2017). One of the key barriers is a lack of specific knowledge in this work and health sphere and how to address work-related factors in those with MSK conditions (Hutting et al., 2017). If this
continues to be the case, it will continue to create a barrier to work participation in those with MSK conditions at risk.

The 2019 HCPs consensus statement for Action Statement for Health and Work have committed to work over the next 5 years to support HCPs to engage more proactively with, and advance the concept of, ‘good work as a health outcome’ across the health and care sector (AOMRC, 2019). One of their principles reports that they will work to enable every HCP to ‘have the skill to incorporate discussion about working in the context of health outcome with patients in their care.’ This Thesis highlights that to a certain extent, this is still an unmet need for HCPs and patients. In addition, health, work, and wellbeing is a cross-government initiative to protect and improve the health and well-being of working aged people.

The impact of employees’ health and wellbeing on performance and productivity has been well documented over the past two decades, yet strategies are still amiss in dealing with the topic. In the Health is everyone’s business (DWP and DHSC, 2021) the government sets out how it wants to improve the health and wellbeing of those in work and prevent ill-health related job loss, with the need to realise the benefits of OH and improve access to OH in small to medium-sized enterprises. In 2022/23 with the current demand and workforce pressures, it is unclear how this is going to be effectively implemented.

10.4 SA certification and FFW/ OH training needed for FCPs

This section considers the OH training need for FCPs from this project and the literature available.

There is a widespread unmet need for patients to access work-related advice and support, with study 3 suggesting a mix of knowledge and skill items for FCP practice required to address this. For example, in the UK, it is estimated that only 1/3 of employees have access to OH services (Fit for Work Europe, 2022) with DWP and DOHSC data suggesting that OH services reach approximately 50% of the population. This data is an estimate based on a single survey of around 0.007% of the working population at the time (DWP, 2015). Whatever the estimate, it leaves the majority searching for primary care HCPs for work-
related support. Thus, as per Chapters 2, 6 and 9, the challenges for HCPs in meeting this need is clear, with training and education in managing health and work issues key (Letrilliart and Barrau, 2012). It is thought that FCPs are well-placed to deliver brief health and work advice as they see patients early in their journey, have experience in giving functionally related advice in individuals lives, and on average can offer consultations of 20-30 minutes compared to 10 minutes for GP assessments (Halls et al., 2020).

To explore new models of care to improve access to vocational advice (VA) and support, the SWAP (Study of Work and Pain) randomised controlled trial tested the effectiveness of a brief vocational advice service in general practice, providing support for patients struggling or absent from work due to MSK pain. Results showed that the VA intervention was effective, leading to an average reduction in work absence of five days per employed patient over four months with a return on investment of £49 per £1 invested (Wynne-Jones et al., 2018). Their findings (like the researchers NGT and Delphi results) suggested that physiotherapists are willing and able to address work issues with patients with MSK conditions (Black, 2022; Welsh et al., 2014).

Chapter 2 produced an overview of the FCP new model of care with its explicit aims of (a) ensuring the provision of early, specialist assessment; (b) save time and resources for GPs; (c) encourage diversification and expansion of the primary care team; and (d) improve collaborative MDT working (NHS and HEE, 2020). Building on the SWAP study, the I-SWAP (Implementation of the Study of Work and Pain) study aimed to deliver the VA intervention used with employed patients with MSK conditions consulting a FCP through a qualitative investigation of semi-structured interviews and focus groups with 10 FCPs and 5 GPs. Their VA training for FCPs consisted of the following in Figure 19:

**Figure 19. Content of work-related training in I-Swap with main themes (Saunders et al., 2021).**

- Value of work
- Obstacles to returning to work
- AHP health and work report
- Sickness policies and benefits
- Is work good for your health?
- The relationship between health and work
- Mental illness
- Managing unhelpful beliefs
• Portraying positive message about work about work
• What works when providing vocational advice?
• Use of AHP health and work report
• Patient information

- Common myths and changing beliefs
- What do we say to patients?
- Practical recommendations
- Reassurance

The trial provided FCPs with a 2-hour, face-to-face training session on the provision of VA to MSK patients and the overall findings were that whilst FCPs and GPs felt that FCPs were well-placed to identify and discuss work issues with patients, there are barriers to delivering other aspects of VA, such as addressing psychosocial barriers to RTW, related to the scope of the FCP role. In accordance with our NGTs and the Delphi results, FCPs felt that they lacked the ‘time and opportunity to really address obstacles to RTW with patients; therefore, in this sense the initiative lacked coherence with existing ways of working’ (Saunders et al., 2021). They also highlighted an inability to build rapport with patients in a single consultation and therefore an inability to fully implement the VA training provided through the SWAP and I-SWAP studies. The two other major themes related to perceptions towards the use of the AHP health and work report, particularly that it ‘is not compulsory for employers to adhere to and lacks legitimacy’ and ‘time to complete’ was a barrier to its use, and the implications of adding VA to the FCP role for inter-disciplinary working.

The FCPs in the above study reported that they felt the need to priorities efforts to improve the patient’s physical function over addressing work-related issue (Saunders et al., 2021). This was also identified with the OH/ACPOHE NGT and relates to the job role, the view that work is part of rehabilitation and improving physical function and therefore unable to undertake the action required to provide this advice. All FCPs and GPs in this study did see potential future benefits of the addition of VA for patients with MSK conditions, but FCPs felt that community or secondary care physical therapy consultations would be more suitable to provide VA than FCP consultations. This is dissimilar to the feedback from the national studies within this thesis, with the majority of FCPs reporting that they are happy and willing to take on this key role.
In the above study the FCPs reported that despite the training received in I-SWAP, they did not feel equipped enough to deal with common mental health problems as barriers to RTW, such as work-related distress and anxiety, although more experienced clinicians felt more comfortable in managing these concerns (Saunders et al., 2021). The researcher contends that the recent changes to the Fit Note should be an opportunity to revisit the role of primary care in delivering OH aspects and enabling FCPs to consider the work and health topic. As previously mentioned, basic training in OH should be available through physiotherapists’ undergraduate and postgraduate education and in HEE’s credentialling process. The MSK core competency document (HEE, 2018) and IFOMPT standards document (IFOMPT, 2016) explicitly document relevant and specific capabilities (Table 20).

**Table 20. MSK work and health competencies (HEE, 2018; IFOMPT, 2016).**

<table>
<thead>
<tr>
<th>Relevant for work and health</th>
<th>Work and Health Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MSK CCF</strong></td>
<td><strong>MSK CCF</strong></td>
</tr>
<tr>
<td>B3, B4, B5, C6-13</td>
<td>B3, C6, C7, C10, C12, C13</td>
</tr>
<tr>
<td><strong>IFOMPT</strong></td>
<td><strong>IFOMPT</strong></td>
</tr>
<tr>
<td>D1-D3, D4, K3, K5-7, K11, S1</td>
<td>D1, D3, D5-D7, D10, K4, K10, K17, S6, S11, AP MSK Bolt On</td>
</tr>
</tbody>
</table>

A welcome step from eLearning for Healthcare (part of HEE) is to provide an e-learning Fit Note module (e-lfh, 2022), created in conjunction with the Royal College of General Practitioners, Chartered Society of Physiotherapy, Royal College of Occupational Therapists, Royal College of Nursing and Royal Pharmaceutical Society. All NHS HCPs can access the four modules below and for non-NHS employees, through an Open Athens account:

- An enabling approach which explains the aims and importance of the fit note
- Key legislation and guidance to help understand the context and dispel any myths
- Making recommendations using case studies and examples of completed fit notes
• Application of the fit note which brings together the knowledge gained to apply to case studies and the final assessment of your knowledge.

This training is available for the new professionals signing the Fit Note but is not mandatory. Now that this thesis has addressed the understanding of the individual FCP training and development and barriers to delivery of this health and work agenda, the opportunity to address these for FCPs will enable stakeholders to best use the Fit Note and promote work-focused conversations in primary care. It is likely to take years to provide adequate OH trans-disciplinary training across undergraduate and postgraduate courses as it remains (in 2023) a low-priority area in many healthcare fields. Relatively few medical trainees seek out OH for their career, as documented by the British Medical Association in its specialty guide on opportunities and careers in occupational medicine (BMA, 2021). In other countries in the world, occupational medicine is a compulsory separate study unit, for undergraduate education, such as in Germany (Radon et al., 2006). Compounding the limited training in OH aspects for most HCPs, the provision of independent and NHS OH services is scarce for working adults and therefore this will mean GPs and primary care will be the first port of call for work-advice.

The work and health topic has started to be included into postgraduate and FCP training modules within higher education institutions within the UK. Indeed, the PI has co-developed some FCP modules with stakeholders during the write up of this thesis. Existing training is freely available, especially on Fit Note usage (University of Nottingham, 2020; NHSE, 2022), but a few studies suggest that the reported uptake is low (Newington et al., 2024). In one study, only 22% in their sample had completed the e-learning modules on SA certification, despite it being available for 14 months prior to the launch of the research survey in hand therapists (Newington et al., 2024). In clinical departments it would ideally be up to service leads to signpost these resources and facilitate appropriate non-clinical time based on service need for their staff to complete work and health training. Additionally, as existing training is generic to physiotherapists and occupational therapists across clinical specialities, specific training related to pharmacists, FCPs not in primary care and nurses in specialist areas may be beneficial.
In the above study, only 23% of the sample reported that their organisation had established a pathway for physiotherapists and occupational therapists to issue Fit Notes and several respondents highlighted this as a barrier to supporting work participation. This issue is not unique to hand therapy; there have been national calls for organisations to do more to support the incorporation of this 2022 legislative change into practice (Drummond and Smyth, 2023). Training has been challenging as the legislation was initially delayed due to the Covid-19 pandemic, and many HCPs were taken by surprise when it became law, almost without warning. For example, pharmacists prior to legislative change had not been anticipating that they would be given these powers, and that has also caused some confusion for their profession, so training has not caught up with the powers bestowed upon this group. The existing work and health competencies are weaved within existing Advanced Practice and IFOMPT competency frameworks, but they are not mandatory / core, so it is unlikely their uptake will be high. The PI recommends that AHPs, including physiotherapists and OTs are best placed to offer return to work planning, co-producing plans with their patients and reinforcing that (good) work is generally good for patient health.

This thesis suggests that FCPs can still offer light touch OH advice in their clinical settings, despite a range of conflicts of interest, providing the barriers, and learning and development needs are addressed as above within primarily postgraduate education.

### 10.5 Strengths and limitations

The methodology was chosen to ensure that participants were involved and represented throughout the process. It allowed participants to reflect and contextualise their thoughts considering input from others (albeit anonymously) and move freely towards consensus rather than being ‘pushed.’

This Delphi study has complied with published reporting checklists on Delphi studies (Jünger et al., 2017) including free text comments, using iterative rounds with feedback, and ensuring anonymity between participants to promote uninhibited responses, and establishing a priori definition of consensus to reduce bias. There is no universally accepted
definition of consensus in Delphi studies; the researcher used ≥70% to represent a substantial and strong level of agreement. Steps were taken to maximise the breadth of expertise and relevance of the findings. The panel was composed entirely of FCPs working in the United Kingdom. Although the study was therefore limited in its geographical scope, the results have potential international HCP applicability. This is because HCPs in several countries in the world can see patients as first point of contact and as such it is believed that the lack of work conversations holds true for these clinicians, with limited training and development in this area. It is acknowledged that the context in other countries is likely to be different, but for most SA episodes, SA is legislated for a HCP to advise/conduct and is commonplace for healthcare settings in many countries throughout the world.

The Delphi study was made up of individuals based within a range of PCNs, to the researcher’s knowledge, no guidelines have been published for the selection of ‘experts’ to form the panel and expertise as per Chapter 3 is hard to define and controversial. The criteria put forward by Adler and Ziglio (1996) was used to define expertise in this FCP Delphi study, ‘knowledge and experience with the issue under investigation’, sufficient time to participate’ and ‘effective communication skills’. Also, the breadth of experience within our participants may indicate that the participants had the expertise to address the Delphi aim and objectives.

Another strength of the Delphi study was participant anonymity in the generating process. This reduced the risk of the group confirming around one view and the influence of dominant individuals (Lilja et al., 2011). However, unlike the NGTS, absence of live dialogue may have inhibited the ability for the group to clarify information, such as conflicting views. The researcher attempted to mitigate the effects of this by providing 3 rounds, and by disseminating the finalised competencies out to the panel. This co-production is increasingly viewed in the consensus literature as being of value and the researcher weaved participants views and contributions throughout the process (Moher et al., 2009). The Delphi study also fitted into the pragmatic view and the researchers view on inter-disciplinary and trans-disciplinary (where indicated) approaches; due to the transformational problems of the UK healthcare landscape, a shift to complex patient presentations and uncertainty, and the demands for HCP research to engage with a variety of research sources.
Some of those that were invited to take part declined (Chapter 9) and there was no attempt to encourage attendees to do so, to enable voluntary participation. That said, the retention rate was exceedingly high, and the researcher has postulated that FCP clinicians were either re-deployed during the pandemic or conducting different roles with digital elements and had the time to engage with the digital research. It is widely accepted that a 100% response rate is very rare in Delphi studies, particularly for those that are carried out remotely (Keeney et al., 2011). In the systematic review by Boulkedid et al. (2011) only 31 of their 80 studies included (39%) reported their response rates, and due to this publication bias it is hard to determine acceptable response rates from the literature. A Delphi study guide recommends a response rate of 70% to be maintained for each round but acknowledges that this is difficult to obtain (Keeney et al., 2011). No undue pressure was put on participants to complete questionnaires beyond the a priori reminders, yet the response rates in this study are normally only seen in Delphi rounds completed face-to-face.

The electronic method was used to facilitate distribution to geographically dispersed professionals. However, due to the new policy and new model of practice exclusively within UK primary healthcare, participants were limited to UK FCPs. Due to the time constraints, pragmatic considerations and FCP topic, only FCPs were recruited, without involvement of others involved in the process, for example, GPs, patients, other AHPs and stakeholder advocates. This is likely to limit the generalisability of the results to the FCP group solely. It would have been interesting with more research time, to compare opinions between professions, which would have been possible to do while maintaining quasi-anonymity, to determine a difference in competencies needed.

Previous Delphi studies in the literature vary widely in the size of the panel, from 5 in some studies, to around 400 in others (Boulkedid et al., 2011; Habibi et al., 2014). A larger panel size increases the variety of experts but can lead to diminishing responses and no new ideas (McMillan et al., 2016). Although the Round 1 panel size of 64 participants was large, it allowed for the inclusion of a series of free text comments and FCP opinion from the group, without making the succeeding rounds overly time consuming. Boulkedid’s systematic review (2011) aimed to review published Delphi studies to guide future studies and found that the median number invited in 76 studies reporting was 17 participants, with a minimum of 3 and maximum of 418 participants. The items that failed to reach consensus (2 items–
see Chapter 9), represent areas of incomplete knowledge and could be used to formulate future clinical considerations for FCPs. It is worth to note that the individual capabilities interrogated in this Delphi study are novel from an FCP and OH/ACOPHE physiotherapist standpoint and have been generated by this research, with contributions from existing capability documents.

Whilst the findings have furthered knowledge and provided a consensus study within a geographically dispersed expert group, there are limitations to the study. The study was designed with a mix of non-peer-reviewed and peer-reviewed research, due to the emergent nature of the topic. Furthermore, there were no definitions given to topics such as ‘fitness for work’ or ‘sickness absence’ etc., and although this was deliberate, with the intended aim of experts giving their individual opinions and contributing to the overall group consensus, it could have resulted in uncertainty for them as this was a new topic of debate for most participants. There is some evidence to suggest in a homogenous group that more than 30 participants can result in no new ideas generated, but due to the emergent theme it was deemed acceptable for higher numbers (n=64) to contribute to the overall group decision-making process. The study was conducted early in the COVID-19 pandemic response and experts had to be flexible to meet service demands, the increase in clinical pressures and pressures in participating during a national lockdown may have influenced some answers. This also affected the extremely high response, due to the digital pivot during the national lockdown response.

10.6 Implications

The work and health competencies for FCP education generated in this study may be utilised in several ways. Firstly, the set provides a common work and health theme in the field of physiotherapy training, for educators and faculty to have a shared understanding of outcomes for professional practice FCP standards and assessment. The results of this study may inform existing under- and post-graduate curricula or the potential for targeted training related to FCP education on FFW and SA certification. This is likely to be difficult, considering the significant breadth of practice needed to be evidenced in the HEE’s credentialling process. However, appealing to stakeholders to investigate the feasibility of integrating
specific FCP education training into existing courses or through stand-alone M-level modules is warranted.

Translating competencies into practice are a key challenge in competency-based teaching and assessment. Evaluating the use of these health and work competencies and, developing performance attributes or more specific enabling competencies that facilitate SA certification and FFW assessment from these competencies are required. The importance of training and development was suggested in a review (Bartys et al., 2019), stressing that work-focussed care must form part of generic competencies in undergraduate education, including beliefs and attitudes to work and health and confidence and signposting for work issues. Of the research available throughout the world, a pilot study among four physiotherapy education programmes (Spain, Brazil, Australia, and Kenya) focussed on how the programmes include work and work-related conditions in their curricula (Boucaut et al., 2019). It suggested that programme content was divergent regarding the extent to which work injury management, return to work and prevention strategies are addressed, indicating ways to improve (Boucaut et al., 2019).

It could be argued that simple, inexpensive approaches that comprise open questions on patient’s work can be beneficial and many of the knowledge and skills listed above may already be used in clinical practice, through the provision of advice and education on MSK recovery, this was already considered within the first few introductory Chapters. Research highlights that when additional training for healthcare professionals is provided on health and work, positive work-outcomes result that can enable better recovery and management of new and existing MSK conditions (Van Vilsteren et al., 2017; Sennehed et al., 2018; Hammond et al., 2017).

This competency list provides a basis for future research which may include exploring student, new and post-graduate self-efficacy and identify in this area and developing and testing new and specific training approaches. Overcoming a major weakness, by replicating the study with other panels, such as GPs, AHPs, educational experts and patients may provide further insight into different competencies across other settings and shared competencies across professions. Additionally, this study can provide a reference point to contrast future generated competencies.
10.7 Conclusion of Study 3

Opportunities exist for further exploration of the drivers and barriers for implementing work-related conversations, SA management and FFW strategies within primary care for FCPs. If FCPs can become competent in this area, it will ensure light coverage for now (not comprehensive Occupational Health services) of work-related advice for the vast majority of MSK conditions in the UK, to potentially reduce the burden of work-related ill health. A more focused intervention could be considered with more specialised training. If FCPs are trained in OH aspects and are willing to commit to work-related conversations in primary care, this may overcome the barriers identified from other clinicians that are hesitant in providing sickness absence certification and fitness for work advice. Providing patient-centred and shared-decision care to people with MSK conditions is high on the agenda of many stakeholders, including work as a health outcome. The competency list considers the knowledge and skills competencies needed to conduct FFW and SA certification within primary care based on a FCP ‘expert’ panel. Finally, the researcher suggests that the hybrid approach of the NGT and Delphi studies drew together the strengths of the approaches, the anonymity and reliability of Delphi with the timesaving, free discussion, and digital face-to-face feedback of the NGT (Hutchings et al., 2006).
Chapter 11. Conclusion

This chapter provides an overview of the achievement of this thesis. The methodological strengths and limitations and novel aspects of the thesis have been discussed in Chapter 10.

11.1 Overall strengths and limitations

This thesis has reported the comprehensive exploration of competencies related to SA certification and FFW advice, generated by FCPs within primary care. The pragmatic design of a three-phased consensus study has enabled me to address the research questions, aim and objectives from complementary data sources and avoiding biases that are intrinsic to solitary-method approaches (Morgan, 2007). The methods utilised were selected to generate firstly and then reach consensus on multiple perspectives of capabilities needed within FCP practice in the UK. The design of the NGTs in studies 1 and 2 permitted exploration of objectives 2 and 3, with final confirmation in study 3 of objective 3 and the main research question.

Further research using qualitative and quantitative methods could be conducted in the future to explore the application, use and outcome review of SA certification and FFW training in MSK physiotherapy education. Future research may even explore the impact of training through emerging typologies such as OH specific virtual reality, simulation-based modules, and other digital methods. A further consensus study would be beneficial in a group of occupational medicine professionals, GPs, and members of the extended primary care professions (a different but comparable expert group). Additionally, further investigation of learner and facilitator roles, including educational practices and design characteristic is warranted. The result of the Delphi study may require some form of external validation, through a post-Delphi consensus conference with relevant stakeholders to refine and agree on the competency items.

Another option could be to consider a randomised group of FCPs to self-rate their knowledge and skills in this area against the final Delphi competencies. There are suggestions in the literature of using self-rating scale and competency statements (Baldwin
et al., 2009) but their validity is poor (Wen et al., 2011) as they do not represent actual performance. The competencies within this study do not separate novice and experienced FCPs and this could be another line of enquiry to ascertain job versus FCP specific competencies.

The findings of this thesis have already influenced some BSc (Hons) and MSc pre-registration physiotherapy curricular developments and design, especially for standalone FCP and health and work modules with HEIs in the UK. Some data was also used to influence ACPOHE professional network training for FCPs and wider AHPs and the researcher was approached to deliver this training for a wide range of individuals online.

The scoping review and information provided on the topic has been disseminated within a mix of peer-reviewed and non-peer reviewed journals, national and international conferences and has provided material for ACPOHE and CSP-funding training for FCPs. The researcher will continue to publish several more articles on the methodology used and one further work and health article before the project finishes and subjecting these topics to peer review will further contribute to the body of knowledge in the field of OH physiotherapy.

11.2 Implications for FCP policy and practice

The results presented represent the first step towards developing a nationally agreed OH competency and curriculum framework for not only FCPs but the wider primary care team and national physiotherapists. The expert-derived competencies are in prototypic form but are definitive and have a FCP authoritative basis, due to the widespread representation of experts across the 3 Delphi rounds. However, it would be beneficial to refine and agree the competences through an external validation process with the Royal Colleges, FOM, SOM, and the CSP; with an inclusion of experts from UK education.

The extent to which these results may be transferable or generalizable is unknown. They could be adapted or supplemented with greater depth to other areas of FCP or AP (non-primary care settings). The knowledge competencies that require more discussion relate to knowledge of ergonomic advice, graded RTW, OH specific outcome measures, risk
assessment and in ensuring work is a routine focus in every consultation. The skill competencies relate to coaching techniques, time management, engaging OH-related stakeholders (employers, services etc.), behavioural techniques and the application of thinking and reflection strategies. This study has not been able to reach consensus on the above competencies.

Implications for research

The National Institute for Health and Care Research (NIHR) invites applications for work and health research collaboration awards. The purpose of these awards is to enable research teams to receive funding for larger programmes of research or large scale and ambitious projects to tackle priorities in work and health research. It is likely that the PI will reach out to academic and professional teams to collaborate and start building on the research gaps identified from this these.

This NIHR competition aims to:

- bring together teams representing different disciplines, professions and sectors to submit plans for ambitious research and to catalyse future research capacity;
- fund large scale, ambitious and transdisciplinary projects or programmes of research addressing key priorities and substantial areas of need in work and health and occupational health.

Further research using qualitative and quantitative methods could be conducted in the future to explore the application, use and outcome review of SA certification and FFW training in MSK physiotherapy education. Future research may even explore the impact of training through emerging typologies such as OH specific virtual reality, simulation-based modules, and other digital methods. A further consensus study would be beneficial in a group of occupational medicine professionals, GPs, and members of the extended primary care professions (a different but comparable expert group). Additionally, further investigation of learner and facilitator roles, including educational practices and design characteristic is warranted. The result of the Delphi study specifically may require some
form of external validation, through a post-Delphi consensus conference with relevant stakeholders to refine and agree on the competency items.

Triangulation is sometimes used within consensus studies as a way of enhancing the quality of the results and verifying the information gathered. One way for the current studies to achieve external validation would be to consider a post consensus conference with relevant stakeholders to refine and agree on competency items, e.g., OH physicians, GPs, commissioners, pharmacists, nurses, and OTs. This study’s results represent the views of two expert groups at one point in time (during the COVID-19 pandemic) when FCP practice was being established. Therefore, the groups could be repeated with a different, but comparable, expert group. Some of the competencies generated in this study require further discussion, especially items that did not reach consensus. Another option for exploration could be to ask a randomised group of FCPs to self-rate their knowledge and skills against the NGT items with a variety of self-rating scales. The validity of this may be poor as it may be more a representation of FCPs perceptions of their ideal or potential performance and confidence level, rather than observed practice. It may be that since the research has been conducted, further research is needed to reflect and distinguish new job specific and FCP specific competencies, and as FCPs may have changed their competency level as they are now more experienced and have undertaken more training since data collection. In addition, the roles are likely to have changed, with more (since the pandemic) face to face clinic-based work completed and new research should reflect this.

The extent to which these results may be transferable or generalizable is unknown. They could be adapted or supplemented with greater depth to other areas of FCP or AP (non-primary care settings). The knowledge competencies that require more research evidence and discussion relate to knowledge of ergonomic advice, graded RTW, OH specific outcome measures, risk assessment and in ensuring work is a routine focus in every consultation. The skill competencies relate to coaching techniques, time management, engaging OH-related stakeholders (employers, services etc.), behavioural techniques and the application of thinking and reflection strategies. This study has not been able to reach consensus on the above competencies.
The expert-derived competencies are in prototypic form but are definitive and have a FCP authoritative basis, due to the widespread representation of experts across the 3 Delphi rounds. However, it would be beneficial to refine and agree the competences through an external validation process with the Royal Colleges, FOM, SOM, and the CSP; with an inclusion of experts from UK education.

The result of this study takes the first steps toward a nationally agreed set of OH competencies and curriculum framework for HCPs. For now, it is envisaged that the final competency list can be utilised and implemented by providers, HEIs and commissioners of training for the benefit of working age adults within primary care.

### 11.3 Summary

This chapter is the second to last one in this thesis and it has briefly highlighted the contribution of this research to existing knowledge. In addition, the implications for practice, policy and FCP research have been identified. There is a plan for further dissemination of the results and engagement with relevant stakeholders. This research extends our knowledge on the role of FCPs providing SA certification and FFW advice within UK primary care settings. It provides them with a list of competencies, which have been identified by FCPs and OH/ACPOHE physiotherapists themselves via two NGTs and a Delphi study. Therefore, it can be assumed that this research will serve as a basis for future studies about FCPs on the work and health education topic. Lastly, the thesis will now present the final reflection chapter on the personal journey towards attaining a Professional Doctorate degree.
Chapter 12. Reflection on Professional Doctorate

This chapter reflects the personal journey towards attaining a Professional Doctorate (PD) (Health, Social Care and Nursing) degree at Glasgow Caledonian University. The style is different to the rest of the thesis in part due to the reflexive nature of the chapter, it necessitates the use of the first person. The premise of this chapter is to communicate my experiences and articulate what I have learnt during the doctoral process and the feedback that was gained in doing so (Clydesdale, 2016). Overall, the whole journey has influenced my learning, and through the experience of learning imbued learning with greater meaning and relevance through problem-solving, sustaining an interest, empowering me to make decisions on research to change practice and policy.

This chapter is in the form of a reflection, which refers to the systematic, intentional, and disciplined meaning-making process that moves a learner from one experience into the next with deeper understanding of its relations and connections to other experiences and is important for improving subsequent actions and learning from previous mistakes (Boud et al., 2013). It also incorporates the concept of reflexivity and both reflection and reflexivity are seen as part of a continuum, whereas reflection is to observe, explain and problem solve events, reflexivity is reflection and how my professional and personal values frame and impact on the event (Schon, 1983).

Reflection can be understood as a distanced ‘thinking about’ after the event (Finlay, 2002, p. 532), while reflexivity refers to ‘turning back of one’s experience upon oneself’ as a circular process in which reflexivity bends back upon itself (Finlay & Gough, 2003, p. 9). In my own research, reflexivity guided me as the researcher through self-aware analyses and participant dynamics to allow for this circularity. In this chapter I hope to provide information related to the experience of the PD for me to summarise my learning and development (Bosangita and Demangeot, 2016) as a key component for cognitive development and to combine them to guide future behaviour (Lindh and Thorgren, 2015). The below highlights my experience, both for the good and bad (Schon, 1987) and reports that through the adversity it enriched the experience.

The chapter is structured around the following six elements:
1. The initial motivations and thought processes at the pre-conception stage

2. The Professional Doctorate taught element and how we learn

3. The impact of the COVID pandemic and practicalities of the research

4. How my experiences have shaped my learning since I started the doctorate

5. Impact of the knowledge and practice at an organisational and sectoral level

6. Conclusion

12.1 The initial motivations and thought processes at the pre-conception stage

My interest in pursuing the doctoral journey originated in a multi-factorial way from my professional, academic, and social life. I had always wanted to pursue a ‘doctorate,’ but professional life had taken me overseas in a range of acute hospital and sporting settings. A doctoral degree usually implies a PhD, although this is not always the case in contemporary higher education contexts. Although it is still often referred to as the ‘gold standard’ of academic research, and therefore by extension an appropriate qualification for healthcare staff, I began to understand, as my professional life progressed, that it has been joined by other types of doctoral awards. Therefore, in my current setting of Occupational Health, as I became interested in increasing research output, a GCU lecturer encouraged me to consider a PD.

Professionally, I had concerns for the healthcare system in the UK with several concurrent issues in general practice both as a healthcare professional, user and scholarly professional; reduced resources, increasing waiting time, increasing demand and challenges faced by the GP workforce and in response to the current COVID-19 pandemic. MSK conditions were expected to rise with an ageing population (Picavet and Schouten, 2003) and within an occupational health setting, the largest cause of employees leaving the workforce and ranking second only to mental health problems in total years lived with disability (YLDs) (March et al., 2014). As mentioned in the main body of the thesis, the burden on the
economy is exceptionally high, with approximately 131 million workdays lost in the UK due to sickness and 31 million of these were associated to conditions of the back, neck and/or muscle pain accounting for more days lost than any other cause (Office for National Statistics, 2014). Meanwhile, policy and procedure considered an expansion of the PCN, and flexible professional boundaries as evidenced in the NHS Long Term Plan (NHS, 2019). This was deemed necessary due to the socio-political consensus that traditional delivery of primary health care, was under unbearable strain and unsustainable in the long term (NHSE, 2014). It was clear to me that with ever increasing cost efficiency, innovative models of delivery were required and was summated in the NHS Long Term plan which stated, “[w]e will expand the number of physiotherapists working in primary care networks, enabling people to see the right professional first time, without needing a GP referral” (NHS England 2019: 73).

Therefore, in early 2018, I presented my research proposal to a potential Supervisor, Course Lead and Academic Writer that was a meld of my professional background in OH and the current context of where primary care and the Physiotherapy profession was headed. I wanted to consider whether FCPs could take on added work-related roles and responsibilities from GPs within primary care.

12.2 The Professional Doctorate taught element and how we learn

I had a research idea and goal identified with academic support and I transitioned into the first semester of the academic year, joining the taught component of the first 18 months of the course. It was evident that as I was around 3 years out of University via my MSc at the University of Glasgow and a substantial knowledge gap needed to be closed. In addition, time application and academic writing skills needed refinement. Thus, going through the taught element made me realise three aspects that were deemed crucial to the success of the journey.

Firstly, the learning aspects and reflection. Throughout the journey I became interested in and considered the contributions made by Plato (Copper et al., 1997), Rousseau (Rosseau,
1997) and Dewey to this philosophical canon of work on deep learning approaches. All of them highlighted in the highest, characteristics such as abstracting meaning, reflecting on experience, critically thinking about, questioning, and interpreting information, all of which in the modern world are referred to as deep approaches to learning (Dewey, 2008). I believe throughout the process, the taught elements and coursework during the first two years, was a process that equipped and prepared us (as a cohort) to be active social agents who were committed to growing and developing into scholarly professionals. The process continually reinforced the ability to synthesis professional knowledge and question the complex relationships between professional practice, theory, policy and research and the main aim was a pragmatic and substantial one: to be an independent professional thinker and be active and involved in one’s own personal growth and for that growth to contribute to the growth of society. To achieve this, I needed to engage with past learning experiences, personal history and better understand my future goals and aims (Dewey, 2008), both rapidly and actively.

In terms of learning theory, this thesis has culminated in the final reflection, and as a healthcare professional I am acutely aware that it is a key component for cognitive development, including one’s increased ability to use and combine knowledge and experiences to guide future behaviour. However, in my experience healthcare professionals are often guilty of not reflecting adequately, in view of time and a focus on clinical skills more than event reflection. I found it difficult to align the academia and practice domains with the practical operationalisation of primary research lacking and practitioners lacking scientific integration post under- or post-graduate education. This may be a contributing factor in that many systematic reviews and meta-analyses find that healthcare professionals tend to report a lack of knowledge of, and confidence in, clinical guidelines, as well as not necessarily agreeing with recommendations made for their patients, with non-adherence and scepticism often voiced in stakeholder engagement during research dissemination (Slade et al., 2015). I found this self-diagnostic realisation within my area of work and emotionally was frustrated when learning best practice in class, but unable to effectively implement within my employer at the time. It was only through this realisation that I was able to detect patterns, engage in corrective change, and increase the attention on my own performance as a clinical academic (Bandura, 1991).
I began to realise that it was only through the focus on constant improvement and motivation, and thus cognitive development, and mediated by observing and reflecting on professional and academic questions, events and in different professional situations. As I progressed reading within the learning theory literature, my frustrations morphed from an internal to an internal and external process that needed to get near to, and learn from, practice (Cunliffe, 2004). It was through this process that the generated knowledge from experience would be better understood (Flyvbjerg, 2001) and I was excited that research would be a self-renewed counterbalance to practice (McLeod, 2001, p.8). I was consciously aware in my professional work of the procedural and legislative complexity of Occupational Health and academically of the rigidity of the scientific process in a tightly controlled environment and when completed technocratically, these offer a very narrow view and often place less emphasis on clarification, explanation, and insight on complex topics. Therefore, I moved toward a pragmatist perspective, in which I needed an instrument to overcome my problem, not a structure to define the problem itself, with progression to an outcome. Pragmatism considers meaning through action and the most suitable combination of means, which was my intent. As mentioned in chapter 4, I reflected on that I hold a deterministic philosophy in which causes (probably) determine outcomes in research and practice, thus, it is important to identify and assess causes that influence outcomes, such as the scientific method and in empirical observation and measurement. However, I also acknowledge the pragmatism paradigm that emphasises the research problem and quest to understand this problem (Morgan, 2007). As an experienced clinician I am conscious of the consequences of actions in practice and stress the importance of problem-centred and real-world orientated outcomes (Phillips and Burbules, 2000). In a research context these assumptions additionally consider refining or changing claims if they are robustly refuted and that data, evidence, and rational considerations shape knowledge. The pragmatism paradigm also acknowledges that any research investigation sits in a social, historical, and political context (Patton, 1990), as the proposed project did.

Finally, I focussed on consensus as there was a lack of current best evidence on the phenomenon under investigation and this method allowed me to reach agreement on a problem with no straightforward responses.
12.3 The impact of the COVID pandemic and practicalities of the research

As I embarked on the data collection phase of the research, the COVID-19 pandemic restrictions limited and eventually necessitated, the cessation of in-person meetings. Thankfully, I was able to complete a pilot study before this and it ran successfully in a group of experienced OH experts, but I had to pivot to full online data collection methods, and this delayed progress for several months. Professionally, although initially I thought the lockdown periods may have afforded me a chance of a ‘writing retreat,’ I ended up volunteering for inpatient work to assist colleagues that were burnt out with the excessive and unrelenting demands placed on them in the healthcare service. I planned on a structured and iterative write up during this time, but situation and consequences on the whole of society meant that this was a laborious and slow process. I found the process around publication time consuming and at times, exasperating. Some students in our cohort reported that the online pedagogical experience was traumatic and exhausting, and although professionally this may have been the case though online meetings, I felt the shift to online project work gave me a positive purpose and a change, during this unprecedented time (Idris et al., 2021).

For the participants, the pandemic may have altered the responses. I selected a time where healthcare professionals were least impacted and extended the Delphi timings to allow for a longer duration so that experts had the chance to participate. I found that OH participants were willing to share best practice or their clinical judgments on the topic as OH seemed to have a renewed sense of worth within stakeholders, as their health and safety, testing, risk assessment and support for employee work was front and centre during the pandemic response. Despite having a catastrophic effect on peoples lives, I would argue that it led our participants to generate a multitude of diverse and rich items to our research questions.

To apply reflexivity in practice required me as a researcher to construct the data analysis and findings during the pandemic critically in the context of participants social background, assumptions, positioning, and behaviour as these are known to affect the research process (Finlay and Gough, 2003). I believe for the participants, this reflexivity process allowed space...
for intersubjective reflection, especially in the FCP group, as the topic had not been considered before. This enabled them to consider self in relation to others and me, as a clinician and researcher, to reflect on my own practice without it influencing the process, method, or outcomes (Finlay 2002).

In sum, the covid-19 context was a critical element to consider when generating knowledge, as one person’s perception would likely change in such an unfamiliar and disconcerting time. Many of the participants lived within a cluster of new institutional circumstances, some worked within a private provider, some the NHS and some directly through a GP surgery. This diversity may have impacted on the participants subjectivity, described by Flyvbjerg (2001) as ‘an open-ended, contingent relation between contexts and actions and interpretations’. Therefore, in generating and reaching consensus, it is impossible to exclude these variables from the research. I do believe that these contexts provided a snapshot of participants way of life from the standpoint of their conflicts, choices, and values.

12.4 How my experiences have shaped my learning since I started the doctorate

‘Getting through’ the taught elements and progressing to the research element would not have been possible without the professional doctoral cohort of students. Our studies were also at an unprecedented time in which COVID-19 stopped most parts of our lives and forever altered the world that we once knew. The ‘cohort’ made the PD more appealing than a traditional PhD. A doctoral degree usually implies a PhD, although that is not always the case in contemporary higher education contexts. It is interesting to note that the earliest doctoral degrees or PhDs could be classified as providing ‘an explicit professional orientation’ (Chiteng Kot and Hendel, 2013: 34). They originated within law, theology, and medicine to allow students admission to the guilds, that governed these professions and allowed students a ‘license to teach.’ In modern times, there has been a significant drive-in doctoral study changes, with emphasis on skills and training throughout all sectors after school education. The PhD is often characterised by its stance on producing ‘professional scholars’ where the PD is distinguished in its emphasis upon producing ‘scholarly professionals,’ with the PD having a practical rather than a purely academic or theoretical
focus (Fenge, 2009). I would argue these attributes fit with the new concepts of the knowledge economy and ‘tradeable knowledge’ from practice, for application back into practice. The ability to learn from each other, as well as from formal programmes and higher education is a feature that distinguishes adult learning (Rogers, 2003).

The experience of the taught elements highlighted ‘communities of practice,’ were as a cohort we had a shared goal, activities, and experiences in the context of our specialities (Wenger, 1999). This highlighted, not only the product (thesis) itself, but the whole process in being just as important a part of the programme and was appealing for me (Mellers-Bourne et al., 2016).

The cohort was a mix of engineers, healthcare professionals, academics, business leaders and middle professionals in a variety of sectors. I was amazed by how enriching the onsite and digital group meets were. Observable teaching was reduced and allowed for more task participation, immersing we in practice or research questions and taking on added responsibility. I wondered with the emergence of artificial intelligence, an ageing workforce and climate change and the associated complex questions involved, would communities of practice be able to answer them from a multi-professional mutual engagement and joint enterprise standpoint. I had not experienced a collection of diverse individuals engaging and sharing knowledge in this way, outside of my OH remit, and it was enlightening to observe how other professionals contributed their knowledge to the common goal. Although, divergence in ways to achieve group tasks would always present, it was interesting to find that most of our professional identity was similar, in our ‘attributes, beliefs, motives and experiences,’ even within different sectors. I believe that the concept of communities of practice enhanced my learning experience for the better and made me question my own ways of practice, and what unique skills I can bring to stakeholders. Our common interest was completing the PD as means of professional extension (Costley and Lester, 2012: 258) and a shared purpose of personal development and an original contribution to knowledge.

The journey was difficult in terms of progression and completion for many of us and it needed a low mark in one taught module essay for me to realise the nature of the process and technique of research required at this level (the ‘doing and achieving’), often defined as ‘doctorateness’ (Trafford and Leshem, 2009). When I wrestled with this dilemma, I
recognised and resolved the learning and understanding deficiencies, which on reflection, was critical to writing up an intellectually coherent and plausible PD thesis. This recognition was a critical timepoint and ensured a successful outcome. Upon reflecting with other students, as candidates we did not fully appreciate the skills required or obstacles that we would have to overcome to produce an acceptable thesis. Although I was a middle professional of around 12 years, I was deficient in academic writing as a skill and was thankful to the workshops in the form of skills training integrated into the stage 1 ‘scaffolding’ (Mellers-Bourne et al., 2016).

I found the self-funded, part-time and ‘time-poor and experience rich’ circumstances difficult to balance. However, the camaraderie and shared togetherness, enabled me to create new knowledge and theoretical perspectives academically and personally. I learnt equally from an ex-Colonel in the British Army, as I did from a podiatrist, security leader and public sector manager. This may be described as the width of experiential learning (Kolb, 2015). For many of us, we had initial poor educational experiences, a lack of opportunity for some early study and a lack of confidence in making sense of the world via an earlier doctoral candidacy (Slewey and Schuetze, 2012). However, these narratives were quickly dispelled when we realised that career success and recognition of other’s abilities could be harnessed in a wish to prove ourselves. It was only through the cohort that I learnt about my own potential and capabilities that could be achieved throughout the life course.

A great deal of continuing professional development provision is designed around critical reflection in healthcare. As mentioned, before this is often ad hoc and informal. During my studies, I developed an understanding of the importance of reflection and becoming a reflexive practitioner that was focused on an outcome and would argue it was one of the key features in my learning journey (Mellers-Bourne et al., 2016: 54).

12.5 Impact of the new knowledge and practice at an organisational and sectoral level

The impact of the new knowledge and practice has positively influenced my professional body, FCPs, GPs, the wider system and I believe the agenda in time will change, so that
other healthcare professionals can be legislated for providing sickness absence certification. In relation to the methods, I pivoted to fully online data collection, of which there are few examples in NGTs within the literature. I have published my key findings in peer-reviewed journals and have been able to disseminate and present at local (CSP, GP, AP, and Primary Care) and international (International Congress in OH) conferences. In addition, I was asked by ACPOHE to present on 12 workshops throughout the year for a CSP funded project on the ‘work and health’ topic and by Health Education England to produce a National Evaluation of FCP practice within the Buckinghamshire, Oxfordshire, and Berkshire West region. I believe my project has provided new research findings with potential policy relevance and hope that it continues to act as a catalyst for change. I have been a research champion within my NHS trust and hope that I can continue to generate new research or analyses, engage with other OH researchers and further the OH policy development and agenda. In a small way, this study will hopefully research-inform health policies and policy documents and lead to better health systems and outcomes.

At an organisational level, I wish to implement best practice that has been taught within the first 18 months of the course, through people, performance, and innovation management. Underpinning these elements are the concepts of change management, effective communication and competitive advantage strategies gained from other disciplines. I believe the concept of communities of practice is especially important as healthcare and especially medicine changes. The recent changes to medical training seem to have reduced the formation of a professional identity by curtailing opportunities for immersion in communities of practice (Spilg et al., 2012). Indeed, many foundation trainees have limited access to consultants and spend fewer hours at work compared to the pre-European working time-directive era. In addition, narrow competencies that are evaluated by workplace-based assessment may not encourage mastery or full participation of students, and an increase in shift work, has isolated healthcare professionals from each other’s work and the outcomes of their work. Perhaps harnessing some of the taught elements, I can consider a small and positive step-change in the way we work within my Trust.

The way the new knowledge was generated and considered, needed skills beyond my undergraduate and postgraduate education. During those taught courses, write ups and publications involved reporting and responding to the information given. For this thesis I
needed to understand relevancy, make connections between issues, how to deal with unexpected occurrences and reframe professional understanding with new theory (Bain, 2002). Within physiotherapy practice, I am familiar with the concept of clinical reasoning, with hypothetico-deductive reasoning giving the clinical clues regarding a patient’s presentation and as I have become an experienced clinician, family with the role of the patient, condition-specific knowledge, pattern recognition and problem solving. This is the cornerstone of physiotherapists being considered as an autonomous healthcare professional that can diagnose, treat, and manage a variety of conditions within their scope of practice. However, this PD, required me to move beyond tacit judgements, knowledge structures and towards skills to deal with a situation triggered by unexpected events (Schon, 1987). The critical events of the pandemic, data collection phase and completing taught modules outside of my knowledge based stimulated the process of reflection and cognitive development. I believe this experience will enable me to consider new, improved ways to approach future critical events, especially those that involve health and safety risk, OH practice or uncertainty.

Reflection and the reflective cycle made me aware of my thought patterns and emotional reactions to a complex and uncertain environment. It may have set in motion a process of change to improve myself as a researcher and clinician.

12.6 Conclusion and final thoughts

I joined the course to consider extrinsic professional initiation and continuation, for career development and in providing opportunities for diversifying career options. When in the process, I began to realise the concept of extrinsic professional alteration, where the doctorate and process was a vehicle for changing, affecting, or contributing to my practice in OH (Mellor-Bourne et al., 2016). It is also important to acknowledge that it provided an exceptional intellectual stimulus and having completed the write-up, great personal fulfilment. I was able to utilise my expertise and existing knowledge to research an area that had a direct bearing upon my professional practice and context (Wellington, 2013) and the PD allowed me to study part-time while in employment. From the 1960s up to the present day, seminal research and the work and publications of public intellectuals have drawn upon
theories of identity to attempt to explain who we are, as individuals, groups, and societies. National identities, class associations and the active identification with social and special interest groups are a significant part of 21st century life, and they are discussed in the media daily. In the case of my project, it could be viewed as seeking or achieving a doctoral identity (Scott and Morrison, 2010) and significantly subject to affirmation by others in my professional sphere.

I did not merely want to ‘become a doctor’ but also to become a better professional that could conceptualise, design, and implement projects for the generation of significant new knowledge and/or understanding. This required both the ability to make informed judgements on complex issues in my specialist fields and an innovative approach to tackling and solving problems during the research. My personal narrative now combines the concept of the ‘scholarly professional’ and I believe meets the needs of policy makers who consider the aspiration and potential of individuals within the social constructs of society. My experience has been fluid and subject to change, as most journeys are in an unfamiliar environment. A purely homogenous doctoral study fails to often capture this experience and the identity that derives from this experience. For now, I would identify as a ‘scholarly professional’ and not a ‘professional scholar’ and would like to conduct research in the OH field in the future. I believe lives have been saved during the pandemic, but as the world recovers, it is time to make those lives worth living. Work is one aspect of life that is central to human existence and a motive force for the economy, it provides structure and meaning and is socially inclusive. Furthering the OH practice and research agenda will hopefully enable those with disability (permanent or temporary) have access to the labour market, especially older workers who will need to remain active in the workforce beyond retirement age to meet the demands of legislation and social policy. This PD may be one enabler to achieve the above.

Professionals now live in a world where sensemaking in a digital age is becoming increasingly difficult. The professional realms feature a ‘craziness’ that Barnett (2008) captures as being ‘fraught with difficulty’ and at times for me, juggling both academic writing and practice, while getting married and having a baby in 2020/21 seemed insurmountable. The rationale and culmination of personal mastery is a significant outcome for me, whilst improving engagement with research and my ability to write academically
and reflectively, both highly distinctive writing genres. With this academic and professional milestone achieved, this PD is the embodiment in the adage that change is the only true constant and albeit that every journey needs direction and goal setting, it is the overall pursuit of a meaningful process that is the most important consideration, not the finish or destination alone. The PI will continue to publish peer-reviewed journals on the topic, with 2 in the pipeline (2024) and several others to be confirmed in terms of write up (2024/25). In 2024, the PI will present at the CSP and SOM conferences on topics aligned to this work and health thesis and the next step professionally would be to consider research grants and further collaboration with active work and health / OH research teams.
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Appendix 1. List of peer-reviewed journal publications


**List of non-peer-reviewed publications**


**Presentations**


BLACK, C., Shanmugam, S., & Gray, H., 2022. What are UK First Contact Practitioners (Physiotherapists) educational needs in order to provide fitness for work recommendations and sickness absence certification in primary care? Paper presented at 33rd International
Congress on Occupational Health (ICOH) 2022, Melbourne-Rome global digital congress, Feb 06, Australia & Italy.


Project

Appendix 2. Summary of Informal Feedback Exercise

Professional Body and Independent Professional Role Feedback

Held with: Natalie Beswetherick (Director of Practice & Development, CSP); Dr Richard Collier (Clinical Lead for MSK practitioners in Primary care); Dr Neil Langridge (Consultant Physiotherapist); Fran Fitch (Head of research & Development, CSP); Sarah Withers (Implementation Lead FCP, CSP), Professor Mayur Lakhani (RCGP President); Dr Kavah Asanati (Consultant Occupational Health Physician, Chairman SOM, Advisor for NICE); Miles Atkinson (Chairperson, ACPOHE); Dr Annette Bishop (Senior Research Fellow, Keele University); Professor Pip Logan (Prof. Rehabilitation Research, Faculty of Medicine & Health Science, University of Nottingham). A brief summary of their views is provided below.

Direct Quotations

‘In my opinion FCP are ideally placed to assess, diagnose and judge whether a person can remain in work, may need adjustments at work for a specific period of time, or refrain from work for a specific period of time’. Director of Practice & Development, CSP

‘This is a professionally relevant and apt research topic that warrants further evaluation. I would encourage you to reach out to my research team if needed to consider further development of the consensus study and as an advisory service’. Professor of Rehabilitation Research

‘The knowledge, skills and attitudes are yet to be determined between the CSP and Strategy Work and Health Unit and it is important that this is properly evidenced’, ‘there is insufficient focus on what the inhibitors are for fitness to work and how we can remove these’ and ‘there is sufficient depth for Doctoral work and you could explore the mass of reasons behind the sickness absence certification instrument, including psychology/legislation underpinning its use- a huge but focused topic’. Clinical Lead for Musculoskeletal Practitioners in Primary Care

‘This is a pertinent and very innovative topic, this will be a major focus for the CSP and practice over the next few years’. Head of Research and Development, CSP
‘Fitness for work/vocational advice is clearly high on the current research agenda, and without doubt fits neatly into the whole FCP programme of work. Whilst part of our current evaluation looks at physiotherapists’ confidence/competence to give occupational advice, both Nottingham and Keele have made moves to understand this role in more detail. Your study will fit nicely within the topic title’. Director of Postgraduate Research

‘As part of the FCP role being based in primary care there is a need to provide fit note certification, yes, anything that keeps patients undertaking normal activities or returning to work at the earliest opportunity can only be a good thing’ Assistant Professor, Postgraduate Rehabilitation Research

‘I wholeheartedly support this and feel that the timing is perfect. I am happy to support you in any way that I can’ Honorary Chairperson, ACPOHE

‘I believe FCPs are well placed to take on these roles but I am unsure if the necessary attitudes and skills are there for sickness absence certification. Consideration may need to be given as to whether the profession has the capacity to take on this extra work, as there is also a shortage of physiotherapists as well as GPs. We take a biopsychosocial approach to an assessment and so have a good grounding in being able to identify a person’s medical, physical and psychosocial needs, perhaps not occupational health related fitness for work aspects. Perhaps advanced skills in communication and behaviour change are needed with the time pressures within primary care’ Professional Health of RCGPs

‘I am not sure if FCPs have the necessary skills and knowledge to deliver fit note certification. This is difficult to answer - arguably GPs do not have any training/expertise in this either and my peers & I do not believe GPs should not be providing this service and it should only be under the remit of Occupational Health colleagues. However, my view is that FCPs would certainly be well placed to provide this if related to MSK complaints only’ Consultant Occupational Health Physician, NICE Reviewer and Professional Head of SOM

Conclusion

Overall, the above is a snapshot of around 100 different pieces of feedback from a variety of stakeholders. They suggested that physiotherapists, in the future, will likely be the
gatekeepers of all patients with MSK, however, the full implications of primary care practice have not been realised until roll out or ‘go live’ of services. Sickness certification using the AHP fitness for work is inconsistent and not fully understood within this community of therapists. There was some uncertainty as to who would be the gatekeepers of sickness certification for MSK when full implementation of FCPs in primary care is complete. The academic staff were in agreement that the role of Physiotherapists in providing sickness certification and workplace advice in primary care is an under researched and largely unexplored area.
Appendix 3. Ethical Approval and Form

HLS Ethics – PSWAH HLSEthicsPSWAH@gcu.ac.uk

Thu 05/03/2020 12:15

To Black, Cameron CBLACK224@caledonian.ac.uk

Cc Gray, Heather H.Gray@gcu.ac.uk

HLS Ethics – PSWAH <HLSEthicsPSWAH@gcu.ac.uk>

Dear Cameron,

HLS/PSWAHS/19/144

Project Title: Exploring Fitness for Work Competencies for Primary Care First Contact Practitioners (Physiotherapists) in the Management of Musculoskeletal Conditions in the UK: A Delphi Consensus Study

The Research Ethics Committee has completed its scrutiny of your application, and I can confirm that this is now Approve – with minor amendments and no need to re-submit.

Good luck with your study.

Regards

Alexis Henderson, on behalf of

Dr Phil Dalgarno, Chair

PSWAHS Research Ethics Committee
From: HLS Ethics – PSWAH <HLSEthicsPSWAH@gcu.ac.uk>
Sent: 07 April 2020 14:44
To: Black, Cameron <CBLACK224@caledonian.ac.uk>
Cc: Hegarty, David <David.Hegarty@gcu.ac.uk>
Subject: RE: Updated COVID-19 ethics form FAO Dr Phil Dalgarno

Apologies Cameron – I have been advised that no further emails need to be sent to students allowing them to continue with their project once the approval has been given by the supervisor. The change has been noted on the database. Please proceed with your project.

Regards

Alexis
The School of Health and Life Sciences has three departmental ethics committee. Please tick which committee you wish to submit your application to (please indicate with an X)

- Nursing and Community Health (Chair: Dr Nicola Roberts)
- Psychology, Social Work and Allied Health Sciences (Chair: Dr Phil Dalgarno)
- Life Sciences (Chair: Dr Les Wood)

Category of principal applicant (please indicate with an X)

- Staff: 
- Research student (Prof D): X
- Taught postgraduate student: 
- Undergraduate student: 

Location of research work (please indicate with an X)
One copy of all of the paperwork for an ethics application should be submitted electronically to HLSEthics@gcu.ac.uk
## School of Health & Life Sciences Ethics Committee Application Form

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<tr>
<td>Principal Investigator (s): Cameron Black</td>
<td>Email address: <a href="mailto:cblack224@caledonian.ac.uk">cblack224@caledonian.ac.uk</a></td>
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**Supervisor:** Dr Heather Gray

**Other academic staff involved:** Dr Sivaramkumar Shanmugam

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<th>Project start date:</th>
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<td>4th November 2019</td>
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**Date application Submitted:** 4th December 2019

Is this a clinical trial: No

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### YOU MUST ANSWER ALL QUESTIONS

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<td>3. Will your participants be able to read and understand the participant information sheet?</td>
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<td>4. Will you obtain written informed consent for participation? (consent is implied for questionnaire studies)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Will you tell participants that they may withdraw from the research at any time without penalty and for any reason?</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Question</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------------------------------</td>
<td>-----</td>
<td>----</td>
</tr>
<tr>
<td>6</td>
<td>With questionnaires/interviews, will you give participants the option of omitting questions they do not want to answer?</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Will you give participants a brief explanation of the purpose of the study at the beginning of their participation in it, and answer any questions?</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>9a</td>
<td>Will your project involve deliberately misleading participants in any way?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>If YES, go to question 9b. Please note you must provide a justification in the research proposal.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9b</td>
<td>If YES, will an explanation be offered following participation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Is there a realistic risk of the participant/researcher experiencing either physical or psychological distress or discomfort?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>If YES, give details in the research proposal and state how you will address these risks (e.g. who they can contact for help).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Do the participants fall into any of the following special groups? If the answer is YES, indicate which group(s) by ticking the appropriate box(es):</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>☐</td>
<td>Children (under 18 years of age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐</td>
<td>Children (under 5 years of age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐</td>
<td>People with a disability such as learning and communication difficulties.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please specify:

☐ Pregnant women
☐ People studied with respect to mental or sexual health
☐ People in custody
☐ People engaged in illegal activities (e.g. drug-taking)
☐ Non-human animals
☐ Patients/service users

**NOTE:** You may also need to obtain clearance from Protection of Vulnerable Groups (PVG) or an equivalent authority.

You must tick **either** Box A or Box B below and provide all relevant information in support of your application. If you answered NO to any questions 1 – 3, 5-8, or YES to any questions 9 – 11, then you must check Box B.

[A] X | I consider that this project has **no significant ethical implications** to be brought to the attention of the University Research Ethics Committee.
Please provide a short study protocol in a separate attachment of no more than 2 sides of A4 (Arial font size 10). The accompanying notes give additional information about how to write the protocol. Your proposal must include the following sections:

1. Project title (with student name or staff member name clearly stated)
2. Version number.
3. Background information.
4. Aims and objectives of the study.
5. Brief description of participants and recruitment methods (sample, numbers, access, recruitment and inclusion and exclusion criteria)
6. Brief description of the research methods and measurements. Include details on how the data will be securely stored and disposed of.
7. Consent, confidentiality, and anonymity
8. Risks to participants/self

Arrangements for debriefing. You must also provide the intended (1) Participant Information Sheet(s), (2) Consent Form(s), (3) copies of any non-validated or validated tools/questionnaire(s), (4) details of interview questions you plan to use, (5) notices advertising the study, (6) draft letter(s) for gatekeeper access permission to recruit participants and (7) replies/proof of gatekeepers approval for access to recruit participants

| B | I consider that this project **may have significant ethical implications** that should be brought to the attention of the University Research Ethics Committee. |

Please provide a short study protocol in a separate attachment of no more than 4 sides of A4 (Arial font size 10). The accompanying notes give additional information about how to write the protocol. Your protocol must include the following sections:

1. Project title (with student name or staff member name clearly stated)
2. Version number.
3. Background information.
4. Aims and objectives of the study.
5. Brief description of participants and recruitment methods (sample, numbers, access, recruitment and inclusion and exclusion criteria)
6. Brief description of the research methods and measurements. Include details on how the data will be securely stored and disposed of.
7. Consent, confidentiality and anonymity.
8. Risks to participants/self (include a risk assessment form).
10. A clear statement of the ethical considerations raised by the project and how you intend to deal with them.

You must also provide the intended (1) Participant Information Sheet(s), (2) Consent Form(s), (3) copies of any non validated or validated questionnaire(s), (4) details of interview questions you plan to use, (5) notices advertising the study, (6) Risk Assessment form, (7) draft letter(s) for gatekeeper access permission to recruit participants and (8) Replies/proof of gatekeepers approval for access to recruit participants

Declaration

I am familiar with the Declaration of Helsinki and professional body code of human research ethics (e.g. BPS), and have discussed them with the other researchers involved in the project. I confirm that my research abides within these guidelines.

<table>
<thead>
<tr>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal Investigator</td>
<td></td>
</tr>
<tr>
<td>Cameron Black</td>
<td>C. Black</td>
</tr>
<tr>
<td><a href="mailto:Cblack224@caledonian.ac.uk">Cblack224@caledonian.ac.uk</a></td>
<td>10th December 2019</td>
</tr>
<tr>
<td>Supervisor</td>
<td></td>
</tr>
<tr>
<td>Dr Heather Gray</td>
<td>H. Gray</td>
</tr>
<tr>
<td><a href="mailto:h.gray@gcu.ac.uk">h.gray@gcu.ac.uk</a></td>
<td>12th December 2019</td>
</tr>
</tbody>
</table>

There is an obligation on the Principal Researcher and/or the Supervisor to bring to the attention of the Ethics Committee any issues with ethical implications not covered by the above checklists.
Please complete the checklist with details of the documents which are included in your submission (where applicable)*

<table>
<thead>
<tr>
<th>Document</th>
<th>Included</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC1 form</td>
<td>X</td>
</tr>
<tr>
<td>2 page protocol (for those with <em>no significant</em> risks) or 4 page protocol (for those <em>WITH significant</em> risks)</td>
<td>X</td>
</tr>
<tr>
<td>Participant information sheet(s)</td>
<td>X</td>
</tr>
<tr>
<td>Consent form(s)</td>
<td>X</td>
</tr>
<tr>
<td>Non-validated or validated tools / questionnaires</td>
<td>X</td>
</tr>
<tr>
<td>Interview guide/ schedule</td>
<td>X</td>
</tr>
<tr>
<td>Advert / notices for study</td>
<td>X</td>
</tr>
<tr>
<td>Risk assessment form (if applicable for those <em>WITH significant risk</em>))</td>
<td>N/A</td>
</tr>
<tr>
<td>Your letter(s) which request access permission to recruit participants</td>
<td>N/A</td>
</tr>
<tr>
<td>Gatekeepers approvals for access permission to recruit participant</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*Paperwork associated with your application does not need to be anonymised. Only one set of these documents are needed. These can be sent as one large word document, please do not send a combined PDF document.*
Protocol

Project Title: Exploring Fitness for Work Competencies for Primary Care First Contact Practitioners (Physiotherapists) in the Management of Musculoskeletal Conditions in the UK: A Delphi Consensus Study. Principal Investigator: Cameron Black MSc MCSP, S1802626, Supervisors: Dr Heather Gray, Dr Sivaramkumar Shanmugam.


Background information: The Department of Health and the Department of Work & Pensions started development work published within Improving Lives: The Future of Work, Health and Disability, based on comprehensive stakeholder consultations to legislate the extension of fit note certification to other non-medical allied health professionals along with a set of competencies to help in its completion (UK Government, 2017). In the UK, General Practitioners are currently the gatekeepers to health-relevant benefits though Government sickness absence policy, whereby the Statement of Fitness for Work or ‘Fit Note’ (Med3 form) is authorised for sickness absence of greater than 7 days (UK Government, 2019). However, in relation to this, many GPs report that they feel inadequately trained to manage the occupational health specific topics and have had little guidance or training in the use of Fit Notes (Moran et al., 2018). Despite a contractually obliged role, evidence suggests that GPs additionally cite a concern to maintain the therapeutic (doctor-patient) relationship and few offer advice to patients about return to work (RTW) issues (Dorrington et al., 2017).

Based on the above Government’s white paper it is likely that physiotherapists as First Contact Practitioners (FCP) will be professionals able to provide fitness for work recommendations and sickness absence certification powers in the future. There is empirical evidence that physiotherapists are well suited to provide expert management of musculoskeletal conditions (MSK) in general practice and primary healthcare settings with associated high levels of patient satisfaction (Goodwin and Hendrick, 2016). However, systematic reviews have observed the low quality of the primary data in this field, having mostly included observational design data, which may bias interpretation in favour of the physiotherapy substitute role (Saxon et al., 2014; Marks et al., 2017). A key impetus for the proposed research, there is a lacuna of empirical research that explores the implementation of FCPs for patients with MSK conditions within primary care and the likely added responsibility necessitated by such roles. Indeed, central to the proposed research, the question arises as to whether and to what extent FCPs
feel they have the sufficient skills to assess, manage and influence the specific occupational health (OH) aspects pertinent to musculoskeletal conditions in primary care. Although the UK Government has highlighted the need for more allied health professionals in General Practice making OH decisions, there have been no studies into the required core clinical competencies for FCPs in primary care.

**Aims:** To identify the fitness for work competencies that underpin FCPs role in sickness absence management for individuals with musculoskeletal conditions in primary care.

**Research Question:** What are UK FCP physiotherapist’s knowledge, beliefs, attitudes, and (perceived) skills in the assessment and management of occupational health related factors in individuals with musculoskeletal (MSK) conditions?

**Objectives:**

1) Identify the sickness absence model in the UK and the role of healthcare staff in sickness certification by undertaking a review of the literature.

2) Systematically review FCP roles within physiotherapy solely, to identify the role itself and second, to search for evidence on the effectiveness of FCP services in terms of their effects on patients, other health-care professionals, and healthcare services.

3) Conduct a NGT meeting to scope, identify, rank and rate critical problem dimensions for sickness absence management within primary care, in terms of occupational health challenges faced and perceived learning development needs in relation to this.

4) Explore the major parameters of the problem area (fitness for work and sickness absence) as perceived by NGT experts, and gain consensus from a national UK-based Delphi study exercise that will underpin new FCP core clinical competencies and educational preparation.

5) Critically analyze data to produce recommendations for future practice and dissemination.

6) Summarize the findings from the NGT and Delphi study exercises and seek opinion on potential trial designs.

**Participants & Recruitment Methods:** It is important that data are collected from individuals who are a representative sample of the target population under study, in order to ensure generalizability (Gentles et al., 2015). Due to the internal logic of the study and general principles of the specific issues in a certain population (focused locality in the FCP context), the generalizability of the findings will not be the main expected attribute of the study. In this study, data gathering methods will include Delphi and NGT and not every FCP in the UK will be studied. Data will be gathered from ‘experts’, defined as a group of informed FCPs that are involved in the management of MSK conditions in primary care and in providing sickness absence certification and work-related advice. Therefore, they are ‘specialists’ in
their field and have specific knowledge about the specified topic (Green et al., 1999). The researcher must be aware of selecting experts who are relatively impartial but have opinions that in the case of this research, reflect FCP knowledge, interest and perceptions on the topic.

To achieve this, a non-random, purposeful sampling approach will be used to allow for an in-depth and appropriate exploration of the research topic based on their expert characteristics. There is no set standard for sample size of a panel, but it is generally agreed that more numbers will increase the reliability and achieve better results (Powell, 2003). As there is no standardized advice on how many experts to recruit and as the Delphi group size depends on group consensus among experts rather than statistical power, at minimum the study will aim for between 15-30 participants from the field with an additional 20% invited to allow for an adequate rejection rate, as suggested by Linstone and Turoff (1975). However, despite some authors recommending an ideal of between 6-11 experts (Bloor et al., 2015), on review of the literature, other Delphi competency studies have recruited between 40 and 70 participants. For example, Suckley (2012) recruited 72 extended scope physiotherapists to identify core clinical competencies in MSK interface clinics in primary care and Irvine (2005) recruited 72 district nursing professionals involved in health promotion. Therefore, up to 70 participants will be considered, but it is likely that 60 participants will be appropriate and allow for three Delphi rounds with the limited time available for data collection. All participants should satisfy the following criteria in Table 5.

Table 5: Eligibility Criteria

<table>
<thead>
<tr>
<th>Inclusion Criteria</th>
<th>Exclusion Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion of a UK qualifying programme in Physiotherapy</td>
<td>Those who meet the inclusion criteria, but are excluded for a different reason, e.g. already enrolled in another study</td>
</tr>
<tr>
<td>Member of the Chartered Society of Physiotherapy (CSP) and Health and Care Professions Council Registered (HCPC)</td>
<td></td>
</tr>
<tr>
<td>May hold or be working towards a prescribing qualification</td>
<td></td>
</tr>
<tr>
<td>Currently employed as a first contact physiotherapist within primary care for the last 3 months</td>
<td></td>
</tr>
<tr>
<td>Ability to read and understand English and willing to complete an online questionnaire</td>
<td></td>
</tr>
<tr>
<td>Be committed to the project duration</td>
<td></td>
</tr>
</tbody>
</table>

Recruitment will focus on individuals that meet the above criteria and potential participants will be contacted via the CSP’s FCP professional network (CSP, 2019). This group provides an exclusive body of knowledge of professional primary care practice for FCPs. This recruitment approach is cited by Dillman (2007, p.20) as ‘sponsorship by legitimate authority’ and it is anticipated that support from the professional body will improve recruitment. It is proposed to send the questionnaire to all registered users in the professional network groups in the CSP’s online community of practice, iCSP. This
represents around 28,000 registered users that actively participate in the online community. In addition, potential participants will be contacted through email and the CSP’s Conference and Trade Exhibition PhysioUK 2019 will serve as a conduit through which the project will be promoted. This year a key focus of the conference is ‘fit for work’ and it is anticipated that experts will be in attendance during FCP sessions and in networking. If the predetermined sample is not recruited and numbers are low, participants will be encouraged to volunteer their colleagues, which is considered as ‘snowball sampling’ and is a conventional approach to recruiting experts within Delphi research (Sedgwick, 2013). This may lead to selection bias (Steurer, 2011), although some authors consider these types of samples as more representative, especially when the FCP target population is difficult to access (Dattalo, 2008). For the NGT, a panel of between 8-12 experts are anticipated (Van de Van and Delbecq, 1975). Participant information sheet and consent forms are attached.

**Design & Methods:** Purposive sampling will be used to recruit FCPs from specialist MSK fields within physiotherapy. Two distinct studies will be conducted, with not necessarily the same participants in each. The individual studies will consist of: 1) **Nominal Group Technique (NGT)** and 2) **The Delphi method (online three rounds)** with samples that match the study’s inclusion criteria. A consensus criterion of 60 per cent will be adopted a priori for the Delphi study. Following this an interactive dissemination plan will be undertaken to apply further pilots and implementation of competencies. The NGT will help direct the Delphi Online Questionnaire and will allow for fast elicitation of practice problems, flows of ideas from experts and consensus on the topic. Each participant will expect to give up two hours to participate in the NGT and up to 2 hours on the Delphi study. Results will be presented in an amalgamated, summary format; any direct quotes that are used will not identify the individual. Any identifiable data will be stored on GCU secure server space on password protected computers, with only 3 members of the project team having access. Data will be stored for 10 years in line with GCU guidance on Data protection and GDPR and ethical guidance for online platforms.

**Consent, confidentiality & anonymity:** Approval for the study will be sought from the Research Ethics Committee in the School of Health and Life Sciences at Glasgow Caledonian University. All raw data will be kept on a computer which is password encrypted, in a locked office and data will be destroyed in accordance with data protection guidelines. Only the researcher and supervisory team will have access to the data and information sheets and consent forms will be provided and used during the NGT and dissemination period. It is not anticipated that the NHS Research Ethics Committee will need to ethically review the study, although the National Research Ethics Service will be contacted by the researcher to confirm this. Participants’ needs will take precedence over the actual process of the research. While the success and completion of the study depends upon the expert’s willingness to participate, if such participation places an individual at risk or causes deleterious effects, participation will not be pursued (justice). Participants will not be coerced or put under undue influence to participate and should volunteer to take part (ESRC, 2019). Informed consent will be obtained during the NGT data collection phase (Eynon et al., 2008).
**Risks to the participants/self:** This study will adhere with the ethical principles as laid out in the Declaration of Helsinki for research involving human subjects (World Medical Association, 2013). Adherence to the EU General Data Protection Regulation (GDPR, 2018) and UK Data Protection Act (2018) data protection principles and safeguards will ensure that data processing is lawful, fair and transparent. This will also be supported through GCU’s own research governance systems and assurances including, ethical approval, risk assessment and the RDC process (GCU, 2019). Participants’ needs will take precedence over the actual process of the research. While the success and completion of the study depends upon the expert’s willingness to participate, if such participation places an individual at risk or causes deleterious effects, participation will not be pursued (justice). Participants will not be coerced or put under undue influence to participate and should volunteer to take part (ESRC, 2019). Due to the face-to-face nature, participants will be discussing and debating with fellow group members and they will be invited to provide considered responses, this may be uncomfortable for some and if deemed unsuitable they will be free to refuse participation or withdraw at any point in the meeting without consequence. Small monetary reimbursement for their time and expenses will be considered, along with gift vouchers or a prize draw for questionnaire responses. Both techniques may encourage responses but will not override the principles of freely given and fully informed consent (ESRC, 2019).

**References:**


Appendix 4. Application for externally approved research projects (COVID-19 Amendment Form)

Glasgow Caledonian University

School of Health & Life Sciences

Application for externally approved research projects

(COVID-19 Amendment Form)

The School of Health and Life Sciences has three departmental ethics committees and each committee uses a separate email address. All COVID-19 amendment forms should be submitted electronically to the correct email address and marked for the attention of the ethics chair for the committee (see below).

<table>
<thead>
<tr>
<th>Committee</th>
<th>Chair of committee</th>
<th>Which committee are you submitting the</th>
<th>Email address</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Department</td>
<td>Name</td>
<td>Application to (mark with an X)?</td>
<td>Email Address</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-----------------------------</td>
<td>----------------------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>Nursing and community health</td>
<td>Mr. Ben Parkinson</td>
<td></td>
<td><a href="mailto:HLSEthicsNursing@gcu.ac.uk">HLSEthicsNursing@gcu.ac.uk</a></td>
</tr>
<tr>
<td>Psychology, social work and allied health sciences</td>
<td>Dr. Phil Dalgarno</td>
<td>X</td>
<td><a href="mailto:HLSEthicsPSWAH@gcu.ac.uk">HLSEthicsPSWAH@gcu.ac.uk</a></td>
</tr>
<tr>
<td>Life sciences</td>
<td>Dr. Les Wood</td>
<td></td>
<td><a href="mailto:HLSEthicsLifeSciences@gcu.ac.uk">HLSEthicsLifeSciences@gcu.ac.uk</a></td>
</tr>
</tbody>
</table>

**Study overview**

**Study title:** Exploring Fitness for Work Competencies for Primary Care First Contact Practitioners (Physiotherapists) in the Management of Musculoskeletal Conditions in the UK: An Online Nominal Group Technique.

**Short title (optional):** Fitness for work considerations for FCPs within primary care

**Chief investigator (N.B. this should be the academic supervisor in student projects):** Dr Heather Gray

**Email for the chief investigator:** h.gray@gcu.ac.uk
<table>
<thead>
<tr>
<th>Other staff involved:</th>
<th>Dr Sivaramkumar Shanmugam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of student undertaking the study (if applicable):</td>
<td>Cameron Black</td>
</tr>
<tr>
<td>Level of study the student is undertaking (if applicable) (e.g. undergraduate, postgraduate, PhD):</td>
<td>Professional Doctorate</td>
</tr>
<tr>
<td>GCU email for the student undertaking the study (if applicable):</td>
<td><a href="mailto:cblack224@caledonian.ac.uk">cblack224@caledonian.ac.uk</a></td>
</tr>
</tbody>
</table>

**Study governance**

| Study sponsor (e.g. GCU for student and/or staff projects):  | GCU, self |
| Study start date:  | 20\textsuperscript{th} April 2020 |
| Study end date:  | 20\textsuperscript{th} April 2021 |

<p>| Can the amended study be completed without any face-to-face and/or close contact (e.g. participants, public, or fellow researchers)?  | Yes |</p>
<table>
<thead>
<tr>
<th>Can the amended study be completed whilst maintaining information security and/or data protection?</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has the chief investigator completed GDPR and data protection training?</td>
<td>Yes</td>
</tr>
<tr>
<td>Does the study involve the NHS? (If yes, please copy <a href="mailto:Lyndsay.McDade@gcu.ac.uk">Lyndsay.McDade@gcu.ac.uk</a> into the email).</td>
<td>No</td>
</tr>
<tr>
<td>Does the amended study place any burden on NHS staff and/or NHS resources?</td>
<td>No</td>
</tr>
<tr>
<td>Will participants with COVID-19/suspected COVID-19 be excluded?</td>
<td>No</td>
</tr>
<tr>
<td>Has gatekeeper approval been given/renewed following the COVID-19 outbreak (if applicable)?</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Proposed amendments to the study**

- How will face-to-face and/or close contact be eliminated?
- How will data security be maintained whilst working from home?
- How will participants with (or suspected of having) COVID-19 be excluded?
- How will burden on the NHS be avoided?
- How will students be supervised remotely?
What amendments are being made to the study in response the COVID-19? Please consider the above bullet points and provide a rationale/justification for the amendments.

A review of the nominal group technique literature methodology and a meeting (30/3/2020) with both supervisors has reinforced my consideration of a fully online format. This will eliminate face-to-face and close contact of participants as per my previous NGT accepted ethics form. The online format will use a group meeting tool such as Microsoft teams (GCU accepted), no data will be shared online. Qualitative data will be stored online using password protected measures as per my last ethics form. There will be no written data, this will be documented online by the participants and held securely using password protected means.

Participants with or suspected of having COVID-19 can decide (if they deem themselves well enough) if they would like to take part or not. If a participant is willing to contribute but is ill on the day of the online meeting, the meeting will go ahead as planned, but will not rank or summate responses until that person provides their answers when able. A cut-off of 6 weeks will be considered and if no response is provided, the research team will make a judgement as to whether the participant can still proceed with providing expert data. As the proposed new format is online, transmission of COVID-19 will not happen.

If participants are working within the NHS, the participant must decide if professionally and socially (childcare etc) they can participate during the COVID-19 outbreak, especially if they need to re-deploy to a specialist assessment unit or acute treatment centre for COVID-19 patients. There will be no pressure to participate from the research team. Overall the research team deem it highly unlikely that NHS stakeholders will be involved, including resources, participants, equipment or the use of facilities. Therefore, the risk of burden on the NHS is negligible.

Student has been remote access for the last 2 years and has passed all Professional Doctorate modules to a high standard. This included supervisory meetings online and telephone consultations. This will continue. It is not anticipated that the current COVID-19
outbreak will change the previous format of supervision. Online supervision will move to Microsoft teams as GCU’s accepted provider.

Risk assessment (the risk assessment should consider the impact of COVID-19 and possible harms to participant(s), researcher(s), wider society, GCU, and any risks associated with the use of personal data).

<table>
<thead>
<tr>
<th></th>
<th>High risk</th>
<th>Medium risk</th>
<th>Low risk</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High likelihood</strong></td>
<td><strong>Unacceptable</strong></td>
<td>Tolerate with mitigation</td>
<td>Tolerate with mitigation</td>
</tr>
<tr>
<td><strong>Medium likelihood</strong></td>
<td>Tolerate with mitigation</td>
<td>Tolerate with mitigation</td>
<td>Acceptable with mitigation</td>
</tr>
<tr>
<td><strong>Low likelihood</strong></td>
<td>Tolerate with mitigation</td>
<td>Acceptable with mitigation</td>
<td>Acceptable</td>
</tr>
</tbody>
</table>

Risk identification (list possible risks below and use risk assessment matrix (above) to determine the level of acceptability/mitigation for each risk).
<table>
<thead>
<tr>
<th>Possible risks</th>
<th>Level of risk (e.g. low, medium, high)</th>
<th>Likelihood (e.g. low, medium, high)</th>
<th>Acceptability/mitigation (e.g. acceptable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Risk of face to face and/or close contact</td>
<td>With previous format – High</td>
<td>Low</td>
<td>Acceptable with new online format</td>
</tr>
<tr>
<td>2) Risk of data loss/breach when working remotely</td>
<td>High</td>
<td>Low</td>
<td>Tolerate with mitigation as per previous data protection techniques</td>
</tr>
<tr>
<td>3) Risk of burden to the NHS</td>
<td>Medium</td>
<td>low</td>
<td>Acceptable with mitigation</td>
</tr>
<tr>
<td>4) Risk of students</td>
<td>Medium</td>
<td>Low</td>
<td>Acceptable with mitigation</td>
</tr>
<tr>
<td>Risk</td>
<td>Steps taken to reduce and/or mitigate risks</td>
<td></td>
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<td>----------------------------------------------------------------------</td>
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<tr>
<td>Risk mitigation</td>
<td></td>
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</table>

| 5) Risk of recruiting participant with COVID-19                     | High                                        |
| Risk                                                                  | Medium                                      |
| Tolerate with mitigation                                             |                                             |

| 6) Risk of further COVID-19 restrictions making the study impractical | Medium                                      |
| Risk                                                                  | Low                                         |
| Acceptable                                                           |                                             |

<p>| not being supervised closely                                         |                                             |</p>
<table>
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<tr>
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<tbody>
<tr>
<td>1)</td>
<td>Study will change to a fully online format, adding novelty and adaptability</td>
</tr>
<tr>
<td>2)</td>
<td>The loss of personal data will be mitigated by minimising the amount of personal data being used, only collecting essential personal data, restricting access to personal data (e.g. only the research team), using secure (e.g. encrypted) data storage methods, anonymising data as soon as possible, and destroying data confidentially. This will be fully online reducing the risk of hard data loss.</td>
</tr>
<tr>
<td>3)</td>
<td>The health and safety risk associated with the project being carried out on 3rd party premises will be mitigated by solely using an online format. No NHS premises, resources or personnel will be used. The interviewer will also liaise with other members of the study team to ensure lone working policies are followed.</td>
</tr>
<tr>
<td>4)</td>
<td>The student will continue regular online meetings through Microsoft teams. All feedback in terms of practical research management will be given in a timely manner. A suitable online trial will be conducted pre data collection. Student will be included in an online NGT within the next two weeks.</td>
</tr>
<tr>
<td>5)</td>
<td>Due to the online format, there is no risk of COVID-19 infection to fellow participants. The participant must deem themselves fit to conduct the online meeting, especially if they are self-isolating for a concerted period, this includes social, professional and lifestyle considerations. There will be no pressure to contribute if a participant is convalescing from COVID-19 infection.</td>
</tr>
<tr>
<td>6)</td>
<td>It is deemed unlikely that the online study will be impractical in the future, even if more stringent restrictions come into place. The only consideration may be to pause the study in the first instance to release staff time for frontline care and/or to protect public health (student and experts). This will likely delay final write up but should still fit with research deliverable for part time doctoral studies. As the study is self-funded, no funding flows (charity, commercial or public funding) will be affected. Clinical decisions will need to be made by the research team based on local risk and capacity assessments for any participants.</td>
</tr>
</tbody>
</table>

**Ethical approval**

What is the name of the ethics committee that approved this study (e.g. SHLS Nursing; SHLS Life Sciences)?
When was ethical approval given? 05/03/2020

What is the reference number for the ethical approval? HLS/PSWAHS/19/144

Who is the contact person for the ethical approval? Alexis Henderson, Phil Dalgarno, David Hegarty

Are any other approvals necessary for this study (e.g. Caldicott)? Nil

When were these other approvals secured (if applicable)? N/A

**Checklist of items to submit with completed EC3 form.**

<table>
<thead>
<tr>
<th>Please check box for those items attached</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Updated research protocol (mark changes in RED)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) Updated documents (e.g. participant information sheet, consent forms) (mark changes in RED)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) Proof of existing ethical approval</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) Proof of renewed gatekeeper approval (or other necessary approvals)</td>
<td></td>
<td>X</td>
<td></td>
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</tbody>
</table>

**Declaration**

The study team are familiar with the declaration of Helsinki and relevant professional body codes for research ethics (e.g. BPS). I can confirm the study abides with these guidelines.

The study team agrees to bring to the attention of the ethics committee any ethical issues not covered by the above document.

**Chief investigator (this will be the supervisor for student projects)**
<table>
<thead>
<tr>
<th>Name: Dr. Heather Gray</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature:</td>
</tr>
<tr>
<td>Date: 30/03/2020</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student (if applicable):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: Cameron Black</td>
</tr>
<tr>
<td>Signature:</td>
</tr>
<tr>
<td>Date: 30/03/2020</td>
</tr>
</tbody>
</table>
Study Protocol for Ethics Applications

The protocol must use these headings (if applicable) and contain the information requested. Additional headings can be added if necessary and it is expected all potential ethical issues are disclosed. The protocol should be approximately 2-3 sides of A4 for studies with no significant ethical concerns and approximately 4-5 sides of A4 for studies with significant ethical concerns. The protocol structure aligns with the research ethics toolkit (Li, et al. 2016), which is a framework for protocol writers to use when applying for research ethics.

Reference:

<table>
<thead>
<tr>
<th>Study title:</th>
<th>Exploring Fitness for Work Competencies for Primary Care First Contact Practitioners (Physiotherapists) in the Management of Musculoskeletal Conditions in the UK: An Online Nominal Group Technique.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short title (optional):</td>
<td>Fitness for work considerations for FCPs within primary care</td>
</tr>
</tbody>
</table>
| Background information: | The Department of Health and the Department of Work & Pensions started development work published within *Improving Lives: The Future of Work, Health and Disability*, based on comprehensive stakeholder consultations to legislate the extension of fit note certification to other non-medical allied health professionals along with a set of competencies to help in its completion (UK Government, 2017). In the UK, General Practitioners are currently the gatekeepers to health-relevant benefits though Government sickness absence policy, whereby the Statement of Fitness for Work or ‘Fit Note’ (Med3 form) is authorised for sickness absence of greater than 7 days (UK Government, 2019). However, in relation to this, many GPs report that they feel inadequately trained to manage the occupational health specific topics and have had little guidance or training in the use of Fit Notes (Moran et al., 2018). Despite a contractually obliged role, evidence suggests that GPs additionally cite a concern to maintain the therapeutic (doctor-patient) relationship and few offer advice to patients about return to work (RTW) issues (Dorrington et al., 2017). Based on the above Government’s white paper it is likely that physiotherapists as First Contact Practitioners (FCP) will be professionals able to provide fitness for work recommendations and sickness absence certification powers in the future. There is empirical evidence that physiotherapists are well suited to provide expert management of musculoskeletal conditions (MSK) in general practice and primary healthcare settings with associated high levels of patient satisfaction (Goodwin and Hendrick, 2016). However, systematic reviews have observed the low quality of the primary data in this field, having mostly included observational design data, which may bias interpretation in favour of the physiotherapy substitute role (Saxon et al., 2014; Marks et al., 2017). A key impetus for the proposed research, there is a lacuna of empirical research that explores the implementation of FCPs for patients with MSK conditions within primary care and the likely added responsibility necessitated by such roles. Indeed, central to the proposed research,
the question arises as to whether and to what extent FCPs feel they have the sufficient skills to assess, manage and influence the specific occupational health (OH) aspects pertinent to musculoskeletal conditions in primary care. Although the UK Government has highlighted the need for more allied health professionals in General Practice making OH decisions, there have been no studies into the required core clinical competencies for FCPs in primary care.

**Study aim(s):**

**Aims:** To identify the fitness for work competencies that underpin FCPs role in sickness absence management for individuals with musculoskeletal conditions in primary care.

**Research Question:** What are UK FCP physiotherapist’s knowledge, beliefs, attitudes, and (perceived) skills in the assessment and management of occupational health related factors in individuals with musculoskeletal (MSK) conditions?

**Objectives:**

1) Identify the sickness absence model in the UK and the role of healthcare staff in sickness certification by undertaking a review of the literature.

2) Systematically review FCP roles within physiotherapy solely, to identify the role itself and second, to search for evidence on the effectiveness of FCP services in terms of their effects on patients, other health-care professionals, and healthcare services.

3) Conduct an online NGT meeting to scope, identify, rank and rate critical problem dimensions for sickness absence management within primary care, in terms of occupational health challenges faced and perceived learning development needs in relation to this.

4) Explore the major parameters of the problem area (fitness for work and sickness absence) as perceived by NGT experts, to direct a national UK-based Delphi study exercise that will underpin new FCP core clinical competencies and educational preparation.

5) Critically analyze data to produce recommendations for future practice and dissemination.
6) Summarize the findings from the NGT and Delphi study exercises and seek opinion on potential trial designs

**Study design and methods:**

Nominal Group Technique (NGT), Outside of GCU premises

Group meeting online with experts, Group NGT interview

Attached sample NGT data collection format. NGT time – 1 hour

Purposive sampling will be used to recruit FCPs from specialist MSK fields within physiotherapy. The study will involve the **online Nominal Group Technique (NGT)** with samples that match the study’s inclusion criteria. A consensus criterion of 60 per cent will be adopted a priori. Following this an interactive dissemination plan will be undertaken to apply further pilots and implementation of competencies. The NGT will help direct the Delphi Online Questionnaire and will allow for fast elicitation of practice problems, flows of ideas from experts and consensus on the topic. Each participant will expect to give up to 1 hour to participate in the NGT. Results will be presented in an amalgamated, summary format; any direct quotes that are used will not identify the individual. Any identifiable data will be stored on GCU secure server space on password protected computers, with only 3 members of the project team having access (Dr. H. Gray and Dr. S. Shanmugam and Cameron Black). Data will be stored for 5 years in line with GCU guidance on Data protection and GDPR and ethical guidance for online platforms.

**Data management:**

All electronic copies of data will be stored on an encrypted data drive. The information will be kept on a password protected PC stored in a locked office which only 2 members of academic staff have access too. Only the research team will have direct access to the data collected which will be kept for a maximum of 5 years. All data will be fully anonymised and every effort will be made to ensure confidentiality is maintained at all times. No attempt will be made to identify any individuals taking part in the study. Data
will be retained in line with GCU’s retention policy for 5 years in an appropriate format and storage facility. The study will adhere to GCU data security and data protection and GDPR legislation.

**Choice of control group and standard care (if applicable):**

N/A

**Inclusion and exclusions criteria:**

*Table 1. Eligibility Criteria*

<table>
<thead>
<tr>
<th>Inclusion Criteria</th>
<th>Exclusion Criteria</th>
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<tr>
<td>Completion of a UK qualifying programme in Physiotherapy</td>
<td>Those who meet the inclusion criteria, but are excluded for a different reason, e.g. already enrolled in another study</td>
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<tr>
<td>Member of the Chartered Society of Physiotherapy (CSP) and Health and Care Professions Council Registered (HCPC)</td>
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<tr>
<td>May hold or be working towards a prescribing qualification</td>
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<tr>
<td>Currently employed as a first contact physiotherapist within primary care for the last 3 months</td>
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<tr>
<td>Ability to read and understand English and willing to complete an online questionnaire</td>
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**Recruitment of participants:**

It is important that data are collected from individuals who are a representative sample of the target population under study, in order to ensure generalizability (Gentles et al., 2015). Due to the internal logic of the study and general principles of the specific issues in a certain population (focused locality in the FCP context), the generalizability of the findings will not be the main expected attribute of the study. In this study, data gathering methods will include the online NGT and not every FCP in the UK will be studied. Data will be gathered from ‘experts’, defined as a group of informed FCPs that are involved in the management of MSK conditions in primary care and in providing sickness absence certification and work-related advice. Therefore, they are ‘specialists’ in their field and have specific knowledge about the specified topic (Green et al., 1999). The researcher must be
aware of selecting experts who are relatively impartial but have opinions that in the case of this research, reflect FCP knowledge, interest and perceptions on the topic.

To achieve this, a non-random, purposeful sampling approach will be used to allow for an in-depth and appropriate exploration of the research topic based on their expert characteristics. There is no set standard for sample size of a panel, but it is generally agreed that more numbers will increase the reliability and achieve better results (Powell, 2003). All participants should satisfy the following criteria in Table 1.

Recruitment will focus on individuals that meet the above criteria and potential participants will be contacted via the CSP’s FCP professional network (CSP, 2019). This group provides an exclusive body of knowledge of professional primary care practice for FCPs. This recruitment approach is cited by Dillman (2007, p.20) as ‘sponsorship by legitimate authority’ and it is anticipated that support from the professional body will improve recruitment. It is proposed to send the questionnaire to all registered users in the professional network groups in the CSP’s online community of practice, iCSP. This represents around 28,000 registered users that actively participate in the online community. In addition, potential participants will be contacted through email and the CSP’s Conference and Trade Exhibition PhysioUK 2019 will serve as a conduit through which the project will be promoted. This year a key focus of the conference is ‘fit for work’ and it is anticipated that experts will be in attendance during FCP sessions and in networking. If the predetermined sample is not recruited and numbers are low, participants will be encouraged to volunteer their colleagues, which is considered as ‘snowball sampling’ and is a conventional approach to recruiting experts within Delphi research (Sedgwick, 2013). This may lead to selection bias (Steurer, 2011), although some authors consider these types of samples as more representative, especially when the FCP target population is difficult to access (Dattalo, 2008). For the online NGT, a panel of between 8-12 experts are anticipated, as more than 12 participants can lead to difficulty in managing the group (Van de Ven and Delbecq, 1975). Participant information sheet and consent forms are attached.

Consent:

- Approval for the study will be sought from the Research Ethics Committee in the School of Health and Life Sciences at Glasgow Caledonian University. All raw data will
be kept on a computer which is password encrypted, in a locked office and data will be destroyed in accordance with data protection guidelines. Only the researcher and supervisory team will have access to the data and information sheets and consent forms will be provided and used during the online NGT. It is not anticipated that the NHS Research Ethics Committee will need to ethically review the study, although the National Research Ethics Service will be contacted by the researcher to confirm this. Participants’ needs will take precedence over the actual process of the research. While the success and completion of the study depends upon the expert’s willingness to participate, if such participation places an individual at risk or causes deleterious effects, participation will not be pursued (justice). Participants will not be coerced or put under undue influence to participate and should volunteer to take part (ESRC, 2019), especially with the pressure from the recent COVID-19 outbreak. Informed consent will be obtained during the NGT data collection phase (Eynon et al., 2008).

### Possible harms:

- Due to the face-to-face nature (online), participants will be discussing and debating with fellow group members and they will be invited to provide considered responses, this may be uncomfortable for some and if deemed unsuitable they will be free to refuse participation or withdraw at any point in the meeting without consequence.

### Steps taken to mitigate possible harms:

- This study will adhere with the ethical principles as laid out in the Declaration of Helsinki for research involving human subjects (World Medical Association, 2013). Adherence to the EU General Data Protection Regulation (GDPR, 2018) and UK Data Protection Act (2018) data protection principles and safeguards will ensure that data processing is lawful, fair and transparent. This will also be supported through GCU’s own research governance systems and assurances including, ethical approval, risk assessment and the RDC process (GCU, 2019). Participants’ needs will take precedence over the actual process of the research. While the success and completion of the study depends upon the expert’s willingness to participate, if such participation places an individual at risk or causes deleterious effects, participation will not be pursued (justice). Participants will not be coerced or put under undue influence to participate and should volunteer to take part (ESRC, 2019). A full de-brief will be given upon study completion through email and telephone contact if indicated.

### Possible benefits:

- Participants may not benefit directly from taking part in this study. However, the results should help our understanding of FCP primary care practice and in managing sickness absence for patients with MSK conditions. It is expected that this research will produce recommendations which will be beneficial to FCP staff, stakeholders and patients.

### Community engagement (if applicable): N/A

### Return of results and incidental findings (if applicable):
• If a participant discloses professional misconduct and/or poor practice during the study, GCU and CSP ethics and whistleblowing policy will be adhered to, including escalation in reporting to professional bodies and/or HCPC
• Full de-brief and electronic dissemination of findings, including summaries will be given throughout the Delphi Study and post online NGT.
• Participants will have free access to all published material post data collection

<table>
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<tr>
<th>Post-trial access (if applicable):</th>
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<tr>
<td>• N/A</td>
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<tr>
<th>Payment and/or reimbursement:</th>
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<tbody>
<tr>
<td>• Small monetary reimbursement for their time and expenses will be considered, along with gift vouchers or a prize draw for questionnaire responses. Both techniques may encourage responses but will not override the principles of freely given and fully informed consent (ESRC, 2019).</td>
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<tr>
<th>Study related injury or difficulties:</th>
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<tr>
<td>Study related difficulties will be reported to the chief investigator and reported through dissemination channels to all ethics and project completion teams. Study related difficulties will be documented in final report and any primary data dissemination channels. COVID-19 considerations will be documented, especially if staff are needed and are mobilised for frontline NHS activities. The study may be paused for practical reasons if there are not enough participants or research team members to conduct the research.</td>
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<tr>
<th>Other ethical concerns:</th>
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<tr>
<td>• Nil of note</td>
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References:


Appendix 5. NGT participant information sheet

Exploring Fitness for Work Competencies for Primary Care First Contact Practitioners (Physiotherapists) in the Management of Musculoskeletal Conditions in the UK: A Nominal Group Technique Participant Information Sheet

Introduction and study purpose

You are invited to take part in a study about fitness for work recommendations and sickness absence certification powers for first contact physiotherapists (FCPs) within primary care. The primary aim of this UK-based study is to identify core clinical competencies for primary-care-based FCPs working in the field of adult musculoskeletal (MSK) care. The research is being carried out by Cameron Black at Glasgow Caledonian University under the supervision of Dr Heather Gray and Dr Sivaramkumar Shanmugam.

Your contribution to the study will help us to understand more about professional practice currently and will also allow us to develop our work in this critical area. It is anticipated that national core clinical competencies and a curriculum framework will be published to assist FCPs decision making with regards to the management of occupational health aspects for adults with MSK conditions.

Before you decide whether to take part, it is important for you to understand what participation in the study will involve for you. Please take time to read the following information carefully and discuss it with others if you wish. Please contact us at the address below if you would like more information.
Study Plan

**Step 1: Nominal Group Technique** with FCP experts to understand current practice in the UK. What are the current challenges in discussing work related aspects such as entering/returning to/remaining in work? What do you feel are the current challenges you face in meeting workplace recommendations or fitness for work certification in primary care?

**Step 2: Summarise findings** from the first step and seek opinion on potential trial designs/use data for National Delphi Study.

**What will I have to do if I take part?**

If you are interested in taking part, you are asked to complete both copies of the study consent form, one copy of which should be returned by email to Cameron Black (cblack224@caledonian.ac.uk) and the other kept for your records. You will be invited to attend a nominal group technique meeting with the researcher at a time convenient to yourself and other experts in the field. It is anticipated that the meeting will take around 2 hours. Refreshments and catering will be provided. Further information regarding this will be provided before participation- so that you can decide if you want to participate.

**Do I have to take part?**

No. It is up to you to decide whether to take part. If data collected has been anonymised prior to you indicating your wish to withdraw it will not be possible to remove this from the study. The events will use the nominal group technique (NGT), which means that participants do not have to speak at all, if they do not want to, as they will be writing their responses to questions.

**What are the possible disadvantages and risks of taking part?**

It is not anticipated that taking part in this research will have any negative effects. Participants’ needs will take precedence over the actual process of the research. While the success and completion of the study depends upon the expert’s willingness to participate, if
such participation places an individual at risk or causes deleterious effects, participation will not be pursued.

Due to the face-to-face nature, participants will be discussing and debating with fellow group members, and they will be invited to provide considered responses, this may be uncomfortable for some and if deemed unsuitable they will be free to refuse participation or withdraw at any point in the meeting without consequence.

**What are the possible benefits of taking part?**

You may not benefit directly from taking part in this study. However, the results should help our understanding of FCP primary care practice and in managing sickness absence for patients with MSK conditions. It is expected that this research will produce recommendations which will be beneficial to FCP staff, stakeholders, and patients.

**What happens when the research study stops?**

The information that is collected during the consultation events will be summarised and themed and no individual will be identified from any of the data collected. The data collected will be used in a final project report and may be published in a journal or presented at a conference at a later date. Data will be stored on GCU’s secure server on a password protected computer.

**What if there is a problem?**

If you are concerned about your participation in the study and would like to speak with someone outwith the research team, please contact Dr Keith Halcro, Senior Lecturer, keith.halcro@gcu.ac.uk, +44 0141 331 8527

**What will happen to the information that you give?**

All interview notes and electronic copies of data will be stored on an encrypted data drive. Field notes will be stored within a locked filing cabinet in a locked office that only Dr. H. Gray and Dr. S. Shanmugam (GCU Academic Staff) have access to. The information will be kept on a password protected PC stored in a locked office which only 2 members of academic staff have access too. Only the research team will have direct access to the data
collected which will be kept for a maximum of five years. All data will be fully anonymised, and every effort will be made to ensure confidentiality is maintained at all times. No attempt will be made to identify any individuals taking part in the study. Data will be retained in line with GCU’s retention policy for 5 years in an appropriate format and storage facility.

**Will my taking part in this study be kept confidential?**

Yes. Ethical and legal practice will be followed, and all of your information will be handled in confidence. Names and addresses are stored securely and will be destroyed after the study has been completed. The responses that you provide will be treated in confidence. Your rights are protected under the General Data Protection Regulation and any information that might identify you will not be shared outside of the research team. No identifying information will appear in any documents or in the final report.

**Who is organising and funding the research?**

This research is being funded by Glasgow Caledonian University. Further funding may be obtained from the CSP’s Charitable Trust.

**What will happen to the results of the research study?**

The data will be analysed, and results will be made available to a range of people, including academics, professional staff and researchers through written reports, established website reports, the media, presentations, and journal publications. However, it will not be possible to identify any individual participant from these reports or publications.

**Who has reviewed the study?**

The School of Health and Life Sciences ethics committee for Psychology, Social Work and Allied Health Sciences has granted ethical approval for the study. Consent will be obtained by Cameron Black. You will receive a copy of all signed consent materials.

**Further information and contact details**
You can get more study information or discuss the project with the research team at: cblack224@caledonian.ac.uk, +44 7527254140 or Project Supervisor: h.gray@gcu.ac.uk, +44 141 331 8115.

**What happens next?**

If you decide you are interested in participating in the study after reading this information sheet, please complete one copy of the consent form attached to this email. One copy of the completed consent form should be retained for your records. If you would like to find out more about the research before participating, please contact one of the research team.

**Thank you for taking the time to read this study information sheet.**
Appendix 6. Delphi participant information sheet

Exploring Fitness for Work Competencies for Primary Care First Contact Practitioners (Physiotherapists) in the Management of Musculoskeletal Conditions in the UK: A Delphi Consensus Study Participant Information Sheet

Introduction and study purpose

You are invited to take part in a study about fitness for work recommendations and sickness absence certification powers for first contact physiotherapists (FCPs) within primary care. The primary aim of this UK-based study is to identify core clinical competencies for primary-care-based FCPs working in the field of adult musculoskeletal (MSK) care. The research is being carried out by Cameron Black at Glasgow Caledonian University under the supervision of Dr Heather Gray and Dr Sivaramkumar Shanmugam.

Your contribution to the study will help us to understand more about professional practice currently and will also allow us to develop our work in this important area. It is anticipated that national core clinical competencies and a curriculum framework will be published to assist FCPs decision making with regards to the management of occupational health aspects for adults with MSK conditions.

Before you decide whether or not to take part, it is important for you to understand what participation in the study will involve for you. Please take time to read the following information carefully and discuss it with others if you wish. Please contact us at the address below if you would like more information.

Study Plan

Step 1: Delphi Study at the UK level to gain consensus on the fitness for work and sickness absence core clinical competencies for MSK FCPs in primary care

Step 2: Summarise findings from the first step and seek opinion on potential trial designs.
What will I have to do if I take part?

If you are interested in taking part, you are asked to complete both copies of the study consent form, one copy of which should be returned by email to Cameron Black (cblack224@caledonian.ac.uk) and the other kept for your records. You will be contacted and invited to participate in the online questionnaires through email (Delphi Study). Further information regarding this will be provided before participation so that you can decide if you want to participate.

Do I have to take part?

No. It is up to you to decide whether or not to take part. You can stop taking part in the study at any time, without giving a reason. If data collected has been anonymised prior to you indicating your wish to withdraw it will not be possible to remove this from the study.

What are the possible disadvantages and risks of taking part?

It is not anticipated that taking part in this research will have any negative effects. Participants’ needs will take precedence over the actual process of the research. While the success and completion of the study depends upon the expert’s willingness to participate, if such participation places an individual at risk or causes deleterious effects, participation will not be pursued. Participants will be invited to provide considered responses, this may be uncomfortable for some and if deemed unsuitable they will be free to refuse participation or withdraw at any point in the online questionnaire without consequence.

What are the possible benefits of taking part?

You may not benefit directly from taking part in this study. However, the results should help our understanding of FCP primary care practice and in managing sickness absence for patients with MSK conditions. It is expected that this research will produce recommendations which will be beneficial to FCP staff, stakeholders and patients.
What happens when the research study stops?

The information that is collected during the consultation events will be summarised and themed and no individual will be identified from any of the data collected. The data collected will be used in a final project report and may be published in a journal or presented at a conference at a later date. Data will be stored on GCU’s secure server on a password protected computer.

What if there is a problem?

If you are concerned about your participation in the study and would like to speak with someone outwith the research team, please contact Dr Keith Halcro, Senior Lecturer, keith.halcro@gcu.ac.uk, +44 0141 331 8527

What will happen to the information that you give?

All electronic copies of data will be stored on an encrypted data drive. The information will be kept on a password protected PC stored in a locked office which only Dr. H. Gray and Dr. S. Shanmugam (GCU academic staff) have access too. Only the research team will have direct access to the data collected which will be kept for a maximum of five years. All data will be fully anonymised and every effort will be made to ensure confidentiality is maintained at all times. No attempt will be made to identify any individuals taking part in the study. Data will be retained in line with GCU’s retention policy for 5 years in an appropriate format and storage facility.

Will my taking part in this study be kept confidential?

Yes. Ethical and legal practice will be followed, and all of your information will be handled in confidence. Names and addresses are stored securely, and will be destroyed after the study has been completed. The responses that you provide will be treated in confidence. Your rights are protected under the General Data Protection Regulation and any information that might identify you will not be shared outside of the research team. No identifying information will appear in any documents or in the final report.
Who is organising and funding the research?

This research is being funded by Glasgow Caledonian University. Further funding may be obtained from the CSP’s Charitable Trust.

What will happen to the results of the research study?

The data will be analysed and results will be made available to a range of people, including academics, professional staff and researchers through written reports, established website reports, the media, presentations and journal publications. However, it will not be possible to identify any individual participant from these reports or publications.

Who has reviewed the study?

The School of Health and Life Sciences ethics committee for Psychology, Social Work and Allied Health Sciences has granted ethical approval for the study. Consent will be obtained by Cameron Black. You will receive a copy of all signed consent materials.

Further information and contact details

You can get more study information or discuss the project with the research team at: cblack224@caledonian.ac.uk, +44 7527254140 or Project Supervisor: h.gray@gcu.ac.uk, +44 141 331 8115.

What happens next?

If you decide you are interested in participating in the study after reading this information sheet, please complete one copy of the consent form attached to this email. One copy of the completed consent form should be retained for your records. If you would like to find out more about the research before participating, please contact one of the research team.

Thank you for taking the time to read this study information sheet.
**Updated Consent Form**

**Exploring Fitness for Work Competencies for Primary Care First Contact Practitioners (Physiotherapists) in the Management of Musculoskeletal Conditions in the UK: An online Nominal Group Technique**

**Cameron Black**

**Participant Consent Form**

Please indicate you have **read and understood** each statement by **initialling each box**.

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<table>
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<tr>
<td>1</td>
<td>I confirm that I have read and understood the information sheet dated 30.03.20 version 1 for the above study and have had the opportunity to ask questions and have had these answered satisfactorily.</td>
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<td>2</td>
<td>I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without consequence to my legal rights.</td>
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<tr>
<td>3</td>
<td>I understand that relevant sections of my data collected during the study may be looked at by individuals from Glasgow Caledonian University, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my data.</td>
</tr>
<tr>
<td>4</td>
<td>I am over 18 years of age.</td>
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</table>
5. I agree to take part in the above study.

6. I understand that my participation will be recorded and analysed, anonymised quotes may be used in publications about the research however it will not be possible to identify me from this information. I give my permission for this.

7. I understand that the results from this work may be published however it will not be possible to identify any participant from this.

__________________________  _______________  _______________
Name or initials of participant  Date  Signature or initials

__________________________  _______________  __________________
Name of person taking consent  Date  Signature

(if different from researcher)

Please keep a copy of this form for yourself, and return a signed copy to:

*Cameron Black, Research Student, School of Health & Life Sciences, GCU Glasgow, G4 0BA*

cblack224@caledonian.ac.uk or 07527254140
## Appendix 7. Delphi and NGT Consent Forms

**Exploring Fitness for Work Competencies for Primary Care First Contact Practitioners (Physiotherapists) in the Management of Musculoskeletal Conditions in the UK: A Delphi Consensus Study**

**Cameron Black**

**Participant Consent Form**

Please indicate you have **read and understood** each statement by **initialling each box**.

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<tr>
<td>7.</td>
<td>I understand that the results from this work may be published however it will not be possible to identify any participant from this.</td>
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<tr>
<td>Name or initials of participant</td>
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<tr>
<th>Name of person taking consent</th>
<th>Date</th>
<th>Signature</th>
</tr>
</thead>
</table>

(if different from researcher)

Please keep a copy of this form for yourself, and return a signed copy to:

*Cameron Black, Principal Investigator, School of Health & Life Sciences, GCU Glasgow, G4 0BA*

cblack224@caledonian.ac.uk or 07527254140
**Updated Consent Form**

Exploring Fitness for Work Competencies for Primary Care First Contact Practitioners (Physiotherapists) in the Management of Musculoskeletal Conditions in the UK: An online Nominal Group Technique

Cameron Black

**Participant Consent Form**

Please indicate you have **read and understood** each statement by **initialling each box**.

<table>
<thead>
<tr>
<th>Number</th>
<th>Statement</th>
<th>Initial</th>
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<tr>
<td>1.</td>
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<td>7.</td>
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<td></td>
</tr>
</tbody>
</table>
Name or initials of participant  Date  Signature or initials

Name of person taking consent  Date  Signature
(if different from researcher)

Please keep a copy of this form for yourself, and return a signed copy to:

Cameron Black, Research Student, School of Health & Life Sciences, GCU Glasgow, G4 0BA

cblack224@caledonian.ac.uk or 07527254140
Pre-NGT meet instructions

“I want to express my appreciation to each of you for attending this online group meeting. I am aware that there are many other commitments currently, especially with the effects of the COVID-19 pandemic. I appreciate the sacrifice you have made to attend and welcome each of you warmly to Thursday’s session. Our main aim is an important one. At the conclusion of this meeting, we should be able to anticipate and answer many of the questions, difficulties, and training solutions for FCP practice when dealing with fitness for work, sickness absence and in having work conversations.

In our meeting it is important that each of us fully participates. Each of us here is an important group resource. There are no status differences between us in this meeting. Our success depends on every member fully sharing the insight from his or her own OH administrative, professional, or technical perspective. I appreciate, therefore, the willingness of every one of you to fully share your ideas and work intensely for 60-120 minutes during the online meeting. If you do not want to share, there is no pressure to.

If you would like to be silent you can also, much emphasis is in the ranking stage, so if you are not keen to talk, no problem at all. The ideas which you generate in this online meeting will become the basis for follow-up training, skill development and discussion.”

I will now share some details on joining, what the NGT is and what you need to complete pre-meeting.

Firstly, a guest link and joining instructions will be shared nearer the time, the format will be Blackboard Collaborate. If possible, we recommend a device with speakers/headphone and a reliable WI-FI or mobile signal. Mobile access can be via the Blackboard App or though Android Chrome browser or for iOS 11+ a safari browser. https://youtu.be/1W4sGpVmJaY follow this video (2min) for further information.

Data will be collected from FCP experts using the Nominal Group Technique.

What is the Nominal Group Technique (NGT)?
• The NGT is a face to face, small group, consensus development method that follows three stages: ideas generation; group discussion and clarification; and individual ranking/scoring (Fox, 1993; Potter et al., 2004).

• NGT is rooted in co-production as it originally was established as a consensus development method in public sector, service user engagement settings.

Why use the NGT?

• The NGT is highly structured, therefore, increasing reproducibility across different participant groups.

• Research has demonstrated that the NGT results in participants generating a larger number & higher quality of ideas than traditional focus groups.

• It enables enhanced confidentiality of responses and maximises each participant’s contribution.

• The NGT enables the amalgamation of the results from nominal groups that are conducted consecutively and/or concurrently.

Pre-meeting at home or work (Ideas generation)

“Would each of you please look carefully at the below question.”

“You will notice that these questions are the focus for our meeting next week:

It is anticipated that FCPs will be able to provide fitness for work recommendations and sickness certification for patients with MSK conditions within primary care from 2020. In addition, the CSP and NHS have the ambition for FCPs to have conversations with patients about entering/returning to/remaining in work.
Question 1 – [https://padlet.com/mrcameronblack/8kiog7m77cjbr4e](https://padlet.com/mrcameronblack/8kiog7m77cjbr4e)

As an OH specialist, what do you feel are the challenges FCPs face in meeting this multi-stakeholder ambition?

N.B. these could be intrinsic or extrinsic, e.g., systems, time, pathways, training, resources, signposting, culture, professional identity, lack of training, time etc.

Question 2 – [https://padlet.com/mrcameronblack/ss2xorwqw0qck8nv](https://padlet.com/mrcameronblack/ss2xorwqw0qck8nv)

What do you feel are FCPs key learning and development needs in response to this ambition?

N.B. these can relate to asking the work question, screening, ACPOHE framework, record keeping, using the AHP Fitness for Work Report, etc.

“I would like each of you to take 5-10 minutes to list your ideas in response to these questions, in a brief phrase or a few words in the links provided above (double click on the padlet to write)

Please work independently at home or in work to identify the challenges involved in meeting the above ambition and the learning and development needs in response to the ambition. During this period of independent thinking, I ask that you not talk to other family members, friends, and colleagues, try to turn off any mobile phones and other devices that may distract you, interrupt your thinking etc.

Since this is the opportunity for each of us to prepare for his or her contributions to the meeting, I would appreciate intense effort during the next 5-10 minutes. At the end of 5-10 minutes, call time and share your responses on the padlet via the + icon. Try to write answers on the padlet succinctly, e.g., a brief sentence or a few words. Remember: responses are all anonymous, no one needs to identify what they wrote at any time. Please view others’ responses on the padlet, this may prompt new ideas that you have not considered.”

Thank you and see you during the meeting! Link to follow
Appendix 8. Participant recruitment emails

Recruitment Emails:

I am a student on the Professional Doctorate Programme at Glasgow Caledonian University, and I am conducting a study to fulfil the requirements of the Thesis. The study explores fitness for work competencies for Primary Care First Contact Practitioners (FCP Physiotherapists) in the Management of Musculoskeletal Conditions in the UK. I know that the COVID-19 unfolding crisis is affecting us all in some way and appreciate your time in reading this.

I am looking for expert ACPOHE members that can read, speak, and understand English and potentially could contribute to an online nominal group technique meeting. This meeting is virtual without physical interaction. I would be very grateful if you would be willing to take part in my study. If you are interested, please contact me on this address and read through the attached information sheet and consent form. If you do so, you will have the chance to find out more about the study before coming to any decision. You would be under no obligation to take part.

The study is supervised by Dr Heather Gray and she can be contacted on h.gray@gcu.ac.uk. The use of email to recruit participants for this study has been approved by GCU’s School of Health & Life Sciences Research Ethics Committee.

Kind regards,

Cameron

Cameron Black BSc MSc MCSP
Professional Doctoral Student, Glasgow Caledonian University, cblack224@caledonian.ac.uk
Dear All,

I am a student on the Professional Doctorate Programme at Glasgow Caledonian University, and I am conducting a study to fulfil the requirements of the Thesis. The study explores fitness for work competencies for Primary Care First Contact Practitioners (FCP Physiotherapists) in the Management of Musculoskeletal Conditions in the UK. I know that the COVID-19 unfolding crisis is affecting us all in some way and appreciate your time in reading this.

I am looking for expert FCP members that can read, speak and understand English and potentially could contribute to an online nominal group technique meeting. This meeting is virtual without physical interaction. I would be very grateful if you would be willing to take part in my study and if you are interested, please contact me on this address and read through the attached information sheet and consent form. If you do so, you will have the chance to find out more about the study before coming to any decision. You would be under no obligation to take part.

The study is supervised by Dr Heather Gray and she can be contacted on h.gray@gcu.ac.uk. The use of email to recruit participants for this study has been approved by GCU’s School of Health & Life Sciences Research Ethics Committee.

Feel free to share with FCP/MSK colleagues.

Kind regards,

Cameron

Cameron Black BSc MSc MCSP

Professional Doctoral Student, Glasgow Caledonian University, cblack224@caledonian.ac.uk

RECRUITMENT EMAIL

I am a student on the Professional Doctorate Programme at Glasgow Caledonian University, and I am conducting a study to fulfil the requirements of the Thesis. This study explores fitness for work competencies for Primary Care First Contact Practitioners (FCP Physiotherapists) in the Management of Musculoskeletal Conditions in the UK.
I am looking for participants that are employed as FCPs within the UK for the last three months and have the ability to read and understand English and potentially could contribute to an online Delphi questionnaire. I would be very grateful if you would be willing to take part in my study. If you are interested, please contact me at the address below. If you do so, you will have the chance to find out more about the study before coming to any decision. You would be under no obligation to take part.

My study is supervised by Dr Heather Gray, and she can be contacted on h.gray@gcu.ac.uk. The use of email to recruit participants for this study has been approved by GCU’s School of Health & Life Sciences Research Ethics Committee

Cameron Black BSc MSc MCSP

Principal Investigator, Glasgow Caledonian University, cblack224@caledonian.ac.uk

Dear First Contact Practitioners!

I am a student on the Professional Doctorate Programme at Glasgow Caledonian University, and I am conducting a study to fulfil the requirements of the Thesis. The study explores fitness for work competencies for Primary Care First Contact Practitioners (FCP Physiotherapists) in the Management of Musculoskeletal Conditions in the UK.

I am looking for participants that are employed as FCPs within the UK for the last three months and have the ability to read and understand English and potentially could contribute to an online Delphi questionnaire.

I would be very grateful if you would be willing to take part in my study. If you are interested, please contact me at the address below. If you do so, you will have the chance to find out more about the study before coming to any decision. You would be under no obligation to take part.
Appendix 9. NGT online digital pre-session information guide and instructions

“I want to express my appreciation to each of you for attending this online group meeting. I am aware that there are many other commitments currently, especially with the effects of the COVID-19 pandemic. I appreciate the sacrifice you have made to attend and welcome each of you warmly to Tuesdays session.

Our main aim is an important one. At the conclusion of this meeting, we should be able to anticipate and answer many of the questions, difficulties, and training solutions for FCP practice when dealing with fitness for work, sickness absence and in having work conversations.

In our meeting it is important that each of us fully participates. Each of us here is an important group resource. There are no status differences between us in this particular meeting. Our success depends on every member fully sharing the insight from his or her own administrative, professional or technical perspective. I appreciate, therefore, the willingness of every one of you to fully share your ideas and work intensely for 60-120 minutes during the online meeting. If you do not want to share, there is no pressure to.

If you would like to be silent you can also, much emphasis is in the ranking stage, so if you are not keen to talk, no problem at all. The ideas which you generate in this online meeting will become the basis for follow-up training, skill development and discussion.” I will now share some details on joining, what the NGT is and what you need to complete pre-meeting.

Firstly a guest link and joining instructions will be shared nearer the time, the format will be Blackboard Collaborate. If possible, we recommend a device with speakers/headphone and a reliable WI-FI or mobile signal. Mobile access can be via the Blackboard App or though Android Chrome browser or for iOS 11+ a safari browser.

https://youtu.be/1W4sGpVmJaY follow this video (2min) for further information.
Data will be collected from FCP experts using the Nominal Group Technique.

What is the Nominal Group Technique (NGT)?

• The NGT is a face to face, small group, consensus development method that follows three stages: ideas generation; group discussion and clarification; and individual ranking/scoring (Fox, 1993; Potter et al., 2004).

• NGT is rooted in co-production as it originally was established as a consensus development method in public sector, service user engagement settings.

Why use the NGT?

• The NGT is highly structured, therefore, increasing reproducibility across different participant groups

• Research has demonstrated that the NGT results in participants generating a larger number & higher quality of ideas than traditional focus groups.

• It enables enhanced confidentiality of responses and maximises each participant’s contribution.

• The NGT enables the amalgamation of the results from nominal groups that are conducted consecutively and/or concurrently.

Pre-meeting at home or work (Ideas generation)

“Would each of you please look carefully at the below question.”

“You will notice that these questions are the focus for our meeting next week:
It is anticipated that FCPs will be able to provide fitness for work recommendations and sickness certification for patients with MSK conditions within primary care from 2020. In addition the CSP and NHS have the ambition for FCPs to have conversations with patients about entering/returning to/remaining in work.

1) Question 1 - https://padlet.com/cblack224/ysvx31s5p70fd9u3

What do you feel are the challenges you face in meeting this multi-stakeholder ambition?

N.B. these could be intrinsic or extrinsic, e.g. systems, time, pathways, training, resources, signposting, culture, professional identity, lack of training.

2) Question 2 - https://padlet.com/cblack224/lby1b48vw1zeoq3i

What do you feel are your key learning and development needs in response to this ambition?

N.B. these can relate to asking the work question, screening, record keeping, using the AHP Fitness for Work Report, etc.

“I would like each of you to take 5-10 minutes to list your ideas in response to these questions, in a brief phrase or a few words in the links provided (double click on the padlet to write)

Please work independently at home or in work to identify the challenges involved in meeting the above ambition and the learning and development needs in response to the ambition. During this period of independent thinking I ask that you not talk to other family members, friends and colleagues, try to turn off any mobile phones and other devices that may distract you, interrupt your thinking etc.

Since this is the opportunity for each of us to prepare for his or her contributions to the meeting, I would appreciate intense effort during the next 5-10 minutes. At the end of 5-10 minutes, call time and share your responses on the padlet via the + icon. Try to write answers on the padlet succinctly, e.g. a brief sentence or a few words. Remember: responses are all anonymous, no one needs to identify what they wrote at any time. Please
view others’ responses on the padlet, this may prompt new ideas that you have not considered.

Thank you and see you on the 12th May 3-5pm! Link to follow.

Exploring fitness for work competencies for primary care FCP practice

Nominal Group Technique Guide

Version 1.0
Prepared by Cameron Black
cblack224@caledonian.ac.uk

Adapted from a Guide developed by Heather Gray
Why is this NGT being conducted?

The Department of Health and the Department of Work & Pensions started development work published within Improving Lives: The Future of Work, Health and Disability, based on comprehensive stakeholder consultations to legislate the extension of fit note certification to other non-medical allied health professionals along with a set of competencies to help in its completion (UK Government, 2017). Based on this Government white paper it is likely that physiotherapists as First Contact Practitioners (FCP) will be professionals able to provide fitness for work recommendations and sickness absence (SA) certification powers in the future.

There is empirical evidence that physiotherapists are well suited to provide expert management of musculoskeletal conditions (MSK) in general practice and primary healthcare settings with associated high levels of patient satisfaction (Goodwin and Hendrick, 2016). However, systematic reviews have observed the low quality of the primary data in this field, having mostly included observational design data, which may bias interpretation in favour of the physiotherapy substitute role (Saxon et al., 2014; Marks et al., 2017). A key impetus for the proposed research, there is a lacuna of empirical research that explores the implementation of FCPs for patients with MSK conditions within primary care and the likely added responsibility necessitated by such roles. Indeed, central to the proposed research, the question arises as to whether and to what extent FCPs feel they have the sufficient skills to assess, manage and influence the specific occupational health aspects pertinent to musculoskeletal conditions in primary care (PC).

It is recognised that work is important for good health and wellbeing and that being able to remain in or return to work is an important element of recovery and condition management. FCPs have a strong role to play in PC, not least broadening the GP team but in enabling MSK patients overcome health barriers to work and achieve job-related goals. Lastly, in recognition, perhaps not all FCPs are asking MSK patients about work and therefore this study aims to establish baseline information on the challenges involved and learning development needs in relation to this.

What method will be used?

Data will be collected from FCP expert participants using the Nominal Group Technique.

What is the Nominal Group Technique (NGT)?

- The NGT is a face to face, small group, consensus development method that follows three stages: ideas generation; group discussion and clarification; and individual ranking/scoring (Fox, 1993; Potter et al., 2004).
- NGT is rooted in co-production as it originally was established as a consensus development method in public sector, service user engagement settings.

Why use the NGT?

- The NGT is a highly structured discussion to achieve consensus among participants. The process involves participants identifying and contributing ideas toward a topic that can be prioritized and ranked.
- Research has demonstrated that the NGT results in participants generating a larger number & higher quality of ideas than traditional focus groups.
- It enables enhanced confidentiality of responses and maximises each participant’s contribution.
• The NGT enables the amalgamation of the results from nominal groups that are conducted consecutively and/or concurrently.

Recruitment targets

We are looking to recruit 8-12 participants

Facilitator

Group facilitators will be the Principal Investigator along with a co-facilitator that has substantial experience in the running of nominal groups and other consensus methods.

Participant Inclusion Criteria

We are looking to collect data from FCP experts that are involved in primary care but are not necessarily familiar with the topic or in vocational rehabilitation.

All participants must fulfil the following criteria to be included in the group:

• Completion of a UK qualifying programme in Physiotherapy
• Member of the Chartered Society of Physiotherapy (CSP) and Health and Care Professions Council Registered (HCPC)
• May hold or be working towards a prescribing qualification
• Currently employed as a first contact physiotherapist within primary care for the last 3 months
• Ability to read, speak and understand English and willing to complete an online questionnaire and/or NGT

Nominal Group practicalities

• Recruitment nos. - recruit 8-12 per group, N.B. invitations of 12 + to the group in anticipation of drop outs
• Length of group - 1.5-2 hours
• Number of facilitators – always 2
• Refreshments - funded by CSP
• Try to link the nominal group into a session/event, e.g. CSP

Materials Required for Nominal Group

Preferably sent to participants before group for completion

• Information sheets – 1 per participant (see handout);
• Consent forms (included with information sheet) – one for participant, one for facilitator (see handout);
• Demographics collection sheets – 1 per participant (see handout).
At group

- Table and chairs – participants need desk space on which to write – see Figure of room set up;
- Research questions printed on sheets of A4 paper and placed on tables in front of participants (best to only have on table the question that they will be working on at the time);
- Name cards for participants;
- Index cards/sheets of paper on which participants write ideas;
- Flipchart paper, pens and white tac adhesive;
- 12 + pens/ pencils for participants to use;
- Score sheets – 2 per participant (see handout).

Sample Room Set Up
Demographics to Collect at Nominal Group

A demographics collection sheet must be completed by each participant to collect the following:

- Geographical area / Trust
- Band
- No. of post qualification years’ work experience
- Clinical speciality/service area in which s/he is working

Nominal Group protocol

Nominal Group Questions

The following questions will be asked at each group. The first question is fully addressed, and responses ranked, prior to continuing to the second question (see separate handouts for print outs of questions).
Question 1

It is anticipated that FCPs will be able to provide fitness for work recommendations and sickness certification for patients with MSK conditions within primary care from 2020.

The CSP and NHS have ambitions for FCPs to have conversations with patients about entering/returning to/remaining in work.

What are the current challenges you face in meeting this multi-stakeholder ambition?

N.B. these could be intrinsic or extrinsic, e.g. systems, time, pathways, training, resources, signposting, culture, professional identity, lack of training.

Question 2

The CSP and NHS have ambitions for FCPs to have conversations with patients about entering/returning to/remaining in work.

What do you feel are your key learning and development needs in response to this ambition?

N.B. these can relate to asking the work question, screening, record keeping, using the AHP Fitness for Work Report, etc.
Nominal group process

The Figure below diagrammatically represents the NGT process. The following stages are followed systematically.

Figure 20: NGT process

Ref: Focus Group meets Nominal Group Technique: an effective combination for student evaluation? Tünde Varga-Atkins, Jaye McIsaac & Ian Willis; Innovations in Education and Teaching International Vol. 54, Iss. 4, 2017

Prior to nominal group commencing:

- Principal Investigator’s welcoming statement including the: sense of importance concerning the groups task, clarifying the importance of each participants contribution and an indication of the use or purpose of the meeting’s output.
- Participants read Participant Information Sheet and consent form
- Participants sign consent prior to group commencing
- Facilitator introduces group to the process and responds to any questions
Stage 1 - Ideas generation and round robin recording stage:
- Facilitator reads out first question to group, which is also placed on table in written form for viewing by participants throughout.
- Facilitator provides prompts, as written below questions.
- Facilitator reminds everyone that:
  - They will be writing silently and independently
  - Responses are all anonymous, no one needs to identify what they wrote at any time
  - Each response is written on separate card/piece of paper
  - No discussion is to take place until everyone has finished writing.
- Participants **silently** write their responses to the question taking a new piece of card/paper for each response, i.e. there is no discussion or conferring at this stage.
- Participants place responses in middle of table for collection by facilitator.
- Facilitator writes up all responses onto flipchart paper stuck up on wall for all to see.
- Each response is numbered – this is essential for ranking afterwards.
- Similar responses are amalgamated, i.e. don’t put up repeat items.
- Participants are encouraged to view others’ responses on the flipcharts – this can prompt new ideas from them.
- This continues for about 10-15 minutes until no one has any more ideas.

Leader should resist nonprocess clarifications, have the question in written form, model good group behaviour by writing in silence, sanction individuals who disrupt the silent independent activity.

*Figure 21: Sample List of Items Generated on Flipchart – each item numbered*

1. Time
2. Managerial support
3. Lack of training
4. Lack of confidence
5. Not interested
6. No UG training
7. Etc.

Stage 2 - Discussion and clarification stage:
- When the ideas have dried up, everyone reviews the flipchart items.
- Clarification is sought on the ideas written on the flipcharts – everyone must have a shared understanding of the items.
- If it looks like some items are similar – then amalgamate them so that the flipcharts have lists of original and not repeat items.
- If any new items come up at this stage, then they are added to the list on the flipchart(s).
• N.B. when deleting/scoring out any redundant items, do not renumber other items, leave as they are.

PI provides verbal statement: objective is to map the group’s thinking, ideas presented in brief words or phrases, ideas will be taken serially, duplicate items omitted, variation on themes desirable

Figure 22: Example of flipchart sheet after discussion

Stage 3 – Ranking, serial discussion and round stage:
• Each participant is given 2 scoring sheets, one for each question (see handouts) with their ID number inserted on it.
• Facilitator asks each participant to write down on the scoring sheet the top 5 items that they feel are the most important, including the number of that item on the flipchart.
• Once they have written down 5 items, they are asked to rank them from 1-5 (most to least important), i.e. 1 to most important and 5 to least important.
• Once ranking is complete they hand the scoresheets to the facilitator who checks that they have been completed and ranked correctly – if not, hand back to participant for accurate completion.
• Store scoring sheets securely.

This process is repeated for the second question.

Stage 4 – Closing group
• Offer thanks for contribution
• You may wish to summarise from the scoresheets if there are any obvious themes/top ranked items. The votes consider group judgement and determines the outcome of the meeting, provides closure and accomplishment and documents the group judgement.
• Advise that involvement in the nominal group feeds into EBP and CPD—evidence of participation in research pillar of practice and improving quality of service delivery.
• Outline what happens next with the work that was done in the group: After the group is over

Do not throw away any raw data on flipcharts, demographics, score sheets, etc.

Facilitator needs to:
• Photograph all flipchart sheets
• Type data from flipchart/scoresheets into Excel spreadsheet provided by research team
• Store securely demographic information/consent forms/scoresheets
Appendix 10. NGT FCP and ACPOHE Timings and Prompt
Sheet used by Research Team

FCP NGT Welcome Statement – 1500hrs

Co-researchers to document number of participants into google docs sheet

“I want to express my appreciation to each of you for attending this online group meeting. I am aware that there are many other commitments currently, especially with the effects of the COVID-19 pandemic. I appreciate the sacrifice you have made to attend and welcome each of you warmly to today’s session.

Our main aim is an important one. At the conclusion of this meeting, we should be able to anticipate and answer many of the questions, difficulties and training solutions for FCP practice when dealing with fitness for work, sickness absence and in having work conversations.

In our meeting it is important that each of us fully participates. Each of us here is an important group resource. There are no status differences between us in this particular meeting. Our success depends on every member fully sharing the insight from his or her own administrative, professional or technical perspective. I appreciate, therefore, the willingness of every one of you to fully share your ideas and work intensely for 60-120 minutes during the online meeting. If you do not want to share, there is no pressure to.

If you would like to be silent you can also, much emphasis is in the ranking stage, so if you are not keen to talk, no problem at all. The ideas which you generate in this online meeting will become the basis for follow-up training, skill development and discussion.”

A cordial and warm welcome

Sense of importance concerning the group’s task

Clarify importance of each member’s contribution
Stage 1 - Ideas generation stage / Record ideas (if you still haven’t)

“Would each of you please look carefully at the link in the text box.”

“You will notice that this question is the focus for the first part of our meeting:

- Facilitator reads out first question to group, which is in the padlet for viewing by participants throughout (COPY & PASTE padlet links)
  https://padlet.com/cblack224/ysvx31s5p70fd9u3
  
  o Responses are all anonymous, no one needs to identify what they wrote at any time

- view others’ responses on the padlets – this can prompt new ideas from them.

- Remember not to duplicate items and keep phrases short and succinct.

It is anticipated that FCPs will be able to provide fitness for work recommendations and sickness certification for patients with MSK conditions within primary care from 2020. In addition the CSP and NHS have the ambition for FCPs to have conversations with patients about entering/returning to/remaining in work.

1) Question 1 - https://padlet.com/cblack224/ysvx31s5p70fd9u3

What do you feel are the challenges you face in meeting this multi-stakeholder ambition?

N.B. these could be intrinsic or extrinsic, e.g. systems, time, pathways, training, resources, signposting, culture, professional identity, lack of training.
1505hrs - 1520hrs- participants write responses to Question 1.

recording of ideas

“I would like to have each of you share your ideas with other members of the group, if you are happy to do so. If not, no problem.

“This is an important step because our list of ideas will constitute a guide for future discussion, help us understand the richness of ideas we have to work with, and stimulate additional ideas.

“If someone else in the group lists an idea which you also had on your worksheet, try not to repeat the idea. If, however, in your judgement the idea on your padlet contains a different emphasis or variation, we would welcome the idea. Variations on a theme are important and will help us be creative.”

Heather, Shiv & Cameron to export items and share excel sheet with items for Question 1.

1530hrs

Stage 2 - Discussion and clarification stage:

“Now that we have listed our ideas on the padlet, I want to take time to go back and briefly discuss ideas. The purpose of this discussion is to clarify the meaning of items on the padlet. It is also our opportunity to express our understanding of the logic behind the idea, and the relative importance of the item. We should feel free to express varying points of view or to disagree.

“We will, however, want to pace ourselves so that each of the items on the chart receives the opportunity for some attention, so I may sometimes ask the group to move on to further items.

“Finally, let me point out that the author of the item need not feel obliged to clarify or explain an item. Any member of the group can play that role.”
Item 1. “Are there any questions or comments group members would like to make about Item 1, maybe raise our hand and then talk?”

- When the ideas have dried up, everyone reviews the padlet items.
- Clarification is sought on the ideas written on the padlets everyone must have a shared understanding of the items.
- If it looks like some items are similar – then amalgamate them so that the flipcharts have lists of original and not repeat items (use text box if possible, so everyone does not talk over one another)
- If any new items come up at this stage, then they are added to the list on the padlet.
- N.B. when deleting/scoring out any redundant items, do not renumber other items, leave as they are.

5-minute break to export padlet?

1545hrs

Stage 3 - Ranking stage:

“We have now completed our discussion of the entire list of ideas, have clarified the meaning of each idea, and have discussed the areas of agreement and disagreement. At this time, I would like to have the judgement of each group member concerning the most important ideas on the list.”

“This will require careful thought and effort on your part.”

“As you look at the flip chart sheets and find an item which you feel is very important, please record the item on the Google Docs form via your initials.”

- Facilitator asks each participant to write down on the Google Docs sheet the top 5 items that they feel are the most important and to rank them from 1-5 (most to least important), i.e. 1 to most important and 5 to least important.
- Researchers check that they have been completed fully and ranked correctly (e.g. 1,1,3,4,5)
“Some of us may have not yet completed our selection of the 5 most important items. If you have already finished, please take time to recheck to be sure you have made the best selection. Also, let’s not disturb those group members who are still making decisions.”

It may be worthwhile to briefly examine the voting pattern in front of us to see if there are any inconsistencies, surprises, or differences members wish to comment on.

“The purpose of this discussion is not to pressure any member to change his or her vote. On the other hand, if we gain additional clarification, some members may wish to modify their original vote.”

“Once again, the purpose of this discussion has not been to pressure you to change your original vote. Indeed, you should think carefully before doing so. However, if you honestly have a new perspective as a result of the discussion, you should change your vote.”

This process is repeated for the second question. 10-minute break pre-question?
https://padlet.com/cblack224/lby1b48vw1zeoq3i

1) Question 2 - https://padlet.com/cblack224/lby1b48vw1zeoq3i

What do you feel are your key learning and development needs in response to this ambition?

_N.B. these can relate to asking the work question, screening, record keeping, using the AHP Fitness for Work Report, etc._

Stage 4 – Closing group

- Offer thanks for contribution and for taking the time to attend, especially under the current circumstances
- You may wish to summarise from the scoresheets if there are any obvious themes/top ranked items.
• Advise that involvement in the nominal group feeds into research to change practice and improving quality of FCP service delivery.

• This will inform a national Delphi study – with consensus on learning and development needs.

After the group is over

**Do not throw away** any raw data on padlets or text box. Recording downloaded.

**Welcome Statement – 1500hrs**

Co-researchers to document number of participants into google docs sheet.

“I want to express my appreciation to each of you for attending this online group meeting. I am aware that there are many other commitments currently, especially with the effects of the COVID-19 pandemic. I appreciate the sacrifice you have made to attend and welcome each of you warmly to todays session.

*Our main aim is an important one. At the conclusion of this meeting, we should be able to anticipate and answer many of the questions, difficulties and training solutions for FCP practice when dealing with fitness for work, sickness absence and in having work conversations.*

*In our meeting it is important that each of us fully participates. Each of us here is an important group resource. There are no status differences between us in this particular meeting. Our success depends on every member fully sharing the insight from his or her own administrative, professional or technical perspective. I appreciate, therefore, the willingness of every one of you to fully share your ideas and work intensely for 60-120 minutes during the online meeting. If you do not want to share, there is no pressure to.*
If you would like to be silent you can also, much emphasis is in the ranking stage, so if you are not keen to talk, no problem at all. The ideas which you generate in this online meeting will become the basis for follow-up training, skill development and discussion.”

A cordial and warm welcome

Sense of importance concerning the group’s task

Clarify importance of each member’s contribution

Indication of the use or purpose of the meeting’s output

Stage 1 - Ideas generation stage / Record ideas (if you still haven’t)

“Would each of you please look carefully at the link in the text box.”

“You will notice that this question is the focus for the first part of the meeting:

Facilitator reads out first question to group, which is in the padlet for viewing by participants throughout (COPY & PASTE padlet link)

https://padlet.com/mrcameronblack/8kiog7m77cjbr4e

- Responses are all anonymous, no one needs to identify what they wrote at any time

- view others’ responses on the padlets—this can prompt new ideas from them.

- Remember not to duplicate items and keep phrases or statements succinct.
It is anticipated that FCPs will be able to provide fitness for work recommendations and sickness certification for patients with MSK conditions within primary care from 2020. In addition the CSP and NHS have the ambition for FCPs to have conversations with patients about entering/returning to/remaining in work.

Question 1 – https://padlet.com/mrcameronblack/8kiog7m77cjobr4e

As an OH specialist, what do you feel are the challenges FCPs face in meeting this multi-stakeholder ambition?

N.B. these could be intrinsic or extrinsic, e.g. systems, time, pathways, training, resources, signposting, culture, professional identity, lack of training, time etc.

1505hrs - 1520hrs- participants write responses to Question 1.

recording of ideas

“I would like to have each of you share your ideas with other members of the group, if you are happy to do so. If not, no problem.

“This is an important step because our list of ideas will constitute a guide for future discussion, help us understand the richness of ideas we have to work with, and stimulate additional ideas.
“If someone else in the group lists an idea which you think, try not to repeat the idea. If, however, in your judgement the idea on your padlet contains a different emphasis or variation, we would welcome the idea. Variations on a theme are important and will help us be creative.”

Heather, Shiv & Cameron to export items and share excel sheet with items for Question 1.

1530hrs

Stage 2 - Discussion and clarification stage:

“Now that we have listed our ideas on the padlet, I want to take time to go back and briefly discuss ideas. The purpose of this discussion is to clarify the meaning of items on the padlet. It is also our opportunity to express our understanding of the logic behind the idea, and the relative importance of the item. We should feel free to express varying points of view or to disagree.

“We will, however, want to pace ourselves so that each of the items on the chart receives the opportunity for some attention, so I may sometimes ask the group to move on to further items.

“Finally, let me point out that the author of the item need not feel obliged to clarify or explain an item. Any member of the group can play that role.”

Item 1. “Are there any questions or comments group members would like to make about Item 1, raise your hand and then speak?”

- When the ideas have dried up, everyone reviews the padlet items.

- Clarification is sought on the ideas written on the padlets everyone must have a shared understanding of the items.

- If it looks like some items are similar – then amalgamate them so that the flipcharts have lists of original and not repeat items (use text box if possible, so everyone does not talk over one another)
• If any new items come up at this stage, then they are added to the list on the padlet.

• N.B. when deleting/scoring out any redundant items, do not renumber other items, leave as they are.

5-minute break to export final padlet?

1545hrs

Stage 3 - Ranking stage:

“We have now completed our discussion of the entire list of ideas, have clarified the meaning of each idea, and have discussed the areas of agreement and disagreement. At this time, I would like to have the judgement of each group member concerning the most important ideas on the list.”

“This will require careful thought and effort on your part.”

“As you look at the flip chart sheets and find an item which you feel is very important, please record the item on the Google Docs form via your initials.”

• Facilitator asks each participant to write down on the Google Docs sheet the top 5 items that they feel are the most important and to rank them from 1-5 (most to least important), i.e. 1 to most important and 5 to least important.

• Researchers check that they have been completed fully and ranked correctly (e.g. 1,1,3,4,5)

“Some of us may have not yet completed our selection of the 5 most important items. If you have already finished, please take time to recheck to be sure you have made the best selection. Also, let’s not disturb those group members who are still making decisions.”

It may be worthwhile to briefly examine the voting pattern in front of us to see if there are any inconsistencies, surprises, or differences members wish to comment on.
“The purpose of this discussion is not to pressure any member to change his or her vote. On the other hand, if we gain additional clarification, some members may wish to modify their original vote.”

“Once again, the purpose of this discussion has not been to pressure you to change your original vote. Indeed, you should think carefully before doing so. However, if you honestly have a new perspective as a result of the discussion, you should change your vote.”

This process is repeated for the second question. 10 minute break pre question if time?

Question 2 - [https://padlet.com/mrcameronblack/ss2xorwqw0qck8nv](https://padlet.com/mrcameronblack/ss2xorwqw0qck8nv)

It is anticipated that FCPs will be able to provide fitness for work recommendations and sickness certification for patients with MSK conditions within primary care from 2020. In addition the CSP and NHS have the ambition for FCPs to have conversations with patients about entering/returning to/remaining in work.

What do you feel are FCPs key learning and development needs in response to this ambition?

N.B. these can relate to asking the work question, screening, ACPOHE framework, record keeping, using the AHP Fitness for Work Report, etc.

Stage 4 – Closing group

- Offer thanks for contribution and for taking the time to attend, especially under the current circumstances
- You may wish to summarise from the scoresheets if there are any obvious themes/top ranked items.
• Advise that involvement in the nominal group feeds into research to change practice and improving quality of FCP service delivery.

• This will inform a national Delphi study – with consensus on learning and development needs.

After the group is over

Do not throw away any raw data on padlets or text box. Recording downloaded.
Appendix 11. Introductory PowerPoint welcome

Welcome to Blackboard Collaborate. We will begin the session shortly.

We will be starting shortly

Please ensure note the following:

- **Please have your speakers on or headphones in** - We will be doing a sound check soon
- **Have your chat function open** – this is the main communication function. Please use the ‘Everybody’ chat unless otherwise stated.
- **Find the ‘raise hand’ button** – we will be using this throughout the session
SOUND CHECK

Please Raise Your Hand ONLY if you can hear the presenter speaking now

SOUND CHECK

Round robin checking sound for group members
Fitness for Work Considerations for FCPs within Primary Care

Main aim

Importance of the topic

Use of NGT – contained within pre info

Online NGT meeting – FCP

Keep video off, only audio for bandwidth

Please do not record, the research team will capture conversations (no ID of participants)

Feel free to raise awareness, visibility and coverage of project – now*

#FCP
#FFW
@black_cameron
@thecsp

*No pics/screenshots during the meeting

Silent ideas silent generation – 10 mins

Points are not for discussing for yet
Appendix 12. Delphi Round 1 Questionnaire

First Round Questionnaire

Thank you for taking the time to complete this questionnaire. Your answers will contribute to a wider group of FCP expert’s views on this important topic. Your involvement and commitment to complete this and subsequent questionnaires is essential and highly valued.

With this e-Delphi study we aim to reach consensus on the FCP competencies needed to undertake fitness for work assessments and provide sickness absence advice within primary care. In addition, the study will help identify learning and development needs for FCPs and disseminate them to professional bodies and educational stakeholders.

For each question you are asked to select either – Agree / No opinion / Disagree. If you disagree then please explain why or provide alternative wording. The aim of this first round is to identify potential competencies for further evaluation in succeeding rounds. The following questionnaire was developed using the reference list below* and by the consensus items obtained through two Nominal Group Technique meetings completed with separate groups of FCP and ACPOHE members in April and May 2020.

*ACPOHE (2015), Behaviours, knowledge & skills required by Physiotherapists working in Occupational Health

Chartered Society of Physiotherapy (2016), Advanced practice in physiotherapy: Understanding the contribution of advanced practice in physiotherapy to transforming lives, maximising independence and empowering populations:


Health Education England (2017), Multi-professional framework for advanced clinical practice in England:

A. **Knowledge: In your opinion, what underpinning knowledge do FCPs need in order to competently provide fitness for work recommendations**

- Yes
- No Opinion
- Disagree

1. The sickness absence framework within the UK, associated risks, prevention through explanation and education about benefits of remaining in work or negative effects of sickness absence
2. The benefits system, sickness absence policy, statutory sick pay, policy and the legal frameworks in which occupational health aspects sit
3. Knowledge of the AHP health and work report and GP’s sick note/med 3
4. Knowledge of organisational factors and their impact on work and health
5. Knowledge of the biopsychosocial (BSP) model and its application to work and disability, BSP assessment and management of those who are off work
6. Knowledge of disability rehabilitation and reintegration aspects into the workplace
7. Knowledge of the identification and management of issues that affect recovery and return to work
8. Knowledge of graded and paced occupational and vocational rehabilitation (work conditioning and work hardening)

**Education style**

1. Using a range of behavioural techniques to challenge beliefs, behaviours, movement, work activities
2. Using evidence informed education and information to care for those off work
3. Use of coaching techniques to influence movement, graded loading, physical activity, healthy living, social and work engagement to build self-efficacy
4. Using specialist techniques to achieve objectives, e.g. Cognitive Behavioural Therapy (CBT) and motivational interviewing
5. Application of thinking and reflection strategies such as mind-mapping to help distinguish differences in patients’ comprehension due to their educational background, etc.
6. Use of self-skills in teaching to develop forward thinking in patients with musculoskeletal disorders, e.g. linking health issues to real life
7. Use of technology, social media, applications to attract the attention and reinforce positive health behaviours

**Any more comments**
B. **Skills: what skills from the following do you feel FCPs need to provide competent fitness for work information?**

1. Analyse the influence of workplace aspects, biopsychosocial aspects and overall perceptions between work and health
2. Analyse the impact of health behaviours on fitness for work
3. Use interpersonal communication skills to enhance and avoid the risk of further sickness absence or delayed return to work
4. The ability to adapt communication according to patient need
5. Demonstrate an advanced level of accurate and efficient selection of inquiry strategies, based on early recognition and correct interpretation of relevant complex clinical cues related to work
6. Gather, synthesise, and appraise from various sources, sometimes incomplete or ambiguous information relating to current and past history, their activities, any injuries, falls, frailty, multi-morbidity, or other determinants of health and wellbeing and characteristics of MSK conditions (pain, stiffness, deformity, weakness, sensory loss, and impact on tasks and **occupation** etc.).
7. Make recommendations to employers regarding individuals’ fitness to work, including through the appropriate use of fit notes and seeking of appropriate occupational health advice.
8. Make recommendations to employers regarding individuals’ fitness to work, including through the appropriate use of fit notes and seeking of appropriate occupational health advice.

C. **Attitudes: what attitudes and behaviours do you feel FCPs need to provide fitness for work information?**

- Yes
- No opinion
- Uncertain

1. Educate and provide information for patients of various cultural backgrounds, socially inequal backgrounds, without discrimination, as it may change health behaviours. Demonstrate awareness and sensitivity to individual aspects listed above
2. Using interactive and technologically advanced methods with patients with musculoskeletal disorders and their families, work colleagues, in order to cater the needs of the patient (e.g. role playing or group decision making)

3. Encourage stakeholders and workplace which may introduce workplace aspects to improve the service offering of primary care networks

4. Provide information to patients about the skills which would improve health behaviour (s)

5. Clinical management techniques (social skills, activity modification, job demands analysis)

6. Assessing and evaluating FCPs in fitness for work aspects

7. Manage in an unbiased manner each individual patient, keeping in mind their individual needs

8. Improve the interaction with stakeholders when needed (GP, AHPs, Specialists, line managers and HRM)

9. Positive attitude toward the role of fitness for work aspects as a whole, understand how important work is as a health outcome

10. Empower (ability to educate patients by preparing and developing teaching and educational skills)

11. Respect other opinions and viewpoints on fitness for work aspects

12. Work according to professional and ethical code of values and behaviours (follow principles and regulations related to FCP practice)

13. Willingness to engage in CPD, primary care development by attending courses and conferences

Please add any comments related to the above questions, e.g. further competencies that need considered or potential barriers to knowledge or skill acquisition in FCP practice.
Appendix 13. Round 2 Delphi Questionnaire example question

Dear Participants,

My name is Cameron Black and I am a Professional Doctoral student at Glasgow Caledonian University. I am emailing you because you have previously responded to a round of my Delphi study questionnaire and consented to participate. The study relates to the generation of an expert consensus list of clinical competencies for FCPs involved in providing sickness absence certification and fitness for work recommendations in primary care.

I am now sending you the SECOND round of this questionnaire. I have attached the results from the FIRST round for you to review – **we had a massive 64 responses!**

Completion of the survey should take around 7 minutes, much shorter than last time.

If you are happy to take part, please just click on the link and follow the instructions.

**Link to Survey:** [https://forms.office.com/Pages/ResponsePage.aspx?id=9ygxn8pM_km8SUerAvepMMwXhFHMVFfSbTcOpxV9JUMOxSEzS01FNzBULjg2NksOM0xOWjIJS4u](https://forms.office.com/Pages/ResponsePage.aspx?id=9ygxn8pM_km8SUerAvepMMwXhFHMVFfSbTcOpxV9JUMOxSEzS01FNzBULjg2NksOM0xOWjIJS4u).

You do not have to take part in the study. Taking part is your decision and you are free to change your mind at any time, without giving a reason, and without any negative consequences. The Information sheet for the study is attached for your information also.

The study has been given ethical approval by the SHLS Research Ethics Committee and is being supervised by Dr. Heather Gray and Dr. Sivaramkumar Shanmugam. The supervisory team can be contacted via h.gray@gcu.ac.uk or sivaram.shanmugam@gcu.ac.uk email addresses.
Please email me if you have any further questions.

Kind regards,

Cameron

Many thanks for your responses to Round 1. The previous round was used to evaluate the level of agreement from the competencies generated from two Nominal Group Techniques and the published literature and to explore whether any additional competencies were required. Only EIGHT items did not reach consensus out of THIRTY competencies in Round 1.

Thank you for consenting and taking the time to complete this second of three rounds of Delphi questionnaires. Your answers will contribute to a wider group of FCP expert’s views on this important topic. Your involvement and commitment to complete this and the final questionnaire is essential and highly valued. With this Delphi study we aim to reach consensus on the FCP competencies needed to undertake sickness absence certification and provide fitness for work recommendations within primary care. In addition, the study will help identify learning and development needs for FCPs and disseminate them to professional bodies and educational stakeholders.

The consensus level for this round is ≥ 70% level of group agreement. Please allow approximately 7 minutes to complete this second round questionnaire, this is a much shorter round than the previous. The questionnaire will autosave so you can re-open it at any point prior to clicking the "submission" button. It would be most appreciated if you could complete the questionnaire by Friday 23rd April 2021. Thank you for your participation. - Cameron Black (Doctoral Candidate, Glasgow Caledonian University) - Dr Heather Gray (Head of Department, Department of Physiotherapy and Paramedicine, Glasgow Caledonian University) - Dr Sivaramkumar Shanmugam (Senior Lecturer in Physiotherapy, Department of Physiotherapy and Paramedicine, Glasgow Caledonian University).

Instructions for Round 2.

Further clarity is needed to evaluate the level of agreement for the underlying competencies identified from Round 1 data analysis and to explore whether any additional competencies are
required. Anonymous feedback is provided from Round 1. Please select one response for each statement using the 5 point Likert scale, where strongly disagree is 1 point and strongly agree is 5 points for each of the below statements. You can also include a comment on any individual competency via the open comment box after the question. You will receive a reminder after 1 week to complete the questionnaire. If you have any queries relating to the questionnaire please contact Cameron Black: cblack224@caledonian.ac.uk

1. Knowledge of graded and paced occupational and vocational rehabilitation.

(Graduated return to work, rehabilitation plans).

This competency reached 65% consensus in Round 1.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
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<td>O</td>
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</tbody>
</table>

Does the above competency represent a competency that you feel is needed to consider sickness absence certification and fitness for work recommendations in primary care?
Appendix 14. Table of selected illustrative quotations from Delphi study

**Round 1**

<table>
<thead>
<tr>
<th>Theme</th>
<th>Illustrative quotations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Time Constraints</strong></td>
<td>‘I do think FCPs are best placed to issue fitness to work as, although we only have 20 min appointments, we have longer with the patient that the GP does. In addition, in an ideal world we would all be using behaviour change techniques, exploring patient beliefs, however in a very busy time constrained practice it is not always possible.’</td>
</tr>
<tr>
<td></td>
<td>‘All great points to include in this questionnaire but I do think we only get 10-20 minutes with patients and therefore needs to be concise. Making sure we get the accurate data off the patient to provide a plan for their workplace and also have the resources to refer the patient onto other services like psychosocial CBT and wellness.’</td>
</tr>
<tr>
<td><strong>Depth of expertise</strong></td>
<td>‘Having worked in Occ. Health for 13 years it is really their role to facilitate the person back to work. In the absence of an active OH then agree that it is the role of PC professional to facilitate and guide pts back to work asap. As we know work is good for our health but only if it is meaningful and rewarding which unfortunately is not the true for all. Perhaps some information on this topic would be valuable also.’</td>
</tr>
<tr>
<td></td>
<td>‘There may be more info needed on a stepped care based approach, especially for those with a disability? Or are we just targeting those mild presentations and aiming to keep people in work. What are the guiding principles for returning to work, staying in or leaving work - it seems to be employer factors, e.g., substandard line management or no support etc.’</td>
</tr>
<tr>
<td><strong>Work-related rehabilitation</strong></td>
<td>‘If work is an important topic to the patient and time is limited, further appts could be made to discuss work-related advice.’</td>
</tr>
<tr>
<td></td>
<td>‘Sickness Absence Certification and Fitness for Work Recommendations should be universally accepted across the health professions. The competencies, training, and standards for first contact physiotherapists (FCP’s) should be the same as...’</td>
</tr>
</tbody>
</table>
those for nurses and doctors. Even a work-related conversation could be conducive for work-related rehab.’

<table>
<thead>
<tr>
<th>Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘A key part of this advice is the embedding of the FCP post within a primary care team where there is evidence of good relationships and communication between professional colleagues. With the way that current FCP delivery is being arranged I am not sure that this is going to work.’</td>
</tr>
<tr>
<td>‘I can readily confirm that someone who is using crutches or fears bending or lifting or has an acute injury is assessed already for fitness to work. The individual’s own motivations are important to gauge my advice. Assuming those of us doing this work have a good, broad experience before moving into this role, a lot of this is ‘soft’ knowledge and confidence, including honest and clear communication.’</td>
</tr>
</tbody>
</table>

Round 2

Especially now due to work from home being more prevalent. As FCPs we would not have time to address this in depth, I think we would direct to their occupational health dept or ask physio outpatients to discuss in more depth. We can touch upon the basics but may not have the time to answer all questions. I do not feel this should be a big part of what the FCP is offering but it may be relevant in certain circumstances to touch upon. Time is so limited in FCP appointment that I am unsure whether this should take priority over other aspects of care. Not a FCP role. Ergonomics has little impact on fitness for work. I do not believe this has a role in a gatekeeper model, too much for primary care. Ergonomic advice has little research on effectiveness and I believe we are moving away from this line of work.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Illustrative quotations</th>
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<tr>
<td>Time Constraints</td>
<td>‘All the above is key, work alongside [to complement] this could be encouraging GPs to utilise these skills and provide relevant time for appts, as assessment/diagnosis/management planning and work-related assessment in one 20 minute appt is not always achievable.’</td>
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<td>[The] biggest limiting factor is time in FCP [practice] but within our consultation work related matters and advice should be seen as priority but all screening tools or outcomes should be fairly quick to use in order to be effective in primary care</td>
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<td>Theme</td>
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<td>‘Any questions relating to skills required need to be considered in context of appointment times. FCPs are expected to get a lot done in what is designed to be a one-off appointment.’</td>
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<td><strong>Depth of expertise</strong></td>
<td>‘Employment law may need to be considered in this. Plus whether the whole sickness absence topic is effective.’</td>
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<td>‘FCPs can do this [and] the introduction of the new Statement of Fitness for Work provides an opportunity for OH professionals to raise their visibility within organizations and demonstrate their contribution through collaborative working and strategic leadership. The input which OH professionals and FCPs will have will depend on the resources available and contractual arrangements in place but OH professionals could help FCP practice.’</td>
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<td>‘Sickness absence has not traditionally been conducted by Physios, especially in primary care. With depth in training, we can be the champions and take on the mantle from GPs.’</td>
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<td>‘I wonder whether it could be made even simpler, e.g., just having a simple conversation, not to change therapeutics etc. Surely all those with MSK conditions could work in some capacity.’</td>
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<td>‘Fitness for work and the drivers that determine patient’s behaviour can be very complex and while we can address some of those issues within the FCP role, more in-depth approaches such as behaviour change, psychological input, social factors may be more challenging to address.’</td>
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<td>‘I do not think it should be an automatic competency for FCPs, but an additional skill that could be learnt. If coaching/lifestyle advice/ liaising with employers is required, this will need more time to do and quite a lot of additional training. In all honesty this is such a large area it really is enough to be its own specialism. Basic sick note should be evaluation of RTW. Ideally mostly remotely for time efficiency.’</td>
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<td><strong>Work-related rehabilitation</strong></td>
<td>‘Competencies for signing fit notes/sick notes is less about the job role and its associated activities and more about the individual. Someone sedentary in an office or check out may have more difficulty managing their condition than a self-employed roofer whose knee keeps giving way, but they are not going to stop for anyone.’</td>
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<td>‘I think we are well placed to provide sick notes and provide some sort of work-related or relevant knowledge, I just think that if people are on long term sick leave, they tend to have either undergone surgery or have cancer etc, or other issues that are preventing their return. As such, they are likely to be more under GPs or specialist services. I see a lot of MSK conditions for people in manual industries - for me helping them more would be useful.’</td>
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<td>‘The vast majority of patients requiring Med3s do so on a short-term basis. A lot of the above is more important on those on the long-term sick perhaps where more specialist services are required to examine their beliefs. Perhaps consider a two-tier approach to sick notes and the honest, evidence-based wore-related advice. Please consider health inequalities and cultural values as this affect some of us.’</td>
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<td>‘If coaching/lifestyle advice/ liaising with employers is required this will need more time to do and quite a lot of additional training on the work aspects.’</td>
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<td>Theme</td>
<td>Illustrative quotations</td>
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<td>‘For discussions about rehabilitation for return to work would require separate sessions.’</td>
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<td>‘I feel comfortable providing advice they [patients] should be on/off work or have a phased return (like a GP would) and feel I [can] provide work-related conversations.’</td>
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<td>‘I would hope that FCPs are in a good place to have conversations regarding activity, graded return and sensible modifications, I am unsure if communicating with employers and completing brief interventions or physical health is completed currently by our medical practitioner colleagues, so unsure of the expectation that we have [the] time, or the skills required to do this. Surely, we should complete similar awareness training to GP and add our professional flair and expertise to this.’</td>
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<td>‘FCPs should be competent in their knowledge of health promotion, use of coaching techniques, use of interpersonal communication skills, promotion of physical activity and use of shared decision making. Work-related conversations may not need further MSK training but more health [and] work conversation training to change behaviour.’</td>
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<td>‘Communication strategies for those in work are needed, especially with an ageing population and for those [living] with chronic conditions. We need to keep people in work for health. This topic is important to consider for FCPs.’</td>
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**Round 3**

**Round 2 Feedback**

1) The group suggested that time constraints and depth of expertise may be limiting factors for our expectation of providing sickness absence certification and fitness for work recommendations. An awareness of work-related rehabilitation was acknowledged and 10% reported that communication was important, but overall, the group suggested that work-related rehabilitation may be too in depth to be considered by FCPs.

2) A basic understanding of ergonomic advice may be beneficial but is not deemed essential. Further signposting may be needed.

3) Risk assessment was acknowledged as important, but only through a 'light' approach. This may be better performed at a workplace level.

4) A brief motivational approach could be used, but possibly not for every individual. With time limited, specialist techniques to change behaviours may be difficult to achieve, 'make every contact count' suggests this could be done at a 'very brief' intervention level within primary care.
5) Thinking and reflections strategies were seen as too in-depth. They may be conducive for secondary care groups. Some experts viewed this as therapeutic rather than fitting with the FCP role.

6) Stakeholder engagement was seen as time consuming. However, some experts suggested that clinical letters could support return to work planning. The patient group was also considered, e.g., some PCNs may be concentrated in areas of high employment with jobs involving physical demands and with individuals experiencing considerable health inequalities, poorer health literacy and a higher incidence and prevalence of MSK and mental health conditions.

7) Screening tools were acknowledged and nearly reached a priori consensus in Round 2. However, experts reported these should be rapid and digital where possible and some questioned as to whether these existed currently in practice and not in academia. Five experts suggested that further screening tools may de-personalise care. It was noted that patients commonly are expected to complete surveys, MSK outcome measures and feedback, and further tools may be a burden. Lastly, two experts questioned whether an outcome measure predicts return to work or aids in a return to work, this was based on the premise that the sickness absence arena is too complex to be captured.

8) The group suggested that FCPs need to collaborate and communicate within the primary care team, so that further roles and responsibilities can be conducted. They questioned what other training primary healthcare professionals receive, e.g., GPs. They questioned what organisations were doing to address this, e.g., Health Education England, NHS Education for Scotland, Medical Training etc. Some competencies were deemed as an Occupational Health role and FCPs would not be able to grasp the physical or mental workload demands of specific jobs. However, some experts were confident in their ability to be prescriptive in deeming patients fit/may be fit/ not fit for work and in providing phased returns.

9) Some experts have worked within Occupational Health previously and they reported that certain OH knowledge and skill competencies have been incorporated into their primary care role. Although, time and health topic again are limiting factors in comprehensive coverage.
10) Overall, experts suggested that it is the patient's own individual expectations as to whether they return to work, i.e., it may not be the injury, condition, job role per se, more the individual assessing whether they can be accommodated with the injury, condition etc. Some experts suggested that patient's employment status would influence this, e.g., self-employment, policy related to employment, sedentary behaviour, certain job demands. Two experts suggested that patients within manual industries may require higher resourced support and ongoing follow ups.
Appendix 15. Round 3 Delphi Questionnaire example question

This is the Final Round. Many thanks for your responses to Round 2, I have summarised responses in the next sections. Thank you for consenting and taking the time to complete this Third of three rounds of Delphi questionnaires. Your involvement and commitment to complete this final questionnaire is essential and highly valued. With the previous results in this Delphi study, we are now close to reaching consensus on the FCP competencies needed to undertake sickness absence certification and provide fitness for work recommendations within primary care.

This final round will provide the final learning and development needs for FCPs so that they can be disseminated to professional bodies and educational stakeholders. Round 3 will allow experts to review Round 2 feedback for further clarification and enable them to make an individual final decision that contributes to the expert group's collective opinion on the topic. Please allow approximately 13 minutes to complete this Third-round questionnaire.

The questionnaire will autosave so you can re-open it at any point prior to clicking the "submission" button. Final feedback can be given via the comment box at the end. This feedback will be included as anonymised feedback on final analysis of this Delphi study.

- Cameron Black (Doctoral Candidate, Glasgow Caledonian University) - Dr Heather Gray (Head of Department, Department of Physiotherapy and Paramedicine, Glasgow Caledonian University) - Dr Sivaramkumar Shanmugam (Senior Lecturer in Physiotherapy, Department of Physiotherapy and Paramedicine, Glasgow Caledonian University)

Round 2 was used to further clarify and evaluate the level of agreement for the underlying competencies identified from Round 1 data analysis. It was also used to explore whether any additional competencies were required.
61 out of 64 experts contributed to Round 2 (95% of the original expert respondents) with no missing data. No additional competencies were suggested by experts. Please review anonymous feedback provided from Round 2 in the next section.

Round 3 (Final) includes competencies that have reached consensus from Rounds 1 and 2. The purpose of Round 3 is to evaluate and verify the final level of agreement of these competencies from the previous rounds. Competencies that have not reached consensus are not included.

For each competency you are asked to select either - Agree / No opinion / Disagree. If you disagree then please explain or provide alternative wording.

- Select AGREE if you believe the competency is needed to undertake sickness absence certification and provide fitness for work recommendations.

- Select NO OPINION if you believe the competency is not relevant to undertake sickness absence certification and provide fitness for work recommendations.

- Select DISAGREE if you believe the competency should be modified, removed or is not relevant to undertake sickness absence certification and provide fitness for work recommendations.

1. The below competency reached 92% consensus (Round 1) indicating that this knowledge competency should be included for the group.

The sickness absence framework within the UK.

(Including policy, procedure, benefits system, statutory sick pay, legal aspects of fitness for work – statute and common law aspects, employer sickness absence policy, Equality Act 2010 etc.).

Are you in agreement that the above competency is one that is needed to be included in our final competency list?
• Agree
• No opinion
• Disagree

If you disagree, please justify in the comment box as to why you are not in agreement for this competency.

Enter your answer:

The below competency reached 91% consensus (Round 1) indicating that this knowledge competency should be included for the group.

**Knowledge of the AHP Health and Work report and GP’s statement of Fitness for Work ‘Fit Note’/ Med 3.**

Are you in agreement that the above competency is one that is needed to be included in our final competency list?

• Agree
• No opinion
• Disagree

If you disagree, please justify in the comment box as to why you are not in agreement for this competency.

Enter your answer: