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SERVICE EVALUATION

Patient perception of group consultations for knee osteoarthritis and influence of area-level deprivation: A service evaluation in a physiotherapy musculoskeletal setting

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Abstract

Introduction: Group consultations are considered valuable for managing musculoskeletal (MSK) conditions. This service evaluation aimed to assess the perception of knee osteoarthritis (OA) patients regarding group consultations in NHS Lanarkshire's MSK service. It also explored the impact of area-level deprivation on patient engagement.

Methods: Surveys were developed to gauge patient satisfaction, preferences, and experiences in virtual and face-to-face (FTF) group consultations. Patients were categorised into opt-out, did not attend (DNA), or opt-in groups. We used the Scottish Index of Multiple Deprivation for area-level deprivation analysis. Descriptive statistics were used for quantitative data, while qualitative data were thematically analysed.

Results: A total of 84 patients participated, and area-level deprivation was similar across groups. Common engagement barriers included disinterest and transportation issues in opt-out and DNA groups, and IT problems in the DNA virtual group. Most patients expressed a preference for one-on-one consultations. FTF opt-in patients reported high satisfaction and increased confidence in managing their condition post-consultation. Virtual opt-in patients had a more neutral satisfaction level and mixed confidence. They were also less comfortable interacting with others during the consultation. Thematic analysis revealed positive experiences, and areas for improvement such as individual privacy concerns and additional resources.

Conclusion: Overall, patients were generally satisfied with group consultations for knee OA. The evaluation identified strategies to enhance engagement. Area-level deprivation did not significantly impact patient participation in group consultations.

KEYWORDS
area-level deprivation, engagement, group consultation, knee osteoarthritis, musculoskeletal, physiotherapy

1 | INTRODUCTION

Almost a third of the population in the UK has a musculoskeletal (MSK) condition. This represents about 16% of the population in Scotland living with a long-term MSK condition and approximate 420,000 people aged 45 and over living with knee osteoarthritis (OA) (Versus Arthritis, 2021). Long-term conditions such as knee OA have a significant impact on people's quality of life and activities of daily living due to symptoms of pain and fatigue. Musculoskeletal conditions also create real challenges for health care services and the wider economy. Treating arthritis conditions in the UK was estimated to have cost £10.2 billion to the economy in 2017 and is projected to increase by 11 times in the next decade (York Health Economics, 2017). Musculoskeletal conditions have also been shown to be more common in areas of greater poverty where individuals who live in the most deprived areas are more likely to report a long-term MSK condition (Versus Arthritis, 2021). The repeated evidence shows that effective patient-centred care is needed to address important multifactorial challenges across the population. A contemporary strategy that has been used to cater for the provision of care in patients with MSK conditions is group consultation (Edelman et al., 2012; Wadsworth et al., 2019). Group consultations, also known as shared medical appointments, are described as care pathways where several patients are consulted by one or more healthcare providers concurrently (Jones et al., 2019). Group consultations are a great alternative to traditional 1:1 appointments, annual review clinics, and education groups. In comparison to self-management programmes, group consultations provide more peer support and group dynamics, which can increase shared learning among individuals with the same condition. A self-management programme employs self-directed strategies where individuals participate for their own personal development, whereas group consultation involves more guidance with input from an external clinician, which tends to enhance the collaborative quality of care for the patients (Barlow et al., 2002). There is growing evidence showing that group consultations may provide better outcomes across healthcare settings for adults and older people with long-term conditions. Recent research on chronic disease has shown that group consultations may enable shared understanding and engagement as well as promote behavioural change and physical health in patients with inflammatory arthritis (Russell-Westhead et al., 2020). It was also indicated that older people with long-term conditions may benefit from the collective support and shared time with other patients during group consultations (Department of Health, 2005). Overall, the introduction of group consultations has established significant benefits for health care settings in reducing cost and increasing efficiency of valued care (Baker et al., 2016). Despite the positives of group consultations, the implementation and sustainability of such an approach require robust leadership roles and responsibilities, and wider organisational support (Swaithes et al., 2021). NHS Lanarkshire's ambition to trial and implement group consultations aimed to make MSK services more accessible and improve patient's outcomes as well as staff efficiency and morale (Jones et al., 2019).

NHS Lanarkshire, receiving approximately 2500 referrals each month into the MSK services, was one of the first UK adopters of the group consultations (Public Health Scotland, 2021). NHS Lanarkshire MSK services first implemented virtual group consultations to support patients with knee OA during the COVID-19 outbreak in 2021. They then implemented a face-to-face (FTF) alternative to retain and engage more patients in the programme and offered the opportunity of 1:1 appointments for those that could not attend group consultations. Currently, the group consultation programme is part of a wider knee OA pathway (Appendix 1), which aims to provide physiotherapy input through evidence-based information, exercise programmes, and advice for a cohort of patients regarding the management of their knee OA. However, despite the general favourable outcomes of the group consultations, there is still a relatively high number of dropouts (i.e., patients that did not attend) and patients opting out from the programme. As any new system approach needs to be evaluated, the appraisal of quality improvement components (i.e., effectiveness, person centred care, timeliness, and equitability) regarding the provision of group consultations is essential (Hughes et al., 2018). Demographic deprivation is also an important factor to consider when investigating the low engagement rate in the clinical population. In fact, evidence has shown that geographical deprivation factors can influence the engagement rate of people who have free access to health care systems (Ellis et al., 2017). A service evaluation aims to assess how well a service is achieving its proposed aims. It is conducted to "benefit the people using a particular healthcare service and is designed and conducted with the sole purpose of defining or judging the current service." (Twycross & Shorten, 2014). The group consultations offer a wider choice for patients' care and allow them to be a strong advocate of the approach. Aligning with wider health and social care strategic policy ambitions, this service evaluation was intended to consolidate the current group consultation programme and enhance realistic medicine in the provision of best possible patient-centred care (NICE, 2022; UK Government, 2021). The expected impact of this service evaluation lies in better care for patients in terms of outcomes and benefits (e.g., patient satisfaction, patient quality of life, and improved self-management strategies) but also in cost-effectiveness impact (e.g., reduced waiting times, better staff time management, remote working options, increased engagement rate) for NHS resources.

This service evaluation aimed to evaluate the overall perception (i.e., satisfaction, preferences, and experiences) of patients with knee OA regarding virtual and FTF group consultations provided within NHS Lanarkshire MSK services. Additionally, it aimed to explore the influence of area-level social deprivation on patients' engagement in group consultations. This service evaluation will benefit many individuals in all health and social care settings, including healthcare providers, unit managers/department leads, and patients with knee OA and long-term MSK conditions.

2 | METHODS

2.1 | Design

This service evaluation used analysis of data collected within NHS Lanarkshire MSK services. This service evaluation was registered with the Research and Development team of NHS Lanarkshire. The methodological approach was constructed around the NHS Education for Scotland quality improvement framework (NES, 2021).

2.2 | Sample

The service evaluation involved the MSK services of NHS Lanarkshire, which comprised two health care facilities (Wester Moffat Hospital and the Douglas Street Community Clinic). The evaluation aimed to recruit patients with knee OA enrolled in the knee OA pathway from February to May 2023. The inclusion criteria for this evaluation followed the pathway criteria and were as follows: patients over 45 years old, medial/diffuse knee pain, non-traumatic onset, activity-related pain, and no early morning stiffness (or resolving in less than 30 min). The exclusion criteria were; non-English spoken patients, and patients with a hearing impairment.

2.3 | Data collection

This service evaluation required the development of surveys (i.e., telephone, online, and letter/paper questionnaires) to address four different groups involved in the knee OA pathway (Figure 1). The surveys were implemented in the opt-out group which consisted of patients who did not respond and/or declined their group consultation class (Appendix 2); the DNA group including patients who were enrolled for either a FTF or a virtual class but DNA at their appointed time (Appendix 3); and the opt-in groups, which consisted of patients who were enrolled and completed either a FTF (Appendix 4) or virtual class (Appendix 5). The surveys contained both quantitative and qualitative questions. Quantitative data included the use of Likert scaling (including 10-point scale) and closed-ended questions, while qualitative data included open-ended questions and individual comments/feedback. The use of the Likert scale and multi-item questionnaires has been shown to be valid and reliable for patient experiences and satisfaction (Beattie et al., 2005). For the area-level deprivation analysis, postcodes from each separate group were collected. This analysis aimed to explore the relationship between patients' attendance to group consultations and urban/social deprivation across the Lanarkshire area.

2.4 | Data extraction and analysis

Data from the telephone and paper surveys were transcribed into Microsoft Forms, where patient names were anonymised with ID numbers. This method was used to reduce the potential implicit and cognitive biases when analysing survey results (NES, 2021). For the analysis of quantitative data, numerical data were pooled from the numbered survey results (i.e., Likert scaling) and a narrative summary was presented in either text, tabular and/or graphical form for comprehensive data presentation. For the analysis of qualitative data, a conventional content analysis method (Hsieh & Shannon, 2005) was used to analyse relevant themes, concepts, and thematic patterns from the open-ended questions and patient feedback/comments. Descriptive analysis was performed in Microsoft Excel (Microsoft Corporation, 2018) to calculate the frequencies and proportions of satisfaction, preferences, and experience measures of each separate group. The Scottish Index of Multiple Deprivation (SIMD) was used for the area-level deprivation analysis (Scottish Government, 2020). The SIMD analyses the extent of deprivation in an area according to seven domains: health, education, employment, income, access to services, crime and housing. An area can be classified as 'deprived' because of several factors such as low income, poor health, or minor resources. The SIMD quintiles were identified for each group of patients; each quintile contained 20% of data zones, quintile 1 included the 20% most deprived data zones in Scotland, while quintile 5 contained the 20% least deprived data zones.

2.5 | Ethical considerations

Confidential information about the study participants was insured during the study period by making personal details anonymous and storing data into password protected Excel sheets. In line with NHS Lanarkshire information governance advice, informed consent was obtained from each patient before telephone survey implementation.

3 | RESULTS

A total of 206 patients consented and were enrolled in this service evaluation. 84 (41%) patients completed the surveys: 28 in the opt-out group, 9 in the DNA group (6 virtual and 3 FTF group), and 47 in the opt-in groups; 42 and 5 in the FTF and virtual group respectively. In the opt-out group, 18 did not answer the telephone calls and 4 declined participation. In the DNA group, 12 did not answer the telephone calls and three declined participation. In the opt-in groups, 85 did not complete the surveys.

3.1 | Area-level deprivation analysis

The relative measure of area-based deprivation across patients according to the SIMD is presented in Table 1. Most patients in the opt-out group (66%), the DNA group (58%), and half the patients in the opt-in groups (50%) lived in 40% most deprived areas of Lanarkshire.

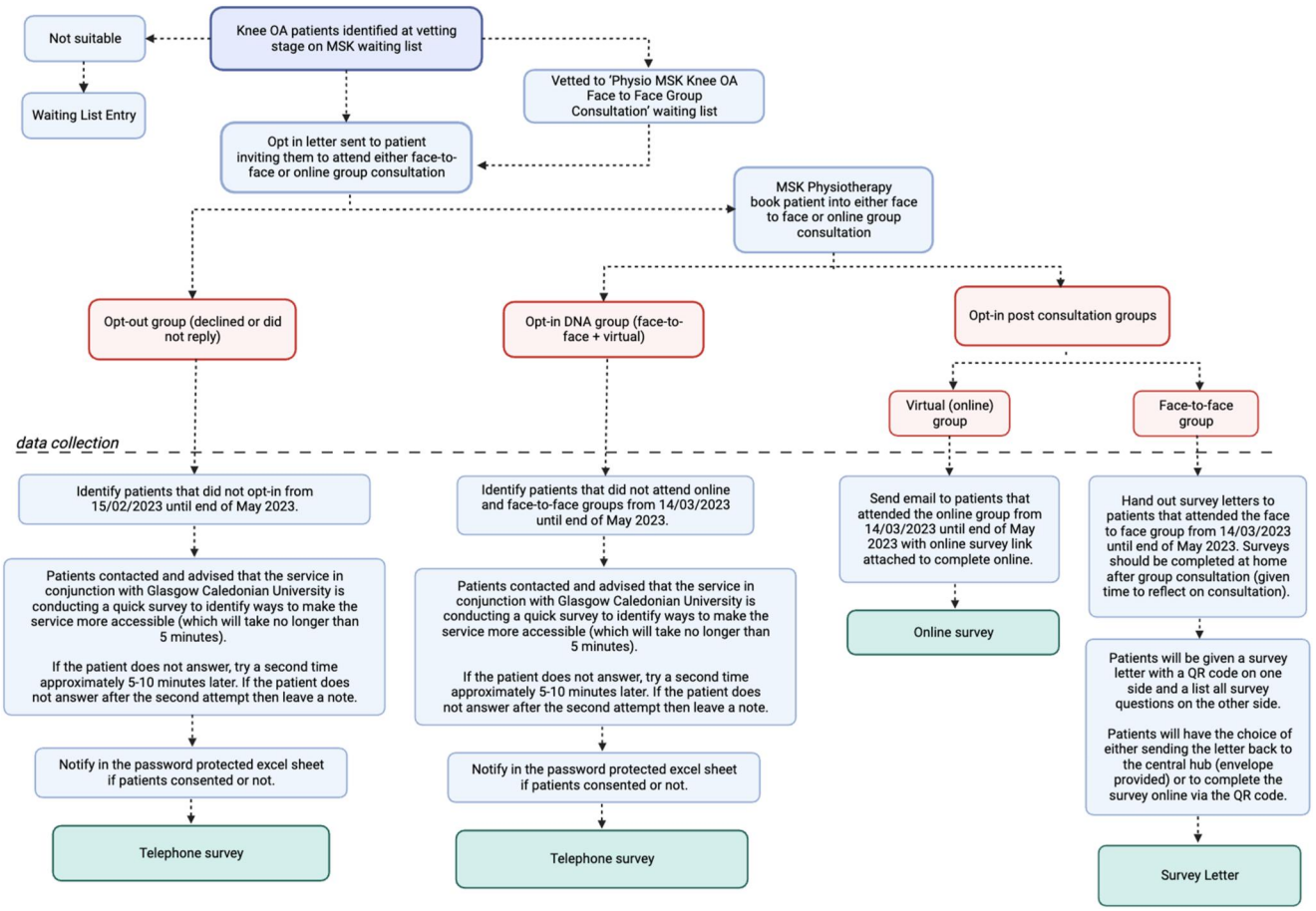

FIGURE 1 Schematic overview of survey implementation points and data collection methods for each group (*created with BioRender.com*). DNA, did not attend; MSK, musculoskeletal; OA, osteoarthritis.

TABLE 1 Relative measure of Scottish Index of Multiple Deprivation (SIMD) based on patient postcodes across groups.

	Number of patients, *n* (%)		
Scottish index of multiple deprivation	**Opt-out**	**DNA**	**Opt-in**
SIMD 1 (20% most deprived)	13 (26)	6 (25)	34 (26)
SIMD 2	20 (40)	8 (33)	32 (24)
SIMD 3	7 (14)	1 (4)	25 (19)
SIMD 4	5 (10)	6 (25)	21 (16)
SIMD 5 (20% least deprived)	5 (10)	3 (13)	20 (15)
TOTAL	50	24	132

Abbreviations: DNA, Did Not Attend; SIMD, Scottish Index of Multiple Deprivation.

3.2 | Survey findings

Four overall themes were identified and developed, which are potential barriers and facilitators to engagement, preferences for consultation type, satisfaction, experiences, and general impressions of group consultations.

3.2.1 | Potential barriers and facilitators to engagement

All 28 patients in the out-opt group provided reasons for declining or not replying to the group consultation invite. The following themes were extracted from questionnaires: difficulty in travelling, wrong referral, lack of interest, lack of confidence, medical condition, external circumstances, work commitments, and administrative issues. The three most common themes were lack of interest (46%), difficulty in travelling (32%), and medical condition (18%). For difficulty in travelling, patients reported "travelling issues", "hospital being too far", or even "no transport available" as reasons for not engaging. The theme named medical condition included patients reporting difficulty in walking long distances, and other medical illnesses limiting them from participating in groups (e.g., respiratory illness, post-traumatic syndrome disorder). Patients were also asked what could facilitate their engagement; a total of 6 patients responded and another 22 were not interested in group consultation. The common themes reported were easier access to the hospital, personalisation of consultation, and shorter duration of consultation. All 9 DNA patients provided reasons for not joining the group consultation at their appointed times. The themes within the virtual

DNA patients included IT issues (67%), lack of confidence (17%), and lack of interest (16%). The reasons for not joining the FTF class included lack of interest (67%) and work commitments (33%).

3.2.2 | Preferences for consultation type

Opt-out patients were asked about their preference in terms of future consultation type; 14 (70%) patients wanted a 1:1 consultation, 5 (25%) wanted an FTF group consultation, and a single patient wanted a virtual group consultation. The remaining 8 patients did not want any consultation. Of the 6 DNA patients reporting they would have preferred another type of consultation, three in the virtual group and the one patient in the FTF group reported a preference for a 1:1 consultation. The remaining 2 patients in the virtual group wanted an FTF group consultation.

3.2.3 | Satisfaction

Patient's satisfaction with the information provided in the initial opt-in letter prior to the group consultation was assessed. In the DNA group, 83% of patients in the virtual group and 67% in the FTF group felt satisfied, while the rest were not satisfied (17%) or expressed no view (33%). In both opt-in groups, 80% reported being satisfied, while 20% expressed dissatisfaction. The overall satisfaction with the group consultation differed between the opt-in groups. The virtual group reported a mean of 5 (2–9 range) indicating a neutral level of satisfaction, while the FTF group reported a mean of 8 (0–10), revealing a higher level of satisfaction. The content of the group consultation was also assessed; in the virtual group, 20% felt that it was 'very appropriate', while 60% considered the group consultation to be 'fairly appropriate'. Another 20% had no strong view and no patients regarded the content 'somewhat' or 'very inappropriate'. In the FTF group, 52% evaluated the content as 'very appropriate', while 29% felt it was 'fairly appropriate'. Only 2% considered it 'very inappropriate, ' with 17% reporting 'no strong view'.

3.2.4 | Experiences and general impressions

Opt-in patients were asked about their perception of the management of their knee symptoms following the group consultation. For the virtual group, 20% felt 'very confident', while 60% expressed being 'not confident', and another 20% indicated 'no strong view'. For the FTF group, 19% indicated being 'very confident' while 57% felt 'fairly confident', and the remaining 12% felt 'not confident' and 12% showed 'no strong view'. The level of comfort felt while interacting with other patients and facilitators during the group consultation was mixed between virtual and FTF (Figure 2). A total of 30 FTF patients provided feedback and suggestions about the group consultation. The common themes were; satisfaction and professionalism (43%), privacy and individual concerns (27%), lack of advice and resources (23%), and lack of communication clarity (20%). For satisfaction and professionalism, participants reported being satisfied with the group consultation, and the staff delivering it. For privacy and individual concerns, participants suggested a more anonymous approach to sensitive information (e.g., weight) and more accessibility to hospital locations. Four virtual patients provided feedback along the themes of gratitude for advice and support, privacy concerns, and some unfavourable experiences.

4 | DISCUSSION

The aims of this service evaluation were to determine the perception of patients with knee OA on the provision of group consultations (virtual and FTF) in a MSK setting and to investigate the relationship between area-level deprivation and engagement to group consultations. The general findings show that potential barriers to engagement may be linked to lack of interest and travelling difficulties. Patients who attended group consultations were mostly satisfied with positive experiences reported across groups. There is some evidence of patients' preferences for more individualised 1:1 consultation. Lastly, area-based deprivation may not influence the engagement rate across groups.

4.1 | Area-level deprivation analysis

Area-level deprivation appeared similar between groups where approximately 60% of the patients lived in the 40% most deprived areas in either the opt-out, DNA, or opt-in groups. This suggests that engagement and attendance in group consultation may not be related to the geographical level of deprivation. However, the small mixed sample size between groups and lack of statical analysis are limitations to consider. In fact, contrasting evidence (Ellis et al., 2017) shows that socioeconomically deprived individuals receiving care are more likely to display reduced engagement in primary care, which may result in increased health inequalities across clinical populations.

4.1.1 | Potential barriers and facilitators to engagement

The lack of interest in group consultations has been reported in previous studies (Graham et al., 2021). It appears that patient resistance to group consultation results from being accustomed to 1:1 appointment, confidentiality concerns, and attachment to physician practice. The interest in the group consultations may be increased with the provision of resources and information highlighting the benefits of the programme with key figures and retrospective feedback from attendees. The difficulty in travelling to consultations is also an issue that has been reported elsewhere (Syed et al., 2013); however, it was found that distance to health care facilities may not ultimately be a barrier. In the context of this

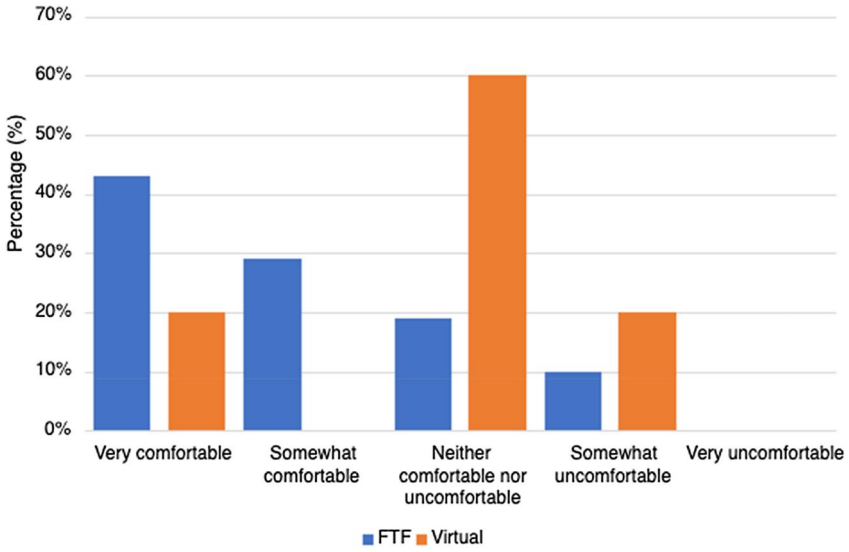

FIGURE 2 Comfort index during group consultation in both opt-in groups. FTF, Face to Face.

evaluation, travelling difficulties could be tackled on a wider scale, by improving public transport in areas of poor services and offering group consultations in more locations across the Lanarkshire area. For the virtual group consultations, IT issues can be difficult to solve, but signposting patients to FTF consultations may be a solution to increase participation. Another option for improving the online delivery of consultation is the use of software that is more accessible and reliable (Baker & Stanley, 2018). In previous research (Shaw et al., 2018), virtual consultations were reported to be effective, safe and convenient for selected groups of patients; however, complex challenges such as access to technology, confidentiality, and personal preferences exist.

4.1.2 | Preferences for consultation type

In the DNA and opt-out groups, most patients mentioned their preference for a 1:1 consultation and only a few patients requested FTF and virtual group consultations. This may suggest that patients wanted a more individualised physiotherapy approach and/or felt apprehensive about engaging in groups. It is important to consider that patients may be accustomed to years of receiving 1:1 care, which could bias their judgement towards group consultations (Graham et al., 2021). To increase patient interest, it may be beneficial to provide more information about the services and feedback from previous attendees. It is essential to increase interest in the group consultation as the latter has been shown to provide high-quality care and reduce cost for healthcare services (Jones et al., 2019).

4.1.3 | Satisfaction

In general, patients felt satisfied with the information given before the group consultation. The overall satisfaction with the group consultation was high in the FTF and neutral in the virtual groups, but both groups rated the content as appropriate. Recent evidence (Waters et al., 2016) has shown that interpersonal factors such as clinician empathy, trust, communication clarity, and meeting patient expectations are essential to foster higher levels of patient satisfaction. Other potential factors to increase satisfaction with the content delivered may include the provision of more advice and information about managing patient condition and associated symptoms.

4.1.4 | Experiences and general impressions

A higher percentage of participants in the virtual group presented with a lack of confidence in the management of their knee symptoms compared with the FTF group. Similarly, patients in the virtual group tended to be less comfortable than those in the FTF group when interacting with other patients and facilitators during the consultation. These findings may be due to the digital approach of the virtual consultation, which reduces opportunities for quality exchange and clinical alliances/ bonds between facilitators and patients (Ackerman & Hilsenroth, 2003). Clinical interaction may also be impacted by more 'technical talk' and less clinician dominated time (Shaw et al., 2018). In line with the NHS Lanarkshire ambition statement to make greater use of technology enabled care, MSK practices should aim to align both perception and patient behaviour/beliefs to clinical improvement. Additionally, the general impressions reported were generally positive with only a few individual mentioning privacy concerns, which is reasonable considering the nature of group consultation. The lack of advice and resources about exercise and symptom modification approaches were also reported; however, this may need to be re-evaluated after patients transition to ESCAPE-pain (Appendix 1), a group rehabilitation programme part of the knee OA pathway integrating self-management and coping strategies (Che Hasan et al., 2021).

4.2 | Strengths and limitations

This service evaluation may be a strength for the local decision-making process at NHS Lanarkshire; however, it is a limitation for wider application in the national service. This evaluation was a quick and efficient snapshot of the service performance; however, the non-randomized design may have led to inherent bias in the analysis of outcomes. The small sample size and lack of inferential statistics could limit interpretations for the analysis of area-level deprivation between groups. Other limitations include the mixed response rate across the groups and the non-reporting of patient demographics, which could limit comparison with other healthcare settings. Lastly, patients were not involved in the survey development due to time constraints, which may have reduced overall research validity and patient-centeredness (Bergerum et al., 2020).

4.3 | Future recommendations for practice and research

Area-level deprivation should be further investigated in other healthcare settings to inform on the relationship between social/geographical deprivation and engagement in consultation services. The implementation of more group consultation services in the Lanarkshire area would be beneficial to offer patients more options of FTF locations. This may increase engagement from patients and reduce the DNA rate across the programme. The provision of more detailed information (including clear benefits for patients) about the group consultation would likely increase participation. This may be supplemented in the initial opt-in letter or with the disposition of a landline number for further information/advice. Other recommendations include enhancing interpersonal factors between facilitators and patients to increase satisfaction. Lastly, further research in other healthcare settings with larger sample sizes investigating the patient's perception of group consultation and the influence of area-level deprivation on engagement would be helpful in providing guidance for national services.

5 | CONCLUSION

In conclusion, patient perception of FTF and virtual group consultations for knee OA is generally favourable. The overall patient satisfaction and experience assessed using a validated questionnaire indicate a general satisfaction and positive experience of group consultation for knee OA. This service evaluation highlights important strategies to increase engagement in the group consultation programme, which will in turn enhance patient health outcomes and cost effectiveness of the service. The prospect of virtual group consultation seems positive, but its complexity indicates careful delivery in practice. Considering the findings of this service evaluation, it is expected that group consultations will continue within the NHS Lanarkshire MSK services. Further research is needed to evaluate the potential dissemination of group consultation to a wide variety of patients and clinical situations nationally.

AUTHOR CONTRIBUTIONS

This service evaluation study was conducted as part of Hugo Blatgé studies for the Doctorate of Physiotherapy at Glasgow Caledonian University. The service evaluation was developed in partnership with NHS Lanarkshire MSK services. Hugo Blatgé was involved in all parts of the project (conception, design, methodology, data collection/analysis, interpretation, and manuscript writing). Dr Sivaram Shanmugam supervised the project and also contributed to all aspects of the study development. Brian Slattery, Olivia Lewis, and Zoe Nicol all made substantial contributions to the conceptualisation, methodology, and manuscript review and revision.

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CONFLICT OF INTEREST STATEMENT

None from Hugo Blatgé, Sivaramkumar Shanmugam, Brian Slattery, Olivia Lewis, and Zoe Nicol.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ETHICS STATEMENT

None.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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