

**Mapping evidence from the literature about the experience of internationally educated health professionals to Canadian professional competency profiles of physiotherapists, occupational therapists, physicians, and pharmacists**

Kalu, Michael E.; Abaraogu, Ukachukwu O.; Norman Dr, Kathleen E.

*Published in:*

Internet Journal of Allied Health Sciences and Practice

*Publication date:*

2019

*Document Version*

Publisher's PDF, also known as Version of record

[Link to publication in ResearchOnline](#)

*Citation for published version (Harvard):*

Kalu, ME, Abaraogu, UO & Norman Dr, KE 2019, 'Mapping evidence from the literature about the experience of internationally educated health professionals to Canadian professional competency profiles of physiotherapists, occupational therapists, physicians, and pharmacists', *Internet Journal of Allied Health Sciences and Practice*, vol. 17, no. 2, pp. 13. <<https://nsuworks.nova.edu/ijahsp/vol17/iss2/13/>>

**General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

**Take down policy**

If you believe that this document breaches copyright please view our takedown policy at <https://edshare.gcu.ac.uk/id/eprint/5179> for details of how to contact us.



March 2019

# Mapping Evidence From the Literature About the Experience of Internationally Educated Health Professionals to Canadian Professional Competency Profiles of Physiotherapists, Occupational Therapists, Physicians, and Pharmacists.

Michael E. Kalu

*School of Rehabilitation Science, McMaster University,, [kalum@mcmaster.ca](mailto:kalum@mcmaster.ca)*

Ukachukwu O. Abaraogu

*School of Health and Life Sciences, Glasgow Caledonian University, United Kingdom*

Kathleen E. Norman Dr

*School of Rehabilitation Therapy, Queens University, Kingston, ON, Canada*

Follow this and additional works at: <https://nsuworks.nova.edu/ijahsp>



Part of the [Medicine and Health Sciences Commons](#)

## Recommended Citation

Kalu ME, Abaraogu UO, Norman KE. Mapping Evidence From the Literature About the Experience of Internationally Educated Health Professionals to Canadian Professional Competency Profiles of Physiotherapists, Occupational Therapists, Physicians, and Pharmacists.. The Internet Journal of Allied Health Sciences and Practice. 2019 Mar 26;17(2), Article 13.

This Review Article is brought to you for free and open access by the College of Health Care Sciences at NSUWorks. It has been accepted for inclusion in Internet Journal of Allied Health Sciences and Practice by an authorized editor of NSUWorks. For more information, please contact [nsuworks@nova.edu](mailto:nsuworks@nova.edu).

---

## Mapping Evidence From the Literature About the Experience of Internationally Educated Health Professionals to Canadian Professional Competency Profiles of Physiotherapists, Occupational Therapists, Physicians, and Pharmacists.

### Abstract

**Purpose:** To review experiences of internationally educated healthcare professionals (physiotherapists, occupational therapists, physicians and pharmacists) in their new country and to map these experiences using a competency framework.

**Method:** Database (Medline, EMBASE, CINAHL, and PsycINFO ) were systematically searched to include articles published between 2000 and 2017 and described the experiences of internationally educated healthcare professionals (IEHPs) in physiotherapists, occupational therapists, physicians and pharmacist in attaining registration in new country. The data were synthesised using conventional content analysis. Emerging themes were mapped across a competency framework based on the profiles of the selected professions.

**Result:** Thirteen articles were included; most were conducted in Canada and among internationally educated medical doctors. Themes were mapped to all the roles in the professional competency profiles except the Health Advocate role. Communicator role was the most frequently discussed; internationally educated healthcare professionals often needed to improve in culture-specific communication including verbal and non-verbal cues during assessment, documentation and treatment of clients. A pictorial representation was created for describing internationally educated healthcare professionals' deficiencies in roles/ competencies for professional practice. In this representation, cultural-language and confidence deficits contribute to the deficiencies seen in roles and competencies among internationally educated healthcare professionals in their new country.

**Conclusion:** Internationally educated healthcare professionals' ability to fulfill the explicit roles in the competency profiles may depend largely on having good cultural-language competence as well as confidence. Exposing the internationally educated healthcare professionals to local practice is one of the strategies for cultural-language and confidence enhancement, consistent with findings reported in the nursing profession.

---

#### Author Bio(s)

1. Michael E Kalu, BMR PT, MSc, Ph.D. student in the School of Rehabilitation Science, McMaster University, Hamilton, Ontario, Canada.
2. Ukachukwu O Abaraogu, BMR.PT, MSc. Ph.D. student at the School of Health and Life Science, Glasgow Caledonian University, United Kingdom. He also a lecturer of the Department of Medical Rehabilitation, Faculty of Health Science and Technology, College of Medicine at the University of Nigeria, Enugu Campus.
3. Kathleen E. Norman, BScPT, Ph.D. Associate Director, Research & Post Professional Program, School of Rehabilitation Therapy, Queens University, Kingston, ON, Canada.

---

#### Acknowledgements

We wish to thank Dr Catherine Donnelly and Dr Trisha Parson for their feedback on this review.



**The Internet Journal of Allied Health Sciences and Practice**

*Dedicated to allied health professional practice and education*

**Vol. 17 No. 2 ISSN 1540-580X**

---

## Mapping Evidence From the Literature About the Experiences of Internationally Educated Health Professionals to Canadian Professional Competency Profiles of Physiotherapists, Occupational Therapists, Physicians, and Pharmacists

---

Michael E. Kalu<sup>1</sup>  
Ukachukwu O. Abaraogu<sup>2</sup>  
Kathleen E. Norman<sup>3</sup>

1. McMaster University
2. Glasgow Caledonian University
3. Queen's University

Canada, United Kingdom

---

### ABSTRACT

**Purpose:** The purpose of this study was to review experiences of internationally educated health care professionals (physiotherapists, occupational therapists, physicians, and pharmacists) in their new country and to map these experiences using a competency framework. **Method:** Database (Medline, EMBASE, CINAHL, and PsycINFO) were systematically searched to include articles published between 2000 and 2017 and were used to describe the experiences of internationally educated health care professionals (physiotherapists, occupational therapists, physicians, and pharmacists) in attaining registration in new country. The data were synthesized using conventional content analysis. Emerging themes were mapped across a competency framework based on the profiles of the selected professions. **Result:** Thirteen articles were included; most of the studies were conducted in Canada and among internationally educated medical doctors. Themes were mapped to all the roles in the professional competency profiles, except the health advocate role. The communicator role was the most frequently discussed; internationally educated health care professionals often needed to improve in culture-specific communication, including verbal and non-verbal cues, during assessment, documentation, and treatment of clients. A pictorial representation was created for describing internationally educated health care professionals' deficiencies in roles/competencies for professional practice. In this representation, cultural-language and confidence deficits contributed to the deficiencies seen in roles and competencies among internationally educated health care professionals in their new country. **Conclusion:** Internationally educated health care professionals' ability to fulfill the explicit roles in the competency profiles may depend largely on having good cultural-language competence as well as confidence. Exposing the internationally educated health care professionals to local practice is one of the strategies for cultural-language and confidence enhancement consistent with findings reported in the nursing profession.

**Key words:** International educated health care professionals, professional competency profiles, international mobility

---

## BACKGROUND

The migration of health care professionals to practice in countries other than where they obtained their professional qualification is on the increase.<sup>1</sup> This workforce migration is typically in the direction that health care professionals from low- and middle-income countries migrate to high-income countries.<sup>2</sup> However, the reason for workforce migration can include both pull factors and push factors. Examples of push factors that motivate health care professionals to leave their home countries include low pay, limited career opportunities, unemployment, or civil unrest. Whereas, livelihood migrants who migrate to countries with a higher standard of living compared with their home countries are examples of being influenced by pull factors.<sup>3-5</sup> The term "brain drain" has been used to describe the loss of well-educated people from one country when they migrate to another, and "brain circulation" refers to the migration of well-educated people to one country for a period, followed by a return to the country of origin.<sup>6,7</sup> The concepts of brain drain and brain circulation are discussed among policy makers on workforce mobility.<sup>8</sup> For instance, some argue that health care workforce mobility should be encouraged because individual freedom and success are supported; others argue that it compromises the health systems of the immigrants' country of origin, especially those migrating from developing countries. The context of explicit regulation of health care professions, such as for physiotherapy in Canada, adds a unique perspective particularly to the concept of brain drain; highly educated physiotherapists leave their country of origin and then face the hurdle of obtaining registration prior to practice.

The first step toward registration for physiotherapy practice in Canada includes credentialing, such as assessing the professional competence of the internationally educated physiotherapists (IEPTs) through evaluation of their prior formal education. Following successful credentialing, the second step is completing the national licensure examination: the Physiotherapy Competency Examination (PCE). Because of the variability in educational training, scope/model of practice, and differences in practice settings, most of the IEPTs have a delay in attaining registration.<sup>9,10</sup> Hence, many IEPTs choose an alternative pathway to workforce integration (eg, physiotherapy assistant), while some end up in totally different professions, such as medical sales representatives or cashiers.<sup>1</sup> This alternative pathway represents a loss of economic benefits to both the country of immigration and the IEPTs. In the language of brain drain, the receiving country has arguably received less than it has drained. This argument is true for other regulated health care professionals in Canada.<sup>10</sup>

The underutilization of internationally educated professionals is an important public and economic policy issue in Canada. Its estimated cost to the Canadian economy is about \$2 billion annually.<sup>11</sup> Efforts are constantly focused on facilitating internationally educated health care professions into the Canadian workforce.<sup>12-14</sup> These efforts have created new policies, programs, and promising practices to facilitate internationally educated health care professionals into the Canadian workforce.<sup>15,16</sup> There is a significant amount of literature published about internationally educated health care professionals (IEHPs) in Canada, although the majority of it is focused on nurses and medical doctors.<sup>1,17-20</sup> While most reviews had specific themes and overviews of existing literature in this field of study, we could find only one that had registration factors that limited international mobility of people holding physiotherapy qualifications.<sup>9</sup> Among the literature that had specific themes, there were no attempts to relate these themes to the roles and competencies expected of those health care professionals in the migrant new country.

In Canada, there are documents describing the roles and competencies in profiles for many health care professions. These competency profiles are used to not only inform the examinations required for entry to practice; they also have descriptions for the expectations for health care professionals to achieve and maintain throughout their practice in their specific professions. Four health care professions in Canada have competency profiles that have largely similar structures: physiotherapists, occupational therapists, physicians, and pharmacists. Among dominant health professions in Canada, only nurses have a very different structure to their competency profile. For the previously mentioned 4 professions, how members of those professions practice in Canada and to varying degrees in other countries with similar education and health care systems are described in the competency profiles.

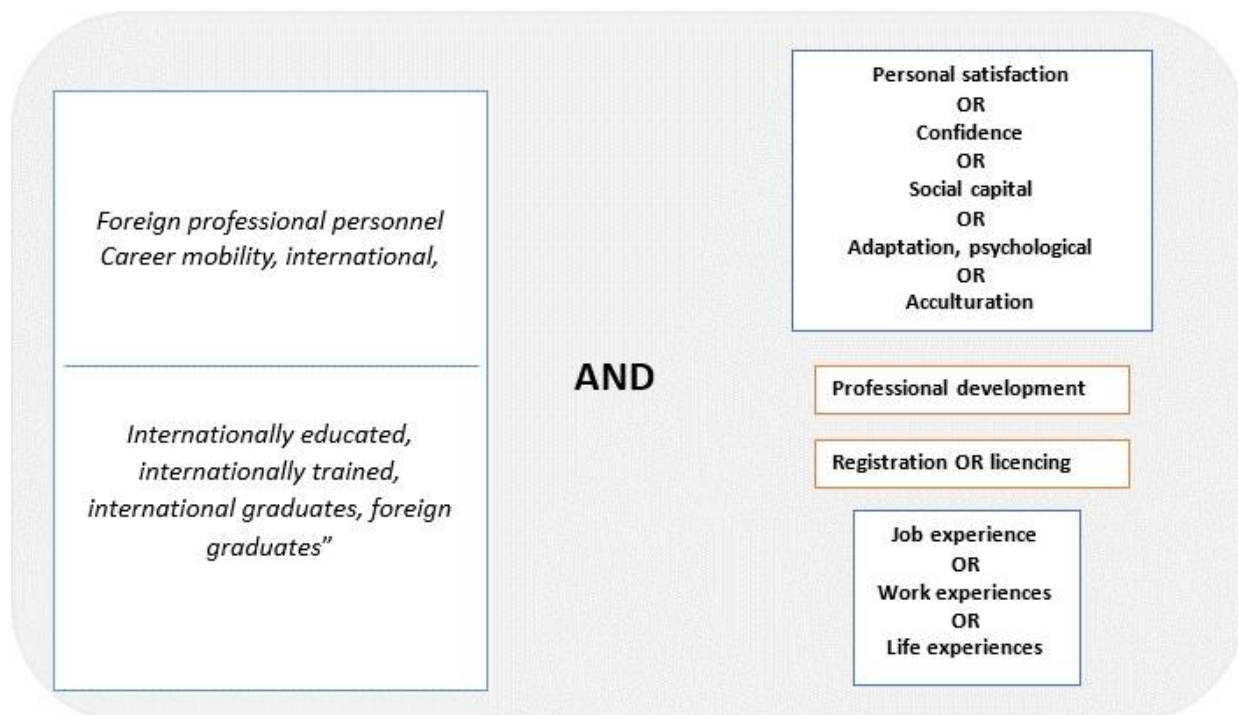
The purpose of this review was to examine the experiences of internationally educated health care professionals with regard to the competencies they need for practice in their new country. Literature was searched that described experiences either from the migrants' perspectives or the perspectives of professionals or regulatory authorities in the new country. These experiences were mapped using a competency framework based on the competency profiles in the four selected professions in Canada.

## METHOD

This review followed the framework described by Grant and Booth: search, appraisal, synthesis, and analysis, incorporating elements of systematic map/mapping review.<sup>21</sup> The systematic approach was followed for searching and selecting articles and we presented our results in tables with narratives. Subsequently, the articles were qualitatively evaluated, following the step-by-step framework by Ryan et al.<sup>22</sup> This framework was appropriate in answering a specific question and identifying areas for further research in the related literature.

## Search

Multiple strategies were used to search for studies in which the experiences of migrants in attaining registration/licensure and entering the workforce in their new country were explored. The search was conducted in CINAHL, MEDLINE, ERIC, EMBASE, and PsycInfo, using the search terms shown in Figure 1. The search was restricted to articles published in 2000 or later; the choice of this timeframe was based on our interest to understand recent experiences, as there are evolutions of practice models across the globe and within professions. Multiple review articles were found in the search.<sup>1,9,18,22</sup> The reference lists of these articles were used to find additional relevant articles or reports, but the reviews were not otherwise directly considered in the analysis. In addition, the reference lists of all relevant articles were reviewed to identify additional relevant articles or reports (ie, grey literature). Also, professional web sites and the conference proceedings for international associations of the 4 professions with similar professional competency profiles were hand searched. It is important to acknowledge that the nursing profession has contributed a huge amount of literature in this area of study. However, literature that was focused specifically on nurses was excluded because the Canadian professional competency profile for nursing does not clearly map to the profiles of the other professions included in this study.



**Figure 1.** Initial Search in CINAHL. *Note:* Search terms in the blue-outlined boxes were searched using "Major focus/MM" while the search terms in the red-outlined boxes were "exploded/MH".

## Study Selection

Each result from the database search was exported to a reference manager (EndNote) in which duplicates were removed. Subsequently, the principal author exported the titles and abstracts of the remaining articles to Microsoft Excel to enable screening, using the PRISMA guideline for selecting articles (see Figure 2). The study selection was performed in two phases: title and abstract screening and full-text screening. In the first phase, the titles and abstracts of the articles obtained from the search after removing duplicate were reviewed independently by 2 researchers (MK and UA) to eliminate duplicates and any articles that met exclusion criteria. In the second phase, the same researchers examined the full text of the remaining articles to ensure fit with the described. The 2 reviewers achieved consensus on all selected articles. The articles or reports retained for analysis were opinion/editorial, evaluation, or research reports. Articles or documents were excluded if they (1) were focused only on the registration/licensure process or career mobility with no description of the problems and/or experiences of migrants in attaining registration/licensure, (2) were not written in English language, or (3) were focused only on professionals other than physicians, physiotherapists, occupational therapists, and pharmacists. Articles or documents were included if IEHPs' experiences were described about attaining professional competency in their new country either by the IEHPs themselves, professional or regulatory authorities, and if written and published in English. A spreadsheet was developed to chart the articles' metadata as well as information that reflected our review questions: authors, year of publication, country of study, type of document (eg, research or opinion paper), and content related to roles as competencies.

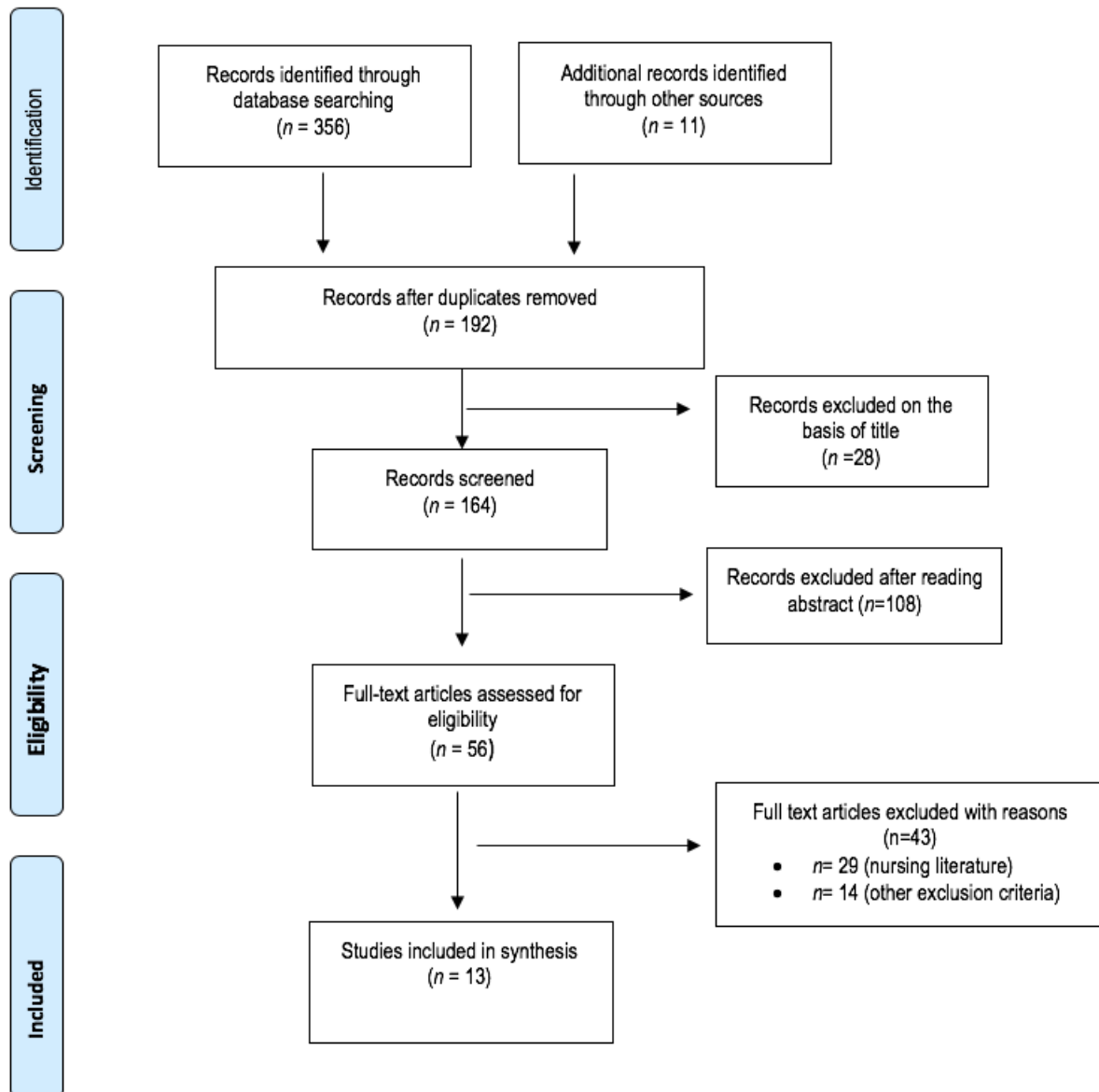


Figure 2. Flowchart to Show Selection of Studies

## DATA ANALYSIS

The included articles were critiqued using the step-by-step guide to critiquing quantitative and qualitative research described by Ryan et al.<sup>22</sup> Subsequently, we employed conventional content analysis describe by Hsieh and Shannon to map the content of the articles across the roles in the framework in Table 1.<sup>23</sup> This framework is an amalgamated version of the 7 roles from the professional competency profiles for physiotherapy, physician, occupational therapy, and pharmacy in Canada. Sentences from the included articles were mapped across each role if it had a close meaning to either the “key” or/and “enabling” competency statements in each of the roles from the professional competency profiles. Two reviewers (MK and UA) independently mapped the sentences relating to experiences on the roles in the framework in Table 1, and any disagreement was discussed and later resolved. An article could be mapped across more than one role in the competency framework.

**Table 1.** Professional Competency Framework

Role	Professions			
	Physiotherapy	Physician	Occupational Therapy	Pharmacy
Expert	Expert	Medical Expert	Experts in enabling occupation	Knowledge and research application*
Communicator	Communicator	Communicator	Communicator	Communication/Education
Collaborator	Collaborator	Collaborator	Collaborator	Patient care, inter and intra professional collaboration
Scholarly Practitioner	Scholarly Practitioner	Scholar	Scholarly Practitioner	Knowledge and research application*
Health Advocate	Advocate	Health Advocate	Change Agent	Health promotion
Practice Manager	Manager	Leader	Practice Manager	Practice setting
Professional	Professional	Professional	Professional	Product distribution, ethical, legal, and professionalism

Note: Roles in the left column are the roles in the framework used for data extraction and analysis in this study.

\*Knowledge and research application are mapped to both Expert and Scholarly Practitioner. Source: National Physiotherapy Advisory Group (NPAG)<sup>25</sup> National Association of Pharmacy Regulatory Authorities;<sup>26</sup> Canadian Association of Occupational Therapists;<sup>27</sup> CanMEDs - Royal College of Physicians and Surgeons of Canada.<sup>28</sup>

## RESULTS

### Descriptive

The search yielded 356 articles; after removing duplicates, 164 were considered as potential articles, and 108 were excluded following abstract screening. A total of 56 articles were kept for full-text reading, of which the majority were excluded because the focus of the articles was on nurses alone (see Figure 2). Thirteen articles met final inclusion criteria: 3 were narrative/opinion/commentary without data, and 10 were qualitative ( $n = 3$ ), mixed method ( $n = 2$ ), and quantitative studies (cross-sectional,  $n = 3$ ; and pretest and posttest intervention study,  $n = 2$ ). The articles selected were conducted or written in Canada ( $n = 7$ ), United States ( $n = 2$ ), New Zealand ( $n = 2$ ), Australia ( $n = 1$ ) and the United Kingdom ( $n = 1$ ). Five of the articles were about foreign-trained doctors, 2 were about foreign-trained occupational therapists, 1 each was about foreign-trained pharmacists and physiotherapists, and 3 were about international educated health care professionals with no specific professions mentioned. Other descriptions of the articles are in Table 2. Only the 10 articles or reports that included data (ie, excluding opinion items) were considered for qualitative evaluation of evidence, whereas all 13 articles were considered in the mapping to the competency framework. It is important to note that the terms internationally trained, internationally educated, overseas trained, or international health professionals graduate are synonymous and were interchangeably used throughout this review. We retained the terms used by each article to maintain originality.

All of the articles met only 2 of the criteria described by Ryan et al: study design and findings.<sup>22</sup> However, majority of the studies did not meet some of the evaluation criteria as shown in Table 1. Amerih and Hersch<sup>29</sup> met all the criteria by Ryan et al.<sup>22</sup>

**Table 2.** Summary of the Reviewed Articles

Authors/ Country	Article Title	Type of Article Study Design	Participants	Evaluation Criteria (Ryan & colleagues) <sup>22</sup>						
				<u>I</u>	<u>RD</u>	<u>DC/A</u>	<u>R</u>	<u>EC</u>	<u>F</u>	<u>SL</u>
Sullivan et al <sup>30</sup> Australia	A pre-employment programme for overseas-trained doctors entering the Australian workforce, 1997–99	Quantitative pre and post	Overseas-trained doctors ( $n = 66$ )	No	Yes	Yes	No	No	Yes	No



Authors/ Country	Article Title	Type of Article Study Design	Participants	Evaluation Criteria (Ryan & colleagues) <sup>22</sup>						
				I	RD	DC/A	R	EC	F	SL
Hawken <sup>36</sup> New Zealand	Overseas-trained doctors' evaluation of a New Zealand course in professional development	Quantitative pre and post	Overseas-trained doctors (n = 25)	No	Yes	Yes	No	No	Yes	No
Narasimhan et al <sup>37</sup> New Zealand	International medical graduates' training needs: perceptions of New Zealand hospital staff	Quantitative cross-sectional survey (questionnaire)	New Zealand doctors (n = 68) nurses (n = 58)	No	Yes	Yes	No	No	Yes	No
Moran et al <sup>3</sup> United Kingdom (UK)	There's no place like home: A pilot study of perspectives of international health and social care professionals working in the UK	Qualitative cross-sectional survey (questionnaire)	Physiotherapist (n = 11) speech therapists (n = 4) social workers (n = 10) OT (n = 1) podiatrists (n = 5) others (n = 3)	No	Yes	Yes	No	No	Yes	No
Austin et al <sup>31</sup> Canada	Development of a Prior Learning Assessment for Pharmacists Seeking Licensure in Canada	Quantitative pilot study	Foreign-trained pharmacists (n = 30)	Yes	Yes	Yes	No	No	Yes	No
Amerih & Hersch <sup>29</sup> United States (US)	The challenges and adaptation of foreign educated occupational therapists	Qualitative telephone interview	OT (n = 7)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lockyer et al <sup>39</sup> Canada	International Medical Graduates: Learning for practice in Alberta, Canada	Qualitative telephone interview	IMGs (n = 19)	No	Yes	Yes	Yes	No	Yes	Yes
Mulholland et al <sup>34</sup> Canada	Exploring the integration of internationally educated occupational therapists into the workforce	Qualitative-Semi-structure interview	IEOTs (n = 40), supervising occupational therapist (n = 12) and managers (n = 7)	No	Yes	Yes	Yes	Yes	Yes	No
Johnson & Baumal <sup>33</sup> Canada	Assessing the workforce integration of internationally educated health professionals	Qualitative focus group*	IEHPs (n = 75) Med. Lab Tech (n = 24), Med. Rad Tech (n = 8), OT (n = 25), Pharmacy (n = 7), PT (n = 11)	-	Yes	No	-	No	Yes	No

Authors/ Country	Article Title	Type of Article Study Design	Participants	Evaluation Criteria (Ryan & colleagues) <sup>22</sup>						
				T	RD	DC/A	R	EC	F	SL
Johnson <sup>38</sup> Canada	Integrating Internationally Educated Physiotherapists	Qualitative Focus group**	IEPTs (n = 36- 60)	-	Yes	No	-	No	Yes	No
Baumann et al <sup>17</sup> Canada	The Authors respond to call for papers for internationally educated health care professionals in Canada	Commentaries	IEHPs	-	-	-	-	-	-	-
Baumann et al <sup>32</sup> Canada	Practice in Alberta, Canada Internationally Educated Health Professionals: Workforce Integration and Retention	Opinion paper	IEHPs	-	-	-	-	-	-	-
Fiscella & Frankel <sup>35</sup> United States	Overcoming Cultural Barriers: International Medical Graduates in the United States	Opinion Paper	IMGs	-	-	-	-	-	-	-

Note: \*The article is a multi-faceted report; however, only the qualitative themes were included in the present review. There were 14 focus groups with participants in each focus group ranging from 3-16 IEHPs.

\*\*The article is a multi-faceted report; however, only the qualitative themes were included in this review. There were 6 focus groups with participants in each focus group ranging from 6-10 IEPTs.

IEHPs = Internationally Educated Health Professionals. IEPTs = Internationally Educated Physical Therapist.

PT = Physical Therapist. OT = Occupational Therapist.

IEOTs = Internationally Educated Occupational Therapists. IMG = International Medical Graduates.

Med. Lab Tech = Medical Laboratory Technology. Med. Rad Tech= Medical Radiation Technology.

T = Theoretical framework, RD = Research design, DC/A = Data collection/Analysis, R = Rigor. EC = Ethical considerations, F = Findings, SL = Study limitation, Yes = met the criteria, No = did not meet the criteria, - = not applicable.

All the studies reported the policy implications of their study.

### Mapping Evidence to the “Roles” Described in the Competency Framework

The themes were created based on the competency framework developed from the 4 professions' competency profiles as shown in Table 1. The themes are expert, communicator, collaborator, scholarly practitioner, health advocate, practice manager, and professional. However, 2 other themes, including cultural competency and networking, emerged during the mapping process.

#### Expert

Sullivan et al designed and piloted a four-week, pre-employment workshop that was aimed to familiarize the foreign-trained doctors with the Australian health care system.<sup>30</sup> Some of the contents of the four-week, pre-employment workshop were clinical clerking, judgement, and diagnostic skills. They reported that there was a significant shift in the confidence of foreign trained doctors in clinical clerking and judgement, but not in clinical diagnostic skills.

#### Communicator

Austin et al developed and pilot-tested a Prior Learning Assessment (PLA) for the internationally educated pharmacist (IEP) seeking licensure in Canada.<sup>31</sup> They found that 20% (6 out of 30) of IEPs were unable to meet standards of practice in any of the 5 stations. Linguistic barriers in the form of verbal and non-verbal skills appeared most significant, and these barriers were consistently in the lowest percentile for all the IEP candidates.

Baumann et al suggested that language competency was one of the major barriers for workforce integration among IEHPs in

Canada.<sup>32</sup> Similarly, Johnson and Bauml found that IEHPs reported overcoming language barriers as one of the challenges they faced in their first year of practice in Canada.<sup>33</sup> These findings are consistent with those from a phenomenological qualitative study about the challenges and adaptation faced by foreign-trained occupational therapists; Amerih and Hersch noted that accent and unfamiliarity with certain vocabulary are often the items that constituted the language barriers.<sup>29</sup> Additionally, Mulholland et al<sup>34</sup> reported that culturally specific communication styles are necessary for internationally educated occupational therapists (IEOTs).<sup>34</sup> They presented the example that IEOTs struggled to understand and develop specific skills in working with clients with diverse sexual orientation. Fiscella and Frankel raised a similar concern about foreign-trained doctors.<sup>35</sup> They postulated that English test proficiency is not enough to ensure successful integration or practice. They stated that understanding the patient's colloquial speech and body language are necessary for effective gathering of clinical evaluations (objectively and subjectively) as well as communicating the evaluations back to the patients.

Furthermore, the 2 pretest and posttest interventional studies demonstrated how preregistration programs can improve communication for foreign-trained professionals. Hawken surveyed 89 foreign-trained doctors in New Zealand after attending a 10.5 month pretraining program and reported that foreign-trained doctors perceived that their confidence in communication with patient and professionals in their practice context had improved after the training.<sup>36</sup> In a similar study in Australia, Sullivan et al reported improvements in foreign-trained doctors after attending a four-week series of pre-employment workshops, especially in the foreign-trained doctor, increased confidence in communicating with clients and professionals and improved clarity of documentation.<sup>30</sup>

Additionally, Narasimhan et al surveyed doctors and nurses in New Zealand, asking them to identify areas of needed training for foreign trained doctors with whom they have worked.<sup>37</sup> Documentation (clinical clerking, adequacy of records, legibility, accurate drug charts), communication ability with patients and their families, and communication with other health care professionals were identified as the professional competencies that needed improvement. Johnson in Canada found similar findings.<sup>38</sup> In his report, physiotherapy employers were asked to rate the statement "Official language proficiency is an issue for individuals who are internationally educated in physiotherapy"; 89% either "strongly agreed" or "agreed somewhat."

#### *Collaborator*

Foreign-trained doctors were reported to show significant increase in confidence in their ability to cope and relate with other professionals in an Australian hospital setting after a four-week series of pre-employment workshops.<sup>30</sup> Similarly, foreign-trained doctors in Alberta, Canada, identified that understanding and learning about the roles played by other health care workers is an essential skill to work in the province.<sup>39</sup>

#### *Scholarly Practitioner*

The self-reflective practice exercise as a component of pretraining program for the foreign-trained doctors was very useful for their success in the national licensing exam in New Zealand.<sup>36</sup> Also, learning new investigation and adopting to new drug therapy are required skills that foreign-trained doctors identified as essential for a successful practice in Alberta, Canada.<sup>39</sup>

#### *Practice Manager*

In a qualitative descriptive study, Mulholland et al reported that one of the stumbling blocks experienced by the internationally educated occupational therapists was the lack of understanding of the health care system services and culture in Canada.<sup>34</sup> In the same study, the IEOTs, especially those from Asia, highlighted the overwhelming autonomy and client-centered practice in Canada. The findings of this study were in alignment with the findings by Johnson and Bauml in which IEHPs expressed their concern about struggling with learning the Canadian health care system in their first year of practice in Canada.<sup>33</sup> Similarly, some selected internationally educated health care professionals in the UK were surveyed; they reported that a better knowledge of health and social care system in the UK would have made their transition easier.<sup>3</sup>

Lockyer et al conducted a telephone interview with 19 foreign-trained doctors.<sup>39</sup> The foreign-trained doctors described that recognizing the differences between the patient's goals and doctor's expectation for the patient, referral processes, and adjusting to the practice culture in Alberta are the types of learning that are required to work in the clinical settings in Alberta, Canada. A similar finding was reported among foreign-trained doctors intending to practice in New Zealand; they reported that they required further training in patient management (management decisions, response to calls, emergency care) in order for them to function effectively.<sup>37</sup> Furthermore, differences in documentation system, insurance regulations and case-load requirement were identified as challenges by foreign-educated occupational therapists in learning to the work in the United States.<sup>29</sup>

#### *Professional*

Narasimhan et al reported that professional knowledge relating to medico-legal practices, hospital policies, and procedures was

---

one of the areas that required improvement in foreign-trained doctors intending to practice in New Zealand.<sup>37</sup> Similarly, in an interventional study, Hawken reported that a significant majority of foreign-trained doctors said that ethics and medico-legal components of a course prepared them very well for working in New Zealand.<sup>36</sup> Similarly, Baumann et al mentioned that professional education is one of the problems faced by IEHPs in Canada.<sup>17</sup> Even after obtaining licensure or registration, IEHPs reported that earning trust of patients, colleagues, and team members is one of the challenges they continue to face in their first year of practice in Canada.<sup>33</sup>

## Other Themes

### *Cultural Competency*

Cultural competency was a frequently emerging theme in all the literature reviewed. Austin et al explained the complexity of the language-cultural competency profiling deficiency in the internationally educated pharmacist.<sup>31</sup> They explained this deficiency in two concepts: "declarative knowledge and procedural knowledge." Declarative knowledge refers to the idea that internationally educated pharmacists are able to communicate explicitly "what they know" from their previous practice context, whereas procedural knowledge requires action; therefore, internationally educated pharmacists are unable to explicitly implement this type of knowledge in the new practice context. Procedural knowledge was deemed to be a cultural competency while declarative knowledge was deemed a communicative competency. Similarly, Baumann et al mentioned that cultural competency is one of the problems faced by internationally educated health professionals.<sup>32</sup> Unanimously, Mulholland et al reported that the stakeholders in a study of IETs agreed that cultural competency exposure is necessary for successful integration of the IETs.<sup>34</sup> Also, Johnson described the scope of cultural difference as professional conduct, client interaction, and general interpersonal skills.<sup>38</sup>

### *Networking*

Networking among colleagues was mentioned as an enabler for successful registration.<sup>34,38</sup> Multiple stakeholders mentioned in these studies (the supervisors, the managers, and the IETs) agreed that networking with colleagues in the profession has 2 advantages: successful registration and successful integration.<sup>34,38</sup> Specifically, Johnson described how exposure to clinical internships increases networks to professional colleagues, which often leads to permanent employment.<sup>38</sup>

## DISCUSSION

Thirteen articles were included in this review, of which more than half were articles or studies written or conducted in Canada. It is, therefore, appropriate to discuss the findings in the Canadian context. Evidence was mapped across six roles (expert, communicator, collaborator, practice manager, professional) in the competency framework with no evidence mapped on one role (health advocate). Health advocate may be seen to be a small role in the professions' competency profiles; also, it may be considered as less critical than the other roles for entry into professional practice. Beyond the roles in the competency framework (Table 1), 2 themes emerged in the reviewed studies: cultural competency and networking.

This mapping review was used to provide evidence about the areas in which IEHPs have been found to need improvements across the professional competency profiles in 4 professions. It is not surprising that literature about foreign-trained doctors dominated the review after excluding the literature about nurses, which is because there is a long history of international mobility in the medical profession.<sup>1</sup> Furthermore, articles from Canada dominated the review, which could be explained by the recent interest in Canada about developing strategies for effectively engaging the foreign-trained health professionals in other related employment aside from their previous health profession if they are unable to attain registration or licensure in their home-country trained profession.<sup>40</sup> If successful, these strategies can enhance Canada's benefit of having health care professionals immigrate, thereby attenuating the estimated cost to the Canadian economy when IEHPs work outside their field. Of course, these strategies also are beneficial to the IEHPs themselves if successful.

Communication skills were noted to be an area that IEHPs often have challenges; these findings are consistent with those reported for internationally educated nurses.<sup>12,13,41</sup> Importantly, the shift from language-developed competency (ie, achieving the required English or French test score) to a broader cultural-language competency may suggest that either cultural competency or language competency alone is not enough. However, we argue that developing strategies that would enhance cultural-language competency as a single construct would likely be a better approach for successful integration of the IEHPs. Therefore, achieving a good language score is an important foundation, but developing skills for culture-specific language appears crucial for professional success.<sup>42</sup> Wells and Black stated that it is possible that there are cultural differences in communication in different groups with the same language; hence, experience in a new cultural context of practice is important.<sup>43</sup> In the studies reviewed, the majority of the experiences related to cultural adaptation were incorporated in bridging programs. For instance, Hawken and Sullivan et al reported that the preregistration internship programs contributed to development of cultural and language competence among IMGs.<sup>30,36</sup> The idea that internship programs are used to foster cultural and language competence is also found in the literature about nurses.<sup>44</sup> However, preregistration internship programs appear to be designed on an ad hoc basis, and therefore, may not provide enough time for IEHPs to fully develop the required cultural and language competency; hence, ongoing experience in this cultural context is essential for IEHPs even after attaining registration or licensure.<sup>3,31</sup> This ongoing experience can be informal (like shadowing a practicing professional) or by a formal compulsory process for clinical exposure before attaining licensure in some professions.<sup>44</sup>

Furthermore, communication typically does not entail only verbal interactions but rather a combination of verbal and non-verbal communication as well as legibility in clinical note documentation. Understanding the cultural-specific norms like gestures; body language; and norms of personal space, touch, eye contact, and the tone of communication is necessary for successful registration

and smooth transition of IEHPs in their new country of practice.<sup>45,46</sup> Overall, good culturally competent practice translates into effective subjective and objective clinical examination, diagnosis, and prognosis and subsequently enhances entry level competencies in the other roles in the competency profile.<sup>33,36</sup>

Confidence has been identified by multiple authors as being an important factor for IEHPs either during the process of seeking registration or after attaining it. IEHPs have less confidence in fulfilling the “expert,” “communicator,” and “collaborator” roles in our included studies. It is likely that most of the IEHPs have the necessary skills and knowledge to practice in a setting different from their previous practice. However, they often were reported not to have the confidence to communicate findings to patients and during interprofessional meetings like medical rounds. This low confidence has been reported in professions like physiotherapist and/or pharmacist in which they do not have autonomy to practice in their home setting, such as if a physiotherapist must follow a physician's instructions.<sup>38</sup> Being able to communicate assessment findings and treatment procedures to patients and other health care professionals is essential for meeting professional standards for autonomous practice in the Canadian practice setting. Confidence is often built through ongoing experience in the Canadian context -- for example, in pre-employment clinical internships.

For an effective practice manager, one must understand the specific health care system processes like insurance, differences in documentation (eg, electronic documentation), and required case load during practice. In addition, one must understand the health care professional's responsibilities with respect to direct access when to refer patients to others and when to discharge patients. It is not surprising that a majority of the IEHPs are reported to struggle to assume the role of a “practice manager,” as most of the roles of a practice manager are culturally specific, and they are different between care setting types. For instance, the responsibilities of a practice manager would be different in an acute care setting than in a primary care setting or a long-term care setting. Having autonomy in practice and using a client-centered approach are new to some of the IEHPs. It is, therefore, not surprising that IEHPs are reported to struggle to fulfil the role of practice manager, especially those from developing countries.

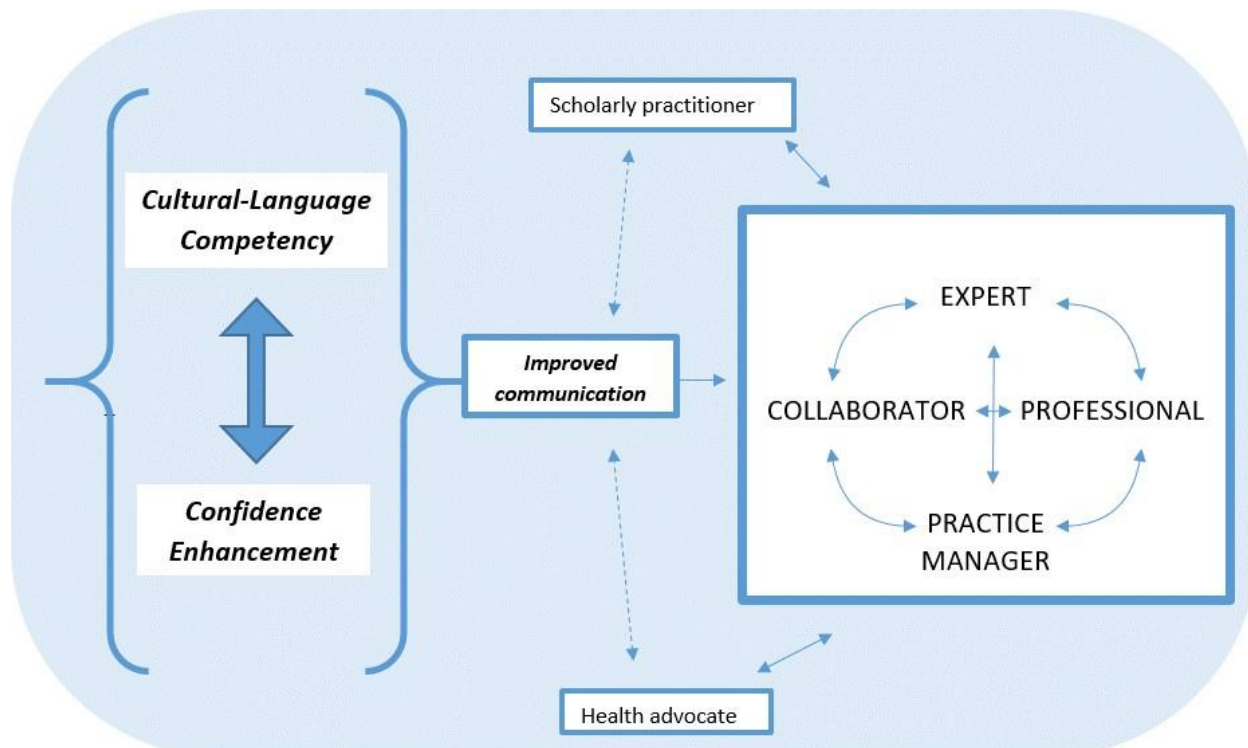
With respect to the role of professional, the main area in which IEHPs are reported to need further improvement is medico-legal ethics. This finding is not surprising in light of how legal and ethical frameworks can be very different across cultures and countries. We propose that course-based program would improve the IEHPs knowledge on the medico-legal practice ethics in their new country.

### **Synthesis of IEHPs' Deficiencies in Fulfilling Professional Roles**

In synthesizing the literature with respect to the deficiencies reported among IEHPs in professional competencies, we noted that there seemed to be multiple types of competency related to communication. One is cultural competency, which involves self-understanding and knowledge of cultural values that are often different from one's own culture and subsequently developing behaviors and responsibilities to bridge with the new culture that is different from one's identified culture.<sup>47</sup> A second one is language competency, which is defined as the knowledge and use of language codes, such as grammatical rules, vocabulary, pronunciation, and spelling.<sup>48</sup> Language competency is often evaluated through formal English tests like the Use of English Test for English language competency test. For the IEHPs to effectively communicate in their new country, having basic language competency is a good foundation, but understanding the cultural differences, specifically those that pertain to communication, such as colloquial and body language, is essential for successful integration into their new country. Therefore, we propose a third competency, which we term cultural-language competency, defined as the mastery and integration of the cultural and language competencies described above. It includes appropriate application of vocabulary and style of delivery in a given situation as well as ability to interpret verbal and non-verbal communications accurately. Hence, we propose that developing cultural-language competency as a unified construct could be a promising strategy to ensure proper and smooth transition and/or integration of IEHPs into their new professional workforce. It is noted that confidence emerged as another issue that frequently needed attention among the IEHPs. Although confidence was sometimes related to cultural and language competencies, it appeared to be a distinct issue.

Overall, our synthesis shows that cultural-language and confidence deficits contribute to the deficiencies seen in roles and competencies among IEHPs in their new country. Based on the reviewed literature, cultural-language and confidence enhancement in a preregistration program for IEHPs is a potentially valuable approach to address the deficiencies in the professional roles/competencies. We believe that we cannot fully understand the true extent of the deficiencies in the roles in the professional competency profile when there are cultural-language and confidence deficiencies. Hence, enhancing cultural-language competency and confidence would likely enhance the ability to see how much there is any true deficit in the “expert” and other roles. Therefore, it would then be logical that when IEHPs' cultural-language competency is achieved and their confidence enhanced, the IEHPs would perform up to their potential in other roles listed in the professional competency profile. For example, we believe that when IEHPs are culturally aware of Canadian practice patterns, they will likely be more confident in communicating with/to patients and the interdisciplinary team members during medical rounds. Figure 3 illustrates that there are interwoven

relationships between the existing roles in the professional framework in some selected professions in Canada and the 2 emerging concepts alongside the roles that emerged from our synthesis.



**Figure 3.** Pictorial Representation of IEHPs' Deficiencies in Fulfilling Professional Roles. *Note:* Competencies in the left column indicate competencies that if enhanced, we propose could influence communication. The improved communication could subsequently influence the ability to fulfill the roles of expert, collaborator, professional and practice manager. The dashed arrows connecting each of scholarly practitioner and health advocate to improved communication reflect that we propose they may be related but we did not find evidence in the literature to support these relationships in contrast to the other roles. IEHPs = internationally educated health care professionals.

As the pictorial representation (Figure 3) indicates, cultural-language competency and confidence enhancement are proposed to lead to improved communication, which in turn will lead to enhancement in all 4 of expert, collaborator, professional, and practice manager roles. Evidence in the literature is sparse with respect to scholarly practitioner and health advocate, but we hypothesize that improved communication will also lead to better performance in these roles.

### STRENGTHS, LIMITATIONS, AND RECOMMENDATION FOR FUTURE RESEARCH

We have mapped the immigrants' perspectives or the perspectives of professionals or regulatory authorities in the new country to the Canadian Professional Competency Profiles. It is possible that some articles, especially grey literature, may have been missed in the search. Moreover, the review only included articles published in English; therefore, it is possible that we missed important articles published in languages other than English. Including only articles in English implied that the findings of this review likely cannot be applied to IEHPs migrating to non-English speaking countries.

The process of critical review relied on a checklist that we applied to the 10 out of 13 articles we found that were studies. Only one met all the criteria in the quality evaluation checklist.<sup>29</sup> The most common weakness was missing information about ethical considerations. This deficiency is potentially a great concern; however, it is possible that some of these studies are partial reports from program evaluation that may have received ethics approval and utilized informed consent, but did not report it in the publication. Nevertheless, it would have been helpful if readers had been referred to the protocol of the initial study when applicable. In addition, a different type of critical review processes may have led to different insights.

From the review process undertaken, we propose one key recommendation: further research should go beyond simple language competence of the IEHPs because it seems that the development of strategies to enhance culturally-language competence and confidence are important.

## CONCLUSION

When internationally educated health care professionals migrate to a new country, it is common for them to experience challenges related to the professional competencies expected of them in the new country. We were able to map the experiences to 6 of the 7 roles in the framework based on the competency profiles for 4 health care professions in Canada, the exception being health advocate. Connected to these roles, we found that aspects of communication were often a major concern in the integration of IEHPs into their new country. From the findings, we propose that cultural-language competency, a unified construct combining cultural competency and language competency, appeared to be important for fulfilling the other roles. We concluded that methods of enhancing cultural-language competency are potentially important in supporting integration of internationally educated health care professionals into the workforces of the countries to which they have migrated. Also, we propose that confidence is an interwoven factor that may have a great influence on IEHPs' ability to fulfill other competencies. Ongoing experience to clinical practice context seems to help improve confidence and promote cultural-language competency. Overall, IEHPs' abilities to fulfill other roles in the competency profile may be enhanced when their cultural-language competency and confidence are improved.

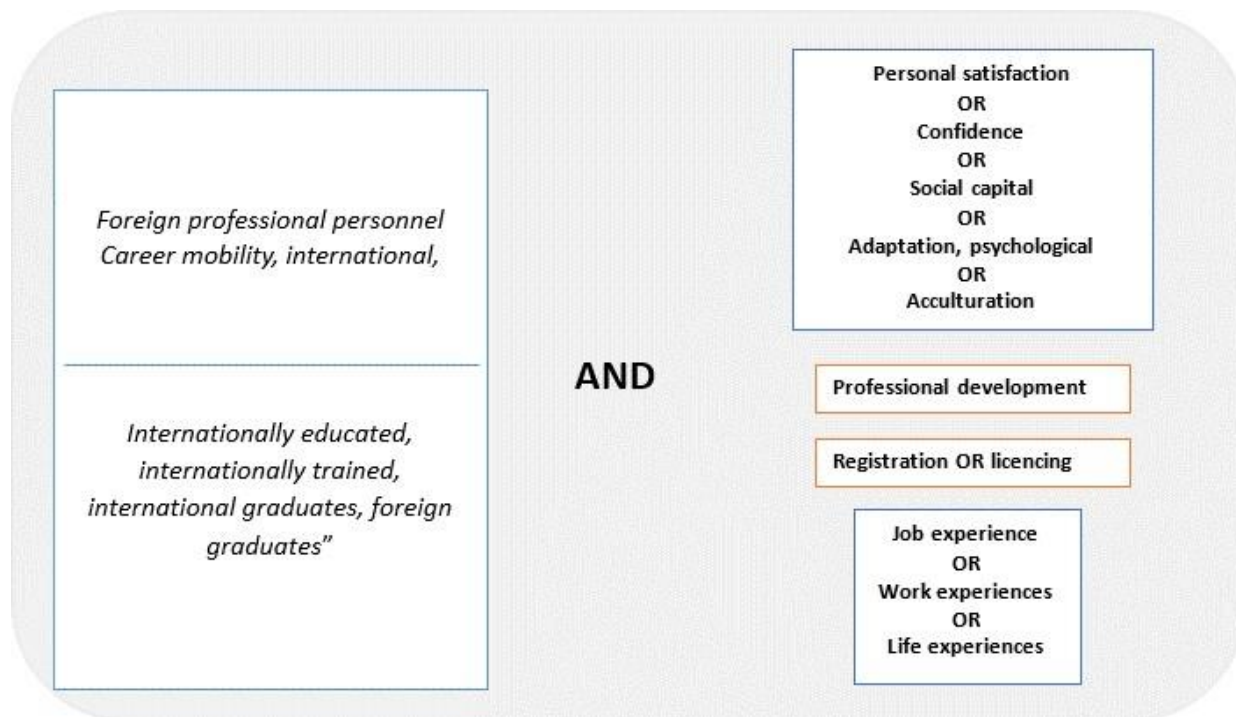
## REFERENCES

1. Covell L, Neiterman E, Bourgeault I. Scoping review about the professional integration of internationally educated health professionals. *Hum Resour Hea*. 2016 Jun 17;14(1):38. [PMID:27316536]
2. Glinos I. Going beyond numbers: A typology of health professional mobility inside and outside the European Union. *Pol Soc*. 2014;33 (1):25-37. <https://doi.org/10.1016/j.polsoc.2014.04.001>
3. Moran A, Nancarrow S, Butler A. "There is no place like home", a pilot study of perspective of international health and social care professionals working in the UK. *Aust New Zealand Hea Pol*. 2005 Oct 27;2(1):25. [PMID:16253132]
4. Dumont J, Lemaitre G. Beyond the headlines: New evidence on the brain drain. *Revue Econo*. 2005;56(6):1275-99. doi: 10.3917/reco.566.1275.
5. Chen H. A brain gain or a brain drain? Migration, endogenous fertility, and human capital formation. *Econ Inquiry*. 2009 Oct 1;47(4):766-82. doi:10.1111/j.1465-7295.2008.00185.x.
6. Gaillard J, Gaillard M. The international mobility of brains: exodus or circulation. *Sci Tech Soci*. 1997 Sep;2(2):195-228.
7. Carrington WJ, Detragiache E. International migration and the "brain drain". *J Soc Pol Econ*. 1999;24(3):163-71.
8. Docquier F, Lohest O, Marfouk A. Brain drain in developing countries. *World Bank Econ Rev*. 2007 Jan;21(2):193-218. doi.org/10.1093/wber/lhm008.
9. Foo J, Storr M, Maloney S. Registration factors that limit international mobility of people holding physiotherapy qualifications: a systematic review. *Health Pol*. 2016 Jun;120(6):665-73. [PMID: 27114105]
10. Sattler P, Peters J, Bourgeault I, Esses V, Neiterman E, et al. *Multiple Case Study Evaluation of Postsecondary Bridging Programs for Internationally Educated Health Professionals Toronto*. Higher Education Quality Council of Ontario; 2015.
11. Government of Canada. *Facts and figures 2013-Immigration Overview: Permanent Residents/2015 Canada-Permanent Residents by Labour Market Intention, Occupation and Skill Level*. Canada; 2014. Available at <http://www.cic.gc.ca/english/resources/statistics/facts2014/permanent/22.asp>. Accessed October 10, 2015.
12. Baumann A, Blythe J. Integrating Internationally Educated Health Care Professionals into the Ontario Workforce. *Health Human Resources Series Report*. Number 20, Hamilton, Ontario: Nursing Health Service Research Unit [McMaster University]; 2009.
13. Baumann A, Blythe J, Rheume A, McIntosh K. *Internationally Educated Nurses in Ontario: Maximizing the Brain Gain*. Health Human Resource Series Number 3, Hamilton, Ontario: Nursing Health Services Research Unit, McMaster University; 2006. Available from: <https://fhs.mcmaster.ca/nhsru/documents/SeriesReport3InternationallyEducatedNursesinOntarioMaximizingtheBrainGain.pdf>. Accessed August 10, 2016.
14. Blythe J, Baumann A. Supply of internationally educated nurses in Ontario: recent developments and future scenarios. *Health Human Resource Series Report*. Number 9, Hamilton, Ontario: Nursing Health Services Research Unit [McMaster University]; 2008.
15. Health Canada. *Internationally Educated Healthcare Professionals*; 2017. Available at <http://www.hc-sc.gc.ca/hcs-sss/hhr-rhs/strateg/init-prof-educ/index-eng.php>. Accessed June 1, 2017.
16. Drummond D, Fong F. An Economics Perspective on Canadian Immigration. *Pol Opti*. 2010 July-Aug;31(7):28-34. <http://irpp.org/wp-content/uploads/assets/po/immigration-jobs-and-canadas-future/drummond.pdf>.
17. Baumann A, Blythe J, Ross D. Internationally educated health professionals: workforce integration and retention: the authors respond. *Healthc Pap*. 2010 May;2(10):51-5. doi:10.12927/hcpap.2010.21801
18. Covell L, Neiterman E, Bourgeault I. A scoping review of the literature on internationally educated nurses in Canada:



- mapping a research agenda. *Can J Nurs Res*. 2014 Sep;46(3):26-45. [PMID:29509484]
19. Hefley J, Mandel J, Gerace R. Internationally educated healthcare workers: focus on physicians in Ontario. *Healthc Pap*. 2010 May;10(2):41-5. doi:10.12927/hcpap.2010.21799.
  20. Beaton M, Walsh J. Overseas recruitment: Experiences of nurses immigrating to Newfoundland and Labrador, 1949-2004. *Nurs Inq*. 2010 Sept;17(2):173-83. [PMID: 20602711]
  21. Grant J, Booth A. A typology of reviews: an analysis of 14 review types and associated methodologies. *Health Info Libr J*. 2009 Jun;26(2):91-108. [PMID:19490148]
  22. Ryan F, Coughlan M, Cronin P. Step-by-step guide to critiquing research. Part 2: qualitative research. *Br J Nurs*. 2007 Jun 28-Jul 11;16(12):738-44. [PMID:17851363]
  23. Dywili S, Bonner A, O'Brien L. Why do nurses migrate? - A review of recent literature. *J Nurs Manag*. 2013 Apr;21(3):511-20. [PMID: 23409815]
  24. Hsieh H, Shannon C. Three approaches to qualitative content analysis. *Qual Health Res*. 2005 Nov;15(9):1277-88. [PMID:16204405]
  25. National Physiotherapy Advisory Group (NPAG). *Essential Competency Profile for Physiotherapists in Canada 2009*. Working Group Report. Canadian Alliance of Physiotherapy Regulators; 2009. Available at: <http://www.physiotherapyeducation.ca/Resources/Essential%20Comp%20PT%20Profile%202009.pdf>. Accessed September 4, 2016.
  26. National Association of Pharmacy Regulatory Authorities. *Professional Competencies for Canadian Pharmacists at Entry to Practice*. Official Report; 2007 (2nd revision March). Available at: [http://napra.ca/sites/default/files/2017-09/Entry\\_to\\_Practice\\_Competencies\\_March2007\\_final\\_new\\_layout\\_2009.pdf](http://napra.ca/sites/default/files/2017-09/Entry_to_Practice_Competencies_March2007_final_new_layout_2009.pdf). Accessed September 6, 2016.
  27. Canadian Association of Occupational Therapists. *Profile of Occupational Therapy Practice in Canada*, Ottawa; Ontario: CAOT Publications ACE; 2012. Available at: <https://www.caot.ca/document/3653/2012otprofile.pdf>. Accessed September 7, 2016.
  28. Royal College of Physicians and Surgeons of Canada. CANMED Framework: CANMEDS: *Better Standards, Better Physician, Better Care*; 2017. Available at <http://www.royalcollege.ca/rcsite/canmeds/canmeds-framework-e>. Accessed September 8, 2016.
  29. Amerih H, Hersch G. The challenges and adaptation of foreign-educated occupational therapists. *Wor Fed Occ Thera Bul*. 2009 May;59(1):63-9. doi.org/10.1179/otb.2009.59.1.018.
  30. Sullivan E, Willcock S, Ardzejewska K, Slayto E. A pre-employment programme for overseas-trained doctors entering the Australian workforce, 1997-99. *Med Educ*. 2002 Jul;36:614-21. [PMID: 12109980]
  31. Austin Z, Galli M, Diamantourous A. Development of a prior learning assessment for pharmacists seeking licensure in Canada. *Pharm Edu*. 2003 May;3:87-96. doi: 10.1080/1560221031000151633.
  32. Baumann A, Blythe J, Ross D. Internationally educated health professionals: workforce integration and retention. *Healthc Pap*. 2010;2(8):8-20. [PMID:20523135]
  33. Johnson K, Bauml B. *Assessing the Workforce Integration of International Educated Health Care Professional*. A Final Report for Canadian Society for Medical laboratory Science, Ontario, Canada; 2011. Available at: [https://www.csmls.org/csmls/media/documents/publications/CSMLS-KS-0001\\_WFI\\_Report\\_ENG.pdf](https://www.csmls.org/csmls/media/documents/publications/CSMLS-KS-0001_WFI_Report_ENG.pdf). Accessed December 12, 2016.
  34. Mulholland SJ, Dietrich TA, Bressler SI, Corbett G. Exploring the integration of internationally educated occupational therapists into the workforce. *Can J Occup Ther*. 2013 Feb;80(1):8-18. [PMID: 233550492]
  35. Fiscella K, Frankel R. Overcoming cultural barriers: international medical graduates in the United States. *JAMA*. 2000 April;283(13):1751. [PMID: 10755508]
  36. Hawken S. Overseas-trained doctors' evaluation of a New Zealand course in professional development. *N Z Med J*. 2005 Jul 29;119(1219):U1584. [PMID: 16059405]
  37. Narasimhan S, Ranchord A, Weatherall M. International medical graduates' training needs: perceptions of New Zealand hospital staff. *N Z Med J*. 2006 Jun 23;119(1236):U2027. [PMID: 16807571]
  38. Johnson K. *Integrating Internationally Educated Physiotherapist*. Canadian Alliance of Physiotherapy Regulators and Canadian Association of Physiotherapy, Ontario, Canada; 2007.
  39. Lockyer J, Hofmeister M, Crutcher R, Klein D, Fidler, H. International medical graduate: learning for practice in Alberta Canada. *J Contin Educ Health Prof*. 2007 Summer;27(3):157-63. [PMID: 17876840]
  40. Landry M, Gupta N, Tepper J. Internationally educated health professionals and the challenge of workforce distribution. *Healthc Pap*. 2010 May;10:35-40. doi:10.12927/hcpap.2010.21798.
  41. Sochan A, Singh M. Acculturation and socialization: voices of internationally educated nurses in Ontario: original article. *Int Nurs Rev*. 2007 Jun;54(2):130-6. [PMID: 17492985]
  42. Dillard M, Andonian L, Flores O, Lai L, Macrae A, Shakir M. Culturally competent occupational therapy in a diversely populated mental health setting. *Am J Occup Ther*. 1992 Aug;46(8):721-726. [PMID: 1497080]

43. Wells S, Black R. *Cultural Competency for Health Professionals*. Bethesda, MD: American Occupational Therapy Association; 2000.
44. Bourgeault L, Neiterman, E, LeBrun J, Viers K, Winkup J. *Brain Gain, Drain and Waste: The Experiences of Internationally Educated Health Professionals*. Ottawa: Canadian Health Human Resources Network; 2012. Available at [http://books1.scholarsportal.info/viewdoc.html?id=/ebooks/ebooks0/gibson\\_cppc-chrc/2012-05-31/1/10545242#tabview=tab1](http://books1.scholarsportal.info/viewdoc.html?id=/ebooks/ebooks0/gibson_cppc-chrc/2012-05-31/1/10545242#tabview=tab1). Accessed June 8, 2017.
45. Awaad T. Culture, cultural competency and occupational therapy: A review of the literature. *Br J Occup Ther*. 2003 Aug;66:356-362. doi.org/10.1177/030802260306600804.
46. Lum L. *Accommodating Learning Styles in Bridging Education Programs for Internationally Educated Professionals*. Canadian Council on learning; 2009. Available at <http://www.cclcca.ca/pdfs/fundedresearch/Lum-FinalReport.pdf>. Accessed January 25, 2017.
47. Chi Y, Hong Y. Cultural Competence: Dynamic Processes. In Elliot A, Dweck C, Yeager D, 2e. *Handbook of Competence and Motivation, Theory and Application*. New York, NY: Guilford; 2017.
48. Bachman F, Palmer S. *Language Testing in Practice: Designing and Developing Useful Language Tests*. Oxford etc: OUP; 1996.



**Figure 1.** Initial Search in CINAHL.

*Note:* Search terms in the blue-outlined boxes were searched using “Major focus/MM” while the search terms in the red-outlined boxes were “exploded/MH”.

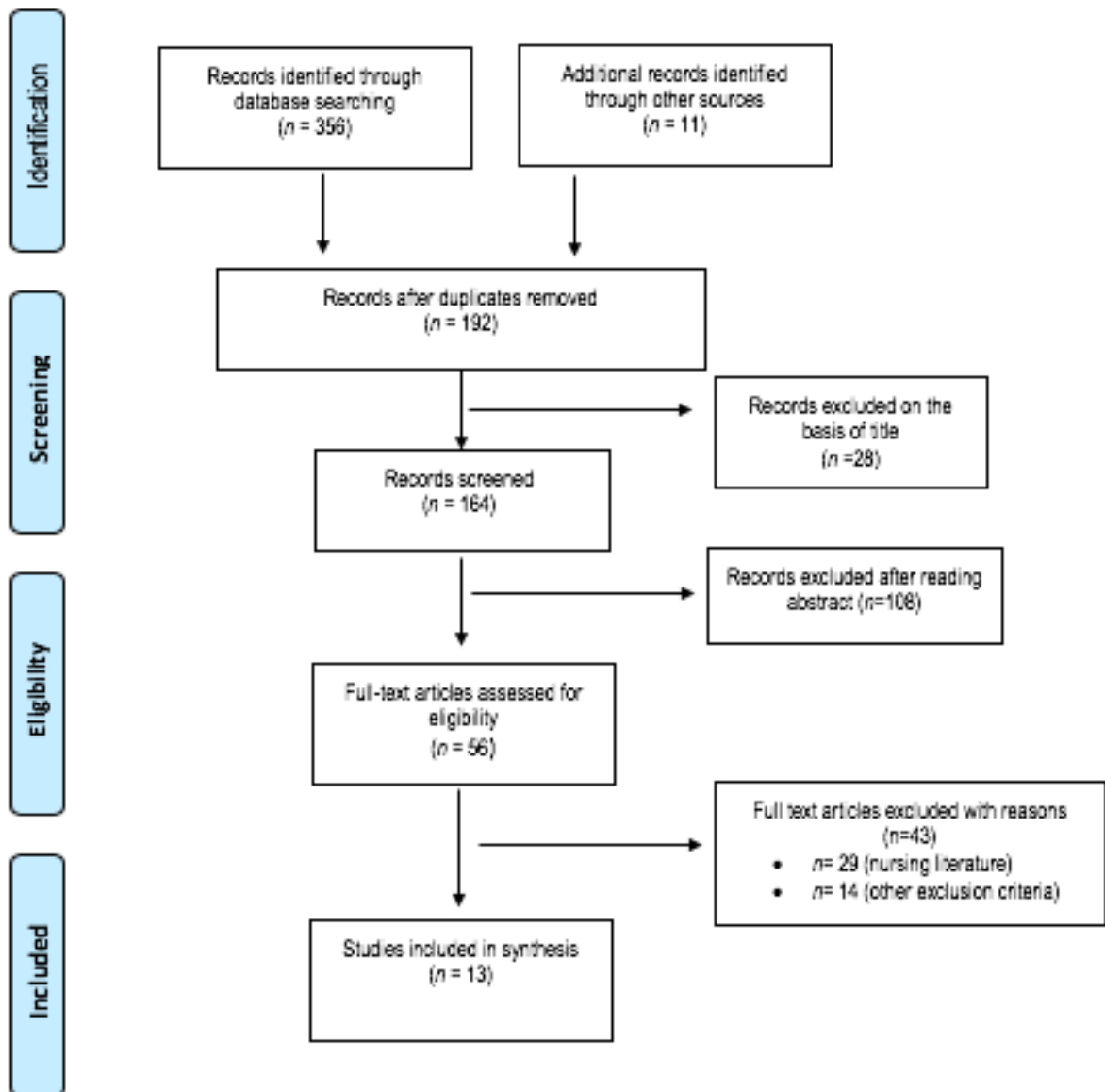
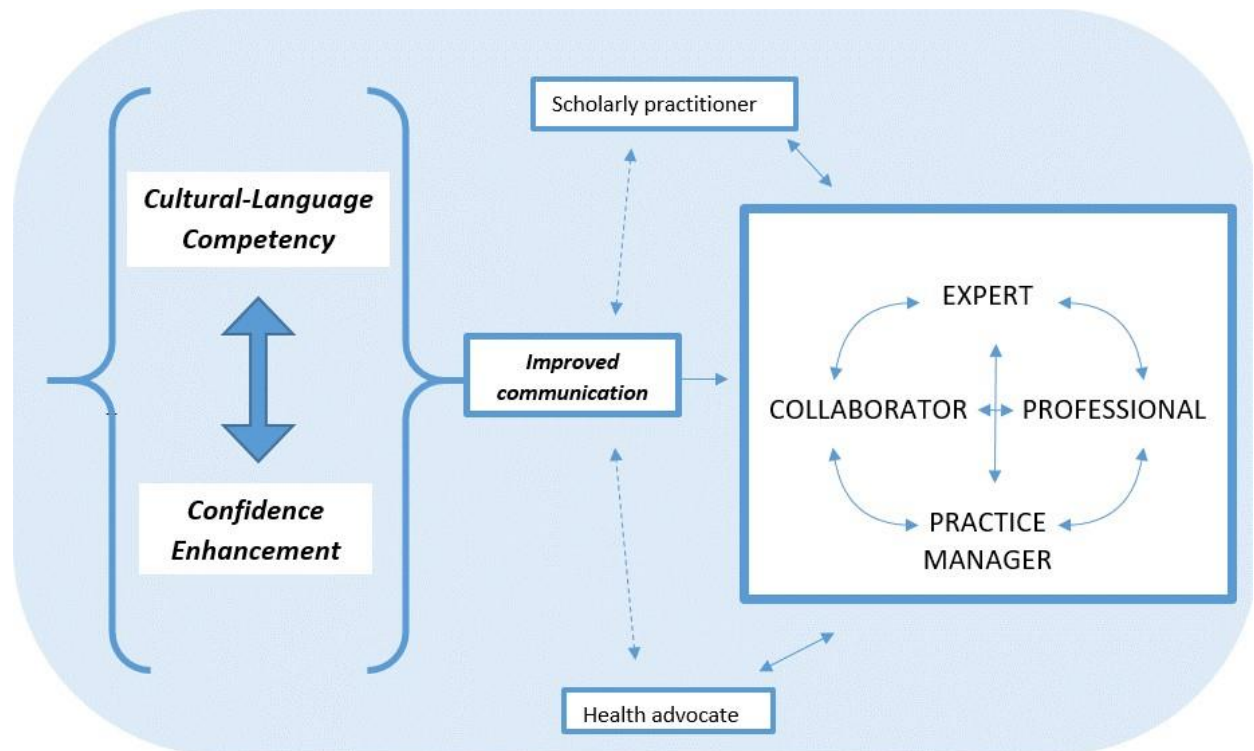


Figure 2. Flowchart to Show Selection of Studies



**Figure 3.** Pictorial Representation of IEHPs' Deficiencies in Fulfilling Professional Roles

*Note:* Competencies in the left column indicate competencies that if enhanced, we propose could influence communication. The improved communication could subsequently influence the ability to fulfill the roles of expert, collaborator, professional and practice manager. The dashed arrows connecting each of scholarly practitioner and health advocate to improved communication reflect that we propose they may be related but we did not find evidence in the literature to support these relationships in contrast to the other roles. IEHPs = internationally educated health care professionals.