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Migration of oral health professionals: a scoping review protocol

Anumala Ram ,[1] Zac Morse[2]

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[1]Oral Rehabilitation, Fiji National University College of Medicine Nursing and Health Sciences, Suva, Fiji
[2]Faculty of Health and Environmental Sciences, Auckland University of Technology, Auckland, New Zealand

Correspondence to
Dr Anumala Ram;
anumala.ram@fnu.ac.fj

ABSTRACT

Introduction Each year, many dental professionals are trained; however, many low-income and middle-income countries face a scarcity of dental professionals. This trend has been observed because of the migration of oral health professionals from developing to developed countries for various reasons such as professional, economic or personal. This negatively impacts the healthcare system by causing critical shortages of trained personnel to support the oral healthcare needs of the countries where the oral health professionals migrate from (source countries). The key objectives of this scoping review are to assess the intentions behind the migrations, identify the countries the graduates migrate to and from, examine the barriers to and facilitators of integrating oral health professionals, as well as the challenges they face post migration.

Methods and analysis A scoping review will be reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Review (PRISMA-ScR) and the Joanna Briggs Institute guidelines. Scientific databases such as Dentistry and Oral Sciences Source, Cumulative Index to Nursing and Allied Health Literature, MEDLINE and Scopus will be systematically searched to identify potential articles. In addition, grey literature will be searched to identify unpublished materials relevant to the topic using Google Scholar and Google. The reviewers will assess the retrieved sources in a three-step search strategy, and a PRISMA-ScR flowchart will document the numbers of identified, screened and excluded sources. The scoping review will collate and present the findings as a descriptive analysis. Finally, the narrative descriptions will be presented in a thematic form based on the findings of the scoping review.

Ethics and dissemination This scoping review is based on a secondary analysis of published data; hence, ethical approval is not required. The findings of this study will be disseminated through publication in a peer-reviewed journal, professional networks and conferences.

STRENGTHS AND LIMITATIONS OF THE STUDY

⇒ This scoping review will systematically identify and review research on the migration of oral health professionals.
⇒ In line with the global impact of the migration of oral health professionals, this review will map and identify gaps in the literature and make recommendations.
⇒ Our scoping review will conform to the rigorous methodology manual by the Joanna Briggs Institute.
⇒ A comprehensive search strategy will include multiple databases, that is, Dentistry and Oral Sciences Source, Cumulative Index to Nursing and Allied Health Literature, MEDLINE and Scopus.
⇒ A limitation of the study will be that it will only include sources published in English.

INTRODUCTION

Global competition exists for healthcare workers, resulting in the migration of workers from low- or medium-income countries (LMIC) to high-income countries. This trend has been receiving substantial attention in both 'brain-drain' and 'brain-gain' countries.[1] The impact of this issue on the global shortage of health professionals is so significant that it has been termed a crisis, and programmes have been developed to overcome the human resource for health (HRH) challenge. The World Health Report, published in 2006, focused on HRH's significant shortage of skilled health professionals in over 50 countries. In addition, the report highlighted the importance of sustainable health-related development goals.[2]

The dental profession has been seen as an attractive career choice with continued interest from high-achieving school leavers.[3 4] However, despite the high number of graduating oral health professionals each year, many developing countries have a scarcity of these professionals. This trend has been observed because of the migration of oral health professionals from LMIC (developing) to high-income (developed) countries for various reasons, such as professional, economic or personal. An outcome of this phenomenon is that the cost of education and training is wasted on the already disadvantaged countries. This leads to critical shortages of trained personnel to support the oral healthcare needs of the countries where the oral health professionals migrate from (source countries). In addition, the recruiting countries can also face adverse impacts of this migratory trend, such as creating restrictions and competition for indigenously trained dental professionals and future dental professionals as the workforce markets become saturated.

The magnitude of this impact on the healthcare systems is so grave that the WHO has developed a 'Global Code of Practice on the

International Recruitment of Health Personnel'[5] that highlights that international recruitment of oral health professionals should be an ethical exercise that is transparent, fair and promotes sustainability of the health systems in the developing countries. Furthermore, this code of practice respects the health professional's right to migrate and a population's right to access oral healthcare. The FDI World Dental Federation (FDI) continually supports the WHO global code for international recruitment of health professionals and has identified the inequitable distribution of oral health professionals as a critical issue to be addressed.[6 7] In addition, non-government stakeholders such as the International Federation of Dental Education Associations, which partners with country and regional-based educators, have highlighted the need to address dental education and regulations related to the brain drain of health professionals.[8 9]

Among the host countries, Australia has been ranked by the FDI as having the highest number of overseas dentists, where every fourth dentist in Australia is a foreign-trained dentist or international dental graduate.[6 10] Other host countries include the USA, Canada and New Zealand. However, acquiring registrations for practising dentistry in the host countries can be challenging for migrating health professionals. For instance, only approximately 25% of a thousand international dentists that take the Australian Dental Council Examinations manage to pass,[11] and about 50–75 international dental graduates enter by direct recognition of qualification.[12] Similarly, in New Zealand, the Dental Registration Examinations are challenging, and many candidates require several attempts to pass the examinations.[13]

Over the past few years, the exponential commercialisation of medical, nursing and dental education has been observed in the South-East Asian and Western Pacific regions, where education is focused on training professionals for the Westernised markets.[14 15] This has led to an increase in the number of private medical and dental universities in these regions. For instance, 85% of the dental universities in India are private, with approximately 90% of overall undergraduate enrolments collectively.[16] However, despite approximately 20 000 graduating dentists annually, there is still a significant shortage of dentists in remote areas in India.[17 18]

Oral health professionals have migrated from sub-Saharan Africa to Canada, which has been recognised as a wealthy and democratic country. Some of the common reasons for migration include job insecurities, poor working conditions, political and economic instability, lower remuneration and poor quality of life, especially in African and Middle Eastern countries.[19] In another context, Labonté *et al*[19] highlighted that migration of oral health professionals can reduce the oversupply of general dentists in countries such as Lithuania, with a high dentist-to-population ratio (9.3 to 10 000). A survey in New Zealand highlighted that lifestyle and quality of life are the reasons that motivate international dental graduates to migrate to New Zealand.[13] Dentists who had family members abroad and did not have personal satisfaction were more likely to migrate from Lithuania.[20] Almost 50% of dentists in Hong Kong intended to migrate to another country because of concerns related to freedom and stability following the 1997 handover to the People's Republic of China.[21]

The UK, on the other hand, has been facing a shortage of dentists in the National Health Services.[22] This has led to the formation of 'dental deserts' where millions of people are without dental care. There is now an urgent need for recruitment of oral health professionals from other countries to assist in levelling up dental access as reported by the Association of Dental Groups[23] that can also add to the migration of oral health professionals from LMIC.

Recognising the global impact that the migration of oral health professionals has, the primary aim of this scoping review is to map the literature on the migration of oral health professionals and, more specifically, to assess the intentions behind the migrations, identify the countries to which the graduates migrate and examine the barriers to and facilitators of integration of oral health professionals.

METHODS AND ANALYSIS

This article describes the protocol for the scoping review that is currently being planned. The review findings will be reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Review (PRISMA-ScR)[24] and the Joanna Briggs Institute (JBI)[25] guidelines. The study will be undertaken in five stages: (1) identification of the research question, (2) identification of relevant studies, (3) selection of eligible studies, (4) charting the data and (5) collating, summarising and reporting the results.

Stage 1: identification of the research questions

Through consultation with the researchers and key stakeholders, this scoping review's main research question is: 'Why do oral health professionals migrate, and what are the challenges they face post migration?'.

Stage 2: identifying relevant sources

The eligibility criteria for this scoping review are based on the JBI recommendations of the Population/Concept/Context framework,[26] as described in table 1.

A search strategy was developed after consultations between the researchers and an experienced health librarian from the Auckland University of Technology (online supplemental appendix I). The search strategy for this scoping review will be a three-step process proposed by JBI.[25] The first search will include databases such as the Dentistry and Oral Sciences Source, Cumulative Index to Nursing and Allied Health Literature (CINAHL), MEDLINE and Scopus databases, followed by an assessment of relevant articles based on text words in the title, abstract and index terms. The intended databases that will be searched include the Dentistry and Oral Sciences Source, CINAHL, MEDLINE and Scopus. There will be no limitations based on publication date, geographic location or setting, and both published and grey literature will be searched. After the initial search, the citations

Table 1 Eligibility criteria based on study Population, Concept and Context framework

Characteristic	Inclusion criteria	Exclusion criteria
Population	Oral health professionals who are registered with national regulatory bodies (dentists, dental specialists, oral health therapists, dental therapists, dental hygienists and dental technicians)	Oral health professionals who are not registered with a national regulatory body
Concept	Migration, brain drain, immigration, relocation	
Context	Any geographical location and setting	None
Types of evidence	Primary emipiral research studies (randomised control trials, cohort studies, cross-sectional studies, case reports) Reviews Full-text articles Full-text conference proceedings Articles written in English	Articles for which full text cannot be obtained or are not written in English

will be downloaded, and duplicates will be removed. Following this, two reviewers will independently pilot the selection process using the eligibility criteria of one database (MEDLINE) to ensure consistency and validity of the search. The first 25 sources will be screened by their titles and abstracts and labelled as 'included', 'excluded' or 'uncertain'. Any discrepancies detected in the eligibility criteria and/or selection process will be reviewed by the researchers. The researchers may contact authors of primary studies or reviews for further information and clarifications as required. After the third search, grey literature will be searched using Google and Google Scholar to identify sources not published in scientific journals relevant to the topic. International health organisations and government websites will also be searched. A PRISMA-ScR flowchart will be used to report on the numbers of identified, screened and excluded sources (figure 1). This will be accompanied by a narrative description of the selection process. The reasons for sources being excluded at each stage of the selection process will also be reported, along with a table outlining the relevance of the included sources to the review question. The review will not have any time frame restrictions in terms of publication dates.

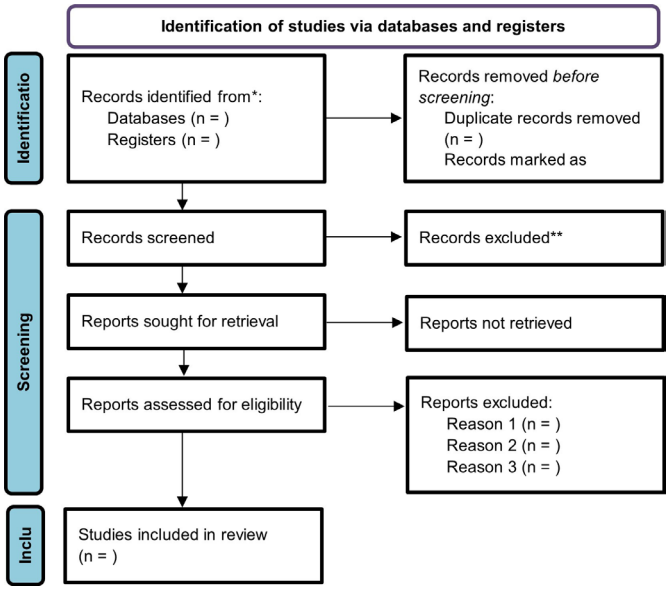

Figure 1 Preferred Reporting Items for Scoping Reviews and Meta-Analyses flow chart.

Stage 3: selection of eligible studies

The EndNote X9[27] reference management software will be used to export all citation records from the databases, duplicates will be removed and data will then be imported to Rayyan[28] for screening and extraction. The selection of eligible studies will be carried out in two steps. The first step will be carried out by both researchers independently and will include screening titles and abstracts against the inclusion criteria. Any publications with titles and abstracts that do not meet the inclusion criteria will be excluded, and the reasons for excluding any research during the full-text screening will be recorded.

Stage 4: charting the data

Data extraction and charting will be managed according to the JBI guidelines.[25] Data charting (online supplemental appendix II) will include authors, year of publication, country of origin, aims and purpose, study population, concept, context, methodology and methods, key findings related to the review questions and future recommendations. The content of the data charting form will evolve with the understanding gained throughout the process. Therefore, the table will be reviewed after the study selection. Additionally, some categories may not be included in the final review if the reviewers decide those categories to be irrelevant and not useful. Other categories may be added as appropriate, and the reasons for the changes will be documented.

Data will be extracted from all sources included in the scoping review using a data extraction table developed by the reviewers. The two reviewers will pilot test the data extraction table from the three sources. The results will be discussed, and, if required, modifications will be introduced to the table.[29]

An assessment of the risk of bias will not be performed, as the authors aim to provide a broad overview of the existing literature, regardless of its risk of bias or methodological quality. However, any changes to the data extraction table will be recorded and reported in the scoping review. One reviewer will extract data, and the second will verify the data

for accuracy.[29] Any disagreements that arise between the reviewers at any stage of the data extraction process will be resolved through discussion, and if required, a third reviewer will make the final decision.

Stage 5: collating, summarising and reporting the results

This scoping review will collate and present the findings as a descriptive analysis. Assessment of the strength of evidence will be qualitative rather than quantitative. The PRISMA-ScR guidelines[24] will be used to present the method flow chart. The findings will be presented in tables and aligned with the review's objectives. The narrative descriptions will be presented in a thematic form based on the findings of the scoping review.

Patient and public involvement

Patients or the public will not be involved in the design, conduct, reporting or dissemination plans of the research as this review involves only secondary data.

ETHICS AND DISSEMINATION

This scoping review is based on secondary data; hence, ethical approval is not required. The findings of this study will be disseminated through publication in a peer-reviewed journal, professional networks and conferences.

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Competing interests None declared.

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ORCID iD

Anumala Ram http://orcid.org/0000-0001-7484-3623

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