
Migrant dentists in Australia: a qualitative-quantitative study

Madhan Balasubramanian
BDS. MHSM(Hons).

This thesis is submitted in fulfilment of the requirement for
the degree of Doctor of Philosophy

School of Dentistry, the University of Adelaide
Aug 2015

Supervised by Professor David S Brennan
Co-supervised by Emeritus Professor A John Spencer
School of Dentistry, the University of Adelaide

&

Co-supervised by Professor Stephanie D Short
Faculty of Health Sciences, the University of Sydney

“The moment you know
Who you really are,
All the secrets of the world
Will be an open book
To you.”

~Sri Chinmoy~

PREFACE

The idea for this Ph.D. project on migrant dentists in Australia began in mid-2010. I had then completed an Australian Government Department of Foreign Affairs and Trade Fellowship on ethical issues related to the migration of dentists across the Commonwealth of Nations. During this period, I was also involved in dental labour force work in the Australian Research Centre for Population Oral Health (ARCPOH) and had gained some knowledge in the design and conduct of surveys. A Ph.D. on the migration of dentists seemed a logical pathway to develop my research skills, and sustain my interests in health policy, health services and global organisations. I was hopeful that dentist migration research will intersect these three broad interests.

Little did I realise at the start of my Ph.D. that I will have the patience to write nine gruelling articles. These articles were based on a qualitative-quantitative study conducted during my Ph.D. candidature in the University of Adelaide. Three research articles were based on the qualitative study and four research articles based on the quantitative study (national survey).

- Original research article 1 (published; qualitative) explored the factors that motivated dentists to migrate to Australia.
- Original research article 2 (published; qualitative) provided insights into the cultural adaptation process of migrant dentists in Australia.
- Original research article 2 (published; qualitative) examined the experiences of migrant dentists on the qualifying examination process in Australia.
- Original research article 4 (published) provided a better understanding of the characteristics and practice profiles of migrant dentists in Australia.

- Original research article 5 (accepted) assessed the level of job satisfaction of migrant dentists in Australia.
- Original research articles 6 (submitted) and 7 (publication style) developed a scale to measure the migration and settlement experiences of migrant dentists, and later assessed the variation of dentist experiences by characteristics.

Two further articles (a commentary article and an opinion article) that contributed towards the development of, or tackled issues arising from, the original research work was also written during the Ph.D. candidature.

- The commentary article (submitted) provided a global overview of the dentist migration issue and contributed to the rationale and development of the study.
- The opinion article (published) based on the learnings from the study, provided a framework to address the challenges associated with the international migration of dentists.

Overall, the last five years has been a life changing experience. First, it was demanding to organise and conduct the fieldwork (for both the qualitative and quantitative studies). I had travelled to five states/territories in Australia, visiting migrant dentists for interviews in many locations. In 2010, all state dental boards were abolished, and a national dental registration scheme came into practice. As new players and organisations emerged, we found it harder to conduct a national survey. Second, it was personally challenging to maintain a work-life balance. I am grateful to my colleagues in ARCPOH, for motivating me towards completion of this Ph.D. I expect that the work contained in this thesis will make a small contribution to the global community, and stimulate further research in the issue of migration of dentists, and health professionals.

ABSTRACT

Dentists from over 120 countries migrate to Australia. Migrants constitute a significant proportion of the Australian dental workforce, and it is estimated that one in four practising dentists is a migrant dentist (qualified from an overseas institution). The purpose of this thesis (by publication) is to provide a better understanding on the migration and settlement experiences of migrant dentists in Australia. The thesis utilises both qualitative and quantitative methods to address the purpose.

The qualitative study included in-depth interviews of 49 migrant dentists (from 22 countries) conducted between July and December 2011. Semi-structured interviews elicited the narration of participants' life stories over time. The analysis mainly supported two superordinate themes: global interconnectedness (explaining the reasons for dentist migration to Australia) and the newness-struggle-success continuum (describing the cultural adaptation process of migrant dentists in Australia). Further, participation in the qualifying examination process appeared to influence the settlement experience of migrant dentists.

The quantitative study included a national survey of all migrant dentists in Australia (n=1977), conducted between January and May 2013. Migrant dentists were asked to complete a self-administered questionnaire. A broad range of data including demographic, migration and residence characteristics, practice profiles, job satisfaction and life story experience were collected. A total of 1022 participants (response rate 54.5%) were classifiable into three mutually exclusive migrant dentist groups: direct recognition (n=491); examination pathway (n=411); and alternative pathway (n=120). The direct recognition group were mainly from high-income countries and had their qualifications directly recognised for practice in Australia.

The examination pathway group included migrants having successfully completed the three-stage qualifying examination process. All other migrant dentists were classified into the alternative pathway group (including students, academics, specialists and special registration candidates). Overall, 41.8% of migrants were female. More than half of the examination pathway group (54.1%) were from lower-middle income countries. A majority of the examination pathway group migrants (65.0%) were under 45 years of age, and a larger proportion (12.4%) worked in the most disadvantaged areas in Australia compared with other groups. In general, migrant dentists reported high levels of job satisfaction in Australia. However, dentists who migrated through the examination pathway had a lower probability of being satisfied with the area and type of practice (OR=0.71; 0.51 – 0.98), compared with the direct recognition group. Based on migrant dentists' life story experience, there was a greater appreciation of the Australian way of life if migrants had lived at least ten years in Australia (OR=1.97; 1.27-3.05). Migrants through the examination pathway (OR=9.32; 3.51-24.72) and alternative pathway (OR=7.38; 2.04-26.73) also showed greater challenges associated with home country systems when compared with the direct recognition group.

The work contained within the thesis provided evidence to suggest that migrant dentists from developing countries face greater challenges both in their country of origin and in Australia. This thesis offers suggestions towards targeted policies for migrants facing settlement issues in Australia. A further recommendation is to adopt a more inclusive approach and greater consensus for an international agenda to address challenges posed by dentist migration.

Number of words: 498/500 words

DECLARATION

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission for any other degree or diploma in any university or other tertiary institution without prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint award of this degree.

I give consent to this copy of my thesis when deposited in the University Library, being made available for loan and photocopying, subject to the provisions of the Copyright Act 1968.

The author acknowledges that copyright of published works contained within this thesis resides with the copyright holder(s) of those works.

I also give permission for the digital version of my thesis to be made available on the web, via the University's digital research repository, the Library catalogue and also through web search engines, unless permission has been granted by the University to restrict access for a period of time.

Madhan Balasubramanian

Dated: 26 Aug 2015

ACKNOWLEDGEMENTS

I first acknowledge the support and guidance provided by my supervisors - Professors David S Brennan, A John Spencer and Stephanie D Short. They have been integral to the success of my career and have always kept me focused towards the task in hand. I individually thank - David for his patience and support at times when I felt all doors were shut; John for helping me see the big picture, and providing inroads for necessary collaborations; Stephanie for her global insights on the problem, and helping me explore my affinity towards pluralistic research methods.

I extend my gratitude to Dr Keith Watkins and to Mr Sergio Chrisopoulos for assisting me in key phases of this thesis work.

I acknowledge the support provided by the following scholarships:

1. Adelaide International Scholarship - Jul 2010 to Dec 2013 [This scholarship was converted to a domestic student support scholarship in Jul 2012]
2. NHMRC's Centers for Research Excellence in Dental Health Services Research PhD Supporting Scholarship - Jan 2014 to Jun 2014

I also acknowledge the Australian Dental Research Foundation Grants (2011 and 2012), which covered the fieldwork expenses for this thesis work.

I thank my family for their faith and patience in me.

The last few years have been a period of serious change in my personal and professional circumstances. I thank God for the love that keeps me alive.

Further acknowledgements are included in each article written for this thesis by publication.

TABLE OF CONTENTS

PREFACE	iii
ABSTRACT.....	v
DECLARATION	vii
ACKNOWLEDGEMENTS	viii
TABLE OF CONTENTS.....	ix
PUBLICATIONS ARISING FROM THE THESIS	xiii
PRESENTATIONS ARISING FROM THE THESIS.....	xv
STRUCTURE OF THESIS.....	xvii
PART ONE	1
1 INTRODUCTION	2
1.1 Commentary article: International migration of dentists	3
1.1.1 Statement of authorship.....	4
1.1.2 Linkage of article to body of research.....	5
1.1.3 Submitted article	6
1.2 Migration of dentists to Australia	39
1.2.1 Setting the scene.....	39
1.2.2 The Australian dental workforce.....	40
1.2.3 Migration pathways into Australia.....	42
1.2.4 Roles of governmental and non-governmental organisations.....	45
1.2.5 Rationale for the thesis.....	48
1.2.6 Endnotes.....	50
1.2.7 References	51
1.2.8 List of tables and figures	56
1.3 Aim of the thesis	60
1.4 Overview of research methods.....	62
1.4.1 Qualitative-Quantitative research strategy.....	62
1.4.2 Ethical approval	62
1.4.3 Qualitative study	63
1.4.4 Quantitative study	64
1.4.5 Integration of qualitative and quantitative methods.....	65
1.4.6 References	66

PART TWO	67
2 RESEARCH ARTICLE 1: GLOBAL INTERCONNECTEDNESS	68
2.1 Statement of authorship.....	69
2.2 Linkage of article to body of research.....	70
2.3 Published article	71
3 RESEARCH ARTICLE 2: NEWNESS-STRUGGLE-SUCCESS	81
3.1 Statement of authorship.....	82
3.2 Linkage of article to body of research.....	83
3.3 Published article	84
4 RESEARCH ARTICLE 3: ADC EXAMINATION EXPERIENCE	91
4.1 Statement of authorship.....	92
4.2 Linkage of article to body of research.....	93
4.3 Published article	94
5 RESEARCH ARTICLE 4: NATIONAL SURVEY	103
5.1 Statement of authorship.....	104
5.2 Linkage of article to body of research.....	105
5.3 Published article	106
6 RESEARCH ARTICLE 5: JOB SATISFACTION	117
6.1 Statement of authorship.....	118
6.2 Linkage of article to body of research.....	119
6.3 Accepted article.....	120
7 RESEARCH ARTICLES 6 and 7: LIFE STORY EXPERIENCE.....	149
7.1 Statement of authorship.....	150
7.2 Linkage of articles to body of research	152
7.3 Submitted article	153
7.3.1 Abstract	154
7.3.2 Introduction	155
7.3.3 Methods.....	157
7.3.4 Results	161
7.3.5 Discussion	164
7.3.6 Conclusion	167
7.3.7 Acknowledgements	168
7.3.8 Endnotes.....	169
7.3.9 References	170

7.3.10	List of Tables.....	173
7.4	Draft article	182
7.4.1	Abstract	183
7.4.2	Introduction	184
7.4.3	Methods.....	187
7.4.4	Results	190
7.4.5	Discussion	193
7.4.6	Conclusion	198
7.4.7	Acknowledgements	199
7.4.8	End notes	200
7.4.9	References	201
7.4.10	List of Tables.....	206
PART THREE.....		213
8	GENERAL DISCUSSION.....	214
8.1	Migrant dentist terminology.....	214
8.2	The qualitative study	215
8.3	The quantitative study	217
8.4	Opinion article.....	220
8.4.1	Statement of authorship.....	221
8.4.2	Linkage of article to body of research.....	222
8.4.3	Published article	223
8.5	Future directions.....	227
8.6	References	228
APPENDIX ONE: METHODS.....		230
A	ETHICAL APPROVAL [1 to 4].....	231
1	– University of Adelaide ethics approval 2010.....	232
2	– Approval for modification to project design.....	233
3	– University of Adelaide ethics renewal 2011	234
4	– University of Adeliade ethics renewal 2013	236
B	QUALITATIVE STUDY [1 to 4]	237
1	– Invitation letter	238
2	– Information sheet	239
3	– Consent form.....	241

4 – Interview guide.....	242
C QUANTITATIVE STUDY [1 to 5]	244
1 – Cover letter and information sheet.....	245
2 – Support letter.....	247
3 – Independent complaints form.....	248
4 – Postal survey	249
5 – Online survey	257
APPENDIX TWO: ACCEPTED/SUBMITTED ARTICLES [1 to 2]	259
B1 Communication from Community Dentistry and Oral Epidemiology	260
B2 Communication from Community Dental Health	261
APPENDIX THREE: RELATED PUBLICATIONS [1 to 2].....	262
C1 Media article.....	263
C2 Prequel articles	269

PUBLICATIONS ARISING FROM THE THESIS

Peer-review journal articles

1. Balasubramanian M, Brennan DS, Spencer AJ, Short SD. The ‘global interconnectedness’ of dentist migration: a qualitative study of the life-stories of international dental graduates in Australia. *Health Policy and Planning*. Oxford University Press; 2015. 30: 442-450. doi: 10.1093/heapol/czu032.
2. Balasubramanian M, Brennan DS, Spencer AJ, Watkins K, Short SD. Overseas-qualified dentists’ experiences and perceptions of the Australian Dental Council assessment and examination process: the importance of support structures. *Australian Health Review*. 2014 Sep: 38(4): 412-9. doi: 10.1071/AH14022.
3. Balasubramanian M, Spencer AJ, Short SD, Watkins K, Chrisopoulos S, Brennan DS. Characteristics and practice profiles of migrant dentists groups in Australia: implications for dental workforce policy and planning. *International Dental Journal*. 2015. 65 (3):146-55. doi: 10.1111/idj.12154.
4. Balasubramanian M, Brennan DS, Spencer AJ, Watkins K, Short SD. The importance of workforce surveillance, research evidence and political advocacy in the context of international migration of dentists. *British Dental Journal*. 2015. 208:329-331. doi: 10.1038/sj.bdj.2015.195.
5. Balasubramanian M, Brennan DS, Spencer AJ, Short SD. The ‘newness-struggle-success’ continuum: a qualitative examination of the cultural adaptation process experienced by overseas-qualified dentists in Australia. 2015. *Australian Health Review* [Early online; Published 3 Aug 2015]. doi:10.1071/AH5040.

6. Balasubramanian M, Brennan DS, Spencer AJ, Short SD. The international migration of dentists: directions for research and policy. *Community Dentistry and Oral Epidemiology* [Submitted 29 Apr 2015, Under Review].
7. Balasubramanian M, Spencer AJ, Short SD, Watkins K, Chrisopoulos S, Brennan DS. Job satisfaction among ‘migrant dentists’ in Australia: implications for dentist migration and workforce policy. *Australian Dental Journal* [Accepted 14 Aug 2015; doi: 10.1111/adj.12370].
8. Balasubramanian M, Spencer AJ, Short SD, Watkins K, Chrisopoulos S, Brennan DS. Development of life story experience scales for migrant dentists in Australia: a sequential qualitative-quantitative study. *Community Dental Health* [Submitted 24 Aug 2015, Under Review].
9. Balasubramanian M, Spencer AJ, Short SD, Watkins K, Chrisopoulos S, Brennan DS. The life story experience for migrant dentists in Australia: new agendas for dental workforce planning, migration policy and international cooperation. [Draft article].

Media article

10. Balasubramanian M & Brennan DS. Dentist migration: a forgotten perspective. *Dental Tribune International*. Nov 2014. http://www.dental-tribune.com/articles/news/australia/20708_dentist_migration_a_forgotten_perspective.html

PRESENTATIONS ARISING FROM THE THESIS

Conference presentations

1. Balasubramanian M*, Brennan DS, Spencer AJ, Short SD. What can you learn from the life-story experiences of foreign trained in Australia? International Association for Dental Research – Indian Section Annual Conference. Invited Guest Lecture Presentation. [25+5 minutes]. Chennai. 7 Oct 2012.
2. Balasubramanian M*, Brennan DS, Spencer AJ, Short SD. Development of a life-story qualitative interviewing technique for a study on international dental graduates in Australia. Public Health Association of Australia Conference. Snapshot presentation. Methodology Stream.[5+2 minutes]. Adelaide. 10 Sep 2012.

University competitions and presentations

1. Balasubramanian M*. Characteristics and practice profiles of migrant dentists groups in Australia: implications for dental workforce policy and planning. Dental School Research Day. Oral Presentation. [10+5 min] The University of Adelaide. Adelaide. Jul 2014. *Winner of Best Presentation in PhD Category.*
2. Balasubramanian M* The global interconnectedness of dental profession: a case study of overseas-qualified dentists in Australia. Faculty of Health Sciences Annual Research Seminar. Poster Presentation. September 2013.
3. Balasubramanian M* The human face of dentist migration. The University of Adelaide -Three minute thesis competition. Faculty of Health Sciences, the University of Adelaide. Faculty Heats. August 2013. *Progressed to final faculty heats.*
4. Balasubramanian M*. Design and development of the mobility life story

questionnaire for international dental graduates in Australia: a mixed methods strategy. Dental School Research Day. Oral Presentation. [10+5 min] The University of Adelaide. Adelaide. Aug 2012.

Internal seminars

1. Balasubramanian M*. The International Dental Graduate Study. Australian Research Centre for Population Oral Health, School of Dentistry. Friday Lunch Seminar. Oral Presentation. [45 + 15 min]. Feb 2014.
2. Balasubramanian M*. Mobility of International Dental Graduates in Australia. Australian Research Centre for Population Oral Health, School of Dentistry. Friday Lunch Seminar. Oral Presentation. [45 + 15 min]. Aug 2012.
3. Balasubramanian M*. Migration, globalisation and leadership: a case of international dental graduates in Australia. Australian Research Centre for Population Oral Health, School of Dentistry. Friday Lunch Seminar. Oral Presentation. [45 + 15 min]. Apr 2012.
4. Balasubramanian M*. Mobility of International Dental Graduates in Australia. PhD Research Proposal. Australian Research Centre for Population Oral Health, School of Dentistry. Friday Lunch Seminar. Oral Presentation. [45 + 15 min]. Aug 2010.

*Presenting Author

STRUCTURE OF THESIS

The thesis is divided into three parts:

PART ONE offers an introduction to the dentist migration issue. First, a commentary (article) on the international migration of dentists (examined at a global level) is provided. Later, the issue of migration of dentists into Australia is discussed, which leads to the rationale and aims of the study. Further, an overview of both the qualitative and quantitative methods used in this study is provided.

PART TWO provides the list of original research articles (1-7) arising from the qualitative-quantitative study.

PART THREE provides a general discussion on the results arising from the qualitative-quantitative study. This part also includes an opinion article that tackles some issues arising from the original research work.

Published articles are provided in pdfs. Accepted articles are provided in the form they were accepted. Submitted or draft articles are provided in the form they have been submitted or drafted respectively.

For purposes of this thesis examination, all articles included in this thesis have been printed in a light blue tinted paper.

Referencing for the articles (published or submitted or accepted) included in the thesis is based on the format it was required for the respective journal. All supplementary material for this thesis is provided in the Appendix.

This thesis is structured based on the guidelines provided for a thesis by publication in the University of Adelaide.