

# Exploration of dentists' characteristics associated with caring for disadvantaged patients using a mixed-methods approach

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## Notes

All references in the Bibliography are arranged in order of the author's surname. In the case where there is more than one reference by the same author, they are listed in chronological order. All references to published works cited in the text, appear in the text by author(s), followed by the year of publication, in parentheses. If there were three authors, reference was made to all three in the text. In the case where multiple authors were cited, the primary author's name was listed in the text, followed by 'et al.', however, all authors were named in the Bibliography. Percentages in the text are abbreviated by the symbol '%' unless at the beginning of a sentence. The terms 'underserved' and 'disadvantaged' are used interchangeably throughout this thesis. Tables and figures are presented immediately following the corresponding text, where practicable. Some statements in the tables are abbreviated in order to fit with the table formatting. The full wording of statements appears in the Appendix. Direct quotations from the researcher's memos and dentists' interviews are reported verbatim in this thesis.

# Abbreviations

$\alpha$	Cronbach's alpha
ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AHPRA	Australian Health Practitioner Regulation Agency
AIHW	Australian Institute of Health and Welfare
ARCPOH	Australian Research Centre for Population Oral Health
ASGS	Australian Statistic Geographical Standard
ATAR	Australian Tertiary Admissions Rank
BDS	Bachelor of Dental Surgery
CD_RISC 10	Connor Davidson Resilience Scale 10 items
cf.	compared with
CI	Confidence interval
DP	Disadvantaged patients
DMFT	Decayed, Missing, Filled permanent Teeth
EC	Empathic concern
e.g.	for example
GPA	Grade Point Average
IADR	International Association for Dental Research
KMO	Kaiser Meyer Olkin
MD	Mean Difference
Med	Median
Min	Minimum
Mn	Mean
n	sample size
ns	not significant
NSW	New South Wales
NT	Northern Territory
OHT	Oral Health Therapist
OR	Odds ratio
PD	Personal distress
PS	Positive sharing
P	p-value

PAL	Primary Approach Letter
PAF	Principal Axis Factoring
PCA	Principal Component Analysis
QLD	Queensland
R <sup>2</sup>	% variance explained
RCF	Residential Care Facility
REF	Reference category for odds ratio
SA	South Australia
SD	Standard Deviation
SES	Socio-Economic Status
SHCN	Special Health Care Needs patients
Sig	Significant
Tas	Tasmania
UK	United Kingdom
UMAT	Undergraduate Medicine and Health Sciences Admissions Test
US	United States of America
Vic	Victoria
WA	Western Australia

## Research Outcomes

Dissemination of these research findings has already commenced in order to create discussion and debate to inform agencies with influence over oral health policy, curriculum, selection, workforce recruitment and retention. Oral presentations to local, national and international audiences, poster presentations, journal publications and funding bodies associated with this study, are listed below.

### Oral presentations during time of candidature

11 July 2014: **S Gardner**, T Winning, R Peterson, K Roberts-Thomson, ‘Career motivation associated with orientation of dental practice toward disadvantaged groups’. Research Day, School of Dentistry, Adelaide Convention Centre, Adelaide.

27 June 2014: **S Gardner**, T Winning, R Peterson, K Roberts-Thomson, ‘Recruiting dentists for underserved populations: do we simply ask them?’ IADR Africa/Middle East Division Regional meeting, Cape Town.

06 June 2014: **S Gardner**, T Winning, R Peterson, K Roberts-Thomson, ‘Recruiting dentists for underserved populations: do we simply ask them?’ Research meeting, ARCPOH, Adelaide.

25 May 2014: **S Gardner**, ‘Getting the facts right: Dentistry and Oral Health’, Tertiary Careers Expo, Convention Centre, Adelaide.

25 Oct 2013: **S Gardner**, T Winning, R Peterson, K Roberts-Thomson, ‘Understanding why some dentists work with underserved groups’ Research meeting, ARCPOH, Adelaide.

11 Sep 2013: **S Gardner**, T Winning, R Peterson, K Roberts-Thomson, ‘Personal reward working as a dentist with underserved groups’ Journal Club presentation, ARCPOH, Adelaide.

17 May 2013: **S Gardner**, T Winning, R Peterson, K Roberts-Thomson, ‘Dentists’ motivation to work with underserved groups and undergraduates’ desire ‘to help’’, Med Dent Selection Forum, Flinders University, Adelaide.



04 Mar 2013: **S Gardner**, ‘Scope of Practice: One dental therapist’s journey’, BDS1 Class Meeting, School of Dentistry, The University of Adelaide.

25 Sep 2012: **S Gardner**, T Winning, R Peterson, K Roberts-Thomson, ‘Understanding what drives dentists to work with disadvantaged groups’ IADR Australian/New Zealand Division, Regional meeting, Denarau Island, FIJI.

31 Aug 2012: **S Gardner**, T Winning, R Peterson, K Roberts-Thomson, ‘Serving the underserved: Why do some dentists do what they do?’ Three Minute Thesis Faculty Final, Research Day, Faculty of Health Sciences, Adelaide Wine Centre, Adelaide.

17 Aug 2012: **S Gardner**, T Winning, R Peterson, K Roberts-Thomson, ‘Understanding what drives dentists to work with disadvantaged groups’ Research Day, School of Dentistry, Adelaide.

02 Mar 2012: **S Gardner**, ‘Scope of Practice: A Dental Therapist’s Perspective’, BDS1 Class Meeting, School of Dentistry, The University of Adelaide.

### **Poster presentation during time of candidature**

24 Sep 2012: **S Gardner**, T Winning, R Peterson, K Roberts-Thomson, ‘Dentists who serve the underserved: a qualitative study’, IADR Australian/New Zealand Division, Regional meeting, Denarau Island, Fiji.

### **Publications of research findings**

**Gardner SP**, Roberts-Thomson KF, Winning TA, Peterson R. ‘Intrinsic reward received by a group of dentists who work with underserved groups’, *Aust Dent J*, 2014;59:1-7 (see Appendix A.1, pp. 180-186).

**Gardner SP**, Roberts-Thomson KF, Winning TA, Peterson R. ‘Serving the underserved: Why do some dentists do what they do?’ *Aust Dent J*, 2013; 58(4):S14-S15.

## **Published abstracts for conference presentations during candidature**

**Gardner SP**, Winning TA, Peterson R, Roberts-Thomson KF. 'Recruiting dentists for underserved populations: do we simply ask them?' *J Dent Res*, 2014 (Spec Iss B):93, 779. (IADR 92<sup>nd</sup> General Session).

**Gardner SP**, Winning TA, Peterson R, Roberts-Thomson K. 'Understanding what drives dentists to work with disadvantaged groups'. *J Dent Res*, 2012 (Spec Iss C):91,169292. (IADR/ANZ Div, 52<sup>nd</sup> Annual Mtg).

## **Grants and awards received**

Nov 2013: Australian Dental Research Foundation Grant \$10,000 (Project code: 6-2013).

**S Gardner**, K Roberts-Thomson, T Winning & R Peterson.

Project title: Characteristics and motivation of dentists who provide care to underserved populations. A mixed-methods study Stage 2.

Nov 2012: Australian Dental Research Foundation Grant \$5,000 (Project code: 2-2012).

**S Gardner**, K Roberts-Thomson & T Winning.

Project title: Characteristics and motivation of dentists who provide care to underserved populations.

July 2012: Colgate Travel Award \$7,000 to attend IADR Australian/New Zealand Division, Regional meeting, Denarau Island, Fiji.

Feb 2011: Divisional Scholarship (3 years full time), Faculty of Health Sciences, University of Adelaide.

# Abstract

Disparities in access to dental services have been reported for particular groups of Australians. Consequently, these groups suffer a greater burden of oral disease when compared with the general population. The reasons why dentists do not undertake and/or sustain working with disadvantaged patients are well known but not so well known is what drives those who do. This project aims to better understand the characteristics of dentists whose practice orientation is focused on care for disadvantaged groups. This will supplement existing knowledge of dentists' career decision making, allow more targeted recruitment of dental applicants, and inform admissions committees and dental educators about how best to prepare students with the skills, attributes and experiences necessary to serve all Australians.

The aim of this research project was to explore the characteristics, values, beliefs, and motivations of dentists who work with disadvantaged patients and compare the findings with those who treat mainly general patients.

A sequential mixed-method study design was undertaken. Dentists who worked with underserved groups were purposefully recruited using the 'snowballing' technique and interviewed. Thematic analysis of the transcripts followed; the findings of which formed the basis of the questionnaire sent to a random sample of registered dentists in Australia. Univariate, bivariate and multivariate analyses were performed on the data. The categorical outcome variable was 'dentists treating  $\geq 50\%$  or  $< 50\%$  disadvantaged patients'.

Sixteen dentists were interviewed in the qualitative stage for an average of 47 minutes (range 22-81). Five key themes emerged: 1) 'Tapped on the shoulder'; dentists were personally approached to work with disadvantaged patients; 2) 'Dental school challenges'; challenges faced during training, e.g. assessment, bullying and delayed completion; 3) 'Empathic concern'; the non-judgmental concern for patients when relieving pain and improving their wellness; 4) 'Intrinsic reward'; the personal gain in receiving simple, unexpected rewards that made a difference; 5) 'Resilience'; the

overarching theme, derived from personal experiences and challenges of the work environment.

In Stage 2, 1523 questionnaires were returned, yielding an adjusted response rate of 62.6%. The adjusted odds of dentists' treating disadvantaged patients, was around twice that for those treating < 50% disadvantaged patients for being motivated by 'status' (OR 2.4, 95% CI: 1.32, 4.35), 'to help' (OR 1.8, 95% CI: 1.03, 3.16), 'a challenging career' (OR 2.1, 95% CI: 1.01, 4.40) and 'second choice to medicine' (OR 2.1, 95% CI: 1.11, 3.95). They were 11 times more likely to work in government clinics (OR 11.6, 95% CI: 5.2, 26.0) and had three times the odds of working in the Defence Force or tertiary institutions (OR 3.0, 95% CI: 1.0, 9.2) than in private solo practices. Treating disadvantaged patients was associated with neutral attitudes towards oral health therapists being employed to do so (OR 2.31; 95% CI: 1.09-4.91), being religious (OR 2.23; 95% CI: 1.12-4.42) and working in remote locations (OR 8.60, 95% CI: 2.21-33.48).

The conclusions from Stage 2 were consistent with the qualitative study. Stage 2 showed that career choice motivation, religious affiliation, type and location of practice were associated with a practice orientation toward disadvantaged patients. However, empathy and resilience, key themes from the qualitative study, and socio-economic factors, demographics and dental school experience were not found to be associated after adjusting for other variables.

## 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 tertiary institution and, to the best of my knowledge, contains no material that has been published previously or written by anyone else, except where due reference has been made in the text.

In addition, I certify that no part of this work will be used in a future submission for any other degree or diploma in any other university or tertiary institution, without prior approval from the University of Adelaide and where applicable, any partner institution responsible for the joint award of this degree.

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