

**Exploring Dental Behaviours of Carers of Adults with Disabilities:
Oral Health Literacy and Psycho-social Factors**

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A thesis submitted in partial fulfilment of the requirements of
the degree of
Doctor of Clinical Dentistry (Special Needs Dentistry)

School of Dentistry, The University of Adelaide

February, 2012

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List of abbreviations

ABS	Australian Bureau of Statistics
ALLS	Adult Literacy and Life Skills
ARCPOH	Australian Research Centre for Population Oral Health
CAM	Carer activation measure
CDE	Carer dental efficacy
COHC	Carer oral health competence
GA	General anaesthesia
GFI	Gunning Fog Index
GL	General literacy
OHL	Oral health literacy
PHCS	Perceived Health Competence Scale
PID	People with physical and intellectual disabilities
REALM	Rapid Estimate of Adult Literacy Measure
SADS	South Australian Dental Service
SCT	Social Cognitive Theory
TOFHLA	Test of Functional Health Literacy in Adults
UK	United Kingdom
USA	United States of America
WHO	World Health Organisation

Abstract

Background: People with physical and intellectual disabilities (PID) depend on their carers for daily oral care at home and attending regular preventive dental visits. However, very few carers seem to receive training in oral care for people with PID. Carers' oral health literacy, and psycho-social factors (carer dental efficacy, carer oral health competency, and carer activation measure) may be associated with the ability of carers to provide good oral care to their care recipients. The oral health care provided could be further associated with the environment, such as the residential setting of the care recipients where the care is provided. Thus, the aims of the study were to describe and compare oral health literacy and psycho-social factors among carers, and assess any associations with preventive dental behaviours. Favourable associations could then be utilised to make recommendations for the development of appropriate education programmes for carers, that match their oral health literacy and psycho-social preparedness, so that carers can provide more appropriate care for their care recipients.

Methods: The research was a follow-up study of carers of adults with PID living in Adelaide in three residential settings: family home; community housing; and institutions. Data were collected (February 2009 - April 2010) through a structured face-to-face interview of 100 carers. Oral health literacy (OHL) and general literacy (GL) were measured using text passages and prompts with a total of 25 items to assess comprehension and numerical ability of carers, based on five domains: accessing dental care, understanding appointments, completing medical history and consent forms, and following medication instructions. Carer dental efficacy (CDE) was measured using five items on oral care behaviours. Carer perceived oral health competence (COHC) was measured using five items on managing oral health care. Carer activation measure (CAM) was used to determine capability or readiness to engage in desired oral health behaviours. CAM included 13 items on three subscales- Knowledge, Skills and Confidence. The key outcome measures were toothbrushing and dental visiting pattern.

Results: GL score was higher than OHL score among all groups, but neither of the literacy scores were significantly associated with the toothbrushing and dental visit frequency of the care recipients. After adjusting for carer and care recipient characteristics, multivariate analysis showed that twice a day toothbrushing was significantly associated with higher CDE [OR= 4.2 (1.5, 11.6)]. Regular dental visit among the care recipients was significantly associated with

higher CDE [OR= 4.7 (1.3, 17.2)], COHC [OR= 5.7 (1.4, 23.4)], and CAM-Skills [OR= 4.3 (1.1, 15.9)].

Conclusions: OHL among carers was not associated with key dental behaviours for care recipients. However, psycho-social factors (carer dental efficacy, carer oral health competence, carer skills) were associated with dental visit frequency. CDE was also associated with toothbrushing frequency. These psycho-social factors may be enhanced by providing encouragement and positive reinforcement to carers, and by specific interventions that match their level of preparedness. Providing such support and guidance to carers may then improve their ability to provide appropriate oral health care for their care recipients.

Signed statement

I Archana Pradhan 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.

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Date:

Acknowledgements

There are many who have contributed in making this thesis possible. I wish to express my sincere gratitude to the following individuals and organisations.

Professor A John Spencer for his continued support and encouragement in my area of interest in Special Needs Dentistry, for guiding me with my career development path, and for adding Special Needs Dentistry on the agenda. I am also thankful to him for „not retiring“ until the completion of my thesis!

The participating organisations, and carers without which this study would not have been possible.

The supportive staff and colleagues at ARCPOH for their valuable comments on the development of the oral health literacy instrument, interview questions, and seminar presentations.

Ms Leonie Jeffery who came to my rescue to complete the interviews of carers at family homes and those who could not accompany the care recipients for their dental visits.

Ms Catherine Offler for proof reading this thesis.

Finally, special thanks to my wonderful husband Anil for being „my patient carer“ and both our supportive families for their blessings, and encouragement.

Thesis format

This thesis presents an introductory chapter that provides background information that led to this research, and gives an overview of various theories in health behaviour change. It also includes a conceptual framework, thesis rationale, aims and hypothesis. The term “people with disabilities” and “care recipients” have been used interchangeably as appropriate. However, when reporting findings from other studies, the term used in the study has been retained, for examples, “handicapped adults”, or “residents”.

The second chapter reviews available literature on health and oral health literacy and the effectiveness and applicability of various psycho-social theories in health behaviour modification. This includes a review of the associations of oral health literacy and psycho-social factors among carers with dental behaviours- toothbrushing and dental visits. The third chapter describes the study design, sampling frame and data collection methods including details of the structured interview, and a summary of the analytical approaches undertaken. The fourth chapter includes responses from the carers and results from the face-to-face interviews completed by them. The final chapter discusses the major findings of the study, whenever possible, comparing them with previous studies. It also includes the strengths and limitations of this study and the significance and implications of findings. It concludes with recommendations based on the findings of this study.

Tables and figures are presented together with their corresponding text, where possible. References to published work are in the text with the author(s) and date of publication in parenthesis. Where there were three or more authors, the first author is listed, followed by et al., in the text. The complete list of authors is listed in the bibliography at the end. Where there were multiple references for an author, references are listed in the bibliography in alphabetical order of authors and date. The appendices include primary approach letters to the administrators of organisations, contents of information package for the study participants, structured interview, and letter of approval for ethical approval of the study.