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Guest Editorial

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New Scope of Practice Regulation for Oral Health Practitioners in Australia

On July 1, 2020 in Australia, oral health practitioners (dental therapists, dental hygienists and oral health therapists) were finally recognised as health practitioners in their own right - registered, recognised and regulated in line with all of Australia's other health professionals. Dental therapists, hygienists and oral health therapists have had an important role in providing dental and oral health services in Australia since the mid 1960s. They have been the backbone of the school dental programs, public dental programs and preventively oriented services in the private sector, however, their subordinated and prescriptive regulatory frameworks have contributed to low profiles for the profession and poor recognition of their contributions.

Dental therapy, built on the New Zealand School Dental Nursing Scheme, was established in the mid 1960s and grown nationally through commonwealth funding from the Whitlam government in the early 1970s. Dental hygiene, imported from the US and UK, established a foothold in two states (South Australia and Western Australia) in the 1970s, and later expanded across all states in the 2000s. Practice for both professions at the time was prescribed, controlled by dentists and excluded policy participation, despite the ability of therapists to autonomously examine, diagnose and prepare their own treatment plans. Employment for dental therapists was

limited to the public sector and included aged limited patients, and for dental hygienists, work was limited to the private sector providing prescribed services and working for a dentist. Despite the rampant feminism of the 1970s, our white uniformed, all female, subordinated predecessors were trapped in structural approaches to professional dominance which deliberately shaped the culture of our professions (Satur 2003).

Move on 20 years, when National Competition Policy initiated review and reform of many industries, including the health professions, leaders in our professions recognised that regulation did not reflect the way we practiced. It limited our employment opportunities and impacted the ability to properly utilise the skills and expertise of the profession to meet the considerable amounts of unmet need for dental care in the Australian population. Dental therapists and hygienists had shown that they could provide high quality services, be trusted to recognise the boundaries of their own abilities and contribute significantly to increasing access to dental services. They also began to emerge as expert and alternative contributors to policy debates and seek participation in regulation and dental policy making. Many settings had needs that matched their skills and were advocating wider employment (Satur 2003, HWA 2012).

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Presidents' Message



Letitia Masters
PRESIDENT ADOHTA



Arish Narish
CHAIR NZDOHTA

ADOHTA and the NZDOHTA would like to thank the many people involved in the production, editing and peer review of this journal.

The objectives of the journal are to;

1. provide a vehicle for communication between dental and oral health therapists in Australia and New Zealand
2. develop dental and oral health therapists' access to self directed professional development
3. provide a vehicle for the reporting of new learning and research in the field of dental and oral health therapy
4. develop a capacity to contribute to the body of knowledge around the discipline of dental and oral therapy, for dental therapists, oral health therapists, dental hygienists and the wider health care field

We are proud to present this edition of the ANZJDOHT and we hope you enjoy reading it.

Letitia Masters, President ADOHTA

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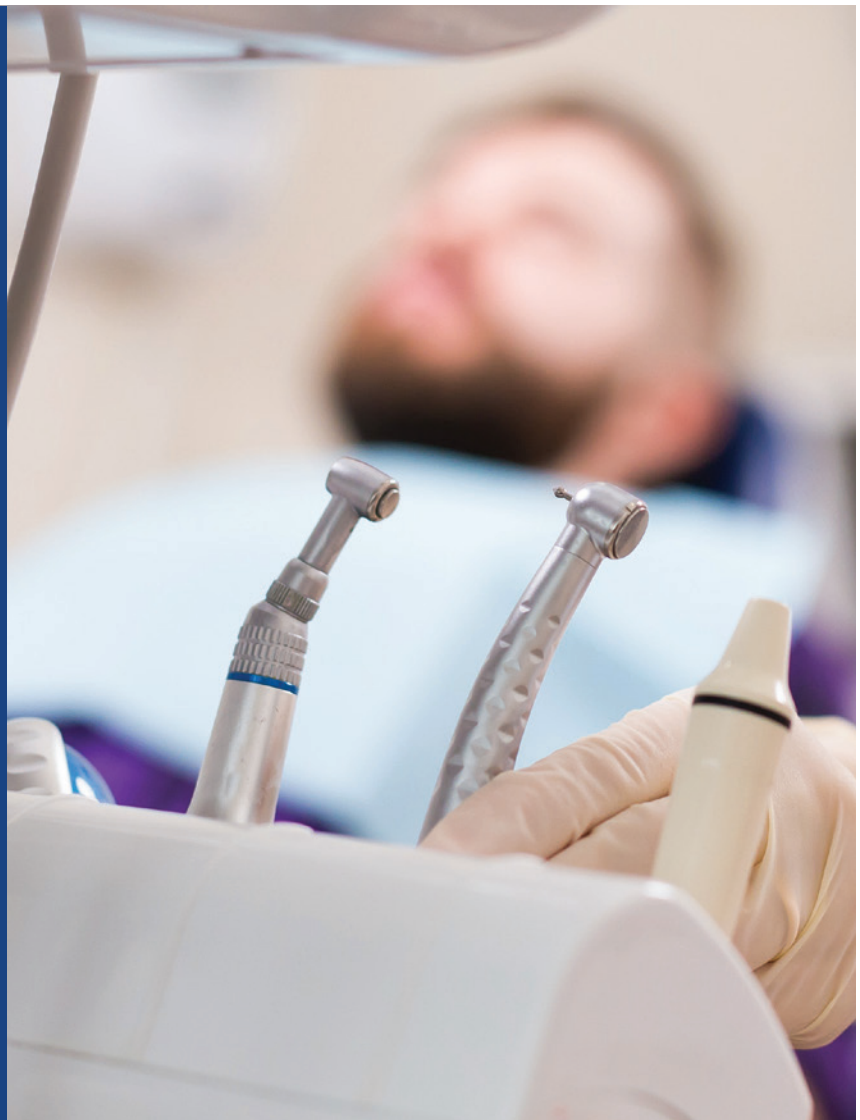
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By 2000, Victoria and Tasmania moved the profession into full registration for practice, alongside their dentist colleagues, appointed dental therapists to their dental boards, removed employment limits and prescriptive lists of 'duties' and the requirement for supervision of practice (DPBV 2000, GoT 2001, TDPB 2001). The other states and territories soon followed so that by the time the National Registration and Accreditation Scheme established the Dental Board of Australia in 2010, dental therapists and hygienists were included in the category of registration as a dental practitioner, however with subordinating regulation stating that oral health practitioners '...must not practise as independent practitioners...' and would need to work in a 'structured professional relationship with a dentist' (DBA 2010).

During this same period, educational preparation for entry to practice moved from dental therapy schools and technical education settings to universities where most programs were established as Bachelor's degrees in Oral Health graduating Oral Health Therapists (thus combining the skills of dental therapists and dental hygienists) (Tsang et al 2010). Concurrently, in Victoria during the 1990s, research was undertaken that established the ability of dental therapists to provide services for people of all ages (Calache et al 2006, Calache et al 2009). In addition, the ability of dental hygienists to diagnose and treatment plan care within their own scope was also carried out in high needs' settings, establishing their ability to practice autonomously (Hopcraft et al 2011). This evidence resulted in two more regulatory barriers being eliminated - the removal of age limits on patients and the recognition in regulation that dental therapists, dental hygienists and oral health therapists practiced autonomously with their own scope of practice, as primary care providers who referred patients beyond their scope to dentists and other health practitioners (DBA 2014).

In the most recent review of the regulation - the Scope of Practice Registration Standard review which began in 2018 - several layers of additional regulation were removed to bring dental therapists, hygienists and oral health therapists into consistency with dentists and other health practitioners. With the removal of the requirement for a '...Structured Professional Relationship with a dentist...' and words...'but

are not independent practitioners', our ability to practice ethically, self-regulate, recognise the boundaries of our own competence and refer appropriately, were all finally acknowledged. The recognition that all health practitioners need to practice in a team environment, working collegially and in the best interests of patient needs, has been applied consistently for all dental practitioners. All practitioners can add skills within their scope of practice through Continuing Professional Development (CPD) - there is no longer a need to especially accredit those programs for oral health practitioners. This means that, like other health professionals, oral health practitioners need to make judgements about the quality of the CPD courses they undertake and about their own competence to practice new skills within their scope. While we have always been responsible for the care we provide - earlier regulation had applied additional regulatory controls that other professions have not had- these controls have now been removed.

Unfortunately, while national regulation has now addressed all these issues, there are, unfortunately, also some pieces of state and territory legislation that still present barriers to full independent practice - ie. Drugs and Poisons legislation that limits the purchase, storage and use of various medications and anaesthetics, and Radiation Safety legislation in some states that limits the ownership and use of radiation equipment. There is also the vexed issue of Provider Numbers - while these do not prevent the provision of clinical care, they do act as impediments to billing and health insurance claims, particularly for many people in underserved communities. Resolution of these impediments will finally enable unbundling of services and full utilisation of all the skills of oral health practitioners where they are needed.

With this article we celebrate the evolution and development of our professions and the transition into full professional recognition. Dental therapists, hygienists and oral health therapists now work in many settings beyond the traditional school and community dental programs and private general practices. They work in specialist practices, hospital and special needs dentistry settings, Aboriginal Health Services, remote outreach programs, mental health, drug and alcohol services, residential and aged care facilities, youth and



Graduating dental therapy class of 1980 Yeronga QLD



Julie Barker and Julie Satur, Council of Australian Governments Dental Working Group to establish the Dental Board of Australia 2006



OHT providing domiciliary outreach dental care for a disabled man, Victoria 2009

homeless outreach programs. They own and run their own private practices and aged residential care services and lead community based oral health programs and volunteer services - they lead their own programs and the profession in ways that bring credit to us all.

Members of our professions are also actively involved in participation in policy making, accreditation and regulation of our own profession. We are included as stakeholders and our expertise is sought by governments, health services and policy makers and we often bring a different view - one that speaks to inequity and those who do not have good access to care! We also lead the education of our profession - our Bachelor of Oral Health courses and graduate research programs are now led by dental therapists, hygienists or oral health therapists. We have an established College of Oral Health Academics whose members (oral health academics and educators from Australia, New Zealand and Fiji) work together to ensure the development of the discipline through quality, evidence-based education for practice. Around 25 members of our professions have completed a Doctor of Philosophy (PhD) and there are many more with Masters' and Honours degrees who are actively developing the knowledge and depth of our discipline through research. We have strong professional associations, codes of ethics and an international peer reviewed journal for our professions - the only one specific to dental and oral health therapists. These are all markers of a developed profession and one in which we can be justifiably proud.

The recognition of our professional standing is now reflected in the 2020 regulation as the last vestige of subordinating language was removed at the end of June this year. We pay enormous tribute to all those visible and invisible people who have contributed their time, energy and advocacy; written submissions and met with ministers; represented us on committees, working groups, inquiries and reviews; and been appointed to Dental Boards since the 1990s - their commitment to this work often goes un-recognised and un-applauded - but with this article we thank you and pay tribute to your work! Happy Independent Practitioner Day!



College of Oral Health Academics Meeting 2019 Rockhampton

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Letter's to the Editor



Use of fluoride guidelines

Dear Professor Satur,

I am responding to the publication titled Guidelines for Use of Fluorides in Australia: Update 2019, which was published in the ANZJDOHT volume 8 (1) 2020. In this publication, it is recommended that fluoride toothpaste is not used at all for infants until they reach 18 months-of-age. This advice differs from the information we provide to New Zealand families / whanau, especially those who have been identified as having a heightened risk of dental decay. The dental risk is evident following a clinical risk assessment.

Our recommendation is that teeth should be cleaned twice a day, and all family members can use the same toothpaste (1,000 to 1,500 ppm fluoride). Small children should have a 'rice grain' smear of toothpaste as soon as teeth erupt. From 2 years-of-age, we recommend teeth should be cleaned twice a day with a 'pea-size' amount of toothpaste, and to spit (do not rinse).

Where demineralised lesions are present, application of a smear of Colgate® Duraphat® Varnish by a registered oral health practitioner is also recommended, either during a pre-school visit, and/ or when the family visits a clinic.

There is no known heightened risk of exposure to higher levels of fluoride as reticulated New Zealand water does not contain traces of natural fluoride beyond the recommended 0.3 ppm. Unfortunately only 54% of community water supplies have additional fluoride to increase levels to the optimum amount of 0.7 to 1.0 ppm fluoride. New Zealand continues to have inequity of oral health, which is evident

within our preschool children, and advocating exposure to fluoride from an early age continues to be an effective population-based approach to help these vulnerable children.

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<https://www.health.govt.nz/our-work/preventative-health-wellness/fluoride-and-oral-health>

Dr Helen Tane

Adult scope of practice

Dear Professor Satur,

I am writing this letter as I believe the readers would be interested in the recent process I have undertaken to be registered in the oral health therapy adult scope of practice in New Zealand.

I qualified with the Graduate Certificate in Dental Therapy (Advanced Clinical Practice) postgraduate qualification from The University of Melbourne in Australia. Upon returning to New Zealand in 2020, I was advised that I could apply to the Dental Council of New Zealand to have the exclusion placed on my scope of practice removed when I applied for my annual practicing certificate. It was a fairly straightforward process, however quite a lengthy one.

1. I completed the 'removal of exclusion' form found on the New Zealand Dental Council website.
2. I submitted certified copies of all relevant personal and professional documents and a certified copy of the detailed course outline.
3. I had to make a payment to have the application process completed. The Dental Council process took place over a month before it was sent to an external assessor for examination. The assessor examined the application independently and volunteered their own time to carry out the assessment. Therefore, this stage can depend on how busy their schedule is and how much time they require to review all the documents.
4. The final step of the whole process was completed once the external assessor was satisfied with the quality of the course content and submitted a report back to the Dental Council. The council examined the report and once they were satisfied, sent a confirmation to me regarding the outcome of my application. I received my certificate in the mail a few weeks later.

The adult scope of practice is a qualification that is currently not available in New Zealand, so graduates with a Bachelor of Oral health have an exclusion placed on their practising certificate which restricts restorative care to patients under 18 years of age. The adult scope of practice course is offered at various Universities in Australia and the duration of the course depends on the institution where you choose to study. This can vary from a few weeks to a few months in duration. I believe this scope will be very beneficial in New Zealand due to the high demand and need for a preventive model of oral care across people of all ages and ethnicities. In New Zealand, Pacific Islander and Maori communities have high deprivation scores and modest-to-low oral health. If implemented appropriately, these communities would likely benefit the most from the introduction of adult scope of practice.

I would love to hear your thoughts on the above.

Kind Regards,
Kiran Athale
Oral Health Therapist

Editors note:

Please note that this is the reported experience of one individual, and the DCNZ have not been contacted for comment.

Job satisfaction and career prospects of Oral Health Therapists in Aotearoa/New Zealand: A research update and call for further research in light of the COVID-19 pandemic

S D Carrington¹, G J Treharne², S M Moffat¹

¹Sir John Walsh Research Institute, University of Otago, ²Department of Psychology, University of Otago

ABSTRACT

Background: Research into the job satisfaction and career prospects of oral health therapists provides crucial insights into ways to support the current workforce and informs the training of future oral health therapists in Aotearoa/New Zealand. Job satisfaction and career prospects of oral health therapists are even more important as we respond to the COVID-19 pandemic.

Aims: The main aim of this literature review is to summarise key studies on job satisfaction and career prospects of oral health therapists in Aotearoa/New Zealand. In addition, we explore what directions should be taken in further research to aid in supporting a satisfied workforce to deliver high quality oral health care after the worldwide COVID-19 pandemic.

Methods: A search for research conducted in Aotearoa/New Zealand on the job satisfaction and career prospects of dental and oral health professionals was undertaken. All relevant literature found was included in this review in a narrative format.

Results: Oral health therapy is a relatively new scope of practice in Aotearoa/New Zealand. There have been both qualitative and quantitative studies in Aotearoa/New Zealand on the job satisfaction as well as perceived career prospects or the working experiences of oral health therapists. Overall, these studies demonstrate some foundational information about career prospects and job satisfaction of oral health therapists; however, further longitudinal research would provide a better understanding of this group of practitioners' place in the oral health workforce.

Conclusion: Further research on the job satisfaction and career prospects of oral health therapists is urgently needed in Aotearoa/New Zealand and other countries to support both oral health students at university and oral health therapists in the workplace. This is particularly important in the current environment because our workforce now faces considerable adjustment based on financial constraints and health and safety considerations resulting from the COVID-19 pandemic.

OVERVIEW, BACKGROUND AND LITERATURE SEARCH STRATEGY

The global pandemic due to COVID-19 has had an unparalleled impact on delivery of oral health care. In Aotearoa/New Zealand, the government adopted an Alert Level system that required dental practitioners to only undertake essential emergency work during Alert Levels 4 and 3 (Dental Council of New Zealand & Ministry of Health, 2020b, 2020c). During these two alert levels, routine dental care such as that performed by oral health therapists was suspended. This raises crucial questions about the job satisfaction and career prospects of oral health therapists at this time given that anecdotal evidence also suggests that employment of oral health therapists (particularly in private practice) was affected by the limitations on practice during lockdown.

The aim of this literature review is to critically review the existing literature regarding the job satisfaction and career prospects of registered oral health therapists in Aotearoa/New Zealand. We also consider what can be learnt from past literature to provide the best support for oral health therapists in practice and in education over coming years as the world adjusts to the provision of oral health care after COVID-19. The ultimate aim is to determine what directions should be taken in further research in order to understand how to support a satisfied workforce providing ongoing high-quality oral health care for children and adults in Aotearoa/New Zealand.

The review is structured into three sections covering: 1) an update on the scope of practice of oral health therapists in Aotearoa/New Zealand, 2) a summary of findings from quantitative surveys of job satisfaction and career prospects that have been carried out with oral health students and

graduates as well as dentists/dental specialists (as an insightful comparison across professions) and 3) an in-depth consideration of two key qualitative studies with oral health students/graduates that involved analyses of open-ended survey questions. Throughout the review, we provide critical comments on the past research and make suggestions for future research with oral health students/graduates. The strategy to find relevant literature involved search terms for the roles in question, concepts relating to job satisfaction and career prospects, and the location Aotearoa/New Zealand

Table 1. Process of searching for literature for this review.

Step	Search
1	Google Scholar search using the keywords "qualitative", "oral health", "Otago" and "Auckland University of Technology"
2	Direct searching for key local authors (Moffat, S. and Foster Page, L.)
3	A further search in Otago Library Ketu for "Moffat, Susan"
4	To condense these results, the term "oral" was added
5	The titles and abstract of the resulting 54 articles were read to select relevant articles for the review. Inclusion criteria included New Zealand specific research pertaining to the BOH programme in Otago and the BHSci (Oral Health) programme at AUT's students and graduates. Eight articles were chosen.
6	"COVID-19" was added to the search terms above, producing two further academic articles that were chosen for this review.
7	Legislative documents were chosen with relevance to scope of practice for oral health therapists, and dental implications and governmental requirements for working with COVID-19 in Aotearoa/New Zealand and. This produced 13 further references.

SCOPE OF PRACTICE OF ORAL HEALTH THERAPISTS

In order to provide contextualised insights into the job satisfaction and career prospects of oral health therapists, it is important to consider the history and status quo of the education and scopes of practice that are now combined and known formally as oral health therapy in Aotearoa/New Zealand. Since 1921, dental professionals other than dentists have been formally trained to provide dental care to children in Aotearoa/New Zealand (Moffat & Coates, 2011a). These practitioners were known as school dental nurses until the early 1990s and then became known as dental therapists. Dental therapists were, and still are, routinely employed in the public sector in Aotearoa/New Zealand providing care for patients up to the age of 18 (Moffat & Coates, 2011a). The role of the dental hygienist has a shorter history in Aotearoa/New Zealand. The New Zealand Army started training dental hygienists from 1974. However, it was not until 1994 that a course outside of the

army was established to educate dental hygienists (Moffat & Coates, 2011a). The majority of dental hygienists practicing in Aotearoa/New Zealand work in private practice (Dental Council of New Zealand, 2017a).

Prior to November 2017, graduates of oral health therapy programmes, now known formally as oral health therapists under the Health Professionals Competence Assurance Act (HPCAA) in Aotearoa/New Zealand (New Zealand Government, 2003), had to be simultaneously registered as both a dental therapist and a dental hygienist after completing the prescribed oral health qualification(s). Currently there are two accredited courses offered in Aotearoa/New Zealand that allow graduates to register with Te Kāunihera Tiaki Niho – the Dental Council of New Zealand (DCNZ) in the scope of oral health therapy (Dental Council of New Zealand, 2014). These courses are run by the Auckland University of Technology (AUT) and the University of Otago at the Faculty of Dentistry in Dunedin (Moffat & Coates, 2011b). The first cohorts of the AUT Bachelor of Health Science (Oral Health) and University of Otago Bachelor of Oral Health programmes graduated in 2008 and 2009 respectively.

The DCNZ noted that the new oral health therapy scope of practice reflects the increased range of skills and capabilities of oral health therapists compared to dental therapists and dental hygienists (Dental Council of New Zealand, 2016). Oral health therapists undertake oral health assessment and diagnosis (including risk assessment), care planning (including disease management and preventive strategies, and required clinical care), restorative procedures on patients up to the age 18, removal of hard and soft deposits from all tooth surfaces, and assisting dentists and dental specialists in implementing orthodontic treatment plans (Dental Council of New Zealand, 2016). The oral health therapy scope also includes oral health education, disease prevention and oral health promotion for individuals and communities (Dental Council of New Zealand, 2016). Oral health therapy graduates register and practice in either Māori/iwi providers, private practice, the Community Oral Health Service, hospital dental departments, or a combination of these. They practice collaboratively with other oral health and health practitioners to provide appropriate and comprehensive care to the benefit of the patient's overall health (Dental Council of New Zealand, 2017b).

In Aotearoa/New Zealand, there are 655 oral health therapists registered with the DCNZ at the time of writing, 418 dental therapists and 345 dental hygienists (Dental Council of New Zealand, 2020). This substantive workforce are currently experiencing many of the same widespread challenges faced by health professionals during the COVID-19 pandemic. Anecdotal evidence from oral health professionals suggests that COVID-19 has had a financial impact on dental practices, and some dental hygienists and

oral health therapists working in private practice have lost their jobs or had their salary or hours reduced. It is timely to consider past research on job satisfaction and career prospects of oral health therapists.

QUANTITATIVE STUDIES OF JOB SATISFACTION AND CAREER PROSPECTS OF OHTS

Survey research has provided glimpses into the job satisfaction and career prospects of OHTs. Moffat and Coates (2011b) carried out a cross-sectional study using a survey sent to all oral health students from both AUT and the University of Otago in 2008. A sample of 165 students completed the survey, of whom 94 (57%) were studying at AUT and 71 (43%) at the University of Otago. The survey covered knowledge of registration requirements and scopes of practice for practicing as a dental therapist and/or dental hygienist. It was found that 43.6% of students answered 80% or more of these questions correctly. Knowledge was significantly lower among students in the earlier years of the course, with 95.5% of the final year students answering 80% or more and only 48.5% in first year and 38.2% in second year respectively. More female participants (60.6%) wanted to work as a dental therapist in the school dental service (SDS) than male participants (30.4%); however, female participants were more likely to want to work in both SDS and private practice (54.2%). Māori and Pasifika students were more likely to want to work for a Māori Health Provider or in a hospital setting compared to non-Māori and non-Pasifika students. Overall, 90.3% said they would consider working in private practice and 56.4% would consider working as a dental therapist for the SDS, whereas 49.7% selected both environments (Moffat & Coates, 2011b). One particularly relevant finding was that most students had grown up in cities and reported wanting to work in cities after qualifying. This finding has implications for provision of access to oral health care in rural communities in general due to there being difficulties in recruiting and retaining oral health practitioners in these areas, but particularly now when there may also be restrictions on the care available due to COVID-19. It is important to encourage oral health therapy students to consider working in rural settings and ensure consistency of access to oral health care across the country as the oral health professions plan on how services accounting for COVID-19 will be delivered.

Moffat and Coates's (2011b) study also raises points about the career aspirations of future oral health therapists at an important point in the development of the practitioner role. Gauging the same information from current oral health students about to graduate should be a focus of future research in order to provide a contemporary perspective and identify gaps in knowledge and understanding. Twelve years has passed since the first oral health graduates entered the workforce; exploring their actual working experiences since graduation would also be of great value for workforce planning, but only one study has been published addressing

the job satisfaction of oral health graduates and others registered as either dental therapists as a single scope or as a dual scope of dental therapy and dental hygiene equivalent to the oral health therapy scope. Fernandez, Khareedi, and Rohan (2020) surveyed members of the New Zealand Dental and Oral Health Therapists Association (NZDOHTA) in 2016 and found that respondents who felt more able to utilise skills across their full scope of practice had higher levels of job satisfaction. Job satisfaction was also higher among respondents whose clinical and non-clinical colleagues had a better understanding of the oral health therapy scope of practice. Of particular note was that respondents with the dual scope of practice equivalent to now being registered as oral health therapists had lower levels of job satisfaction than dental therapists. Because most respondents were working in the public sector, the authors suggested that this difference may be due to them not being able to use their dental hygiene scope of practice and potentially receiving lower remuneration than dental hygienists able to work in private practice. Given the low response rate (23% of those invited to complete the survey), and the fact that only 29% of those responding were registered in both the dental therapy and dental hygiene scopes of practice (44 participants), the authors conclude that their findings cannot be considered representative of the oral health therapy workforce as a whole (Fernandez, Khareedi, & Rohan, 2020). The oral health therapy scope of practice has since been introduced (2017) and this may also have impacted job satisfaction for the current workforce. The findings of this study, however, also demonstrate the need for further research on job satisfaction for the oral health therapy workforce.

Future research will also need to investigate the ability of oral health graduates to provide care that meets guidance under COVID-19 (Dental Council of New Zealand & Ministry of Health, 2020a, 2020b, 2020c; New Zealand Dental Hygienists' Association, 2020) and explore the career prospects for graduates based on the availability of oral health care jobs, particularly in the current situation. Job satisfaction has also not been investigated in-depth for oral health therapists and should be a focus for future surveys, particularly as the recent pandemic may have impacted negatively on job satisfaction. Recent research, which included some participants from Aotearoa/New Zealand, shows that dental practitioners are fearful and anxious about contracting COVID-19 while treating an infected patient and possibly passing this on to their whānau/family (Ahmed et al., 2020).

The views of dentists, dental specialists and dental students in Aotearoa/New Zealand about the role of newly-named oral health therapists and their employability are also very relevant, particularly as these practitioners and potential employers may not fully understand the role of an OHT which could lead to challenges in the workplace. Moffat and Coates (2011a) carried out a cross-sectional study that aimed to determine the attitudes of dentists employing

'dual-trained' oral health practitioners and their knowledge of the scopes of practice and practicing requirements of oral health graduates, and to identify barriers to employment of these graduates. A postal questionnaire was sent to 600 randomly-selected dentists and dental specialists from the Dental Council register, and the final-year University of Otago Bachelor of Dental Surgery (BDS) students in 2008 were given the same questionnaire. Response rates were 66.8% for dentists, 64.5% for dental specialists, and 72.9% for dental students. Knowledge of scopes of practice and practicing requirements was limited in some areas and the main reason given for not employing an oral health graduate was insufficient physical space at the practice. While this survey was undertaken some years ago, dental practices are currently emerging from considerable restrictions during the COVID-19 lock-down. Undertaking research now on whether oral health therapists will be employed in reopened and potentially restructured practices should be considered, as such research may well reveal new barriers to employing these practitioners.

The dentists, dental specialists and dental students in Moffat and Coates's (2011a) survey believed that oral health therapists were more suited to treating children and adolescents. This was most likely due to there being very few oral health therapists having graduated at the time and dental hygiene was a relatively new profession (in Aotearoa/New Zealand) while dental therapy was long-established. The authors suggested that if oral health graduates attained an adult scope of practice for dental therapy, Community Oral Health Service clinics (which are for those under the age of 18 years) could be extended accordingly, especially to offer treatment for low-income young adults over the age of 18 years, who have the highest need for oral health care (Jatrana, Crampton, & Filoche, 2009; Ministry of Health, 2010).

In February 2019, the DCNZ issued a consultation document seeking feedback from practitioners and stakeholders about its proposal to remove the 18-year age limit for restorative activities from the oral health therapy scope of practice (Dental Council of New Zealand, 2019). The DCNZ received 737 submissions from a range of stakeholders about the proposal, with just over half supporting it. After careful consideration, the DCNZ decided to proceed with the proposal to remove the 18-year age limit and so oral health therapists can now provide restorative care for those over 18 years of age if they have completed a DCNZ-approved course in restorative care for adults. However, currently, there are no such courses available in Aotearoa/New Zealand. Moffat and Coates (2011b) found that dentists and dental specialists are interested in employing oral health therapists, with most expecting them to use all their skills, and two key government documents have previously recommended investigating re-orienting the current workforce to adapt and provide treatment to low-income adults (Ministry of Health, 2000, 2006). Specific questions around oral health therapists providing restorative care to

patients over the age of 18 years should also be explored with dentists/specialists and dental students. Further research could explore the collaborative work patterns of dentists/specialists and oral health therapists using qualitative methods, such as focus groups, to understand how team members work together, and potential synergies and tensions in the COVID-19 era.

So far, the studies included in this review have been cross-sectional surveys. A disadvantage of this methodology is that it only provides a snapshot at one particular time and thus does not allow causal inferences to be made (Levin, 2006). Another limitation to these studies is that they were conducted prior to any oral health therapists being employed in Aotearoa/New Zealand; career prospects were only explored in terms of perceptions with oral health students asked to indicate where they would like to work on graduation and their future employers indicating whether they would be willing to employ them and what they thought their role should be. Furthermore, quantitative surveys do not provide in-depth exploration and accounts of experiences that can be achieved with qualitative data. Future qualitative research could focus on tracking the growing awareness of oral health therapy, oral health therapists' employment since graduation, and the resulting implications for outcomes such as job satisfaction in certain workplaces in public and private practice and university education roles.

QUALITATIVE STUDIES OF JOB SATISFACTION AND CAREER PROSPECTS OF OHTS

Two previous qualitative studies have focused on the oral health therapist scope of practice, perceptions of the roles of oral health therapists in the wider dental team, and career pathways and employment experience of oral health therapists in Aotearoa/New Zealand. Anderson, Kang and Foster Page (2012) carried out a longitudinal qualitative study to explore and compare how BDS students and Bachelor of Oral Health (BOH) students at the University of Otago characterise their future professional work at the start and the end of their first year of the professional programme (Anderson, Kang, & Foster Page, 2012). While primarily concerned with the qualities of the students, it gives some insight as to the type of employment BOH graduates may prefer, in terms of the questions asked about their perceived working situations. All BOH students were given an anonymous survey on the first and last days of their 2009 course. Both start and end surveys were completed by 83% of BOH students. The authors examined the students' response to two questions asking them to identify a situation characterising their future professional work and a professional difficulty they would likely encounter. The responses were analysed inductively to identify key themes and indicate each theme's weighting based on frequency in the sample. The thematic analysis revealed eight characteristics of future professional work

involving: restorative tasks, patient-related concerns, patient emotion and behaviour, public health concerns, disease prevention and monitoring, communication, teamwork and self-management. Although students were, once again, being asked about their perceived future working situation, the conclusion was that BOH students characterised their work as primarily patient-centred, communicative and preventative whereas BDS students characterised their work as primarily interventive. BOH students valued the ability to ensure patient well-being and described a more holistic, preventive-based care. Further research could be conducted to examine current students' perceptions of their role and how these have changed, particularly after the COVID-19 pandemic.

Pang, Anderson, and Moffat (2012) carried out a survey-based qualitative research project that examined University of Otago BOH graduates' career pathways after graduation and their employment experience. They also explored graduate, employer and clinical placement host dental therapist perspectives of the new BOH programme and preparedness for work. The study involved open-ended questionnaires given in 2010 to the 2009 BOH graduates and their consenting employers and a 2011 survey of dental therapists who hosted BOH students on clinical placement in their final year since 2009. A sample of 18 (60%) of the 2009 BOH graduates completed an online questionnaire with 10 providing employer information. Six employers completed the 'graduate attribute' questionnaire, and 30 (45%) of the 66 eligible host therapists, the 'student attribute' questionnaire. Of the 18 graduate participants, 10 were working in both dental hygiene and dental therapy, with the remaining eight working in one scope. Graduates were mostly satisfied with their current employment; however, their main concern was maintaining both scopes of practice. Graduates and host therapists stressed a need for students to receive exposure to complex cases, while employers indicated graduates' clinical confidence had developed over time (Pang, Anderson, & Moffat, 2012).

Pang et al.'s (2012) recommendations for improving the BOH graduates' work transition outcomes consisted of: 1) increasing students' exposure to complex clinical and placement experience; 2) improving continuing education opportunities for the new graduates; and 3) promoting interaction between BOH and dental students with a view on improving (future) dentists' knowledge of BOH graduate skills and attributes. Future research could build on Pang et al.'s (2012) survey by sending the questionnaire out to other BOH graduates after a longer period working in practice. In particular, the changes in concerns they may have and how that relates to job stability and workplace health and safety, in light of both the 2017 changes to their scope of practice and COVID-19, should be explored.

CONCLUSION

To summarise, this review of the literature has demonstrated that past research on the profession of oral health therapy has mainly used quantitative surveys and was from a time when oral health graduates in Aotearoa/New Zealand registered and worked in the separate scopes of dental therapy and dental hygiene. The studies have demonstrated some foundational information about career prospects of oral health professionals who completed an oral health degree and how they are viewed by dentists/specialists (Moffat & Coates, 2011a, 2011b), as well as some more recent detail on their practising conditions and job satisfaction (Fernandez et al., 2020). In addition, there have been two qualitative studies that have revealed characteristics of professional work for oral health graduates and the patient-centred nature of their work (Anderson et al., 2012). Future research in this area would benefit from further in-depth explorations with longer periods of follow-up to help ensure oral health therapists are confident in optimising their job satisfaction and career prospects in the era of adjusting to COVID-19.

Oral health therapy is now a recognised profession in Aotearoa/New Zealand. It is crucial for all dental professionals and the public to understand the integrated scope of practice of oral health therapists and their contribution to the field of oral health, so their skills can be optimally utilised within the dental team for the benefit of the oral health of people living in Aotearoa/New Zealand. Future research on job satisfaction and the career prospects of oral health therapists is urgently needed to support both oral health students at university and oral health therapists in the workplace, particularly as our workforce now faces considerable adjustment based on financial constraints and health and safety considerations resulting from the COVID-19 pandemic (Coulthard, 2020; Dental Council of New Zealand & Ministry of Health, 2020a, 2020b, 2020c; Farooq & Ali, 2020).

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A scoping review of Australian policy relating Oral Health to Cardiovascular Disease, Diabetes and Cognitive Impairment.

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ABSTRACT

Objectives: To identify the extent and number of policies in Australia relating oral health to cardiovascular disease (CVD), diabetes mellitus (DM) and cognitive impairment (CI).

Methods: A scoping review was conducted based on the framework set out by Arksey & O'Malley (2005) with revisions based on Levac, Colquhoun & O'Brien (2010) and Anderson, Allen, Peckham, & Goodwin (2008). Australian national, state and territory government websites and grey literature were systematically searched for Australian national, state and territory policies.

Results: A total of twenty-two policies were found. After assessment, one policy was excluded and twenty-one policies were reviewed with publication years ranging from 2013-2018. All policies were either Australian national or state policies pertaining to cardiovascular diseases, diabetes mellitus, dementia, chronic diseases, or oral health.

Conclusions: Upon review of the policies, several common themes emerged. There is scope to expand implementation of current research linking oral health to cardiovascular disease, diabetes mellitus and cognitive impairment in Australian health policy. A need for improvement in oral health literacy was identified.

INTRODUCTION

Non-communicable diseases (NCDs) continue to be one of the largest burdens on global health resources (World Health Organization [WHO], 2017). Current indications are that this burden will increase while healthcare resources continue to be insufficient. Despite global efforts to address many of the factors related to NCDs, it is estimated the universal economic impact of CVD alone will continue to grow reaching US\$1,044 billion by 2030 (World Heart Federation, 2019). This estimate is of even greater concern when the economic impact of DM, which increases an individual's risk of CVD, is also considered. It is estimated that in 2017, 451 million people globally had been diagnosed with diabetes mellitus with an economic cost of US\$727 billion dollars (Cho, 2018).

Policies are an effective health intervention (de Leeuw, Clavier, & Breton, 2014) that can be used to address these concerns and reduce the global burden of NCDs. Additionally, the establishment of policy is considered key to the implementation of measures required to improve health outcomes (de Leeuw, Clavier, & Breton, 2014). The WHO has created the Global Action Plan for the Prevention and Control of NCDs 2013-2020 with a host of policy options which, if implemented across all member states between

2013 and 2020, could result in a 25% relative reduction in premature mortality (age 30-70 years) from NCDs by 2025 (WHO, 2013).

In addition to cardiovascular disease and diabetes mellitus, cognitive impairment is another prevalent NCD. Research has demonstrated that individuals with CVD are at increased risk of CI (Qiu, & Fratiglioni, 2015). Cognitive impairment is defined as a state between that of usual cognition and dementia which leads to dementia in 10-15% of cases (Hugo, & Ganguli, 2014; Janoutová, Šerý, Hosák, Janout, 2015). Cognitive impairment is expected to affect 75.63 million people globally by 2030, while costing the world an estimated US\$604 billion per year (WHO, 2018). As health economists continue to address these increasing concerns, it is important to consider all risk factors of NCDs.

Research indicates poor oral health is a risk factor for CVD, DM and CI (Borgnakke, 2015; Daly, 2017). Oral health can be defined as a state of being free from mouth and facial pain, oral diseases and disorders that limit an individual's capacity in biting, chewing, smiling and speaking and affects psychosocial well-being (WHO, 2020). Links between poor oral health and NCDs are well documented with preliminary

research showing that poor oral health increases an individual's risk of developing CVD, DM and CI (WHO, 2017). Early identification of poor oral health issues may prevent the development of some NCDs in some individuals, therefore reducing the economic impact. In the absence of a cure for these diseases, modifiable risk factors should be addressed. Given the increasing costs associated with NCDs, the impact that dental professionals and early intervention could have on the quality of life of patients, while diminishing the economic burden for society strongly, supports further investigation (Borgnakke, 2015).

The extent and number of policies in Australia relating oral health to cardiovascular disease, diabetes mellitus and cognitive impairment is yet to be determined. This information is imperative to identifying gaps and creating policies that focus on prevention, resulting in the growing cost of healthcare being managed by a public health policy approach. Therefore, the purpose of this scoping review is to assess the extent, range, and nature of national and state policies within Australia in relation to oral health, CVD, DM and CI. These policies will then be compared to the WHO Global Action Plan for the Prevention and Control of NCDs 2013-2020. This policy was chosen as Australia is a member state of WHO and a signatory to this plan (WHO, 2013).

METHODS

This scoping review was conducted based on the framework set out by Arksey & O'Malley (2005) with revisions based on Levac, Colquhoun & O'Brien (2010) and Anderson, Allen, Peckham, & Goodwin (2008). The framework and revisions were adopted as they allow for the specificity of a policy review. Anderson and colleagues (2008) state that scoping reviews can include a variety of different elements, one of these being a policy map. This type of scoping review is used "to identify the main documents and statements from government agencies and professional bodies that have a bearing on the nature of practice in that area (p. 8)." We have chosen to incorporate policy mapping into our review. Therefore, the purpose of this scoping review in relation to oral health, CVD, diabetes and CI is to:

- assess the extent, range, and nature of national and state policies within Australia
- assess the current understanding and application of the chosen research to policies
- summarise and identify gaps that exist in these policies inform further research

Search Strategy and Data Sources

A search of policy documents issued by the Australian state and national governments from 2013-2018 was performed. The expertise of a senior research librarian was utilised to create the search strategy. As the policies were expected to be published on government websites, 'Australian Government Department of Health' was entered into the google search engine and the Australian Department of Health website was accessed at <https://www.health.gov.au/>. The search terms are displayed in Table 1.

Table 1 Search terms

'Health Policy'
'Oral Health'
'Oral Hygiene'
'Cardiovascular Disease'
'Diabetes'
'Cognitive Impairment'
'Chronic Disease'
'Non-communicable Disease'

We then returned to the search engine and searched 'Australian state websites'. A comprehensive list of all state websites was accessed at <https://www.australia.gov.au/about-government/states-territories-and-local-government>. Each individual state website was selected, and their health department found.

All policy lists found during each search were individually screened to ensure no relevant policies were overlooked. Policies that met the inclusion criteria were located and assessed for eligibility. During the search one university webpage was found, listing state oral health policies from which three additional policies were retrieved. This list can be retrieved from the from the Australian Research Centre for Population Oral Health website (ARCPOH, 2015)

Policy Selection

Twenty-two policies were found based on the inclusion/exclusion criteria (see Table 2). All policies were reviewed by the first author; where it was unclear if a policy met the criteria, the policy was discussed among the research team to reach a consensus. One policy was excluded as it pertained to primary health care only. Any mention of oral health or terms related to dentistry, such as 'dentists' included in allied health teams, were included.

Table 2 Inclusion and exclusion criteria

Aspect	Inclusion Criteria	Exclusion Criteria
Language of publication	English	Any language other than English
Years published	2013-2018	Policies that expired before 2013 Policies that were rescinded, replaced or obsolete
Country of focus	Australia	All other countries other than Australia
Type of policy	National, State and Territory Policies	Organizational, municipal, and local health districts
Policy focus	Policies relating to oral health, cardiovascular diseases, diabetes and cognitive impairment within the adult population	Policies relating to children or specific population groups. Policies relating to primary health care or to diseases other than oral health, cardiovascular diseases, diabetes and cognitive impairment.

RESULTS

Extent, nature and distribution of records

A total of twenty-one policies were reviewed with publication years ranging from 2013–2018. All policies were either an Australian national, state or territory policy pertaining to cardiovascular disease, diabetes mellitus, dementia, chronic diseases or oral health. No policies specifically related to CVD were identified. Five national policies were found. One addressed dementia, one addressed oral health and one addressed chronic conditions including cardiovascular disease, diabetes mellitus and oral health; but not dementia. The remaining two were strategies and implementation plans for DM. Sixteen state policies were found from five of Australia's six states and the two territories. While there were varying numbers of policies per state, Queensland did not have any policies that matched our search criteria. The international policy of comparison was the WHO Global Action Plan for the Prevention and Control of non-communicable Diseases 2013–2020 (herein referred to as the 'WHO Plan') (WHO, 2013).

Qualitative content analysis

Content analysis of the policies associating CVD, DM, and CI to oral health was performed. The following thematic content was identified in the national and state policies: priority groups, promotion of self-management, policy environment, and impact on hospitalisations. While any mention related to oral health was identified, the emphasis on oral health varied. The Western Australia (WA) Framework for Action on Diabetes included 'dentists' in their lists of members of a multidisciplinary team and 'dental complications' as a risk factor of diabetes mellitus (Department of Health, State of Western Australia, 2014). South Australia's (SA) Health Care Plan lists 'dental' as an option under 'allied health services' available at some GP Plus Healthcare centres as required by the needs of the community and provides dental services at some of their hospitals (Government of South Australia, n.d). In reporting the relationship between Australian healthcare expenditure to disability adjusted life years, the WA Chronic Health Conditions Framework explicitly includes dental services within healthcare expenditure (Department of Health, State of Western Australia, 2011).

Priority groups

The WHO Plan identifies the heightened risk of vulnerable populations to NCDs, highlighting the need for action to create equitable healthcare (WHO, 2013). While each Australian policy discusses priority groups, there are discrepancies between which populations constitute a priority group as seen in Table 3.

Policy Environment

All policies acknowledge the importance of implementing research into policy and practice, which aligns with the WHO Plan's aim for high quality research in the areas of NCD prevention and control. The National Framework for Action on Dementia emphasised incorporating evidence-based research into dementia services, and prioritised areas requiring more research (Government of Australia, 2015).

Overview of state policies

The Australian state policies addressing chronic disease and oral health that were reviewed are displayed in Table 4.

Association of NCDs and oral health

The WHO Plan emphasises the importance of a comprehensive approach to NCDs stating that the presence of other conditions, including oral diseases and CI, may influence the development, progression and response to treatment of NCDs (WHO, 2013). The WA Oral Health Plan acknowledges oral health is associated with chronic conditions such as CVD and DM. Moreover, it recognises that individuals with diabetes mellitus and gum disease may have difficulty stabilising blood sugar levels and are at higher risk of diabetic complications (Department of Health, Western Australia, 2016). The Victorian Action Plan for Oral Health Promotion recommends a common risk factor approach highlighting the common risk factors between periodontal disease, dental caries, cardiovascular disease and other common chronic diseases (Department of Health, State of Victoria, 2013). The Northern Territory (NT) Oral Health Promotion Plan also recommends a common risk factor approach emphasising an association of risk factors between oral health, CVD, and DM (Northern Territory Government 2011). SA's Oral Health Plan acknowledges the bi-directional relationship of diabetes stating that individuals with diabetes mellitus may be at higher risk of periodontal disease while periodontal disease places individuals at higher risk of cardiovascular disease and diabetes mellitus (Government of South Australia, n.d). Similarly, the Strategic Framework for Dental Health in New South Wales (NSW) includes a common risk factor approach stating the effectiveness and efficiency towards several chronic diseases (Centre for Oral Health Strategy, 2013). Dental complications are listed as a potential complication of diabetes mellitus in WA Framework for Action on Diabetes (Department of Health, State of Western Australia, 2014).

Table 3 Priority groups identified among national policies

	National Strategic Framework for Chronic Conditions	Australian National Diabetes Strategy 2016-2020	Diabetes in Australia: Focus on the Future 2016-2020	Australia's National Oral Health Plan	National Framework for Action on Dementia 2015-2019
Aboriginal and Torres Strait Islander	•	•	•	•	•
Culturally and linguistically diverse	•	•	•		•
Older Australians	•	•	•		
Australians living in rural and remote areas	•	•	•	•	•
Carers of individuals with chronic conditions	•				
Those experiencing low socio-economic disadvantage	•			•	•
Those who are or have been incarcerated	•				
Those with a mental or physical disability	•			•	•
Individuals who are homeless					•
Those living alone without suitable supports					•
Veterans					•
Care-leavers					•
Those who identify as LGBTIQ					•

Table 4 Themes identified among state policies

	Inclusion of oral health	Inclusion of economics	Identifies associations between NCD's and oral health	Considers impact on hospitalisations	Promotes self-management	Acknowledges importance of policy
NT Chronic conditions prevention and management 2010-2020		•		•	•	•
ACT Chronic Conditions strategy	•		•	•		
SA's Health Care Plan 2007-2016	•		•	•		
Victorian Public health and wellbeing plan 2015-2019	•	•		•	•	
WA State Oral Health Plan 2016-2020	•	•	•	•	•	•
WA Framework for Action on Diabetes and Diabetes Service Standards	•	•	•		•	
WA Health Promotion Strategic Framework 2017-2021	•	•		•		•
Victorian Action plan for oral health promotion 2013-2017	•	•	•	•		•
Victorian dementia action plan 2014-18	•	•		•		
NTOral Health Promotion Plan 2011-15	•		•			•
SA's Oral Health Plan 2010-2017	•	•	•	•		•
WA Chronic Health Conditions Framework 2011-2016/ Self-Management Strategic Framework 2011-2015	•	•		•	•	•
Oral Health 2020: A Strategic Framework for Dental Health in NSW	•		•			
NSW Diabetes Prevention Framework					•	•
Healthy Tasmania Five Year Strategic Plan					•	
NSW Dementia Services Framework 2010-2015		•		•		•

Policy Environment

The importance of a positive policy environment is acknowledged by eight policies as a means of impacting the prevention of NCDs and oral health. SA's Oral Health Plan acknowledges that further oral health research can influence policy and that integration of oral health service policy can promote oral health (Government of South Australia, n.d). WA's Chronic Health Conditions Framework aims to establish research partnerships between academics, health providers, and policy units, acknowledging the need to deliver the best possible care by facilitating transition of research into practice (Department of Health, State of Western Australia, 2011). Likewise, the Victorian Action Plan for Oral Health Promotion promotes the implementation of research into policy and practice (Department of Health, State of Victoria, 2013). WA's Oral Health Plan strategises to improve oral health by strengthening policies to promote oral health in locations such as pre-schools, schools, workplaces and residential care facilities, and also points to the exclusion/limited inclusion of oral health in other WA policies (Department of Health, Western Australia, 2016). The NT Chronic Conditions Prevention and Management policy defines 'positive policy environment', while the NT Oral Health Promotion Plan is to achieve the recognition of oral health being integral to general health and see this reflected in health policy (Department of Health and Families, 2009; Northern Territory Government 2011). The NSW Diabetes Prevention Framework addresses the influence of policy on preventive health and acknowledges the need to maintain consistency in the development of policies, including compliance with state and national policies (NSW Ministry of Health, 2016).

Hospitalisations

The WHO Plan encourages a strengthened healthcare system where there is a decreased need for hospitalisations through increased prevention, early detection, treatment and continual management of NCDs (WHO, 2013). WA's Oral Health Plan states that oral health issues are the greatest cause of acute preventable hospitalisations in WA and is among the most prevalent, costly health issues suffered by Australians (Department of Health, Western Australia, 2016). It aims to reduce hospitalisations by addressing poor oral health related issues. The Victorian Public Health and Wellbeing Plan notes that dental conditions are the primary reason for hospitalisations for Victorians under 25, and the second most common ailment across all ages (State of Victoria, 2015). Similarly, the Victorian Action Plan for Oral Health Promotion states that dental conditions are the primary reason for hospitalisations of Victorians under 20 years, and attributes oral trauma due to injury or assault to rising hospitalisations (Department of Health, State of Victoria, 2013). SA's Oral Health Plan also highlights the impact oral diseases have on hospitalisations (Government of South Australia, n.d).

WA's Health Promotion Strategic Framework discusses

hospitalisations highlighting the role of NCDs, the economic impact of hospitalisations and the likelihood that they are to increase, stating that hospital costs due to chronic disease were \$715 million in 2013 (Department of Health, State of Western Australia, 2011). The Victorian Public Health and Wellbeing Plan states that 10% of Victorians with chronic diseases account for 55% of hospitalisations, estimating that preventable hospitalisations will increase to 80,000 per year by 2025-26 (State of Victoria, 2015). NT Chronic Conditions Prevention and Management policy states that hospitalisations increase with each co-morbidity (Department of Health and Families, 2009). The ACT Chronic Conditions Strategy estimates half of avoidable hospitable admissions are due to chronic conditions and discusses the need for self-management, which is reiterated by WA's Chronic Health Conditions Framework. Various policies advocate for early detection and interventions to minimise or prevent hospitalisation (ACT Government, 2013; Department of Health, State of Western Australia, 2011).

DISCUSSION

National Policies

The link between oral health and systemic diseases is well established (Tavares, Lindefjeld Calabi & San Martin, 2014; DHSV, 2015). Due to the extensive research available on these links, this scoping review focuses on the national, state and territory policies within Australia and their utilization and promotion of this research. The purpose of this review was to identify and assess these current policies and identify gaps by comparing them to an international policy on chronic diseases. When we compare these policies to WHO Plan, which associates oral diseases to NCDs, a gap is identified in Australian health policy where the emphasis on the oral-systemic link is poor.

The national policies align with the WHO Plan encouraging a multi-sectoral approach; however, only the National Diabetes Strategy mentions dentists by profession, although it falls short of including dentistry in actions to improve quality of life (Commonwealth of Australia, 2015). This highlights the need for clear guidelines for dentists, oral health practitioners and allied health professionals when caring for individuals with diabetes mellitus. Diabetes mellitus and periodontal disease have a bi-directional relationship where treatment would arguably improve an individual's quality of life (Bagda, Patel, Kesharani, Shah, & Garasia, 2016).

Australia's National Oral Health Plan highlights the need to improve oral health, stating only 39% of Australian's see a dentist yearly for regular check-ups (COAG Health Council, 2015). In addition, approximately 70,200 people are hospitalised yearly with oral health issues (AIHW, 2019). A hypothesis can be made that if the number of yearly dental exams increased, hospitalisations would likely decrease. This would require the support of multiple healthcare professions emphasising the need for increased

oral health literacy and its link to NCDs among healthcare professionals as highlighted in the National Oral Health Plan. The National Oral Health Plan identifies priority groups and the vulnerability of the elderly and those at socio-economic disadvantage to periodontal disease (COAG Health Council, 2015). As periodontal disease is preventable, this modifiable risk factor continues to increase the likelihood of NCDs. This highlights the need for collaboration between governments to create and implement uniform policies addressing oral health and NCDs. The National Oral Health Plan highlights the expense of dental care and stipulates that the cost is greater than any other major category of health spending (COAG Health Council, 2015). The affordability of oral health care is identified as a barrier to access.

State Policies

Prevention and early intervention is a consistent theme in all state policies with multiple policies discussing the risk factors of NCDs. This aligns with the aims of the WHO Plan to reduce modifiable risk factors and consider the social determinants through health promoting environments (WHO, 2013). It also ascertains that renal, oral and eye diseases share common risk factors which can benefit from common responses to NCDs. Aside from SA's Oral Health Plan, all oral health policies discuss a common risk factor approach in varying degrees, acknowledging the effectiveness of addressing common risk factors of oral disease and NCDs. The Victorian Public Health and Wellbeing Plan has the strongest emphasis on oral health. This policy includes a sub-section identifying the burden of poor oral health, its prevalence in low socio-economic groups and identifies poor oral health as a condition sharing co-factors with NCDs' (State of Victoria, 2015).

The implementation of health screening was suggested by four policies as a preventive measure for NCDs. This highlights an opportunity for policy to incorporate oral health screening into NCD treatment and use this to increase oral health literacy among their patients; only the NT Oral Health Promotion Plan included oral health into their chronic disease care plans (Northern Territory Government 2011). WA's Oral Health Plan considers the inclusion of oral screening into general health assessments as an indicator of success (Department of Health, Western Australia, 2016). This could serve as an avenue for health professionals to identify individuals with poor oral health and generate appropriate dental referrals. Alternatively, dental professionals could be carrying out NCD screening and referring at-risk individuals to appropriate health professionals.

Less than half of state policies promote self-management in prevention and treatment of chronic diseases. Given that lack of self-management is a symptom of CI, it is logical that CI policies promote patient-centred care. WA's Chronic Health Conditions Framework has a strong focus on self-management and emphasis on a common risk factor approach, listing diseases that pose the greatest burden; however, oral health is not included (Department of Health,

State of Western Australia, 2011). Self-management has been identified as an important strategy to improve the quality of life of those with chronic diseases while reducing the economic burden by emphasising patient responsibility (Grady & Gough, 2014).

Indicators for success

Areas for improvement have been highlighted in Australian policies relating oral health to CVD, diabetes mellitus and CI. Indicators of success would include an increase of oral health literacy among health professionals understanding, resulting in treatment that takes into account the links between oral health and NCDs. This could be promoted through the inclusion of oral health in general health assessments, as highlighted by the WA Oral Health Plan, as an indicator for success (Department of Health, Western Australia, 2016).

Implementation of the links between oral health and NCDs into health policies would increase public awareness and funding. As we consider the risk factors for oral disease and NCDs, Lee et al. (2018) asserts "oral health should be integrated into overall health policies using cross-sector and common risk factor approaches for health promotion (p. 246)." Current research strongly supports the bi-directional relationship of periodontal disease and diabetes and we recommend it be implemented within policy structure (Bagda, Patel, Kesharani, Shah, & Garasia, 2016; Tavares, Lindefjeld Calabi, & San Martin, 2014).

Implications for Research

Future research should be conducted to determine how to implement research-based strategies into health policy. While current research relating oral health to NCDs is vast, its inclusion into health policy pales in comparison. The implications of including oral health into policy would positively affect Australians, particularly those living with NCDs.

This study also highlighted a lack of Australian-based statistics regarding projection figures of CI. In addition, there is a need for current CVD statistics and estimated costs associated with CVD in Australia.

Implications for Practice

A need to incorporate research identifying the relationship between oral health and NCDs into health promotion was identified. This could increase oral health literacy for health professionals and the public. A greater emphasis on oral health research should be considered with an aim to influence policy. There is an obvious need for consistency between national, state, and territory policies addressing oral health and NCDs.

CONCLUSION

As the incidence of non-communicable diseases continues to rise, so does the need to identify and address modifiable

risk factors. Research indicates oral health is a modifiable risk factor for CVD, diabetes mellitus, and CI. This indicates that with appropriate preventive care, oral health can be improved and the potential risk reduced. Sadly, individuals with the greatest need are often those with poor access to oral health care and are at higher risk of NCDs.

A policy approach is seen as an effective public health measure to improve poor oral health and decrease the impact on NCDs. Furthermore, this could improve the quality of life for individuals with NCDs and potentially reduce the economic impact on the healthcare system. Action is imperative in view of the limitations of the existing healthcare resources. Oral health literacy has been identified as lacking which highlights the need to address this issue within Australia.

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Exploring the influence of an oral health promotion intervention on Parental Self-Efficacy and Locus of Control: Results from a community playgroup setting.

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ABSTRACT:

Background: Early childhood caries (ECC) is the most prevalent dental disease in children with reports of over half of 6-year-old Australians experiencing decay in deciduous teeth. ECC can affect aesthetics, speech and mastication function and socialisation; all of which can influence the child's quality of life and cause financial and emotional hardship for their families. An area that is gaining the interest of many researchers is the impact of the parents' psychosocial well-being on their child's ECC susceptibility. The aim of this study was to test the effectiveness of a parenting program designed to enhance Parental Self-Efficacy (PSE) and Locus of Control (LoC) towards tooth brushing. The study also investigated the link between these psychosocial factors (i.e. PSE and LoC) with ECC susceptibility.

Methods: Parents were recruited from the Whyalla Community Playgroup. PSE and LoC were measured using rating scale-based questionnaires. A PowerPoint presentation, which embedded small group activities, provided the theoretical component. To assess the immediate effect of the program on the PSE and LoC, mean scores for the pre- and post- questionnaires were calculated and compared.

Results: Ten participants attended the program, and most were between 25-34 years of age. Around half had two or more children, most of whom were under 5-years-of-age. All parents reported their family type as nuclear, consisting of two parents and their child/children. Comparisons between the mean scores from the pre-questionnaire to the post-questionnaire demonstrated an increase in PSE and LoC, indicating an immediate increase on the parents' motivation to help their child achieve optimum oral health.

Conclusion: The program was effective at promoting parents' self-efficacy and LoC to enact tooth brushing for their child. Due to the strong relationship between PSE and LoC with ECC risk, the findings from this study support the incorporation of a tooth brushing intervention in a community playgroup setting.

Keywords: Early childhood caries, locus of control, parental self-efficacy, tooth brushing

BACKGROUND

Early childhood caries (ECC) is the most prevalent dental disease in children (WHO 2017). In 2010, 55 percent of 6-year-old Australians had experienced caries in their deciduous dentition (AIHW 2015). This is of significant concern as ECC is related to issues in aesthetics, speech and mastication function and socialisation; all of which may influence the child's quality of life and cause financial and emotional hardship for their families (Do & Spencer 2016). Leong et al. (2013) suggest that although maternal-child oral bacteria transmission is regarded as one of the main culprits of ECC initiation, determinants extending beyond the biological factors, such as those influencing tooth cleaning behaviour, may influence ECC risk. An area that is gaining interest is the impact of parents' psychosocial well-being on their child's ECC susceptibility.

Psychosocial factors affecting health

Psychosocial health includes the mental, social, spiritual and emotional dimensions that operate simultaneously

to contribute to the well-being of an individual within their social environment (Egan et al. 2008). This allows a person with self-efficacy and self-esteem to connect with others with a sense of belonging, approval and success as they experience control in meeting their needs as described by Siegrist and Marmot (cited in Egan et al 2008). Two important dimensions of psychosocial health are self-efficacy (SE) and locus of control (LoC), and can specifically relate to the context of children's oral health (OH). These constructs were developed by Albert Bandura in 1994 and Julian Rotter in 1954 (Bandura 2004; Rotter 1960). Self-efficacy as part of Bandura's Social Cognitive Theory is one's perceived capability in accomplishing a task or action successfully (Bandura 2004, de Silva-Sanigorski et al. 2013). A parent's belief in their ability to adopt and persist with tasks related to parenting is known as parental self-efficacy (PSE) (Amin & Harrison 2009). Locus of control (LoC) relates to one's belief in their ability to control or predict the outcome of a situation based on Rotter's Social Learning Theory (Freed & Tompson 2011; Rotter 1960). Those with strong LoC tend to view the attainment of an outcome as being within their control, and

influenced by their decisions and efforts, whilst those with weak LoC solely believe that an outcome is beyond their control, and is a result of external forces such as luck or fate (AbuSabha & Achterberg 1997).

The relationship between these concepts and ECC have been recognised by researchers, with many suggesting that high PSE and strong LoC can reduce ECC risk (Amin & Harrison 2009; Bandura 2004; Lencova et al. 2008; Reisine & Douglass 1998). These elements are essential in the establishment and maintenance of positive family dental behaviours, as they can influence the parent's belief that their child's OH status is determined by their efforts, decisions, and behaviours (Bandura 2004). Parents attitudes, such as accepting that the relationship exists between healthy deciduous teeth and healthy adult teeth and accepting practical tips and advice from dental professionals in oral care techniques, are examples of PSE and LOC influencing the ECC risk of their child (Amin & Harrison 2009). Therefore, parenting programs promoting children's dental health should also target factors that influence parents' attitudes and behaviours (i.e. PSE and LoC).

AIMS

The aim of the study was to evaluate the effectiveness of a small group educational program designed to enhance PSE and LoC towards tooth brushing.

METHODS

Study setting and participants

Parents attending the Whyalla Community Playgroup with their children were invited to participate in a 30-minute session in September 2018. The 'playgroup' concept is an organisation dedicated to providing support and network for families with babies, toddlers and pre-schoolers.

Ethical considerations

The study met the standards of basic principles of ethical practice as required from the Human Research Ethics Committee, at the University of Adelaide. Student researchers contacted the director of the conveniently located playgroup to explain and subsequently request permission to conduct the intervention. Once permission was granted and a date set, the parents of the playgroup children were informed in writing of the purpose of the study and that their participation was voluntary and reporting anonymous. The purpose and structure of the intervention was also detailed in the pre-questionnaire, and informed consent implied by completing the survey. No identifying information was included in the questionnaire and hard copies were disposed of after completion of the project.

Program development

The short PowerPoint presentation was constructed which gave examples and advice on improving PSE and LoC towards brushing their child's teeth and how to reduce the risk of ECC. A pre-questionnaire was distributed prior to the session, highlighting its purpose and session format. The objectives were to i). Increase parents knowledge regarding children's OH; ii). Enhance parents' confidence and control around brushing their child's teeth, and iii). Create an interactive and supportive environment between the parents, the children, and dental professionals through sharing of information, and engaging in group activities and play.

To ensure that the session was interactive, three small group discussion activities were performed. The first related to ECC statistics, the second explored the parents' opinion around the factors that may increase ECC susceptibility, and the third asked parents to identify common reasons children may refuse to brush teeth, and strategies that have led to successful outcomes. The following techniques incorporated into the program were:

Modelling: Children's words and actions are often influenced by parents or other adults (ACECQA 2016) setting a good example for their children. A video demonstrating the 'brush from behind' position, the technique of brushing using an orderly approach, and, engaging the child through song (i.e. 'This is the way we brush our teeth...'), was shown to the parents' to incorporate the modelling technique into the program.

Giving children control: Empowering children to be responsible for a task under the supervision and guidance of a parent or carer can help with compliance and essential skill development (ACECQA 2016).

Routine setting: Incorporating oral hygiene care as part of a routine has been shown to help with PSE (Underwood et al. 2015). Allowing the child to develop, from an early age, a perception that brushing is an everyday requirement, may lead to favourable oral hygiene practices in the future.

Positive reinforcement: Acknowledging desirable behaviour through rewards (e.g. using a sticker-chart) can reinforce the desired behaviour (AAPD 2015). Rewarding children each time tooth brushing is performed can positively improve parents' SE.

Toothpaste as optional: Suggesting brushing without toothpaste if children strongly objected to the taste, but then gradually introducing a variety of commercially available toothpaste flavours. Low concentrated fluoridated toothpaste was recommended and beneficial in caries prevention for children from 18 months to five years (inclusive) and from six years, adult strength toothpaste was the preferred option (Do & Spencer 2016).

Tooth brushing song: Incorporating children's normal developmental psychology, where children are often driven by entertaining external stimuli (Asnani 2010), a tooth brushing song can be used as encouragement to brush.

Colgate-Palmolive oral care supplies were distributed to the parents and children after the presentation which was followed by a tooth brushing activity. Post-questionnaires were completed and the Dr Rabbit and the Tooth Defenders class kit from Colgate-Palmolive (ColgatePM 2018) was provided to the playgroup to be shared with future families.

Statistical measurement and analysis

The pre-questionnaire comprised of two sections. Section 1 sought demographic detail such as age, number of children in the family, age ranges of the children and family type. Section 2 measured parents PSE, LOC and motivation using a ten-point Likert scale (1=strongly disagree to 10=strongly agree) for rating statements. The statements, both positively and negatively worded, were extracted and modified from the questionnaires used by Adair et al. (2004), Freed and Tompson (2011) and Lencova et al. (2008). Negative items were reverse scored, with higher scores on both scales

indicating higher PSE and more internal LOC (see Table 2).

The post-questionnaire consisted of three sections. The questions and statements in Section 1 and 2 were identical to the pre-questionnaire for evaluation purposes. Section 3 asked the participants to rate their perceived confidence in brushing their child's teeth twice a day, and to state their opinion around the positive aspects of the program and areas that could be improved. To assess the immediate effect of the program on the PSE and LoC, the mean scores before and after were compared for each statement in the Section 2 pre- and post- questionnaires.

RESULTS

Demographic characteristics

The sample consisted of 10 participants. Eight participants represented the 25-34 age group, while the others were between 18-24 years. In terms of the number of children in each family, five had two or more children. All the parents reported their family type as nuclear, consisting of two parents and their child/children (Table 1).

Table 1: Demographic characteristics of parent participants

Characteristic	Number
Age (years)	
<18	0
18-24	2
25-34	8
35-44	0
45+	0
Number of children in family	
1	1
2	5
3	2
4+	2
Age ranges of children (if appropriate, select more than one)	
0-5	10
6-10	2
11-15	0
16+	0
Family type	
Nuclear family	10
Single-parent family	0
Extended family	0
Other	0

Parental Self-Efficacy

All participants showed an increased PSE score following the intervention after accounting for the reverse order statements in Table 2. The greatest change related to 'battling with a child to brush his/her teeth twice daily' (Statement 3) which showed a difference in mean of 2.7 between the pre and post mean scores. The second area was in relation to 'parental difficulty in brushing their child's teeth if the child was uncooperative' (Statement 2), which showed a difference in mean of 1.9.

Locus of Control

There was a shift in mean scores for all statements measuring LOC demonstrating an increase in parents LOC after the intervention (see Table 2). The greatest shift showing a difference in mean of 2.3, after accounting for the reverse order wording, related to 'dental professionals being the best persons to prevent their child from developing tooth decay' (Statement 7). The second area with a difference in mean of 2.0 related to 'the inevitability of their child getting tooth decay even after brushing twice daily' (Statement 5).

Table 2: Mean scores of the Pre- and Post- Questionnaire statement

Statement	Mean Score		
	Pre-	Post-	Higher rating indicates ...
If we brush our child's teeth twice a day, we can help stop them from getting decay in the future.	8.8	9.8	Internal LoC
As parents, we feel it is difficult for us to brush our child's teeth if he/she is upset or does not want to cooperate. (R)	7.1	5.2	Low SE
It is not worth it to battle with our child to brush his/her teeth twice a day. (R)	4.5	1.8	Low SE
If our child does not want to brush his/her teeth every day, we don't feel we should make them. (R)	1.9	1.4	Low SE
Even if we help our child brush twice a day, they are still going to get tooth decay. (R)	5.1	3.1	External LoC
Some people just naturally have teeth that are more likely to decay. (R)	5.0	4.0	External LoC
Dental professionals (oral health therapists, dentists) are the best person to prevent our child from getting tooth decay. (R)	5.7	3.4	External LoC
As parents, we should address problems with our child because ignoring them will not make them go away.	9.2	10	High SE
As parents, it is our responsibility to prevent our child from getting decayed teeth.	9.2	9.4	Internal LoC
On a scale of 1-10, how motivated are you to help your child achieve good oral health?	8.5	9.9	N/A
After listening to our presentation, please rate your confidence in brushing your child's teeth twice a day.	-	9.6	N/A
Note: (R) = Reverse coded items			

Motivation and Confidence

In addition to the statements measuring PSE and LoC, there was an increase in parent's motivation to help their child achieve optimum OH. The pre-questionnaire showed a mean score of 8.5 with the ratings ranging from 7 to 10. The post-questionnaire garnered a mean score of 9.9 as nine participants rated their motivation as 10/10 and the other, 9/10. This showed an immediate effect of the intervention on the parents' motivation.

In Statement 11, the parents were asked 'After listening to our presentation, please rate your confidence in brushing your child's teeth twice a day'. Eight participants rated their confidence 10/10, and the other two, 9/10 and 7/10. These results reflect stronger (internal) LoC following the presentation.

Parent feedback

Parents were invited to provide feedback about the project in order to make changes for future interactions with the Playgroup should the need be identified. Responses included:

"Presentation has made me feel it is even more important to brush teeth and promote good long-term habits."

"I really liked how the parents were given a chance to discuss some of the techniques they use."

"Provided useful information and was interactive."

"Holding the child from behind technique was helpful!"

DISCUSSION

This study evaluated the effectiveness of a parenting program aimed at enhancing parents' perceived capability and confidence, motivation and sense of responsibility, for twice-daily tooth brushing. However, parental application of acquired knowledge towards favourable oral health behaviours is influenced by other determinants, such as the psychosocial factors, PSE and LoC (Egan et al. 2008). This study found that both LOC and PSE increased simultaneously which fits with evidence that those with more internal LOC tend to have higher SE (Phillips & Gully 1997). For example, if an individual perceives that they can control their desired outcome of a scenario (internal LoC), they are more likely to be motivated to improve their performance and set a specific goal to achieve this (high PSE). Therefore, identifying the level of PSE and LoC is essential to assess the extent of parental involvement in their child's OH, especially if they encounter child-related challenges. Most parents are aware that good oral hygiene facilitates in the prevention and management of ECC in children. However, the child's resistance and behavioural issues, can often limit implementation of regular brushing routines at home (Freed & Tompson 2011). Hence, this affects parents' confidence and control towards their performance of the desired task. It has been shown that active parental involvement is required to decrease the risk of ECC incidence (Ramos-Gomez et al. 2012) and that the most common interventions are parental education (Kagihara et al. 2009).

The analysis of the pre- and post-questionnaires demonstrated a shift in the scale on all statements. There was an immediate increase in the confidence and self-perceived motivation of parents towards brushing their children's teeth, despite some challenges relating to children's noncompliance. Small-group interventions incorporating discussion between parents, have been found to support parents facing similar challenges (Bloomfield & Kendall 2012). This social support positively influences parents' confidence and parenting competence thus enhancing their child's development (Anglely et al. 2016; Trivette & Dunst 2014). This study was able to show the improved PSE and LoC following the program implementation.

STUDY LIMITATIONS

Limitations included the small sample size, the study setting, and the time constraint. The results are not generalizable because the sample was small and from one community centre only. Due to time constraints in the undergraduate curriculum, the student researchers were unable to administer a follow-up questionnaire, therefore the long-term outcome or impact of the program could not be measured. Lastly, the nature of self-reported data may increase bias, especially having the program leaders in the room. There may have been experimenter effects such as participants wanting to please with their responses rather than answer honestly when evaluating the program (Rosenman et al. 2014). A blind evaluation design may have been better. Assessment of PSE

and LoC is a comprehensive process, however it was not possible in this study to test the link between the intervention and improvements in actual ECC incidence but future studies may seek to explore this. Despite these limitations, the project was successful at demonstrating how a parenting program that focusses on parents' motivation, confidence and sense of responsibility towards their child/children's oral health can improve psychosocial markers of ECC risk.

IMPLICATIONS FOR RESEARCH

The outcome of this study emphasises the potential for further evidence-based interventions focused on improving PSE and LoC. These results provide the basis for further studies to investigate the correlation between PSE and LoC, the associated influence of these to ECC, and some suggested interventions that can help address the relationship between PSE, LoC and ECC. As ECC is a significant public health concern (WHO 2017), active involvement from government and non-government organisations would build capacity within the local community to reduce ECC risk through other interventions. Enhancing PSE and LoC toward making dietary changes and improved eating habits for fussy toddlers is an example of where support would be beneficial. This current project showed that incorporating a short intervention into a community-based playgroup setting, helps provide support and motivation for parents to be actively involved in maintaining their child's OH. Replicating this simple study in other playgroups, early learning centres and preschool settings is warranted thus enabling the impact of improving PSE and LOC to be measured over time.

CONCLUSION

Psychosocial attributes are strongly linked to OH. PSE and LoC have been shown to have an influential role in establishing and maintaining positive dental behaviours in children. A simple program in the form of a PowerPoint presentation and small group discussion was found to be effective at enhancing PSE and LoC related to tooth brushing for a group of parents. Improving parents' psychosocial health factors should be considered when developing oral health promotion programs, to indirectly have a positive impact on the OH of their children and their risk of ECC.

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THESIS TITLE:

**Indigenous cultural competence in dentistry and oral health higher education:
A case study**

ABSTRACT

Indigenous people in Australia suffer significant disadvantage in relation to oral health, with higher rates of oral disease and poorer access to care than their non-Indigenous counterparts. National accreditation standards require tertiary education institutions to incorporate Indigenous culture in curricula to increase cultural competence for all students; this is expected to translate into improved health outcomes. The aim of the case study reported in this thesis by publication was to explore Indigenous cultural competency in dentistry and oral health curricula, explicate the enablers of and barriers to students' acquisition of Indigenous cultural competence, and identify innovative strategies to help students achieve such competencies upon graduation. A systematic review, online survey and two in-depth interview studies were conducted. The findings indicated that governance is central to education reform involving Indigenous cultural competence, especially to support the recruitment, retention and integration of Indigenous academics and students. An informed history of Indigenous peoples is also required, as well as engagement with Indigenous communities and individual reflection on these experiences. A key outcome of the study was the development of an Indigenous cultural competence model to assist dental and oral health programs in Australia to integrate Indigenous cultural competence into their curricula.

Publications from this research:

- Forsyth, C., Short S, Gilroy J, Tennant M, Irving M. (2020) An Indigenous Cultural Competence Model for Dentistry Education. *British Dental Journal*, 2020;228(9),1-7.
- Forsyth, C., Irving, M., Short, S., Tennant, M. (2018) Students don't know what they don't know: dentistry students' perspectives on Indigenous cultural competence curricula. *Journal of Dental Education, J Dent Educ.* 2019;83(6):679-86.
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- Forsyth, C., Irving, M., Tennant, M., Short, S., Gilroy, J. (2016). Teaching Cultural Competence in Dental Education: A Systematic Review and Exploration of Implications for Indigenous Populations in Australia. *Journal of Dental Education*, 81(8), 956-968.6



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THESIS TITLE:

Building Capacity To Promote Oral Health In An Australian Community Mental Health Setting

ABSTRACT

Half of all Australians will experience a common mental illness during their lifetime. There is strong evidence that people living with mental illness (PLWMI), particularly those with severe mental illness, experience poor oral health outcomes and face significant challenges in accessing oral health care. Indeed, Australia's National Oral Health Plan identifies PLWMI as a Priority Population with additional and/or specialised oral health needs. Despite this recognition, there is a distinct lack of oral health promotion programs targeting PLWMI.

The utilisation of non-dental professionals (e.g. aged care professionals, midwives, pharmacists etc.) in promoting oral health has demonstrated considerable success in a variety of settings. However, there is little evidence of this approach involving mental health professionals. Developing oral health promotion skills of mental health professionals may provide an appropriate solution to increase oral health advice and support for PLWMI. Therefore, the aim of this PhD project was to investigate how to build capacity to promote oral health in an Australian community mental health setting. All research activities were approved by the Human Research Ethics Committee at the Melbourne Dental School and by the Research and Evaluation Committee at Neami National.

This project used a multi-stage sequential mixed methods participatory action research design. It was guided by the 'Framework for Building Capacity to Improve Health'. Research was conducted within Neami National, one of Australia's largest community mental health organisations. Stage One explored existing capacity to promote oral health within Neami National through an environmental scan of health promotion action, a post-training evaluation survey after face-to-face oral health training, and a cross-sectional web-based survey of Neami Community Rehabilitation and Support Workers (CRSWs) measuring their oral health knowledge, attitudes and professional practices (KAP).

Stage Two focused on the design, development and implementation of professional development activities to

increase capacity of Neami CRSWs to promote oral health for mental health consumers. This stage involved a multi-state quasi-experimental control group study design, which sought to compare the effectiveness of different training delivery modes (face-to-face, online, blended or none) as part of the 'Smile for Health' professional development (PD) program. Oral health 'champions' in each Neami site were utilised to support the implementation of oral health PD within their team.

Stage Three included process, impact and outcome evaluation, which was used in determining which Smile for Health training delivery mode is most appropriate for use in a community mental health setting. Evaluation activities included a mixed-mode post-training evaluation survey, qualitative focus groups and semi-structured interviews, and a follow-up cross-sectional oral health KAP survey of Neami CRSWs.

This project found that any type of PD increases the provision of oral health support to mental health consumers. However, it is important to tailor PD activities to be contextually appropriate. The utilisation of oral health champions was a key enabler in this project, as they had the skills and capacity to problem-solve any issues as they arose and ensured that oral health promotion remained on the agenda within individual teams. Oral health champions offer a sustainable solution to support the implementation of capacity building approaches to increase oral health promotion in community mental health settings.

People living with mental illness require specialised oral health promotion programs. This project provides evidence on how to increase capacity to promote oral health in a community mental health setting. Smile for Health offers a contextually appropriate oral health promotion solution for services providing support to people living with mental illness. It is recommended that Smile for Health be rolled out across all Neami sites and potentially implemented in other community mental health services.

Corporate Partnerships and online learning

Leonie M. Short

Central Queensland University

Continuing Professional Development Opportunities during the COVID-19 Pandemic

Our professional associations and corporate partners were very quick to respond to, and meet, our Continuing Professional Development (CPD) needs during the COVID-19 Pandemic. Apart from providing information and updates about restrictions, infection control measures and screening methods during the pandemic, they also filled a much-needed gap in connecting, supporting and educating us at a time of uncertainty and disruption amongst oral health practitioners.

Webinars and other videoconferencing platforms were utilised to deliver presentations on a range of topics with locally sourced and overseas speakers. Some of these CPD webinar presentations were also applicable for dental and oral health students. As our students were 'time rich' but 'contact poor' during the pandemic, the CPD sessions proved to be an excellent vehicle for connecting isolated and homesick students with registered and more experienced members of their profession. Students were able to see first-hand the commitment of oral health practitioners in CPD events and understand what is expected of themselves after graduation. You have been excellent role models for our students this year - thank you.

Corporate CPD websites:

Colgate Oral Health Network from the USA <https://www.colgateoralhealthnetwork.com/> and <https://www.colgateprofessional.com.au/>


EMS Oceania via the Swiss Dental Academy from Switzerland <https://www.swissdentalacademyonline.com/>

GC Australasia <http://www.gcaustralasia.com/Home>

GSK Health Partner <https://www.gskhealthpartner.com/en-au/learning-lab/>

Oral-B <https://www.dentalcare-aus.com.au/en-au/professional-dentist-education/ce-courses/ce550>

TePe Share Odontology Webinars from Sweden <https://www.tepe.com/share/>



Notice Board

Please note that the ANZJDOHT publishes these events on information received; please check with the organisations concerned to determine COVID19 arrangements.

2020

On-Line CPD events from ADOHTA – throughout 2020 and 2021 - check the website for details <https://www.adohta.net.au/eventsonline>

18th-26th November, ADA NSW Convention Online Lecture Series. 8 Presenters over 4 evenings in a 2-week period. 8 CPD hours. <https://2020.adanswconvention.com/>

2021

30th April – 1st May, NZDHA/NZDOHTA Conference Past, present & Future – Celebrating 100 years of the School Dental Service in NZ. Dunedin Town Hall, New Zealand.

6th-8th May, ADX Melbourne, Australia. Melbourne Convention Exhibition Centre. ADX Melbourne will continue to be a place where the nation's dental community can come together to learn, experience the latest innovations, technologies and techniques as well as network with professionals from across the dental industry. <https://www.adx.melbourne/>

10 to 12 May 2021. Preventive Health Conference 2021 will be held as a hybrid conference at the Pan Pacific Perth, WA. <https://www.phaa.net.au/events/event/preventive-health-conference-2021>

13TH-15TH May, DHAA 2020 National Symposium Melbourne, Australia, <http://dhaasymposium2021.com.au/>

9th-12 June 2021, International Association of Paediatric Dentistry (IAPD) Maastricht, The Netherlands. In the Netherlands, IAPD 2021 will give you the opportunity to gather with over 1200 delegates from more than 70 countries, in order to discover the latest research findings in different fields of paediatric dentistry, as well as network with the specialty's top academics and practitioners. For more information: <https://www.iapd2021.org/>

10th July 2021, ADOHTA & DHAA joint Conference, Rydges World Square Sydney, Australia. Registration and information coming soon.

JULY 21-24, 2021 International Association of Dental Research (IADR) Boston, Mass., USA 99th General Session of the IADR, 50th Annual Meeting & Exhibition of the AADR, 45th Annual Meeting of the CADR <https://www.iadr.org/IADR/Meetings/Future-Meetings/ArtMID/133565/ArticleID/565/July-21-24-2021>

IADR ANZ Division (International Association of Dental Research) 2021 Gold Coast

60th Annual Scientific Meeting of the IADR ANZ Division - Date in 2021 to be advised Gold Coast, Queensland, Australia. <http://www.iadrnz.org.au/meetings/>

2nd-4th September 2021, ADOHTA 6th International Conference, Crown Perth, Australia The 2021 international conference celebrates 50 years of ADOHTA in Western Australia <http://www.adohtaconferences.com/>

2022

10-13th August 2022, Dublin, Ireland. International Symposium on Dental Hygiene. Join us to expand our knowledge, meet like-minded colleagues, share ideas, present current research and learn new skills under the theme 'The Future in Our Hands' in the Convention Centre Dublin (CCD).” <http://dhaasymposium2021.com.au/>

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