

# Building capacity to promote oral health in an Australian community mental health setting

**Roisin Mary McGrath**

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The University of Melbourne

## Abstract

Half of all Australians will experience a common mental illness during their lifetime. There is strong evidence that people living with mental illness, particularly those living 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 people living with mental illness 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 people living with mental illness.

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 approach to increase oral health advice and support for people living with mental illness. 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.

A multi-stage sequential mixed methods participatory action research design was used in this project. It was guided by the 'Framework for Building Capacity to Improve Health', which is a well-recognised and widely used framework in Australia. 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 measuring their oral health knowledge, attitudes and professional practices.

Stage Two focused on the design, development and implementation of professional development activities to increase capacity of Neami Community Rehabilitation and Support Workers 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 program. Oral health ‘champions’ in each Neami site were utilised to support the implementation of oral health professional development 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 survey of Neami Community Rehabilitation and Support Workers to measure changes in oral health-related knowledge, attitudes and professional practices.

The results of this project demonstrated that any type of professional development can increase the provision of oral health support to mental health consumers. However, it is important to tailor professional development 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 research 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 approach 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.

## **Dedication**

I dedicate this thesis to my late father, Dave McGrath. My candidature was made more challenging by losing you in March 2017. However, my sense of personal achievement is enhanced by having gotten through such a difficult time and completing what I set out to do. I know you were always proud of your daughters and that you would be particularly proud of me now. Miss you always.



## Declaration

This is to certify that:

- i. the thesis comprises only my original work towards the PhD except where indicated in the preface,
- ii. due acknowledgement has been made in the text to all other material used, and
- iii. the thesis is fewer than 100 000 words in length, exclusive of tables, figures, the reference list and appendices.

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**Roisin Mary MCGRATH**

**December 2018**

## Preface

The setting for my PhD project was Neami National, an Australian community mental health service. Neami and the Melbourne Dental School, the University of Melbourne, have been working collaboratively on oral health promotion projects since 2011. My PhD research, which commenced in mid-2015, was the next phase in building capacity to promote oral health for Neami consumers living with severe mental illness. My research was funded in part by Neami National, the Oral Health Cooperative Research Centre and the Melbourne Dental School. Colgate also generously supported my project through the donation of oral hygiene product.

I was supported financially during my candidature through two scholarships (the Sheppard M Lowe Scholarship and the Elizabeth Mary Sweet Scholarship in Medicine) from the Faculty of Medicine, Dentistry and Health Sciences at the University of Melbourne.

As this was a participatory action research project, Neami staff and consumers were actively involved in all phases of the analysis, design, development, implementation and evaluation. However, I conducted all research activities and performed all data analyses (quantitative and qualitative). Professional support in formatting the final version of this thesis was provided by Mr Bradley Dawson.

Part of this work has been presented as:

### Publications

- McGrath R, Satur J, Marino R, ‘Exploring oral health-related knowledge and confidence among Australian community mental health support workers: A cross-sectional web-based survey’, *Annual Clinical Journal of Dental Health* (in press).
- McGrath R, Satur J, Marino R, Meldrum R, Langan V, Hilton P, Tobias G, ‘Smile for Health: An evidence-based oral health promotion program for people living with severe mental illness’, *New Paradigm*. Winter 2018:37–40 (Appendix 1).
- McGrath R, ‘Oral health care for people living with mental illness: What do we need to know as dental practitioners?’ *Dental Health*. 2018;57(1):22–24 (Appendix 2).

## **Oral presentations**

### *Abstract accepted*

- McGrath R, Satur J, Marino R (2016), 'Understanding the oral health-related knowledge, attitudes and professional practices of Australian community mental health support workers'. International Symposium on Dental Hygiene, Basel, Switzerland.
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- McGrath R, Langan V (accepted for 2019), 'Who's more anxious: you or your client? Addressing factors that contribute to stress among dental practitioners and dentistry-related anxiety in people living with mental illness'. International Symposium on Dental Hygiene, Brisbane, Australia

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- McGrath R (2016 & 2018), Victorian Oral Health Promotion Advisory Group meeting, Dental Health Services Victoria.
- McGrath R (2016), New South Wales Oral Health Promotion Network meeting, Sydney.
- McGrath R (2017 & 2018), 'Let's talk about mental health', Dental Hygienists Association of Australia CPD events in Daylesford (Victoria), Albury (New South Wales), and Sydney (New South Wales).
- McGrath R (2018), 'Talking mental health', ADX, Australian Dental Industry Association conference, Sydney.

## **Poster presentations**

- McGrath R, Satur J, Marino R (2016), 'Mental health support workers oral health-related knowledge, attitudes and professional practices', National Symposium, Dental Hygienists Association of Australia, Hobart.

- McGrath R, Satur J, Marino R (2017), ‘Exploring oral health promotion in an Australian community mental health setting’, Oral Health Conference, British Society of Dental Hygiene and Therapy, Harrogate, UK (First prize in poster competition).
- McGrath R, Satur J, Marino R (2018), ‘Qualitative evaluation of student learning experiences from delivering oral health education sessions to non-dental professionals’, National Symposium, Dental Hygienists Association of Australia, Cairns.
- McGrath R, Satur J, Marino R (2018), ‘Building capacity to promote oral health in a community mental health setting’, Universitas 21 Health Sciences Group Annual Meeting, the University of Melbourne (First prize in poster competition).

### **Other**

- The ‘Smile for Health’ oral health program received a Letter of Commendation from the Mental Health Services Awards of Australia and New Zealand, (Appendix 3).

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Thank you to all the Bachelor of Oral Health students from the Melbourne Dental School who delivered face-to-face oral health training at Neami sites in 2015 and 2016. Your professionalism and passion for oral health promotion was a credit to the University of Melbourne and to yourselves.

To my two, sorely neglected sons. Tadgh and Massimo, I thank you from the bottom of my heart for your patience and understanding. Finally, my husband Mauro. You have been and continue to be my rock. You have supported me on this journey and celebrated my achievements along the way. I could not have done this without you.

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## List of abbreviations

|        |                                                            |
|--------|------------------------------------------------------------|
| ADDIE  | Analysis, design, development, implementation & evaluation |
| AHPRA  | Australian Health Practitioner Regulation Agency           |
| ABP    | Altogether Better Programme                                |
| BOH    | Bachelor of Oral Health                                    |
| BOHRC  | Better Oral Health in Residential Care                     |
| CMHC   | Community mental health care                               |
| CPD    | Continuing professional development                        |
| CRM    | Collaborative Recovery Model                               |
| CROP   | Centre for Recovery Oriented Practice                      |
| CRSW   | Community Rehabilitation and Support Worker                |
| DHSV   | Dental Health Services Victoria                            |
| F2F    | Face-to-face                                               |
| HPO    | Health Promotion Officer                                   |
| HPSC   | Health Promotion Site Champion                             |
| KAP    | Knowledge, attitudes and professional practices            |
| L&D    | Learning and Development                                   |
| LMS    | Learning management system                                 |
| MDS    | Melbourne Dental School                                    |
| MHFA   | Mental Health First Aid                                    |
| NCD    | Non-communicable disease                                   |
| NDIS   | National Disability Insurance Scheme                       |
| NOHP   | National Oral Health Plan                                  |
| NSMHWB | National Survey of Mental Health and Wellbeing 2007        |

|        |                                          |
|--------|------------------------------------------|
| NSW    | New South Wales                          |
| OHP    | Oral health professional                 |
| OHRQoL | Oral health-related quality of life      |
| PAG    | Project advisory group                   |
| PD     | Professional development                 |
| PLWMI  | People living with mental illness        |
| PLWSMI | People living with severe mental illness |
| QLD    | Queensland                               |
| SA     | South Australia                          |
| SES    | Socio-economic status                    |
| SPL    | Senior Practice Leader                   |
| TA     | Thematic analysis                        |
| VIC    | Victoria                                 |
| WA     | Western Australia                        |
| WHO    | World Health Organization                |

## Glossary of key terms

**Bachelor of Oral Health (BOH):** BOH students at the Melbourne Dental School complete a three-year undergraduate degree to graduate as an Oral Health Therapist. A qualification in Oral Health Therapy equips practitioners with scientific, theoretical and clinical skills equivalent to those of both a Dental Hygienist and Dental Therapist.<sup>1</sup>

**Collaborative Recovery Model (CRM):** The CRM was developed at the University of Wollongong Illawarra Institute for Mental Health. The CRM provides an integrative framework of service delivery that is consistent with recovery-based principles. It emphasises the collaborative working alliance between support workers and consumers, and the autonomy of consumers in setting and achieving personal goals.<sup>2</sup>

**Community Rehabilitation and Support Worker (CRSW):** CRSWs provide a range of rehabilitation and support to consumers, tailored to meet their individual needs. They work closely with clinical case managers and other community partner organisations in order to deliver comprehensive support services to Neami consumers.<sup>3</sup>

**A Framework for Building Capacity to Improve Health:** This framework was developed by New South Wales Health in 2001. It provides a guide to enhance capability to improve health outcomes. This framework has been widely used in Australia, in developing sustainable health promotion programs.<sup>4</sup>

**Health Promotion Site Champions (HPSC):** Each Neami service site is required to identify a CRSW to act as HPSC, or ‘Site Champion’. HPSCs are responsible for ensuring all staff are resourced and have the capacity to support the implementation of Neami’s annual health promotion strategic directions, priority areas and projects. Managing the health promotion portfolio is in addition to their existing workload of CRSW.<sup>5</sup>

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<sup>1</sup> Bachelor of Oral Health [accessed 27/10/2010]. Available from: <https://study.unimelb.edu.au/find/courses/undergraduate/bachelor-of-oral-health/>.

<sup>2</sup> Neami staff handbook.

<sup>3</sup> Neami staff handbook.

<sup>4</sup> A Framework for Building Capacity to Improve Health, NSW Department of Health, 2001.

<sup>5</sup> Neami staff handbook, 2015.

**Participatory Action Research (PAR):** PAR is a research approach where ‘informants become co-researchers’; it involves repetitive cycles of observing, reflecting, planning and acting.<sup>6</sup>

**Physical Health Prompt:** The PHP or ‘Health Prompt’ is Neami’s physical health screening tool that was developed to promote guided conversations between CRSWs and consumers to address health care needs. It is designed to create opportunities to raise awareness about consumers’ unmet physical health needs, and it is offered to consumers every six months.<sup>7</sup>

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<sup>6</sup> Pyett P, Waples-Crowe P & Van Der Sterren A, Collaborative participatory research with disadvantaged communities, in: Liamputtong P, editor. *Research Methods in Health: Foundations for Evidence Based Practice*. 2nd ed. Melbourne Oxford University Press, 2013. p. 345.

<sup>7</sup> Neami staff handbook, 2015.

## **Chapter 1 – Introduction**

This chapter provides an introduction to this PhD project, explaining the problem under investigation. It describes the context for this research, the purpose and scope of each study, and an outline of this PhD thesis.

## Research problem

Despite general improvements in oral health, many people still experience poor oral health outcomes and face significant challenges in accessing appropriate oral health care. (1) One such population group is people living with mental illness, particularly people living with severe mental illness.

It is estimated that almost half (45%) of all Australian adults will experience a common mental disorder at some stage in their life (anxiety disorders, affective disorders and substance use disorders). (2) One-in-five (20%) Australians aged 16–85 years old had a common mental illness in the last 12 months. However, only one-third (35%) of people with a common mental illness actually access professional support. (2) Severity of mental illness varies (e.g. mild, moderate or severe) and is based on the diagnosis and the duration, intensity and impact of the mental illness. (3, 4) Approximately 3% of Australian adults are currently living with a severe mental illness. (5) Severe mental illness includes lower prevalence disorders such as schizophrenia and bipolar disorder, but also more severe and disabling forms of depression and anxiety.

People living with severe mental illness experience higher mortality rates than the general population. This mortality gap is largely attributable to chronic physical health conditions (e.g. cardiovascular disease, diabetes, obesity etc.) (6, 7) Lifestyle factors that contribute to the poor physical health outcomes in people living with severe mental illness (e.g. tobacco smoking, alcohol consumption and diet) are also risk factors for oral diseases. (1, 8)

While there is little epidemiological data measuring the oral health status of Australians living with mental illness, there is strong international evidence that people living with severe mental illness experience persistently poor oral health outcomes. They have much higher rates of untreated dental decay and tooth loss compared to the general population, which can impact detrimentally on their quality of life. (9-12) Mental illness is also associated with suboptimal dental visiting patterns and a lack of regular preventive-focused oral health care. (13, 14)

Individual level factors which contribute to oral health problems amongst people living with severe mental illness include side effects of medications (e.g. dry mouth), lifestyle and behavioural factors, cognitive deficits, oral health literacy, fear and stigma, and barriers to accessing appropriate oral health services. (15-19) Australia's National Oral Health Plan

(NOHP) identifies people living with mental illness as a priority population group requiring ‘additional, targeted strategies’ to improve their oral health outcomes. (1) However, little has been done to address the gap in oral health promotion programs reaching those living with mental illness.

Health services have a responsibility to promote health, including oral health, in methods appropriate to their individual contexts and work environments. (1) There is good evidence supporting the utilisation of non-dental professionals (e.g. nurses, midwives, aged care workers, pharmacists, Aboriginal health workers etc.) as oral health promoters, when working with disadvantaged and hard to reach adult populations. (8, 20-29) Therefore, the involvement of community mental health support workers in promoting oral health offers a potential solution to increase oral health promotion activities targeting those living with severe mental illness.

Neami National is a community mental health service that supports people living with severe mental illness to improve their physical and mental health, to live independently, and to pursue life based on their individual strengths, values and goals. (30) Neami provides a range of rehabilitation and recovery-oriented services in over 50 diverse communities in five Australian states (New South Wales, Queensland, South Australia, Victoria and Western Australia). (31) Neami is committed to physical health promotion for people living with severe mental illness, and oral health is one of the identified Health Promotion Priority Areas within the organisation. (32)

Since 2011, representatives from Neami in Victoria and the Melbourne Dental School have been working collaboratively to improve oral health promotion at Neami. Research activities have included the development of an evidence-based oral health question for inclusion in the Neami physical health screening tool, (33) the implementation of oral health information resources, (34) and investigating barriers to oral health as perceived by Neami consumers. (35) This research highlighted the need for a more comprehensive approach in building capacity to promote oral health in Neami National.

## **Overarching research question**

What can be done to increase capacity to promote oral health in a community mental health setting?



## Aim and scope of the project

The aim of this PhD research was to develop a contextually appropriate approach to build capacity to promote oral health at Neami National. This research, which commenced in mid-2015, was a collaboration between the Melbourne Dental School and Neami National. It was guided by the 'Framework for Building Capacity to Improve Health'. (36) A participatory action research (PAR) approach was used and the project was conducted in three sequential stages, each of which had a different purpose and included different research methods (quantitative and qualitative).

**Stage One:** This was the scoping stage, in which research action sought to explore existing capacity within Neami for oral health promotion.

**Stage Two:** Based on the initial project findings, Stage Two research action sought to build workforce capacity to promote oral health through the implementation of professional development activities.

**Stage Three:** In this final stage, research action sought to evaluate the workforce development approaches implemented during Stage Two of the project, and to answer the overarching research question.

## Thesis overview

This PhD thesis presents research undertaken to determine what can be done to increase capacity to promote oral health in a community mental health setting. In keeping with the PAR approach, each stage involved cycles of planning, acting, observing and reflecting before moving onto the next stage. The individual studies included in each of the three stages are presented chronologically.

Chapter 2 comprises a narrative review of relevant literature related to Stage One of this project. It includes the profile of mental illness in Australia and evidence of the links between mental illness and poor oral health. It identifies a gap in oral health promotion programs targeting people living with mental illness and highlights the need to address this situation, particularly for people with severe mental illness. This chapter also provides background information about the collaborative partnership between the Melbourne Dental School and Neami National. In summary, this chapter contextualises this project and the importance of building capacity to promote oral health in a community mental health setting.

Chapter 3 provides an overview of the research methods used in this PhD project. It discusses the importance of the Framework for Building Capacity to Promote Health in guiding this project and justifies the PAR approach in meaningfully engaging Neami staff and consumers in all project activities. It briefly discusses the methods used in each study; however, the methods are more fully explained in later chapters.

Chapter 4 presents an environmental scan which explored existing health promotion practices within Neami to determine how best oral health promotion can be integrated into the Neami service delivery model. The findings from the environmental scan were used to develop a number of strategies to build capacity to promote oral health which are also included in this chapter.

Chapter 5 presents an evaluation of face-to-face oral health training sessions conducted in October 2015. Training was delivered by second-year Bachelor of Oral Health students from the University of Melbourne at Neami sites in Victoria. A paper-based process and impact survey was used to evaluate the training and to determine if face-to-face oral health training is an appropriate professional development delivery mode.

Chapter 6 presents an anonymous cross-sectional web-based survey of Neami Community Rehabilitation and Support Workers. This survey was used to determine current oral health related knowledge, attitudes and professional practices (KAP) among those who provide direct consumer support. This was the final study conducted during Stage One of this project, exploring the existing capacity to promote oral health in Neami.

Chapter 7 presents a narrative review of literature relevant to Stage Two of the project, which involved the design, development and implementation of oral health-related professional development activities. The literature review covered professional development delivery modes (face-to-face, online and blended), train-the-trainer approaches in health promotion and the utilisation of oral health ‘champions’ in promoting oral health.

Chapter 8 presents the methods used in a multi-site quasi-experimental control group design study, which sought to compare the effectiveness of different types of oral health professional development (face-to-face, online, blended or none) in improving oral health knowledge, attitudes and professional practices. This chapter describes the design, development and implementation of the ‘Smile for Health’ professional development activities in later 2016.

Chapter 9 presents a mixed-mode (paper-based and web-based) post-training evaluation survey. This process and impact survey was conducted after the delivery of both face-to-face and online oral health professional development in New South Wales and Victoria. This survey was used to determine how satisfied participants were with the different ‘Smile for Health’ training delivery modes and the differences in their self-rated oral health understanding and confidence after training.

Chapter 10 presents a qualitative process evaluation study that included focus groups and semi-structured interviews with Neami health promotion staff and Bachelor of Oral Health students, who had delivered the face-to-face training sessions. The purpose of this study was to understand the barriers and enablers to oral health promotion at Neami, and to involve participants in exploring what could be done to overcome potential challenges to implementation.

Chapter 11 presents a follow-up cross-sectional web-based survey of Neami Community Rehabilitation and Support Workers, measuring changes in oral health-related knowledge, attitudes and professional practices. This study repeated the KAP survey used in Stage One and was conducted in April 2017, six months after delivery of the face-to-face oral health professional development. This study was conducted to compare results with those from the Stage One baseline survey and also to investigate differences in KAP dependent upon training type (face-to-face, online, blended or none).

Chapter 12 is the final discussion chapter which pulls together and summarises the key findings from all three stages of this PhD project. In doing so, it answers the overarching research question, ‘What can be done to increase capacity to promote oral health in a community mental health setting?’ This chapter describes a number of research limitations, but it also highlights the importance of the ‘Smile for Health’ capacity building approach to the fields of oral health and mental health. It makes recommendations for practice, research and policy, based on the research learnings.

## **Chapter 2 – Background to the project**

This chapter presents the background to Stage One of this PhD project. It includes a narrative review of literature relevant to mental illness and oral health. It also provides details of the ongoing partnership between the Melbourne Dental School and Neami National, highlighting the previous work conducted and contextualising the capacity building approach used in this project.

## Severe mental illness and oral health: a narrative review of the literature

This narrative literature review presents the profile of mental illness in Australia and discusses the links between mental health and oral health, with particular focus on the factors increasing oral health risks for people living with severe mental illness. The electronic search for relevant peer-reviewed and grey literature published from the year 2000 included Medline, PubMed, Google Scholar and Google Chrome. Key search terms included ‘mental illness’, ‘severe mental illness’, ‘mental health’, ‘mental health services’, ‘physical health’, ‘oral health’, ‘dental health’, ‘risk factors’, ‘oral health services’, ‘dental services’, ‘oral health care’, ‘dental care’, ‘oral health related quality of life’ and ‘oral health promotion’. Additional literature was identified by manually searching cited references. Publications for which full text was not available or which were not published in English, were excluded from this review.

### What is mental health?

There are many ways to define ‘mental health’. Some definitions focus solely on the absence of mental illness, while others are broader and encompass psychological wellbeing. (3) The World Health Organization (WHO) emphasises the ‘positive dimension’ and defines mental health as

*‘a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community’. (37)*

Mental health is viewed as a continuum, ranging from good mental health to mental illness. (3) An individual’s mental health status is determined by the unique and complex interaction of multiple environmental, socio-economic, psychological and biological factors. (37-44) Risks to mental health can manifest themselves at all stages of the life course. (44) A mental illness is a clinically diagnosable disorder that ‘significantly interferes with an individual’s cognitive, emotional or social abilities’. (45) The term ‘mental illness’ encompasses conditions of varying severity which are episodic or persistent in nature. (2, 5) Dependent upon the duration, intensity and severity of the mental illness, specialist management, medication and treatment may be required.

## Mental illness in Australia

In Australia, diagnoses of mental illnesses conform to classifications listed in the *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition (DSM-5) and the *International Classification of Diseases*, Eleventh Edition (ICD-11). The DSM-5 covers all mental health disorders for both adults and children and is published by the American Psychiatric Association. (46) It uses a multi-axial approach to diagnosing mental disorders, considering the impact life-factors (e.g. physical conditions, psychosocial stressors etc.) have on a person's mental health status. The ICD-11 is the standard diagnostic tool used for epidemiology, health management and clinical purposes. (47) It is the foundation of the international standard for reporting diseases and health conditions.

The most recent National Survey of Mental Health and Wellbeing (NSMHWB) was conducted by the Australian Bureau of Statistics in 2007. (48) (This survey was due to be repeated in 2017; however this did not occur.) Approximately 8,800 Australians aged 16–85 were surveyed, providing lifetime and 12-month prevalence data for common mental disorders.<sup>8</sup> In addition to demographic and socio-economic characteristics, the NSMHWB also gathered information about the level of impairment experienced, the types of health service used for mental health issues, physical conditions experienced, social networks and caregiving. (2)

The NSMHWB found that one in five Australian adults had experienced a mental disorder in the previous 12 months (Table 2.1) and that nearly half of the Australian population will experience a mental health-related condition at some stage in their lives. (2) Anxiety disorders (14.4%) are the most prevalent and include disorders such as post-traumatic stress disorder (6.4%), social phobia (4.7%), agoraphobia (2.8%), generalised anxiety disorder (2.7%), panic disorder (2.6%) and obsessive compulsive disorder (2.7%). Affective disorders (or 'mood disorders') are the second most prevalent (6.2%) and include depressive episodes (4.1%), bipolar affective disorder (1.8%) and dysthymia (1.3%). Approximately one in 20 people have a substance use disorder, which includes harmful alcohol use (2.9%), alcohol dependence (1.4%) and drug use disorders (1.4%). (5)

Women experience higher rates of 12-month mental disorders than men (22% compared to 18%); however, men have twice the rate of substance use disorders (Table 2.1). Overall,

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<sup>8</sup> The previous national survey was conducted in 1997.

mental illness prevalence rates decline with increasing age (i.e. 26% of 16–24 year olds, compared to only 5.9% of those aged 75–85) (Figure 2.1). (5) However, substance use disorders are higher in younger groups and anxiety disorders are highest in those aged 35–44 years (Figure 2.2).

According to the 2016 ‘Young Minds Matter’ survey, one in seven young people aged 4–17 years had a mental disorder in the previous year. (49) The number of young people with major depressive disorder has increased and has the greatest impact of any mental disorders on how young people function. Girls experience higher rates of distress, self-harming and suicidal behaviour than boys. Mental disorders are more common in those families already facing significant challenges, such as family breakdown or unemployment.

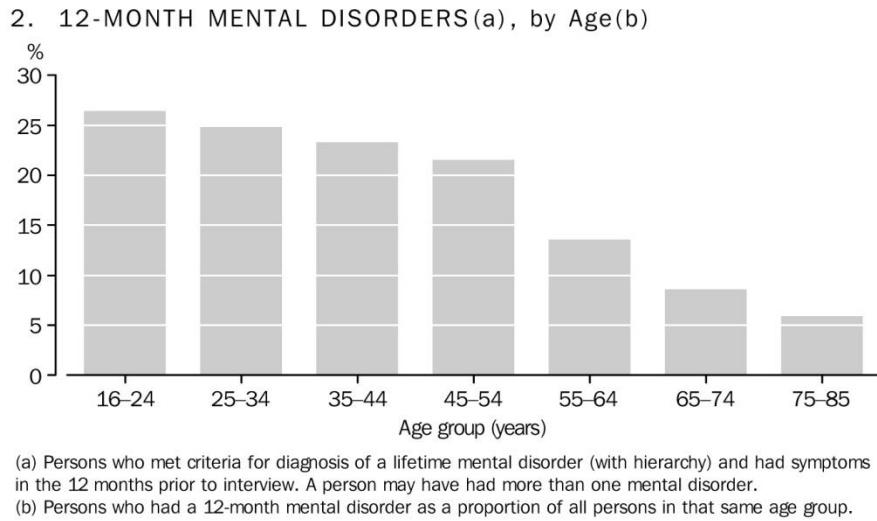
It is estimated that 2–3% of Australians have a severe mental disorder. (5) Severity is based upon diagnosis, intensity and duration of symptoms, and the degree of associated disability. (4) The severe mental illness group includes conditions such as schizophrenia, bipolar disorder, dissociative disorders, and severe and/or disabling forms of anxiety and depression. People with schizophrenia make up about one-third of those with severe mental illness. (50)

Table 2.1 Percentage of Australians aged 16-85 with common mental illnesses in previous 12 months

| Type of mental illness              | Males | Females | All   |
|-------------------------------------|-------|---------|-------|
| Anxiety disorders                   | 10.8% | 17.9%   | 14.4% |
| Depressive and other mood disorders | 5.3%  | 7.1%    | 6.2%  |
| Substance use disorders             | 7.0%  | 3.3%    | 5.1%  |
| Any common mental illness           | 17.6% | 22.3%   | 20.0% |

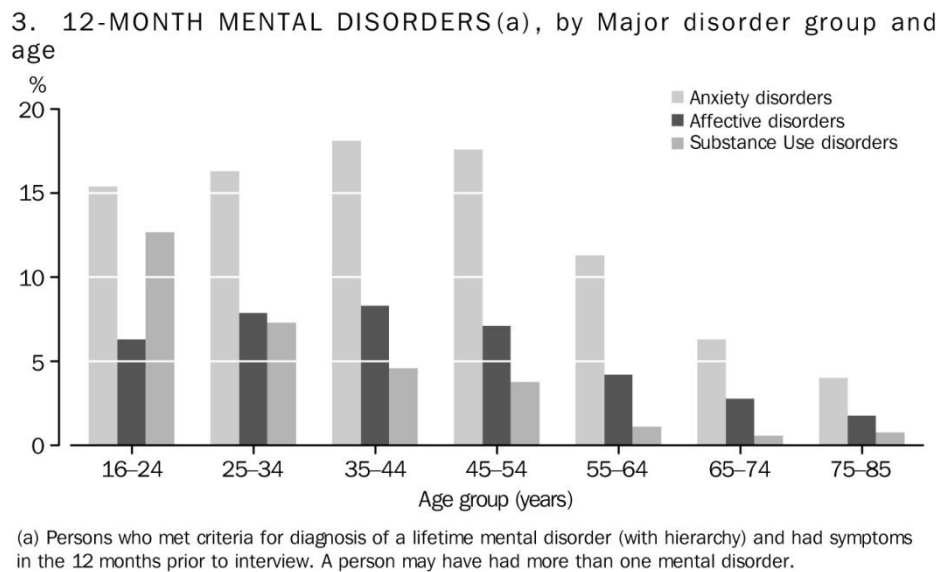
Source: National Survey of Mental Health and Wellbeing 2007. (5)

**Figure 2.1 Prevalence of 12-month mental disorders across age groups**



Source: Copied from National Survey of Mental Health and Wellbeing 2007. (5)

**Figure 2.2 Prevalence of 12-month mental disorders by major disorder group and age**



Source: Copied from National Survey of Mental Health and Wellbeing 2007. (5)

## Mental illness and physical health

The magnitude of the global disease burden attributable to mental disorders is becoming increasingly apparent. (51) People living with mental illness experience increased disability and premature death, stigma and discrimination, impoverishment and social isolation or exclusion. (44) Disability is defined and described in a variety of ways. The World Health



Organization uses ‘disability’ as an umbrella term to cover impairments, including problems in body function or structure, activity limitations, which create difficulties in executing activities, and participation restrictions, which an individual may experience during involvement in life situations. (52) Mental and substance use disorders are the leading cause of disability worldwide. (53)

In Australia, mental and substance use disorders account for 12% of the total burden of disease and almost one-quarter (24%) of the ‘non-fatal health loss’. (54) Comorbidity is the occurrence of two or more illnesses or disorders simultaneously or sequentially in the same person. (55) Comorbidity of mental disorders is high, affecting 8.5% of the Australian population. More than one in 10 Australians (11.7%) have both a mental disorder and a physical health condition. (2) Almost half (48%) of those with a severe or profound disability also experience mental health problems. (56)

Mortality rates are significantly higher among people living with severe mental illness. Although mental illnesses are associated with an increased risk of suicide, they are not direct causes of death. (6) Much of the excess mortality can be attributed to chronic diseases, such as cardiovascular disease, respiratory disease and cancer. (6, 7, 57-59) People with schizophrenia die up to 15 years earlier than the general population. (60) Preventable chronic physical health conditions such as type 2 diabetes, high blood pressure, obesity and being overweight, cardiovascular disease and respiratory disease often arise as a result of prescribed medication effects (e.g. psychotropic medications) and lifestyle factors. (61) Lifestyle factors that contribute to physical health risks include physical inactivity, unhealthy dietary habits, tobacco use, risky alcohol consumption, and misuse of drugs. (2, 44, 62)

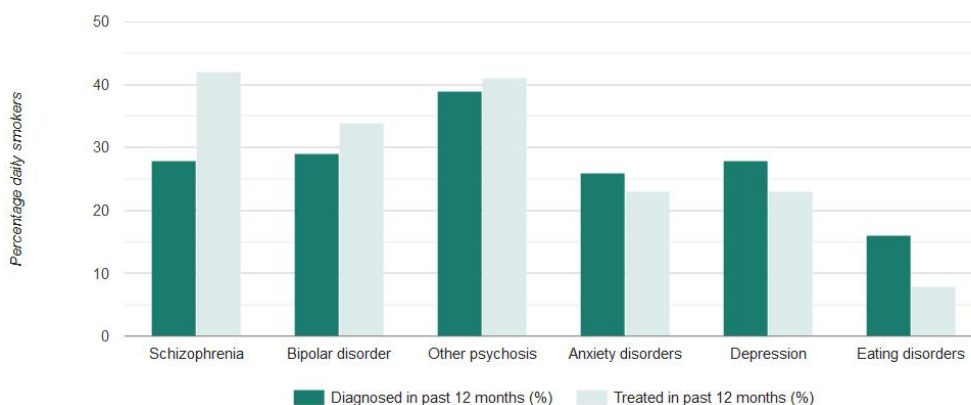
*Physical inactivity:* Physical activity across the life course is associated with positive physical health outcomes. (63) While there is little research investigating whether lack of physical activity is a precursor to mental illness, there is strong evidence that physical activity can boost mental health and wellbeing. (64-67) This positive association is particularly apparent in reducing the risk of depression, but has not been demonstrated in anxiety prevention approaches. (68-70)

*Unhealthy dietary habits:* Many common non-communicable diseases (NCDs) are directly influenced by unhealthy dietary factors. These NCDs include dental caries, type 2 diabetes, cardiovascular disease, obesity and some cancers. (62) The bidirectional relationship between

obesity and mental illness, where each condition affects the other, is well established. (71) Unhealthy dietary habits are also a risk factor for mental disorders such as depression and anxiety. (72-74)

*Smoking:* Smoking is causally linked to a range of physical health problems that are potentially deadly, including cancer, lung disease, cardiovascular disease, and poor blood circulation. (75) There is also a strong association between smoking and mental illness. Although tobacco-smoking rates have generally dropped significantly, the rate remains high among those with mental illness. (76) Current smokers have twice the prevalence of 12-month mental disorders compared with those who have never smoked. (2) Smoking rates increase in line with the severity of the mental disorder (Figure 2.3), with people living with psychotic illness having smoking prevalence rates up to 70%. (77, 78) Smokers also experience four times the prevalence of substance use disorders, almost three times the prevalence of affective disorders and twice the prevalence of anxiety disorders compared to non-smokers.

**Figure 2.3 Smoking prevalence among people diagnosed and/or treated for mental disorders in Australia in 2016**



Source: Copied from Tobacco in Australia. (79)

*Risky alcohol consumption:* Problematic alcohol consumption is a health risk behaviour that contributes significantly to morbidity and mortality. Alcohol kills more than 5,000 Australians every year, and attributable health conditions include cancers, cardiovascular diseases, digestive diseases, injuries and neuropsychiatric diseases. (80) Alcohol is responsible for the greatest burden of disease in males under 45 years of age. (81) Alcohol

consumption is also known to interact with mental health status. People with alcohol dependence are more likely to suffer from mental health problems and people with mental health problems are at risk of experiencing alcohol-related problems. (2)

*Misuse of drugs:* The NSMHWB defines the misuse of drugs as ‘the use of illicit drugs or substances and/or the misuse of prescribed medicines’. (2) Drug misuse can exacerbate the symptoms of mental illness and may substantially interfere with personal relationships, employment and physical health. It can be difficult to determine which problem came first. For some people, drug use may trigger their mental illness; for others, having a mental illness may increase their likelihood of using drugs. (82)

## Mental health care services in Australia

Australia’s mental health care system is broadly divided into specialised mental health services and general health care services where mental health care is provided. (4) State and territory governments fund and deliver specialised public sector mental health services for people living with severe mental illness. These include services in psychiatric hospitals and specialised community and residential mental health care services. States and territories also deliver mental health-specific community services such as supported accommodation and social housing programs. (83) A range of mental health services are funded by the Australian Government through the Medicare Benefits Scheme and the Pharmaceutical Benefits Scheme/Repatriation Pharmaceutical Benefits Scheme. (4) Services are provided by a range of health care professionals (e.g. GPs, nurses, psychiatrists, psychologists, social workers, occupational therapists) and in a variety of care settings. In 2015–16, 2.3 million Australians received Medicare-subsidised mental health services. (4) However, it is estimated that only one-third (35%) of those with a common 12-month mental disorder access professional support. (2) The most prevalent mental health-related problems managed by GPs are depression (32.1%), anxiety (16.6%) and sleep disturbances (12.1%). Mainstream services and programs also provide essential support services (e.g. income support, disability services, housing assistance, social and community support services, and workforce participation programs) for people living with severe mental illness. (83)

Mental illness is routinely treated in community and hospital-based ambulatory care settings. Community Mental Health Care (CHMC) services can be conducted with individuals or in group sessions, and can be delivered face-to-face, via telephone or video link, or using forms of direct communication. (4) The most common principal diagnosis for consumers of

community mental health care is schizophrenia, followed by depressive episode and bipolar affective disorder. (84) Around 9.4 million CHMC service contacts were recorded in Australia in 2015–16. (85) People aged 35–44 years old had the highest number of CHMC contacts, with males accessing services at a higher rate than females. (86) Indigenous Australians accessed services at over 3.5 times the rate of non-Indigenous Australians. When considering socio-economic status, residents in the most disadvantaged areas had the highest rate of CHMC contacts.

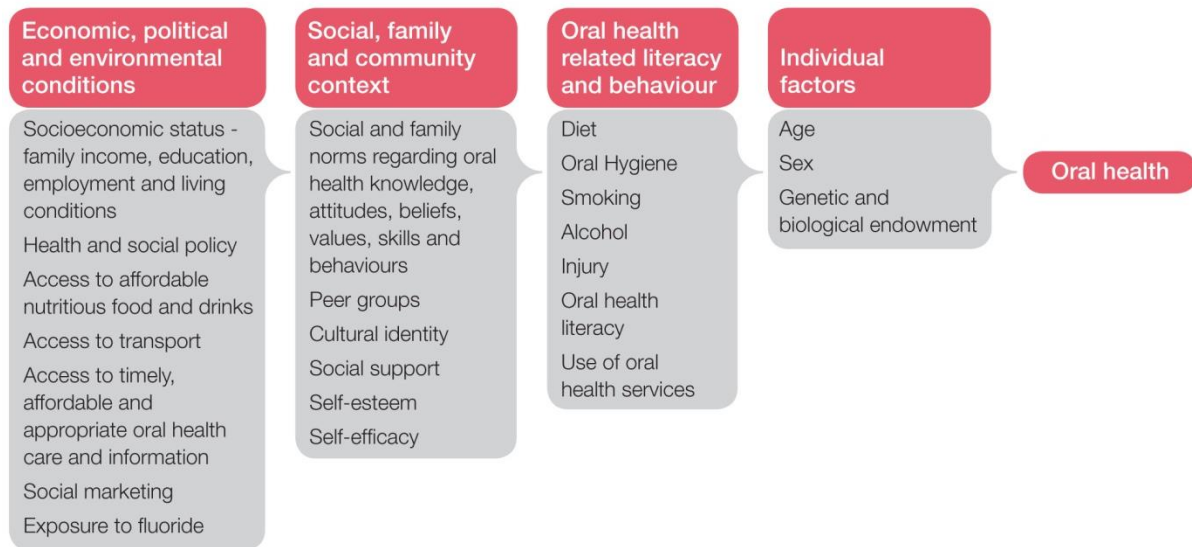
## Mental illness and oral health

### Oral health

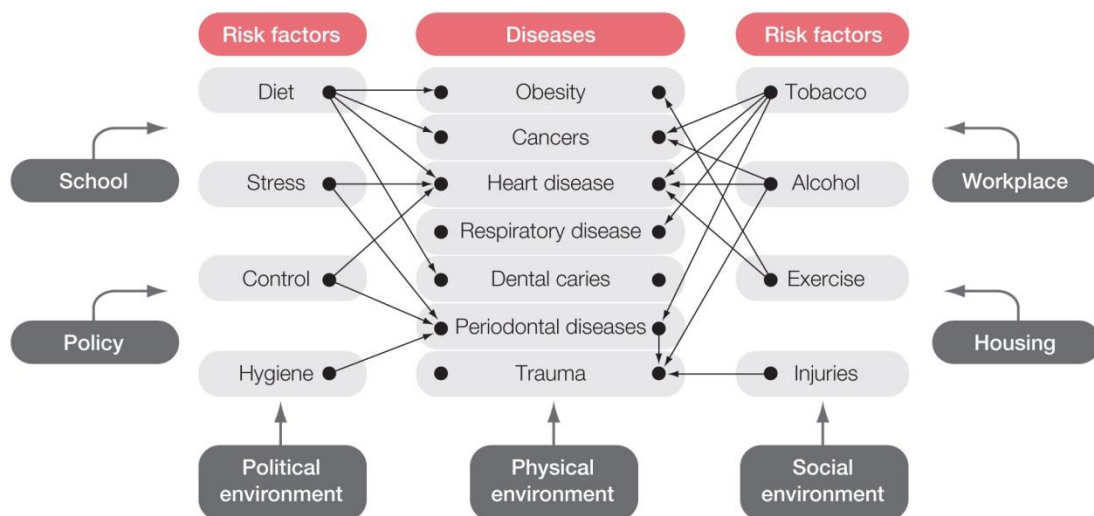
Oral health is more than simply the absence of dental disease. Oral health is ‘fundamental to overall health, wellbeing and quality of life. A healthy mouth enables people to eat, speak and socialise without pain, discomfort or embarrassment’. (87) The major oral diseases are dental caries (tooth decay), periodontal (gum) disease and oral cancers.

Oral diseases are among the most prevalent and the most costly physical health conditions in Australia. (1) Despite improvements in recent decades, more than 90% of Australian adults and more than 40% of Australian children have experienced dental caries. People from lower socio-economic groups have higher rates of dental disease. (88) A person’s oral health status is influenced by a range of factors including the following: their economic, political and environmental conditions; social, family and community context; oral health-related literacy and behaviour; and individual level factors (Figure 2.4). (8) Many oral health risk factors are ‘common’ risk factors for other NCDs (Figure 2.5), highlighting the need to integrate oral health promotion strategies into broader health promotion approaches.

National oral health surveys conducted by the Australian Institute of Health and Welfare measure a range of oral health indicators. Demographic data collected includes gender, age, remoteness area, health insurance status, eligibility for public dental care and household income. Unfortunately, these population-level surveys are not able to identify National Oral Health Plan ‘Priority Groups’ such as people with additional and/or specialised health care needs (i.e. people with mental illness, people with disabilities, people with complex medical conditions and frail, older people). (1) Thus, there is a need to develop new or adapt existing oral health monitoring practices to capture data about the most vulnerable and disadvantaged groups.

**Figure 2.4 Determinants of oral health**

Source: Copied from 'Evidence-based oral health promotion resource'. (8)

**Figure 2.5 Common risk-factor approach**

Source: Copied from 'Evidence-based oral health promotion resource'. (8)

### Evidence of poor oral health in People Living with Severe Mental illness

While there is a paucity of reliable Australian data, there is strong international evidence that people living with mental illness, particularly those with severe mental illness, are at increased risk of oral health problems and experience greater oral health treatment needs. (1, 11, 89-96) Dental decay and tooth loss rates are significantly higher than those in the general population. (97-101) Dental erosion (i.e. the loss of tooth tissue due to acid) is common in

people with eating disorders,<sup>9</sup> particularly those with self-induced vomiting. (102, 103) People living with severe mental illness are almost three times more likely to have lost all of their natural teeth. (9, 10) Psychiatric patients who are hospitalised long-term experience particularly high levels of oral disease. (93, 104-107)

A number of large-scale population-based studies have found that depression is associated with suboptimal oral health. A Finnish study investigating the dental health behaviours and self-perceived dental treatment needs of 8,463 men and women born in 1966 found that those with a high number of depressive symptoms had lower tooth brushing frequency, lower dental visiting patterns and higher self-perceived dental treatment needs than participants with few or no depressive symptoms. (108) Another study in the United States also found that older adults with higher-level symptoms of depression had poorer self-rated oral health and a poorer mouth condition than those with lower-level or no symptoms of depression. (109) A nationwide study in Korea, which included 6,139 participants who had taken part in the Korean National Health and Nutrition Survey, found that depression was significantly associated with poorer oral health behaviours and oral health status. (110, 111)

In 2016, Kiseley et al. conducted a systematic review and meta-analysis of studies investigating the oral health of people with common mental disorders such as depression, anxiety and dental phobia. (97) The results indicated people with mental disorders experienced higher rates of dental caries and tooth loss than those without mental illness. The authors compared their findings with a 2015 meta-analysis investigating the association between poor oral health and severe mental illness. (9) They found that the oral health disparities experienced by people living with common mental illnesses were less marked than for those living with severe mental illness, such as schizophrenia and bipolar disorder. Research has shown that the oral health status of people living with schizophrenia is particularly poor, and that they experience much higher levels of dental caries, missing teeth and edentulousness (loss of all natural teeth), and poorer periodontal health than the general population. (112-116)

### Factors associated with oral health risk in people living with mental illness

A diverse range of factors influence the oral health of people living with mental illness, mitigate against self-care and affect access to and provision of oral health services. (89) The

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<sup>9</sup> Eating disorders are complex neuropsychiatric disorders. Up to 97% of people with an eating disorder also have a comorbid mental disorder, most commonly depression and anxiety (Eating Disorders Victoria).

type of mental disorder, its onset and its severity are predictors of oral health outcomes. (96) Individual level factors contributing to oral health problems amongst people living with mental illness include side effects of medications, lifestyle and behavioural factors (e.g. tobacco smoking, alcohol consumption, substance use and diet), cognitive deficits, oral health literacy, stigma and discrimination, and barriers to accessing appropriate oral health services. (15, 16)

### Psychotropic medication use

The use of psychotropic medications significantly increases the risk of adverse oral health outcomes. Psychotropic medications are ‘capable of affecting the mind, emotions and behaviour’. (117) Common psychotropic medications include antipsychotics, antidepressants, mood stabilisers and anxiolytics. (118) Xerostomia, or ‘dry mouth’, is a common side effect of psychotropic medication. (119) Lack of saliva increases the risk of oral diseases (e.g. dental caries, periodontal disease and fungal infections). (119-121) Dry mouth causes difficulty chewing and swallowing and impacts on oral comfort levels. (122-124)

Other oral side effects of psychotropic medication use include tardive dyskinesia (e.g. involuntary hyperkinetic movements of the jaw), orofacial dystonia (abnormal posturing of the jaw), sialorrhoea (drooling or excessive saliva), bruxism (excessive teeth grinding) and rabbit syndrome (rhythmic motion resembling the chewing movements of a rabbit). (120, 125, 126) Dystonia and dyskinesia can affect tooth brushing, chewing and swallowing practices. (127) There is some evidence that people with schizophrenia maintained on atypical antipsychotics have better oral health than those on typical or combination antipsychotics. (126) Atypical antipsychotics induce more metabolic side effects than typical antipsychotics (such as diabetes and obesity), but less neurological side effects (such as dystonia and dyskinesia). However, the priority in prescribing antipsychotics should be medication efficacy in managing the symptoms of schizophrenia.

Anticholinergic drugs are often used to treat the neurological side effects of antipsychotic medications (e.g. dystonia and tardive dyskinesia). (118) Beta blockers, more commonly used to treat hypertension, may also be used to alleviate medication side effects. These drugs can also cause dry mouth, increasing the risk of oral diseases. In considering the effects of these drugs, it is no surprise that the oral health of patients taking psychotropic medications is substantially worse than the general population. (9, 96, 98, 119) In 2013–14 alone, 34 million

prescriptions were filled in Australia for mental health-related medications. (4) This gives an indication of the sheer size of the issue.

### Oral health-related quality of life

Oral health-related quality of life (OHRQoL) is ‘a multidimensional construct that includes a subjective evaluation of the individual’s oral health, functional wellbeing, emotional wellbeing, expectations and satisfaction with care, and sense of self’. (128) It is increasingly recognised as an integral component of general health and wellbeing. There is growing evidence supporting the link between mental illness and OHRQoL. (100, 129, 130) People living with mental illness report feeling shame and stigma associated with having poor oral health. (12) When unwell, maintaining effective oral hygiene care can prove particularly challenging, in terms of implementing and adhering to a daily oral hygiene regimen. (9) As a result, people living with mental illness may experience further deterioration in their oral health status, which can also detrimentally affect their quality of life. (11, 12)

### Barriers to accessing oral health care

Regular access to oral health services for preventive care is associated with good oral health status. (1) Two-thirds (64%) of Australians aged five and over visited a dental practitioner in the last year. (88) Just under half (44%) of the adult population had a regular dental check-up, which is recognised as a ‘favourable’ dental visiting pattern. The NOHP describes barriers to accessing dental care at the consumer level including a person’s ability to perceive a need for care, to seek the service needed, to reach the service, to pay for the service, and to engage effectively with the service. (1) Mental illness is associated with not only suboptimal oral hygiene, but also delayed care-seeking for dental problems. (110, 111) People living with mental illness frequently have irregular dental visiting patterns (often attending only for emergency dental care) and high unmet dental needs, and underutilise preventive oral health services. (14, 19, 99, 127, 131)

Dental fear is a common occurrence, with many people reporting a fear of physical pain or physical sensations, and a loss of control in the dental setting. (132-134) The Australian Research Centre for Population Oral Health reports that people often avoid visiting a dental practitioner because of fear and anxiety related to dental care. (132) Dental fear can lead to a vicious cycle of irregular dental attendance and poor oral health outcomes. People experiencing many types of mental disorder are prone to dental fear and anxiety. (17, 135, 136) There is a mutually reinforcing component, where the fear of dental treatment often



results in underutilisation of oral health services and the delay in accessing oral health care can lead to more complex dental treatment needs. (13) The attitudes, knowledge and skills of oral health professionals (OHPs) may alleviate or exacerbate dental fear. (89) OHPs have a key role to play in the identification and management of patients with mental health issues. Therefore, it is important that they are trained to provide appropriate and acceptable oral health care for people living with severe mental illness. (137)

## Promoting oral health for People Living with Severe Mental illness

### Lack of oral health promotion programs targeting people living with severe mental illness

In his article ‘No mental health without oral health’, Kisely bemoans the fact that the poor oral health of people living with mental illness ‘remains a largely forgotten problem’. (138) This paper emphasises the need for mental health and oral health professionals to work collaboratively to address barriers to achieving better oral health outcomes for mental health consumers. While research into the links between mental health and oral health is growing, evidence of what can be done to successfully address this issue remains limited. (139)

Oral health education programs targeting people living with severe mental illness have demonstrated success in improving oral hygiene status. (137, 140) Oral hygiene reminders (e.g. text messages) have proved efficacious in promoting better tooth brushing habits and reducing participants’ dental plaque scores. (137) Combining oral health education with a brief motivational interviewing intervention can also enhance oral health knowledge and care practices significantly more than education alone. (141, 142) However, further follow-up is necessary to determine if these improvements are sustained, as there is little evidence that the provision of oral health advice translates into ‘clinically meaningful outcomes’. (143, 144)

Outreach dental services can be used to reach community-based people living with severe mental illness. In Victoria, Australia, the ‘Dental as Anything’ program has been operating for over a decade. This program is a collaboration between the dental and mental health services at Inner South Community Health. (145) It utilises a health promotion framework and delivers services through an assertive outreach model. Oral health screenings are conducted in settings such as parks, rooming houses, drop-in centres and other community locations. This program provides an innovative response to the oral health care needs of people living with severe mental illness and manages to ‘reach the unreachable’. It has proven a sustainable and effective oral health care approach and should be considered in

developing services for people living with severe mental illness, who are not accessing dental care.

The majority of oral health promotion programs for people living with mental illness have been conducted in clinical settings. To date, little work has occurred in their local community settings, where they live and access support services. However, there is some evidence of community oral health programs for people living with severe mental illness delivered in Victoria, Australia. One such example is the ‘Yarra Oral Health Project’, which was a finalist in the Mental Health Services Awards in 2003. (146) This project was a collaboration between health service providers and mental health consumers; the project was successful in raising awareness about oral health for people living with severe mental illness and in facilitating access to dental care. In addition, the ‘Strengthening oral health’ project, led by La Trobe University, reported success in engaging a multidisciplinary group of health professionals and mental health consumers from rural and regional areas in creating a supportive oral health education program. (15) However, it seems this project was not sustained longer term. It is recommended that multidisciplinary partnerships and collaborative relationships across multiple levels be developed to improve physical health outcomes, including oral health, for people living with severe mental illness. (1, 8, 89, 147) Community-based oral health interventions can offer a cost-effective solution in oral health promotion (148, 149), and the current gap in such programs should be addressed.

### Oral health promotion by non-dental professionals

Non-dental professionals are often ideally positioned to promote and support oral health for individuals at risk of oral disease. (150, 151) While a range of primary care providers practise oral health promotion, the results achieved have been variable. Challenges have included the lack of oral health knowledge and confidence in discussing oral health, and not knowing where or how to refer clients to dental practitioners. (152-156) These are important factors to consider in designing oral health training programs for non-dental professionals.

In exploring what can work, much can be learned from the aged care sector. Given the changing demographic profile and rapid rise in ageing populations, oral health care for older people has become a popular research topic. Training aged care professionals in oral hygiene care has demonstrated success in improving older people’s oral health status. (23-25) In Australia, the Better Oral Health in Residential Aged Care program was rolled out nationally in 2009. This program increased awareness of oral health in aged care settings and trained

staff in basic oral health care practices. Despite the success of this program, there was a lack of collaboration with oral health professionals and no funding for ongoing training. There is a need for more rigorous research to determine which oral health training approaches are most cost-effective and how to achieve sustainable results. (28)

Incorporating oral health promotion practices into antenatal care is also a feasible and acceptable approach, particularly for vulnerable and disadvantaged populations. (157, 158) The Dental Health Services Victoria (DHSV) program ‘Healthy Family, Healthy Smiles’ aims to improve the oral health of pregnant women and children aged 0–3 years. Pregnant women and new mothers are generally receptive to oral health advice and encouragement in visiting a dental practitioner. (159) This program works with midwives, maternal and child health nurses, early childhood professionals, Aboriginal health services, general practitioners and nurses, pharmacists, dietitians and other allied health professionals to build capacity to promote oral health. (160)

Another successful DHSV initiative is the ‘Smiles 4 Miles’ program. This award-winning program works with early childhood educators to improve the oral health of children living in high-risk areas in Victoria, Australia (e.g. areas with non-fluoridated water, low SES). (161) Based on the WHO’s Health Promoting Schools Framework, this program has been continuously funded by the Victorian Government since 2004. The ‘Romp and Chomp’ program in Geelong, Australia, which became linked with the Smiles 4 Miles program, focused on capacity building and sustainable changes in early childhood environments. (162) The program had positive results in improving diets (i.e. increased consumption of fruit and vegetables, increased intake of water and plain milk, and reduced intake of fruit juice and cordial). (8)

Peer-support interventions (delivered by people with a lived experience of mental illness) are widely implemented in the mental health field. (163) However, researchers regard the evidence supporting this approach as ‘low quality’. (164, 165) There is some evidence supporting the use of peers in promoting oral health. (8, 166, 167) Oral health advice delivered by peer educators, particularly to vulnerable and marginalised groups such as those living with mental illness, may be more acceptable than advice from dental practitioners. More research needs to be done to determine if the utilisation of peers in oral health promotion programs can be included in as an evidence-based approach.

## The future of oral health promotion for people living with severe mental illness

Although oral health has improved over the last few decades, many Australians, particularly the most vulnerable and disadvantaged, still experience poor oral health outcomes. The oral health promotion goal in Australia's NOHP is that

*'all Australians have access to oral health promoting environments and appropriate evidence-based information and programs that support them to make informed decisions about their oral health'. (1)*

Achieving this goal requires a coordinated and collaborative multi-level approach to address the determinants of poor oral health, particularly in the most at-risk groups. The WHO Global Oral Health Programme identifies a 'core group of modifiable risk factors' related to lifestyles which are common to many chronic medical conditions and also to oral diseases. (168) These lifestyle factors include tobacco use, unsafe alcohol consumption, dietary habits and standard of hygiene. The incorporation of oral health into general health promotion programs, using the 'common risk factor approach', may be more efficient and effective than targeting a single disease. (8)

On the other hand, it is often necessary to design oral health promotion programs to address the specific needs of high-risk population groups. (1) Key studies highlight the importance of oral health promotion action for people living with mental illness, particularly those with severe mental illness who are at greatest risk of oral health problems. (9, 10, 97, 102, 169) There is broad consensus that mental health professionals can play a role in promoting physical health, including oral health. (11, 16, 18, 140, 170-175) Therefore, it is important that they have the skills to discuss oral health in their interactions with mental health clients, in both community-based and in-patient settings. (9, 96, 176)

Research supports capacity building of non-dental professionals to enhance oral health promotion. (177) There is a need to improve the oral health-related knowledge, confidence and practices of non-dental professionals with the potential to reach high-risk populations in key settings. (178) Considerable work has been done to enhance oral health promotion at vulnerable stages in the life cycle, including pregnancy, childhood and older age (particularly those in residential aged care facilities). Targeted oral health education and training has demonstrated success in improving oral health promotion and support practices. (179, 180) Interprofessional collaboration is a requisite to build a strong foundation of trust and respect.

(151, 181, 182) The lessons learned from other settings should be considered in developing contextually appropriate oral health promotion programs for people living with severe mental illness.

## Partnership between the Melbourne Dental School and Neami National

### About Neami

Neami National is a community mental health service that supports people living with mental illness to improve their physical and mental health, to live independently and to pursue life based on their individual strengths, values and goals. (183) At the commencement of this project in mid-2015,<sup>10</sup> Neami was providing a range of rehabilitation and recovery services in over 50 diverse Australian communities, ranging from inner-city suburbs to regional and remote areas. (31) Neami National operates in five Australian states, including New South Wales (NSW), Queensland (QLD), South Australia (SA), Victoria (VIC) and Western Australia (WA). In recent years, the organisation has experienced a period of rapid growth. The number of Neami staff grew from 422 in 2012 to roughly 750 in 2015. (184) This was a 77% increase in staff numbers over a three-year period. Community Rehabilitation and Support Workers, of which there were approximately 500, made up the majority of the Neami workforce. The number of Peer Support Workers also grew by 75% between 2012 and 2015. Neami consumer numbers also increased by 62%, from 2,533 in 2010 to 4,111 in 2013. In 2015, the majority of consumers (74%) accessed services in either Victoria or New South Wales. (31)

Neami utilises the Collaborative Recovery Model (CRM), developed at the University of Wollongong, as an integrative service delivery framework to assist Neami staff in identifying consumers' personal values and goals, and supporting their efforts to achieve them. (183) The CRM incorporates practices that assist people living with chronic and recurring mental illness. (185) This model is relevant to the broader system of recovery and draws influence from a range of sources including the Recovery Movement, Positive Psychology, the Consumer Participation Movement, evidence-based practice, coaching-style relationships, and organisational and workforce development. (186) The guiding CRM principle is that recovery is an individual process, and that there is a need to focus on increasing wellbeing rather than decreasing symptoms. (183) The Model has four evidence-based skills

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<sup>10</sup> This organisational profile was correct as of August 2015.

development components: 1) change enhancement; 2) collaborative strengths and values identification; 3) collaborative visioning and goal striving; and 4) collaborative action and monitoring. It combines the values, concepts and practices associated with recovery and ensures consistency in the language and approach during service delivery. (183) Unmet needs are a key factor in motivating people living with mental health disorders. (187) The CRM recognises the importance of identifying consumers' needs (using the CANSAS tool)<sup>11</sup> as an essential precursor to engaging in collaborative goal setting. (188)

Neami's mission is to improve mental health and wellbeing in local communities. (189) The organisation is committed to enhancing physical health outcomes for people living with severe mental illness and integrates health promotion into all aspects of service delivery. (32) Since 2011, state Health Promotion Officers (HPOs) were employed to oversee the planning, development, implementation and evaluation of all health promotion activities. (190) HPO responsibilities include health education, community engagement, community development, advocacy, health policy, social marketing, and structural and environmental strategies. They work closely with the Neami Service Development team to develop and implement programs at both a state and local level. Each Neami service has a Health Promotion Site Champion who supports health promotion initiatives within their individual service site. It is their responsibility to ensure staff are appropriately resourced and have the capacity to support the implementation of health promotion action addressing physical health priority areas. (191) At the commencement of this project, the Neami 2014–15 Health Promotion Priority Areas were: (32)

1. Smoking and mental health
2. Physical health needs identification
3. Oral health
4. Diabetes prevention and intervention
5. A health behaviours program.

Community Rehabilitation and Support Workers are trained to provide a range of rehabilitation and support services to Neami consumers, which are tailored to meet their individual needs. (192) CRSWs work with consumers within consumers' own community of

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<sup>11</sup> The Camberwell Assessment of Need Short Appraisal Schedule is widely used in the mental health field as an assessment tool.

friends, family and neighbourhood and function. They work with Clinical Case Managers and partner community organisations in a collaborative and integrated service delivery model to ensure consumers have access to comprehensive recovery support. CRSWs are responsible for implementing the Neami Physical Health Prompt screening tool, which is designed to trigger guided conversations about consumers' physical health needs. (193) The Physical Health Prompt is offered every six months, and aims to increase consumers' awareness of their unmet physical health issues and to improve referral pathways to appropriate health and wellbeing services.

The Neami Physical Health Prompt was rolled out across the whole organisation in late 2012; implementation included training, resource development and incorporation of the Physical Health Prompt into the consumer data collection processes. (193) The tool includes 28 closed-ended questions, which are designed to generate 'yes' or 'no' responses. Formal evaluation of the Physical Health Prompt found it had a positive impact on consumers' health outcomes and referral processes, and that it was very well received by both staff and consumers. However, this review also revealed a number of obstacles and challenges faced by staff and consumers in addressing health needs. These included: challenges in discussing sensitive issues and health problems with consumers; systemic barriers to follow-up care and making healthy choices; lack of local health service information; inconsistencies in Physical Health Prompt training; and challenges in using the Physical Health Prompt effectively with consumers with low-level health literacy, from culturally and linguistically diverse backgrounds, from Aboriginal and Torres Strait Islander backgrounds, and those with cognitive or intellectual impairment. (193) Neami has since improved the Physical Health Prompt implementation process and provides staff with regular training updates to ensure that they are confident and competent in administering this screening tool.

### About the partnership between the Melbourne Dental School and Neami

In 2011, Neami National identified the need to address consumers' oral health issues and increase oral health promotion action within the organisation. Neami partnered with the Melbourne Dental School (MDS) at the University of Melbourne to conduct a needs assessment to determine what could be done to improve consumers' oral health. The Framework for Building Capacity to Improve Health (36) was used to guide these earlier projects. The first output from this partnership was the inclusion of an evidence-based oral health question in the Neami Physical Health Prompt tool. (33) This question asks if

consumers have had a regular dental check-up in the preceding six months. Oral health resources were designed for staff and consumers to encourage oral health conversations and support referrals to oral health services. These resources were rolled out across Neami's Victorian agencies in 2013. (34) In 2014, a study was conducted by a Bachelor of Oral Health Honours student from the University of Melbourne exploring the barriers to achieving oral health, as perceived by Neami consumers living with severe mental illness. (194) This research involved focus groups and semi-structured interviews with Neami consumers. Participants felt that their mental illness frequently affected their ability to maintain good oral health, and cited stigma, fear of dental treatment and lack of oral health knowledge as some of the barriers to oral health care. The results of this study also indicated that consumers valued the oral health support provided by Neami CRSWs and highlighted the need to further build capacity in Neami to promote oral health. (195) The PhD project presented in this thesis was therefore the next stage, building on the previous work conducted by Neami and the MDS between 2011 and 2014.

## **Chapter conclusion**

The persistently poor oral health of people living with severe mental illness is an issue that needs to be addressed. While there is good evidence that non-dental professionals can be utilised effectively in promoting oral health for vulnerable and disadvantaged populations, little has been done to promote oral health in community mental health settings.

Neami National is a community mental health service that is committed to improving the health status, including oral health, of people living with severe mental illness. In 2011, Neami identified oral health as an unmet need and has been working collaboratively with the Melbourne Dental School since then to enhance oral health promotion practices.

This PhD project builds on previous efforts to provide a more comprehensive approach to build capacity promote oral health for people living with severe mental illness. The next chapter provides an overview of the research methods used in this project, and highlights how the Framework for Building Capacity to Improve Health was used to guide each stage.



## **Chapter 3 – Overview of research methods**

This chapter provides an overview of the research methods used in this PhD project, which was guided by the ‘Framework for Building Capacity to Improve Health’. (36) A multi-stage sequential mixed methods participatory action research design was utilised. Research action occurred between June 2015 and July 2017. The quantitative and qualitative methods used in individual studies related to this project are described in detail in later chapters.

## Rationale

As mentioned in the previous chapter, between 2011 and 2015 the Melbourne Dental School collaborated with Neami on a number of small-scale oral health research studies, conducted by Bachelor of Oral Health (BOH) undergraduate and BOH Honours students. The key successes of these projects were the inclusion of an oral health question in the Neami physical health prompt questionnaire, (33) the development and implementation of oral health information resources, (34) and the identification of barriers to oral health, as perceived by mental health consumers. (35) This PhD project sought to build on these successes, to further develop capacity to promote oral health for Neami consumers.

## Reflexivity statement

It is important to consider one's influence as a researcher on the way in which studies are designed and methodologies selected, particularly in qualitative research approaches. (196, 197) I have been working in the oral health field for nearly three decades. Almost all of my working life has been spent trying to improve the oral health of others and I feel it my duty to educate people on preventing oral disease. In my role as an oral health 'expert' I have often found myself frustrated when those I am 'helping' have not responded in a way I felt appropriate or did not make the lifestyle changes I deemed necessary. As dental practitioners, we frequently label our clients as 'non-compliant' when they fail to implement the rigorous oral hygiene regimens and protocols we outline in their treatment plan. This PhD project made me reflect on my judgmental practices as an oral health professional, when my focus was on getting clients to adhere to the oral health goals that I had set for them rather than those they wanted to achieve for themselves.

I have considerable personal experience in mental health, with a strong family history of severe mental illness. My opinions and attitudes to mental illness were shaped by those close to me who faced barriers accessing the support and care they need, while becoming increasingly dependent on medication to help alleviate their symptoms. The majority have been unable to maintain employment and have struggled to live independently. I believed this experience would assist me as an early career researcher in the mental health field; in fact, it turned out that my experience with this project and working with the Neami staff was also beneficial to me in my personal relationships with family and friends who are living with mental illness. While I was aware of their difficulties fitting into society, I had not duly

considered the obstacles people living with severe mental illness face in managing their physical health needs, or what I could do to support them in their recovery.

Although I have extensive professional experience in oral health, I recognise my limitations in the mental health field and in conducting research. Initially I was influenced by positivism, aiming to design a scientifically rigorous research methodology to gather and analyse purely quantitative data. (198) I regarded myself as ‘independent’ of the research and believed I could be entirely objective in my approach. Experimental research is essential in the field of oral health; however, it became apparent that this was not the best approach in designing a capacity building approach to increase oral health promotion for people living with severe mental illness. This project required a more flexible and nuanced approach, and research methods that allowed data interpretation and adaptation as necessary. The pragmatism paradigm includes ‘psychological and social realities, which include subjective experience and thought, language and culture’. (198) Pragmatist researchers employ a mix of both quantitative and qualitative research methods, which are selected on the basis of their ability to answer the research question being asked. My shift in perspective to that of a ‘pragmatist’ happened very early in my candidature, when it became apparent that a participatory action research approach and mixed methods design was most appropriate for this setting.

Throughout the course of my research, I developed close working relationships with a number of Neami staff and consumers. I believe that had these relationships not been in place, the project success would have been jeopardised. My experience in the field of oral health meant that I was accepted into the organisation as an expert in this area. My project management and stakeholder engagement skills assisted me when I commenced as a Neami associate staff member. I am of the opinion that if I did not have these skills at the time I would have found the entire research journey more challenging. Ultimately, this PhD project was shaped by the experiences and skills of the researchers, the Neami staff and the Neami consumers, which is reflected in the choice of methods for each research stage.

## A Framework for Building Capacity to Improve Health

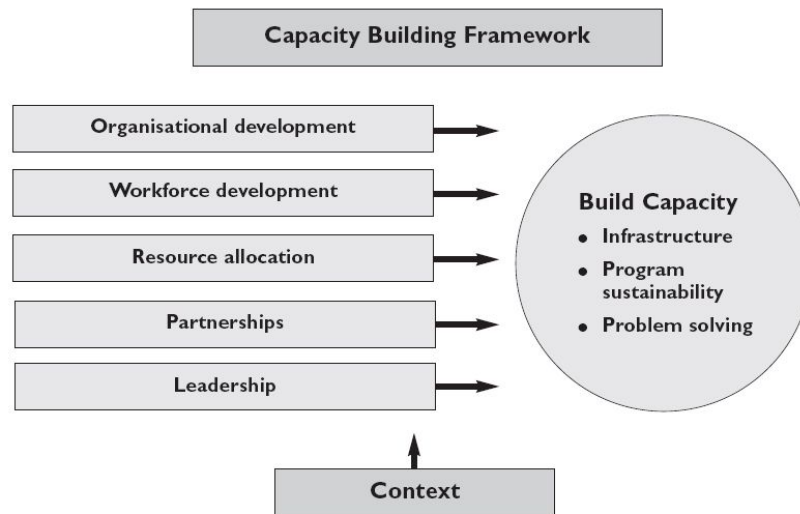
Building capacity to improve health is an important element of effective health promotion action. (36) This involves the ‘development of sustainable skills, organisational structures, resources and commitment to health improvement’. (8) Capacity building approaches are used in health promotion to address social inequities and to reach disadvantaged and high-

risk populations through the involvement of individuals, organisations and communities in health promotion practice. (199) Despite being developed in 2001, the 'Framework for Building Capacity to Improve Health' is still widely used in Australia. (36) Previous Neami oral health projects utilised this framework and it was decided to continue to use it to guide the design, development, implementation and evaluation of research activities in this PhD project.

The framework identifies five key action areas (Figure 3.1) and recommends the use of strategies to address each of these areas in capacity building efforts. These action areas are:

1. Organisational development
2. Workforce development
3. Resource allocation
4. Partnerships
5. Leadership

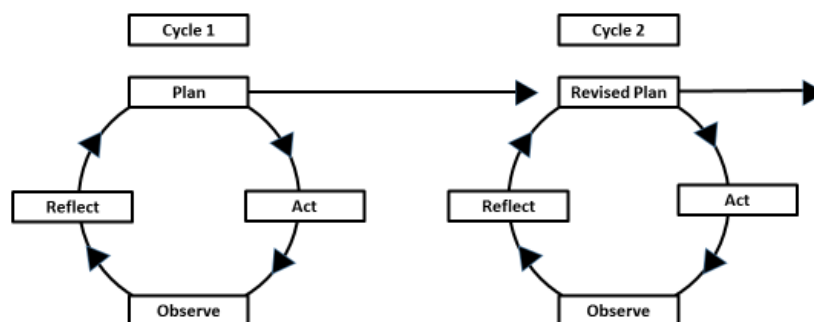
The framework also highlights three distinct dimensions of capacity building (Figure 3.1). 'Health infrastructure or service development' refers to the capacity to address specific health problems through relevant program responses. 'Program maintenance and sustainability' can be achieved when health promotion programs can be delivered by agencies other than, or in addition to, the agency initially responsible for the program. 'Problem solving capability of organisations and communities' is important to ensure appropriateness and enhance effectiveness of health promotion programs.

**Figure 3.1 Capacity building model**

Source: Copied from 'A Framework for Building Capacity to Improve Health'. (36)

### Participatory action research approach

This project used a participatory action research (PAR) approach, which involves a 'repetitive cycle of observing, reflecting, planning and acting'. (200) Kurt Lewin introduced the term 'action research' in the mid-1940s, and it has since been applied in a range of disciplines and contexts because of its 'practically relevant' approach to research. (201) Kemmis and McTaggart adapted Lewin's cyclical model into the 'action research spiral', the diagrammatic form of which simplistically demonstrates the sequential progression through planning, action, observation and reflection stages before moving on to the next cycle commencing with replanning (Figure 3.2). (201)

**Figure 3.2 Sequence of action research cycles**

Source: Adapted from 'Action Research: The challenges of understanding and researching practice'. (201)

PAR and collaborative research approaches are becoming increasingly popular in health and welfare organisations, where practitioners recognise the importance of community and consumer involvement in formulating research and implementing actions to address the situation of concern. (200, 202-205) Using a PAR approach allows not only ongoing critical appraisal and interpretation of data collected, but also the continuous refinement of methods as the project progresses. (206, 207) This approach does not aim to result in generalisable findings, but is used to understand particular contexts and to produce outcomes that are relevant locally. Participatory action research was selected for this PhD project, to ensure that actions aligned with Neami principles and the Neami service delivery model (i.e. Collaborative Recovery Model) in efforts to implement appropriate and sustainable oral health promotion practices.

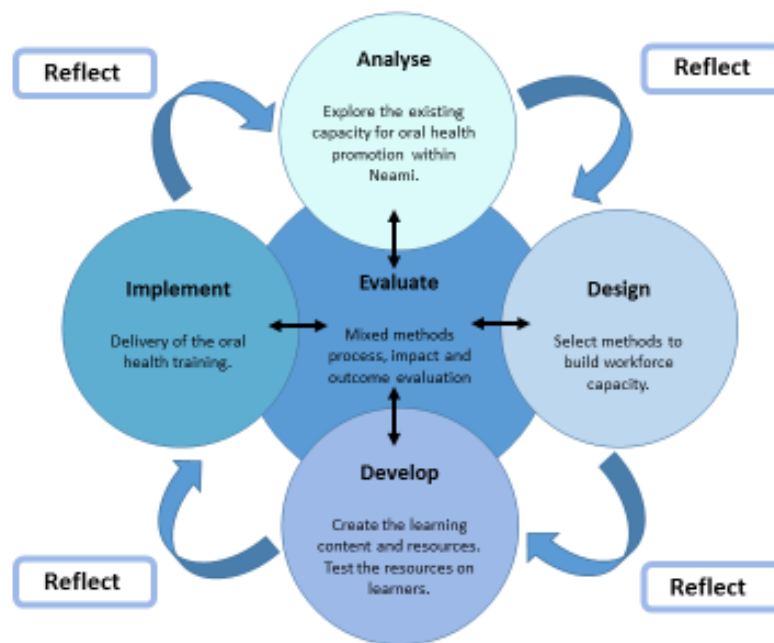
### Multi-stage sequential mixed methods

This project was underpinned by the ‘pragmatism’ paradigm, which is associated with the use of diverse theoretical and research methods selected based on their suitability to address the research objectives. (198, 208) Using mixed methods allows researchers to answer complex questions, which may not be possible with a single method. (209) Qualitative research methods ‘emphasise words rather than numbers in data collection and analysis’. (198) They offer a flexible approach to research the ‘social world’ and focus on meaning and interpretation of lived experiences. Qualitative approaches include research designs such as interviews, focus groups and narrative enquiries. Quantitative research is more concerned with numbers and measurement, and includes research designs such as surveys, experimental studies and clinical trials. (210) ‘Triangulation’ (looking at something from multiple viewpoints) of research methods, combines complementary approaches that can add strength to the overall research methodology. (211)

A multi-stage sequential mixed methods research design was employed in this PhD project. This involved interdependent quantitative and qualitative research methods, which were used in determining how to build capacity to promote oral health in a community mental health setting. (212) Individual study methods were selected based on the research questions being answered at that time. Research methods were continuously evaluated and refined to address any issues as they emerged. (207)

This project was conducted in three distinct stages. Initial research action focused on identifying and analysing existing capacity for oral health promotion within Neami. At completion of this stage, it became apparent that workforce development was the key action area where this project was most likely to increase capacity to promote oral health. The ADDIE model (a five-step model for action: analysis, design, development, implementation and evaluation) is an instructional design model that is widely used in training development. (213-216) Each action step in the ADDIE process ‘receives input from the previous step and provides output for the next step’. (214) The ADDIE model was adapted for use in this PhD research, in designing workforce development activities (Figure 3.3).

**Figure 3.3 ADDIE model, as applied to this PhD project**



Source: Adapted from InstructionalDesign.org. (216)

## Project governance

A Project Advisory Group (PAG) was established at commencement of this PhD project. The PAG, responsible for overseeing all activities related to this project, included representatives from Neami National and the Melbourne Dental School, giving the group a broad profile of expertise in oral health, mental health, health promotion, ethical conduct in human research and organisation-based research. Neami is committed to genuine consumer participation across all areas of organisation development and service delivery. In line with the Neami Consumer Participation Framework, the PAG included a consumer representative, and

consumers were involved in developing and reviewing all of the project training and information resources. (217) This collaborative process created a unique mix of skills, blending the lived experience of consumers, the ‘on the ground’ knowledge of Neami staff and the technical expertise of the MDS researchers.

The PAG met approximately four times per annum for the duration of the project. In addition, the candidate worked collaboratively with each of the PAG members on individual aspects of the project. This created opportunities for a continuous cycle of reflection, adaptation, implementation and review of project actions to fit with the PAR approach.

## Ethics requirements

Ethics approval for this PhD project was granted by the University of Melbourne Human Research Ethics Committee (ethics ID 1544795 and 1648458) and by the Neami National Research and Evaluation Committee (Appendices 4–6).

## Overview of research methods

As mentioned, this PhD project was conducted in three stages. Each stage involved multiple actions, with different research methods. However, all stages were guided by the Framework for Building Capacity to Improve Health (36) and by the need to answer the overarching research question, ‘What can be done to build capacity to promote oral health in a community mental health setting?’ The methods for each stage are described in detail in the relevant chapters; however, a brief overview of each stage is provided here (Figure 3.4).

### ***Stage One: Exploring existing capacity to promote oral health at Neami***

Stage One was the scoping stage (or the ‘analysis’ stage in the ADDIE model) that explored existing capacity in Neami for oral health promotion. Research action included an environmental scan of current health promotion activities at Neami, a post-training evaluation survey (after face-to-face oral health training delivered by BOH students from the University of Melbourne), and a cross-sectional web-based survey of Neami Community Rehabilitation and Support Workers who provide direct consumer support.

### ***Stage Two: Building Neami workforce capacity to promote oral health***

Stage Two focused on the design, development and implementation of professional development activities to increase workforce capacity to promote oral health. It included a

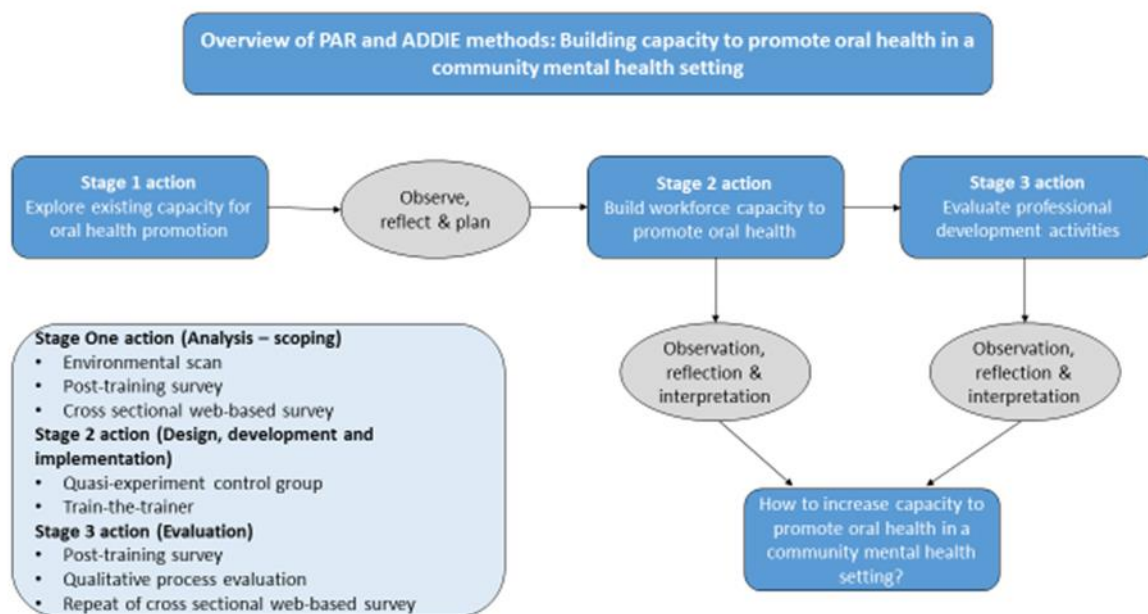


narrative literature review to assist with the design phase, and a multi-site quasi experiment to compare different professional development delivery modes (face-to-face, online, blended or none).

**Stage Three: Evaluation of oral health professional development activities**

Stage Three was the mixed methods evaluation stage. It included a mixed-mode (web-based and paper-based) post-training evaluation survey, qualitative process evaluation (focus groups and semi-structured interviews), and a follow-up cross-sectional web-based survey of Neami CRSWs (to measure changes in oral health KAP).

**Figure 3.4 Research methods: A diagrammatic overview of PhD research methods**



## Chapter conclusion

This chapter provided a brief overview of the research methods used throughout this PhD project. While each stage of this PAR project included multiple research activities, they were designed to be complementary and all were guided by the Framework for Building Capacity to Improve Health. The next chapter introduces Stage One of this PhD research, which explored the existing capacity within Neami for oral health promotion.

## **Stage One – Exploring existing capacity to promote oral health at Neami National**

## Stage One introduction

The first stage of this project was the analysis (or scoping) phase, which was used to explore existing capacity to promote oral health within Neami. This stage included an environmental scan of current health promotion action (Chapter 4), a post-training evaluation survey conducted after the delivery of face-to-face oral health training (Chapter 5), and a cross-sectional web-based survey exploring oral health-related knowledge, attitudes and professional practices of Neami CRSWs (Chapter 6). These research activities were important in determining how health promotion fits into the Neami service delivery model and in determining what could be done to increase oral health promotion within the organisation.

## **Chapter 4 – Health promotion at Neami: An environmental scan**

This chapter presents a basic environmental scan study, which was conducted to determine the existing capacity for oral health promotion within the Neami. This exploratory study was important in order to understand how oral health promotion can be integrated into the organisation service delivery model.

## Study rationale

An environmental scan (ES) is used by businesses and organisations as an exploratory phase to identify strengths and potential challenges prior to the process of strategic planning. (218) Environmental scanning is becoming more prominent in the public health field and is being used for a wide range of health topics. (219-222) For example, the Substance Abuse and Mental Health Services Administration at the United States Department of Health and Human Services developed a tool to guide environmental scanning and strategic planning to enhance programs, services and resources for young children and their families. (223) This tool emphasises that the ES is an essential component of planning if programs are to be effectively implemented and evaluated. For the purpose of this project, an internal environmental scan of health promotion within Neami was used in the development of strategies to increase capacity to promote oral health.

## Research questions

The research questions for the environmental scan were:

1. What are the existing capacities for oral health promotion?
2. What strategies could be used for increasing capacity to promote oral health?

## Methods

The ES was guided by the Framework for Building Capacity to Improve Health. (36) The 'Indicators to Help with Capacity Building in Health Promotion' (224) were also used in determining existing health promotion capacity within Neami and to assist in the development of capacity building strategies. Ethics approval was granted by the Human Research Ethics Committee at the University of Melbourne (ethics ID 1544795) and by the Research and Evaluation Committee at Neami National (Appendices 4 & 6).

The methods used for the environmental scan included:

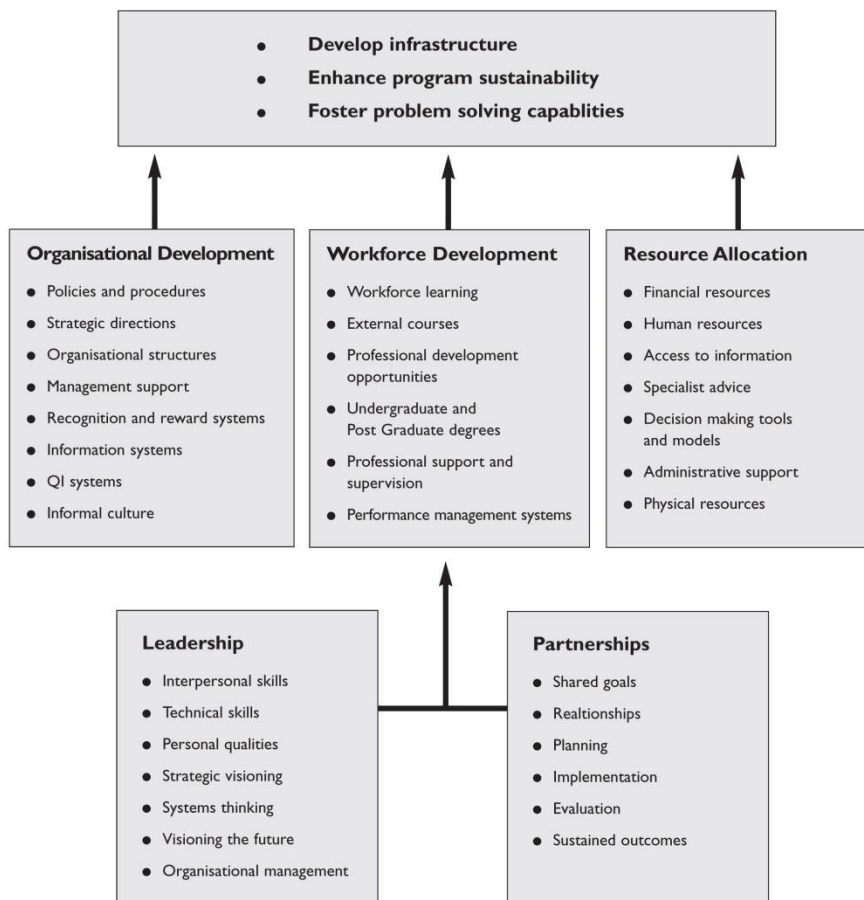
1. Discussing health promotion and workforce training with Neami staff including Community Rehabilitation and Support Workers, Peer Support Workers, Health Promotion Site Champions, state Health Promotion Officers, research staff and management),
2. Shadowing Neami CRSWs when working with consumers,
3. Attending site team meetings,

4. Attending peer-education sessions for the Optimal Health Program (health education by Neami Peer Support Workers with a lived experience of severe mental illness), and
5. Reviewing documents related to health promotion activities within the organisation.

Information was mapped against the five Key Action Areas from the capacity building framework: organisational development, workforce development, resource allocation, leadership, and partnerships (Figure 4.1). (36)

The results of the ES were used to develop potential strategies to build capacity within Neami to promote oral health for people living with severe mental illness. The strategies are underpinned by the Principles of Capacity Building Practice as outlined in the framework. These principles are ‘respect and value pre-existing capacities’, ‘develop trust’, ‘be responsive to context’, ‘avoid pre-packaged ideas and strategies’ and ‘develop well planned and integrated strategies’. (36)

**Figure 4.1 Capacity building framework key action areas**



Source: Framework for Building Capacity to Improve Health. (36)

## Results of the environmental scan

In exploring each of the five Key Action Areas from the capacity building framework, it became apparent that there is considerable overlap between these areas. Although presented separately, it was important to consider the interrelatedness of action areas and the need for multi-level approaches in building capacity to promote oral health.

### Organisational development

Organisational development is widely recognised as ‘the practice of changing people and organisations for positive growth’. (225) It describes the processes used to ensure an organisation’s structures, policies and practices appropriately reflect its purpose and values. (36) At Neami, health promotion is part of ‘core business’ and a range of organisational policies include physical health-related goals. Neami’s Health Promotion Framework, which aligns closely with the Ottawa Charter, supports the integration of health promotion for consumers and staff into all aspects of the organisation. (32) Health promotion action is reviewed annually and available literature used to inform the selection of health promotion priority areas. In addition to the national framework, each state has its own State Health Promotion Plan, which reflects local priorities and health promotion needs. (226-230) Neami’s Strategic Directions 2014–17 also emphasise the importance of embedding strategies to respond to consumers’ physical health needs. (231) As the organisation continues to evolve and grow, new quality and safety structures are being implemented to address clinical governance and service improvement requirements.

Neami is committed to evidence-based practice and has increased the emphasis on organisational research activities. (232) The Research and Evaluation Committee aims to improve programs and services for consumers of Neami through innovative approaches. Successful health promotion initiatives are promoted on the Neami intranet and research findings disseminated more widely at conferences, in journals and on social media sites. This knowledge sharing is important in building the evidence base regarding health promotion in a community mental health setting.

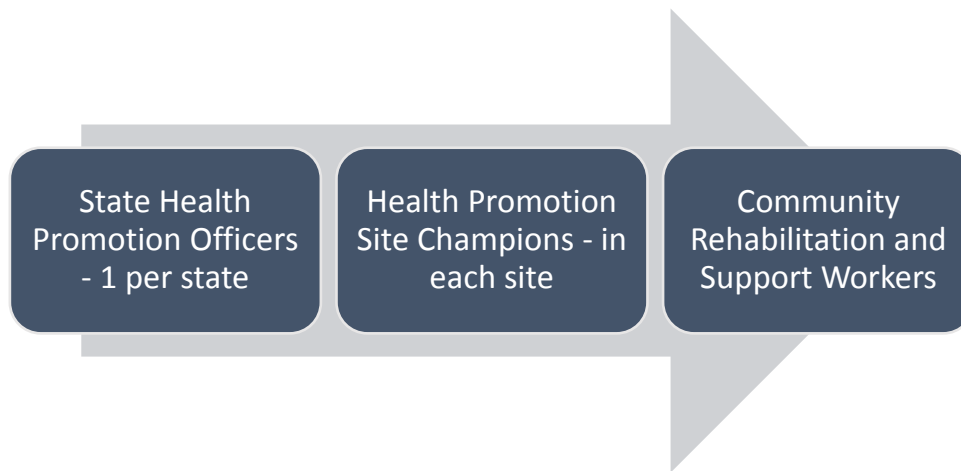
Health promotion is well supported within Neami’s organisational structures (Figure 4.2). Since 2010, Health Promotion Officers have been employed in each state where Neami operates, and they are responsible for the planning, development and implementation of health promotion activities. (32) These HPOs coordinate all health promotion action,

including workforce development and capacity building strategies in the priority areas of smoking, physical health needs identification, oral health, chronic disease prevention and intervention, and healthy behaviours. In addition, each service site has a Health Promotion Site Champion. The HPSC liaises with the state HPO and takes a leadership role in driving site-specific health promotion activities. (191) They are responsible for new staff induction in health promotion and ensuring all staff are appropriately resourced and supported in implementing local health promotion initiatives. HPSCs are provided with professional and training opportunities to support them in their role as 'Site Champion'. A set amount of funds is allocated annually to each site for the delivery of health promotion activities. The HPOs, in collaboration with the HPSCs, determine how funds will be spent and what health promotion activities will be provided. Understanding the organisational structures related to health promotion was necessary in planning future oral health promotion activities.

Health promotion is incorporated into the job descriptions of all staff providing direct consumer support. This includes Community Rehabilitation and Support Workers and Peer-Support Workers. The Physical Health Prompt screening questionnaire is offered by CRSWs to every consumer at six-monthly intervals; however, consumers can choose not to complete the screening tool at that time. The Physical Health Prompt is designed to prompt a discussion when consumers answer 'no' to questions about particular physical health issues. Although health promotion practices are not strictly monitored, Senior Practice Leaders and Site Managers have a duty to ensure that health promotion action is being incorporated into service delivery. They are also accountable for the Physical Health Prompt completion rates within their site and it is their responsibility to work towards achieving pre-determined completion targets. This information about organisational structures was essential in designing capacity building strategies that align with health promotion approaches.



**Figure 4.2 Health promotion structures within Neami National**



CareLink+ is the client-management software system used by Neami to record details of sessions with consumers. When the Physical Health Prompt is completed, a hard copy is given to an Operations Support Worker to enter data onto the consumer file. At the time of conducting this scan, there was no requirement for CRSWs to monitor ‘no’ responses to individual questions or to record any follow-up action taken. While CRSWs can estimate the proportion of each appointment spent on health promotion, it is not a simple process to use CareLink+ to track the physical health area being addressed or the type of support provided. The gaps in health promotion data collection identified during this environmental scan should be addressed to improve and health promotion monitoring and evaluation processes.

### Workforce development

According to the Australian Health Promotion Association, workforce development is defined as ‘a process initiated within an industry or organisation to respond to the strategic priorities of the system and to help ensure that people working within these systems have the knowledge, skills, capabilities and commitment to contribute to these priorities’. (233)

Neami has experienced considerable expansion in the last decade. This rapid growth can present substantial organisational risks in ensuring that governance and organisational capacity develops in conjunction with this expansion of services. (231) One of Neami’s five Strategic Directions for 2014–17 is to ‘nurture and develop a healthy and vibrant organisational culture’. Workforce development strategies to build staff skills and experience

are being implemented and include enhancing internal communications systems, conducting regular staff satisfaction surveys, improving the staff learning and development program, and creating leadership development opportunities for senior staff. (231)

The Service Development department at Neami, led by the Service Development Manager, coordinate the areas of Health Promotion, Learning and Development, Consumer Participation, Continuous Improvement, Carelink+, Research, and Feedback and Complaints. (183) New staff induction includes training topics such as:

- the Collaborative Recovery Model
- the Physical Health Prompt
- suicide prevention
- optimal health
- child safe environments
- critical incidents
- group facilitation
- motivational interviewing and coaching.

Regular ‘booster’ or refresher sessions ensure competence in using the CRM and the Physical Health Prompt, both of which are central to the Neami service delivery model. In addition to the limited face-to-face oral health training previously provided, staff also have access to online training related to smoking cessation and diabetes. At the time of the ES there were plans to roll them out more broadly within the organisation; however, participation will not be compulsory.

Funding for accredited programs (e.g. certificate or diploma in mental health) and additional external courses for specialist training (e.g. alcohol and other drugs, autism, self-harm) is available upon approval. There is an expectation that staff who receive additional training will share relevant information with the rest of their team in efforts to enhance their collective knowledge. These findings demonstrated Neami’s commitment to staff training and the organisational efforts to enhance workforce development opportunities.

Neami understands the importance of capacity building, and that workforce development is a key component of improving the health and wellbeing of both consumers and staff. In line with this ‘whole of organisation approach’, Neami employees are encouraged to reflect on their personal health behaviours and to initiate positive changes to improve their own

physical health and wellbeing. (32) This approach aligns with the growing recognition of organisational responsibility in promoting employee health and wellbeing. (234, 235) In addition to promoting healthy staff, Neami is committed to promoting health and wellbeing for consumers. As previously described, there is a formal chain of support for health promotion within Neami. CRSWs are the key staff members who engage consumers in health-related conversations and provide them with appropriate advice and support. As such, they are the Neami staff cohort with the greatest 'sphere of influence to effect change' with consumers, promote positive behaviours and healthy lifestyle choices. (36) Therefore, it seems logical that any workforce development strategies to improve oral health promotion should target CRSWs.

Part of the HPSC's role is to ensure that support workers have the appropriate skills and resources to promote the physical health priority areas. Each site has a weekly team meeting and HPSCs have an opportunity to share information about the health promotion portfolio with colleagues. The state Health Promotion Officers support the HPSCs in developing health promotion activities and monitoring their implementation. The HPOs work collaboratively to coordinate health promotion nationally across the organisation. HPOs report to the Service Development Manager, but they also work with Neami senior management in ensuring health promotion priorities and action areas are evidence based. From these findings, it was apparent that Neami staff at all levels of the organisation are involved in health promotion, somewhere along the continuum from high-level strategic planning to working with individual consumers.

### Resource allocation

Resource allocation is an 'economic process, not just a planning one', and includes the availability and distribution of the collateral needed to support a program. (36) This key action area considers financial, human, information, administrative and physical resources. As part of the annual planning process, budget is allocated to health promotion programs in each state. HPOs work with HPSCs in each site to determine how they will spend their allocated funds. Supplementary or special funding is available as a grant and a formal application is required to receive this money. This was important to consider in the planning of oral health promotion activities which may require funding support.

In addition to the national and state policies and guidelines, and the staff training materials previously mentioned, Neami provides a range of information resources relevant to health

promotion. Staff and consumer pamphlets and brochures are available in the health promotion folder on the organisation intranet, which can be downloaded for printing. While many of these physical health resources are produced by external organisations, some have been developed in partnership with Neami (e.g. the oral health resources). It was not known how useful these resources are or how frequently they are being used, indicating the need to explore this area further.

Human resources are essential in effective health promotion, and have already been discussed in relation to organisational and workforce development.<sup>12</sup> The allocation of human resources for health promotion at Neami includes the involvement of staff at all levels in the planning, delivery and evaluation of health promotion activities. Administrative and physical resources for health promotion include communications expertise in developing information resources and access to meeting spaces and office space as necessary. It is apparent that Neami views health promotion as a key component of service delivery and consumer support. However, it was not clear if these health promotion-related resources are sustainable in the longer term.

## Leadership

According to the World Health Organization, strong leadership is required to ‘institutionalise’ health promotion. (236) Neami’s National Leadership Team, or executive management, are responsible for strategic oversight across the organisation. (237) State Leadership Teams consist of State, Regional and Service Managers and are responsible for implementing directives from the National Leadership Team. A two-day Neami leadership forum is held annually, and is attended by all National and State Leadership Team members.

Neami fosters an environment for personal growth and learning. Within individual sites, Service Managers or Senior Practice Leaders meet fortnightly with CRSWs for one-on-one supervision or mentoring sessions. These sessions alternate between one hour of formal mentoring and one hour of practice development. They provide opportunities for staff to develop reflexive-practice skills and to be coached in a supportive and safe environment.

Neami understands the health promotion needs of people living with severe mental illness and has been proactive and innovative in developing approaches targeting specific health issues (e.g. physical health screening, healthy eating, oral health, staying skin smart, physical

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<sup>12</sup> As mentioned previously, the margins between individual action areas became quite blurred due to the considerable overlap, in this instance between ‘workforce development’ and ‘resource allocation’.

activity). Emerging health trends and unmet physical health needs are identified in the process of ‘visioning the future’ for health promotion in the organisation. (36) In relation to consumers’ oral health, Neami demonstrated leadership in identifying oral health as a health promotion priority area across the organisation, and management has continued to support oral health promotion since this time.

## Partnerships

‘Partnerships are an important mechanism for building and sustaining capacity.’ (238) Building and sustaining partnerships, at a national and state level, is a key priority for Neami. (231) Joint ventures may include activities with similar mental health organisations or inter-sectoral partnerships with non-mental health organisations who share Neami visions or goals. (239) These working relationships will require ongoing commitment and an investment of time and resources.

In 2011, Neami identified oral health as an unmet physical health need for consumers. The Victorian State Manager initiated the partnership with the Melbourne Dental School, the University of Melbourne to implement strategies to improve oral health outcomes for Victorians living with severe mental illness. Neami has adopted this partnership approach in addressing other physical health issues faced by consumers (e.g. smoking, chronic illness management). The relationship between Neami and the MDS has continued to strengthen and flourish, and the potential for similar partnerships in other states should be explored.

Consumer participation is widely recognised as a key factor in developing appropriate health services. (240-242) Central to all Neami operations is the ‘partnership’ with consumers, who are meaningfully involved in the planning, delivery and evaluation of all Neami services, programs and research activities. Prior to the commencement of this current study, Neami consumers participated in research to identify their perceived barriers to oral health. (194, 195) This information provides the rationale for this project to build capacity for oral health promotion. In order to ensure this project is contextually appropriate, is essential that consumers are meaningfully involved in all aspects of planning, design, implementation and evaluation.

## Discussion

This environmental scan identified a variety of existing capacities within the organisation that are being used for health promotion, many of which can be readily applied to oral health

promotion. As mentioned, the Principles of Capacity Building (respect and value pre-existing capacities, develop trust, be responsive to context, avoid pre-packaged ideas and strategies, and develop well-planned and integrated strategies) were applied in developing a number of interrelated strategies to build capacity across key action areas. Particular emphasis was placed on the utilisation of pre-existing capacities and organisational systems, and the need to be responsive to the Neami context. (36) These strategies, presented below, formed part of the action research approach in the second stage of this project (Table 4.1).

### Organisational development strategies

Health promotion is recognised as ‘core business’ in Neami service delivery and is underpinned by organisational policies and strategic plans. There is strong support from senior management for a project that improves oral health promotion practices within Neami. Community Rehabilitation and Support Workers, who make up the majority of the Neami workforce, are responsible for administering the Physical Health Prompt screening questionnaire with consumers every six months. The inclusion of the oral health question in this screening tool ensures that oral health remains on the health promotion agenda. The fact that oral health is also a health promotion priority area indicates that Neami recognises that people living with severe mental illness are at increased risk of oral health issues and should be offered oral health support by CRSWs. These existing organisational structures can be used to advocate for the wider implementation of oral health promotion activities in Neami.

Although Neami has existing organisational structures and capacities to support oral health promotion, there are strategies that will assist in ensuring this project is contextually appropriate, and also in the evaluation and monitoring of oral health promotion practices. The Project Advisory Group oversees all aspects of the design, implementation and evaluation of this project, which establishes a continuous quality improvement process. As mentioned in the project background information, the group consists of representatives from Neami and the Melbourne Dental School. It was recommended that the PAG always include a Neami senior manager and a consumer representative, who can provide expert advice from an organisational perspective (as a service-developer and service-user). Involving senior management in health promotion decision-making processes is important in developing capacity to make operational changes. (243, 244) There has been significant shift in the mental health sector towards greater consumer leadership within mental health organisations, which is part of the movement to reorient service delivery models. (245) This project

recognises that ‘insider’ knowledge is essential in developing a program that can adapt to ever-changing contexts, internal and external to the organisation.

While Physical Health Prompt Data and details of appointments with consumers are recorded in CareLink+, this system was not being used effectively to monitor health promotion activities or physical health support provided to consumers. It was suggested that Neami explore the use of the CareLink+ system in following up ‘no’ responses to Physical Health Prompt questions and tracking referrals made by Neami to other health services, including to oral health services. It was also suggested that this system be developed to more accurately record and monitor the ‘amount and type of health promotion action’ (36) undertaken by staff engaged in direct consumer support.

*Recommended strategies:*

1. Include Neami senior management and consumer representatives on Project Advisory Group.
2. Improve monitoring of oral health promotion activities.

### Workforce development strategies

Workforce development is a key element in expanding health promotion capacity. (246) While it is recognised that multi-level action is necessary to build capacity to improve oral health, the process of conducting the ES highlighted that workforce development is the area where this project was likely to have the greatest impact at Neami. This finding is supported by previous research conducted at Neami, which recommended oral health training for all Neami support staff. (34, 35)

Neami has a highly skilled consumer-support workforce, who are experts in the Collaborative Recovery Model, motivational interviewing and recovery coaching. The CRM uses a recovery oriented, strengths-based approach to determine consumers’ goals, and to support them in developing strategies and utilising their strengths in achieving them. (247) This is a consumer-led approach, whereby individuals identify which areas of their life they wish to focus on (e.g. physical health, employment and housing). In order to be acceptable and effective, oral health-related professional development for Neami support workers must align with the CRM and build on existing staff skills (e.g. coaching and motivational interviewing).

The Neami Physical Health Prompt highlights physical health areas where consumers are not currently meeting evidence-based guidelines. It is designed to prompt health-related conversations; however, consumers may indicate they do not wish to focus on that physical health area at that time or may choose to prioritise one physical health area over another. This information about the Neami service delivery model is critically important in developing strategies to enhance oral health promotion. CRSWs are the support staff members who administer the Physical Health Prompt screening tool with consumers and are regularly engaged in health-related conversations. They should be trained when a ‘no’ response is elicited to the oral health question in the Physical Health Prompt to ask whether the consumer would like support in addressing their oral health needs. Training can enhance CRSWs’ understanding of the links between oral health and general health. Even if consumers indicate that oral health is not a priority for them at that time, CRSWs can be trained to include simple oral health messages when discussing other physical health areas (e.g. diabetes management, smoking cessation, diet and nutrition). In an effort to avoid a ‘pre-packaged’ approach, oral health PD must be co-designed by Neami and the MDS to ensure it is contextually appropriate.

Health promotion practitioners must be involved in designing and implementing new health promotion practices in community settings. (248) Close collaboration with state HPOs, who are ultimately responsible for all health promotion action within their state, is essential in improving oral health promotion within Neami. The Health Promotion Officers meet regularly with the Health Promotion Site Champions, which provides an opportunity to engage them in the oral health PD planning process and in preparing them to support the implementation of training within their team. It is the role of the HPSC to ensure that support staff at their site are appropriately trained and resourced to address the health promotion priority areas. Train-the-trainer approaches have proved effective in improving health promotion practices. (249, 250) Involving HPSCs in the coordination and implementation of oral health PD would assist in the scale-up of oral health promotion, and serve to strengthen the program adaptability and sustainability, which are key principles in capacity building. However, it is important to remember that, in addition to managing the health promotion portfolio, the primary role of the HPSC is as a support worker delivering consumer support services. In considering the already heavy workload of the HPSCs and CRSWs, any planned oral health PD should be of short duration and easily implemented at the site level.



*Recommended strategies:*

1. Integrate oral health promotion into Neami service delivery model.
2. Utilise existing health promotion structures to promote oral health (i.e. HPOs, HPSCs and CRSWs).
3. Develop contextually appropriate oral health-related professional development for Neami consumer support staff.
4. Utilise Health Promotion Site Champions in a ‘train-the-trainer’ type role to support the coordination and implementation of oral health training at the site level.

**Strategies to enhance resources**

Neami has demonstrated commitment to the oral health program through continued support of the partnership with the MDS and the provision of resources to develop and sustain the program. These resources have largely been in-kind human, administrative and physical resources (i.e. office space, meeting rooms and computer access). To date, the oral health program has received minimal financial resources from Neami, the MDS, or from other funding sources. Product donation has been received from Colgate (toothbrushes and toothpaste), which were provided to Neami sites in Victoria for distribution to consumers.<sup>13</sup> In order to scale-up the reach of the oral health program, additional funding sources must be identified.

Funding for the expansion of the oral health program may be in the form of one-off grants or longer-term financial support options. The ES process revealed that Neami offers ‘special grants’ for programs and activities, and it was recommended that an application be submitted to Neami requesting funds to develop oral health PD for staff. It was also recommended that the Project Advisory Group identify other potential funding sources external to Neami to be used in growing this project.

While a number of oral health education resources (i.e. staff education resources and consumer pamphlets) are available, feedback from Health Promotion Officers suggests they are not being widely used. These resources were developed, at the request of Neami, in partnership with the MDS team. There is evidence to show that that written information can

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<sup>13</sup> In 2014, 2015 and 2016, Colgate donated oral hygiene packs containing toothbrushes and toothpaste, which could be used by CRSWs to encourage consumers’ participation in oral health conversations.

prove useful and effective in improving consumer knowledge about medical conditions and their management. (251-254) Therefore, it is recommended that the Neami oral health resources be reviewed and updated by staff and consumers, to ensure that they remain contextually relevant, and that training in using the resources be incorporated into the oral health PD.

*Recommended strategies:*

1. Identify additional funding sources to scale-up the oral health program.
2. Review and update Neami oral health resources.

### Strategies to build leadership

Neami has demonstrated leadership in identifying that the consumer groups they work with are at increased risk of oral diseases and experience barriers in accessing dental care. The organisation has a health promoting culture for staff and consumers. Team learning is central to the way the organisation operates, and the sharing of knowledge and celebration of accomplishments is encouraged.

One strategy that may prove useful to the oral health program is the endorsement of a ‘team learning’ approach to oral health promotion and the fostering of oral health-related dialogue and discussion within teams. It is recommended that Neami health promotion staff (HPOs and HPSCs) take a leadership role in coordinating oral health promotion action within the organisation and in developing site-level strategies (e.g. planning OH training sessions, promoting participation, sharing oral health promotion successes etc.) to support the program implementation. This approach fits with the PAR methodology; when combined with other proposed strategies, it will contribute to the development of a well-integrated and sustainable oral health promotion program.

*Recommended strategies:*

1. Involve health promotion staff in the project coordination and implementation.

### Strategies to build partnerships

Effective capacity building requires action between organisations as well as internally within individual organisations. (36) As Neami grows, it seeks to ‘expand the range and scope of the work’ it does with other organisations. (255) Through collaborative relationships, Neami has established a network of services and organisations with skills and capacities to supplement

their own. The Neami oral health program is an inter-sectoral collaboration between a community mental health service and a university dental school. Both partners share the goal of improving oral health promotion for people living with severe mental illness and have been working together to achieve this since 2011. The longevity of the Neami oral health program is evidence of each organisation's commitment to the partnership. While organisation-level engagement has been key the program thus far, going forward it is important to foster local partnerships to support oral health promotion at the community level. (256-258)

This oral health project aims to increase oral health support provided to Neami consumers, including referrals to oral health services. In order to develop smoother referral pathways, it is recommended that individual Neami sites develop partnerships with local community dental services. Problem-solving capability is an important dimension of capacity building (36) and the forging of local level partnerships will enhance capacity to develop appropriate mechanisms to address service access issues as they emerge. This will increase program flexibility and adaptability to meet consumers' oral health needs in diverse community settings.

*Recommended strategies:*

1. Enhance existing and develop new local-level partnerships between individual Neami sites and community dental services.

## Chapter conclusion

This environmental scan was the first phase in understanding how health promotion operates within Neami and how existing capacities could be utilised to promote oral health. This process affirmed Neami's commitment to improving consumers' physical health outcomes, and findings suggest this project would have the greatest impact by concentrating predominantly on workforce development strategies to increase oral health promotion. Prior to commencing workforce development, it was essential to understand current oral health-related knowledge, attitudes<sup>14</sup> and professional practices of Neami support workers. The following two chapters explore these issues further and, combined with the findings from the environmental scan, informed the workforce development activities conducted during Stage Two of this project,

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<sup>14</sup> This refers to attitudes to oral health training and to oral health promotion.

**Table 4.1 Capacity building ‘Action Areas’ (36) and recommended capacity building strategies**

| Action Area                       | Strategies to build capacity to promote oral health                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Elements                                                                                                         |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Organisational development</b> | <ol style="list-style-type: none"> <li>1. Include senior management and consumer representatives on Project Advisory Group</li> <li>2. Improve monitoring of oral health promotion activities</li> </ol>                                                                                                                                                                                                                                                                                               | Management support<br>Quality improvement systems                                                                |
| <b>Workforce development</b>      | <ol style="list-style-type: none"> <li>3. Integrate oral health promotion into service delivery model</li> <li>4. Utilise existing health promotion structures to promote oral health</li> <li>5. Develop contextually-appropriate oral health-related professional development for consumer support staff</li> <li>6. Utilise Health Promotion Site Champions in a ‘train-the-trainer’ type role, to support the coordination and implementation of oral health training at the site-level</li> </ol> | Performance management systems<br>Professional development opportunities<br>Professional support and supervision |
| <b>Resource allocation</b>        | <ol style="list-style-type: none"> <li>7. Identify additional funding sources to scale-up the oral health program</li> <li>8. Review and update oral health resources</li> </ol>                                                                                                                                                                                                                                                                                                                       | Financial resources<br>Information<br>Specialist advice                                                          |
| <b>Leadership</b>                 | <ol style="list-style-type: none"> <li>9. Involve health promotion staff in coordinating oral health promotion</li> </ol>                                                                                                                                                                                                                                                                                                                                                                              | Creative collaboration<br>Team learning                                                                          |
| <b>Partnerships</b>               | <ol style="list-style-type: none"> <li>10. Develop local-level partnerships between individual sites and community dental clinics</li> </ol>                                                                                                                                                                                                                                                                                                                                                           | Relationships<br>Sustained outcomes                                                                              |

## **Chapter 5 – Process and impact evaluation of face-to-face oral health training delivered by Bachelor of Oral Health students at Neami sites in Melbourne, Victoria**

This chapter presents research undertaken to evaluate face-to-face oral health training delivered by second-year Bachelor of Oral Health students from the Melbourne Dental School at Neami sites across metropolitan Melbourne in October 2015. A paper-based post-training process and impact survey was used to evaluate the oral health training sessions.

## Study overview

As part of the Bachelor of Oral Health undergraduate program at the MDS, second-year students are required to plan, deliver and evaluate an oral health education session for the subject Oral Health Promotion 2B: Applied Health Education. As previously mentioned, the partnership between Neami and the MDS has been ongoing since 2011 and planning for the delivery of face-to-face oral health training sessions to Neami staff had commenced in early 2015. This was prior to the candidate's enrolment as a PhD candidate, so the training was not initially planned as part of this project.

The aim of the training was for staff who provide direct consumer support to have the knowledge and confidence to provide oral health support when working with consumers. The objectives were for support staff to have an understanding of common oral diseases and their causes, have confidence discussing oral health with consumers, and confidence supporting consumers to access dental services.

Although the training sessions were planned independently, evaluation of the training was deemed relevant and was therefore included as part of this PhD project. It is important to disclose that the candidate was the convenor for this subject; however, there was no resulting conflict of interest as the students were not observed or assessed on the delivery of the training sessions. Ethics approval was granted by the Human Research Ethics Committee at the University of Melbourne (ethics ID 1544795) and by the Research and Evaluation Committee at Neami National (Appendices 4 & 6).

## Research questions

1. How do participants rate their oral health understanding after face-to-face oral health training?
2. How do participants rate their oral health confidence after face-to-face oral health training?
3. How satisfied are participants with the face-to-face oral health training delivered by Bachelor of Oral Health students?
4. What are participants' opinions on developing future oral health training?

## Hypotheses

1. Staff who provide direct consumer support will rate their oral health-related understanding higher than those who do not provide direct consumer support after face-to-face training.
2. Staff who provide direct consumer support will rate their oral health-related confidence higher after face-to-face training than those who do not provide direct consumer support.
3. Staff who provide direct consumer support will be more satisfied with face-to-face oral health training than those who do not provide direct consumer support.

## Methods

An anonymous paper-based post-training survey was used to collect process and impact evaluation data after face-to-face oral health training sessions. Process evaluation is used to evaluate ‘the way in which a health promotion activity or strategies were implemented’. (259) It examines whether a program was implemented as intended. Process evaluation is a key component of the PAR approach, and can be conducted periodically during a project to monitor progress and identify issues that require attention. (260) In impact evaluation, ‘the immediate effects of the program are assessed’. (259) This type of evaluation is useful in assessing changes in knowledge, attitudes and behaviours at the individual or group level. Process and impact evaluation was used in this study to determine if the training aims were achieved and to answer the study questions.

Second-year BOH students from the Melbourne Dental School delivered training at twelve Neami sites across Metropolitan Melbourne in October 2015. Students were prepared for delivering these oral health presentations during classes for the subject Applied Health Education, which requires students to plan, deliver and evaluate an oral health education session. This subject was coordinated and convened by the PhD candidate.

Training sessions were limited to 30 minutes, due to Neami time constraints, and were conducted during the weekly site team meeting. The students developed lesson plans and PowerPoint presentations collaboratively during class time with the support of the PhD candidate. Presentation topics included the links between oral health and general health, the links between mental health and oral health, common oral diseases, engaging consumers in oral health conversations and referring consumers to dental services. Training introduced

staff to the Neami oral health resources, which had been updated prior to the delivery of these sessions. Resources included:

1. A flow-chart and information resource for staff to guide oral health conversations with consumers. (Appendix 7)
2. A consumer pamphlet explaining oral health risk factors and simple preventive advice. (Appendix 8)
3. A consumer pamphlet explaining how to access public dental services. (Appendix 9).

The original resources were developed as part of an undergraduate project in 2012. Feedback from the Neami Health Promotion Officers and Health Promotion Site Champions suggested that the resources were not being widely used and that the language and strategies did not align with current evidence-based recovery-oriented approaches. Prior to the delivery of the face-to-face training in 2015, a workshop involving Neami Community Rehabilitation and Support Workers and consumers was conducted and the resources were reviewed and updated. This audit process is important in PAR and as part of quality improvement activities.

The questionnaire was purpose designed and approved by the Project Advisory Group (which included Neami consumers and health promotion staff), and took approximately three to five minutes to complete. It included three five-point Likert items to determine respondents' opinions on the content, duration and delivery of the training session (process evaluation) and seven five-point Likert items to (rated from 'poor' to 'excellent') to determine respondents' self-rated oral health understanding and confidence after the training (impact evaluation). Three open-ended questions asked what respondents learned from and liked about the training and ways in which future training could be improved. Demographic data included the Neami site respondents worked at, their role within the organisation and if they provided direct consumer support. No personal information was collected, but respondents created a unique identifier code <sup>15</sup> to maintain anonymity yet enable participant matching in future surveys.

All staff who participated in the oral health training sessions, regardless of their role within the organisation, were invited to participate in the evaluation survey immediately after training. Prior to completing the survey, BOH students verbally informed staff that participation was voluntary and that their data would be used to evaluate the training and

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<sup>15</sup> The first three letters of their mother's maiden name and the last two digits of their last year of high school



assist in developing future oral health-related PD sessions. Completion of the survey was taken as implied consent to participate in the study.

## Data analysis

This survey collected quantitative data. Univariate statistics were used to describe the respondents' characteristics (e.g. Neami, site) and responses to each of the survey questions. Bivariate analysis of nominal and ordinal variables was performed using Chi-squared and Fisher's Exact tests. In order to perform further analyses, mean scores were calculated from Likert items (responses were scored from '1' for 'below average' or 'not at all' to '5' for 'excellent' or 'extremely'). For continuous variables, Mann-Whitney U tests were conducted. Correlations measuring the strength of association between variables were run using Spearman's Rho. Statistical significance was set at the alpha level  $p < 0.05$ . Data were analysed using SPSS 23.0. (261)

In addition to the quantitative data, the survey collected data from three open-ended questions seeking feedback on the training. The purpose of these questions was to determine what participants found most useful about the training and how future oral health PD for mental health support workers should be designed. Simple content analysis, was used to analyse data from these questions. The steps performed in this simple TA were as follows: manually entering data from the paper-based survey into an Excel spreadsheet, searching for patterns in responses, and identifying key comments to assist in planning future oral health PD activities.

## Results

In October 2015, face-to-face oral health training was delivered to staff at twelve Neami sites in Metropolitan Melbourne. A total of 116 completed post-training surveys were received and included in the data analysis.

The number of participants at each site ranged from four to fourteen (Table 5.1). Almost three-quarters ( $n = 84$ , 72.4%) of participants who completed the survey were CRSWs. The remainder consisted of Senior Practice Leaders/Managers ( $n = 12$ ), students ( $n = 9$ ), Peer Support Workers ( $n = 7$ ), Operations Support ( $n = 3$ ) and one Consumer Participation Officer. Almost nine-tenths ( $n = 101$ , 87.1%) of all participants provided direct consumer support, and CRSWs made up the majority of participants at each site (see Table 5.1). In addition to CRSWs, Peer Support Workers, Managers/Senior Practice Leaders and students also indicated that they provide direct consumer support. Survey respondents were asked to

create a unique identifier code to enable respondent matching in future surveys, however, only 93 (80.2%) of respondents created this code.

Table 5.1 Profile of respondents from post-training survey, by individual Neami site (n = 116)

|                |     | Site |   |    |   |    |   |    |   |   |    |    |    | Total |      |
|----------------|-----|------|---|----|---|----|---|----|---|---|----|----|----|-------|------|
|                |     | 1    | 2 | 3  | 4 | 5  | 6 | 7  | 8 | 9 | 10 | 11 | 12 | N     | %    |
| CRSW           |     | 7    | 7 | 9  | 6 | 9  | 7 | 12 | 6 | 3 | 8  | 2  | 8  | 84    | 72.4 |
| Peer-Support   |     | 2    | - | 1  | - | 1  | - | -  | - | - | 1  | 1  | 1  | 9     | 7.8  |
| Manager/SPL    |     | 2    | 1 | 1  | 2 | 1  | 1 | 1  | 1 | 1 | 1  | -  | -  | 12    | 10.3 |
| Student        |     | -    | 1 | -  | 2 | 1  | - | 1  | - | - | 2  | 1  | 1  | 9     | 7.8  |
| Other          |     | -    | - | -  | - | -  | - | -  | 1 | - | -  | -  | -  | 1     | .9   |
| Direct support | Yes | 10   | 8 | 11 | 9 | 10 | 7 | 13 | 7 | 3 | 10 | 4  | 9  | 101   | 87.0 |
|                | No  | 1    | 2 | -  | 2 | 2  | 2 | 1  | 1 | 1 | 2  | -  | 1  | 15    | 12.9 |

CRSW = Community Rehabilitation and Support Worker

SPL = Senior Practice Leader

### Self-rated oral health understanding and confidence after training

Neami staff were asked to rate their level of oral health understanding (Table 5.2) and confidence (Table 5.3) using five-point Likert items after completing the oral health training. The majority of participants rated their understanding as ‘above average’ or ‘excellent’ for risk factors associated with poor oral health (n = 104, 89.6%), the links between mental health and oral health (n = 102, 87.9%), and the links between mental health and general health (n = 104, 89.6%). These results indicate participants believed they had a good level of oral health knowledge after the face-to-face training session.

The majority of staff also rated their level confidence as ‘above average’ or ‘excellent’ for discussing oral health with consumers (n = 90, 77.6%), using the Neami oral health resources (n = 86, 74.2%), supporting consumers with their oral health needs (n = 97, 84.4%), and referring consumers to oral health services (n = 94, 81.7%). Chi-square tests found no significant differences in responses for understanding and confidence questions dependent upon engagement in direct consumer support or the Neami site worked at.

Table 5.2 Participants' self-rated understanding responses (n = 116)

|                                                     | Poor |   | Below average |    | Average |      | Above Average |      | Excellent |      |
|-----------------------------------------------------|------|---|---------------|----|---------|------|---------------|------|-----------|------|
|                                                     | N    | % | N             | %  | N       | %    | N             | %    | N         | %    |
| <i>Risk factors for poor oral health</i>            | -    | - | 1             | .9 | 11      | 9.5  | 78            | 67.2 | 26        | 22.4 |
| <i>Links between mental health and oral health</i>  | -    | - | -             | -  | 14      | 12.1 | 71            | 61.2 | 31        | 26.7 |
| <i>Links between oral health and general health</i> | -    | - | -             | -  | 12      | 10.3 | 78            | 67.2 | 26        | 22.4 |
| Chi-square tests                                    |      |   |               |    |         |      |               |      |           |      |
| N = number of respondents                           |      |   |               |    |         |      |               |      |           |      |

Table 5.3 Participants' self-rated confidence responses (n = 116)

|                                                          | Poor |   | Below average |     | Average |      | Above Average |      | Excellent |      |
|----------------------------------------------------------|------|---|---------------|-----|---------|------|---------------|------|-----------|------|
|                                                          | N    | % | N             | %   | N       | %    | N             | %    | N         | %    |
| <i>Discussing oral health with consumers</i>             | -    | - | 2             | 1.7 | 24      | 20.7 | 68            | 58.6 | 22        | 19.0 |
| <i>Using oral health resources</i>                       | -    | - | 2             | 1.7 | 28      | 24.1 | 51            | 44.0 | 35        | 30.2 |
| <i>Supporting consumers with their oral health needs</i> | -    | - | 1             | .9  | 17      | 14.7 | 67            | 57.8 | 30        | 25.9 |
| <i>Referring consumers to oral health services</i>       | -    | - | 2             | 1.7 | 19      | 16.4 | 59            | 50.9 | 35        | 30.2 |
| Chi-square tests                                         |      |   |               |     |         |      |               |      |           |      |
| N = number of respondents                                |      |   |               |     |         |      |               |      |           |      |

When considering mean scores, it was interesting to note that non-consumer support staff rated their knowledge slightly higher than that of support staff for understanding of oral health risk factors and understanding the links between mental health and oral health (Table 5.4). However, support staff rated their confidence higher than those who did not provide direct consumer support for each of the confidence items. These results were not statistically significant. Mean scores for each item were also compared between the different Neami sites. There were no statistically significant differences for any of the understanding and confidence items. Total mean understanding scores and confidence scores were calculated by the combining results of Likert items, but again no statistically significant differences were found between sites.

It was interesting to find that mean scores were higher for all understanding questions than for the confidence questions. Respondents rated their understanding of the links between mental health and oral health highest ( $M = 4.17$ ,  $SE 0.056$ ), while their confidence discussing

oral health with consumers had the lowest mean score ( $M = 3.95$ ,  $SE 0.063$ ). A significant positive correlation was found between total understanding scores and total confidence scores ( $r_s = 0.578$ ,  $n = 116$ ,  $p < 0.0001$ ), indicating that staff with higher self-rated oral health understanding also rated their confidence higher.

Table 5.4 Mean self-rated understanding and confidence after oral health training, dependent on the provision of direct consumer support

|                                                                                      | Direct Support | N   | Mean | SE   | Sig. |
|--------------------------------------------------------------------------------------|----------------|-----|------|------|------|
| Your understanding of the risk factors associated with poor oral health              | Yes            | 101 | 4.09 | .060 | .305 |
|                                                                                      | No             | 15  | 4.27 | .118 |      |
|                                                                                      | Total          | 116 | 4.11 | .054 |      |
| Your understanding of the links between mental health and oral health                | Yes            | 101 | 4.14 | .060 | .686 |
|                                                                                      | No             | 15  | 4.20 | .175 |      |
|                                                                                      | Total          | 116 | 4.15 | .056 |      |
| Your understanding of the links between oral health and general health and wellbeing | Yes            | 101 | 4.13 | .056 | .698 |
|                                                                                      | No             | 15  | 4.07 | .153 |      |
|                                                                                      | Total          | 116 | 4.12 | .052 |      |
| Your confidence in discussing oral health with consumers                             | Yes            | 101 | 3.97 | .065 | .468 |
|                                                                                      | No             | 15  | 3.80 | .223 |      |
|                                                                                      | Total          | 116 | 3.95 | .063 |      |
| Your confidence in using the Neami oral health information resources                 | Yes            | 101 | 4.05 | .076 | .492 |
|                                                                                      | No             | 15  | 3.87 | .236 |      |
|                                                                                      | Total          | 116 | 4.03 | .073 |      |
| Your confidence in supporting consumers with their oral health needs                 | Yes            | 101 | 4.13 | .062 | .264 |
|                                                                                      | No             | 14  | 3.86 | .231 |      |
|                                                                                      | Total          | 115 | 4.10 | .062 |      |
| Your confidence in referring consumers to oral health services                       | Yes            | 101 | 4.12 | .072 | .536 |
|                                                                                      | No             | 14  | 4.00 | .210 |      |
|                                                                                      | Total          | 115 | 4.10 | .068 |      |
| Mean total understanding score                                                       | Yes            | 101 | 4.12 | .051 | .612 |
|                                                                                      | No             | 15  | 4.18 | .130 |      |
|                                                                                      | Total          | 116 | 4.13 | .047 |      |
| Mean total confidence score                                                          | Yes            | 101 | 4.07 | .054 | .361 |
|                                                                                      | No             | 15  | 3.85 | .214 |      |
|                                                                                      | Total          | 116 | 4.04 | .055 |      |
| Mean total understanding and confidence score                                        | Yes            | 101 | 4.09 | .047 | .470 |
|                                                                                      | No             | 15  | 4.00 | .165 |      |
|                                                                                      | Total          | 116 | 4.08 | .046 |      |
| Mann-Whitney U test                                                                  |                |     |      |      |      |
| n = number of respondents                                                            |                |     |      |      |      |

### Participants' satisfaction with oral health training (process evaluation)

Participants were asked their opinions on the face-to-face oral health training session using three five-point Likert items (Table 5.5) and three open-ended questions. Over three-quarters of staff (n = 91, 78.4%) found the training 'very' or 'extremely' beneficial. Eight in 10 (n = 94, 81%) responded that the length of the training was 'very' or 'extremely' appropriate, with only one person indicating that it was 'not at all' appropriate. The vast majority of Neami staff (n = 105, 90.5%) also felt that the content was appropriate. There were no significant differences in responses dependent upon engagement in direct consumer support.

Table 5.5 Participants' satisfaction with oral health training (n = 116)

|                                              | Not at all |    | Slightly |     | Somewhat |      | Very |      | Extremely |      |
|----------------------------------------------|------------|----|----------|-----|----------|------|------|------|-----------|------|
|                                              | N          | %  | N        | %   | N        | %    | N    | %    | N         | %    |
| <i>Was the training beneficial?</i>          | -          | -  | 2        | 1.7 | 23       | 19.8 | 76   | 65.5 | 15        | 12.9 |
| <i>Was the training length appropriate?</i>  | 1          | .9 | 1        | .9  | 20       | 17.2 | 74   | 63.8 | 20        | 17.2 |
| <i>Was the training content appropriate?</i> | -          | -  | -        | -   | 11       | 9.5  | 82   | 70.7 | 23        | 19.8 |
| Chi-square test                              |            |    |          |     |          |      |      |      |           |      |
| n = number of respondents                    |            |    |          |     |          |      |      |      |           |      |

Mean scores were calculated for each five-point Likert item and the mean total satisfaction score was calculated by combining the results for all three training-related Likert items (Table 5.6). The content of the training was rated most highly (M = 4.10, SE 0.05). Although the length (mean 3.96, SE 0.063) and benefit (M = 3.90, SE 0.058) also achieved high scores. Statistically significant differences in means were found between Neami sites for how beneficial training was, ranging from 3.00 to 4.36 ( $\chi^2(11) = 29.468$ ,  $p = 0.002$ ). Significant differences were also found between sites for mean total satisfaction scores ( $\chi^2(11) = 29.772$ ,  $p = 0.002$ ). However, no significant differences were found between those who provided direct consumer support and those who did not ( $p > 0.05$ ).

Table 5.6 Mean satisfaction scores for oral health training, dependent upon direct consumer support (n = 116)

|                                  | Direct Support | N   | Mean | SE   | Sig. |
|----------------------------------|----------------|-----|------|------|------|
| Beneficial                       | Yes            | 101 | 3.87 | .064 |      |
|                                  | No             | 15  | 4.07 | .118 | .255 |
|                                  | Total          | 116 | 3.90 | .624 |      |
| Length                           | Yes            | 101 | 3.97 | .064 |      |
|                                  | No             | 15  | 3.87 | .236 | .973 |
|                                  | Total          | 116 | 3.96 | .677 |      |
| Content                          | Yes            | 101 | 4.09 | .053 |      |
|                                  | No             | 15  | 4.20 | .145 | .449 |
|                                  | Total          | 116 | 4.10 | .534 |      |
| Mean training satisfaction score | Yes            | 101 | 3.98 | .052 |      |
|                                  | No             | 15  | 4.04 | .130 | .532 |
|                                  | Total          | 116 | 3.99 | .519 |      |
| Mann-Whitney U test              |                |     |      |      |      |
| n = number of respondents        |                |     |      |      |      |

A significant positive correlation was found between respondents' self-rated understanding and confidence scores and training satisfaction scores ( $r_s = 0.275$ ,  $p = 0.038$ ), meaning those who rated their understanding and confidence highest also had higher levels of satisfaction with the oral health training.

### Participant feedback

Participants were asked three open-ended questions regarding the oral health training: 'What did they learn?', 'What did they find most useful about the training?' and 'How could the oral health training be improved?' (Table 5.7) Overall, 90 (77.6%) participants commented on what they had learned, 80 (70%) provided feedback on what they found useful, and 57 (49.1%) commented in the text box which asked how the training could be improved. These responses were analysed and themes identified.

In relation to knowledge acquired, the most frequently reported learning was 'the links between mental health and oral health'. While a number of participants mentioned that the training reinforced what they already knew, others stated that they learned information about oral diseases and some new simple strategies to reduce oral health risks (e.g. use a soft-bristled toothbrush, do not brush immediately after eating).

A number of respondents commented on the relevance of oral health promotion to their professional role in supporting people living with severe mental illness. The evaluation survey indicated that staff feel they have the ‘information that will support [them] to have a conversation about oral health with consumers’. They also indicated that the information about eligibility criteria for public dental services, and how to refer consumers to dental services, was very useful.

As mentioned earlier, the Neami oral health resources were updated prior to delivery of the face-to-face training. Survey feedback highlighted that participants found the revised oral health resources useful and recognised the change to more ‘consumer friendly language’. This contextual appropriateness of educational resources is essential in a community mental health setting.

In considering how the training could be improved, the majority of comments received were complementing the BOH students on their presentation skills or stating that they had no suggestions for improvements. However, a number of Neami staff mentioned the length of the training and suggested that ‘a little more time for the presentation’ would be better. In addition to the questions and answers activity, some staff thought the training could be ‘more interactive’ and ‘more specific’ to Neami and the mental health field, and proposed the inclusion of scenarios and role-play activities as part of the training. There were a few comments about using the correct language, and one CRSW cautioned students to ‘be aware of “othering” mental health consumers by referring to non-mental health consumers as “normal” people’. While one of the objectives was for staff to understand how to refer consumers to dental services, it was recommended that training include ‘more info [sic] about engaging with local [dental] services’. The suggestions from this question are particularly important for the planning and delivery of professional development during Stage Two of this project.

**Table 5.7 Feedback from open-ended questions in post-training survey**

| <i><b>What did you learn?</b></i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <i><b>What did you find useful?</b></i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <i><b>How to improve?</b></i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>‘Found it very useful. Succinct and relevant. Increased knowledge of oral cancers, link between poor oral health and difficulty in managing diabetes. Also pH levels following eating - very informative.’</p> <p>‘The effects of meds on oral health and possible solutions to combat these complications.’</p> <p>‘I learned that the risk of acidic environment in the mouth can increase risk of oral disease.’</p> <p>‘Pathways to support consumers re oral health.’</p> <p>‘There are a variety of oral health conditions that can effect [sic] people and there are some basic steps we can employ to minimise these.’</p> <p>‘Relationship between mental, physical and oral health’</p> <p>‘The higher risks of dental issues in people with mental illness’</p> <p>‘To monitor dental health of consumers on a more regular basis.’</p> <p>‘Mouth wash is bad.’</p> <p>‘How to talk about oral health to consumers. What products to use/what to avoid. That they are priority [access].’</p> | <p>‘The handouts to provide to consumers in consumer friendly language.’</p> <p>‘Resources with easy to understand info.’</p> <p>‘The relevance of the information [to] the people we work with.’</p> <p>‘Simple and direct.’</p> <p>‘a reminder about the importance of discussing oral health with consumers.’</p> <p>‘The products to recommend to consumers, relating this to the health prompt and the link between mental health and oral health.’</p> <p>‘Revised resources.’</p> <p>‘Reinforce information I had learnt from previous presentation.’</p> <p>‘The ‘reminder’ factor.’</p> <p>‘Keep dental and wider physical health effects on the radar in day to day work.’</p> <p>‘It was a reminder for myself and as a CRSW to go to the dentist. How important it is.’</p> <p>‘Information on accessing public dental health services.’</p> | <p>‘A little more time for the presentation.’</p> <p>‘More harm minimisation strategies - it is very difficult for consumers to cut back on sugar so what can they do to minimise damage.’</p> <p>‘Perhaps be aware of “othering” mental health consumers by referring to non-mental health consumers as “normal” people.’</p> <p>‘It was great. Maybe bit more info about engaging with local services.’</p> <p>‘Make it slightly more interactive and ensure that both presenters have an equal role to play in the presentation delivery.’</p> <p>‘Very good training. Recommend for future as well.’</p> <p>‘Could be longer and more engaging, freebies for consumers are always good.’</p> <p>‘Coming up with examples of various scenarios/questions. Thanks!’</p> <p>‘More specific to our actual work - it went too into detail about specific tooth/gum issues which were not as relevant. Having conversations with consumers more relevant.’</p> <p>‘This is the first time I have heard this training and this was very helpful information.’</p> |



## Summary of results

**Hypothesis 1:** Staff who provide direct consumer support will rate their oral health-related knowledge higher than those who do not provide direct consumer support after face-to-face training.

Staff who provide direct consumer support did not rate their oral health-related knowledge higher after face-to-face training than those who do not provide direct consumer support.

**Hypothesis 2:** Staff who provide direct consumer support will rate their oral health-related confidence higher after face-to-face training than those who do not provide direct consumer support.

Staff who provide direct consumer support did rate their oral health-related confidence higher after face-to-face training than those who do not provide direct consumer support. However, this result was not statistically significant.

**Hypothesis 3:** Staff who provide direct consumer support will be more satisfied with face-to-face oral health training than those who do not provide direct consumer support.

Staff who provide direct consumer support were not found to be more satisfied with face-to-face oral health training than those who do not provide direct consumer support.

## Discussion

This component of the project involved process and impact evaluation of face-to-face oral health training delivered by BOH students at twelve Neami sites in metropolitan Melbourne, during October 2015. The training was designed for CRSWs, but was open to any staff member attending the weekly team meeting on the day of delivery. Almost three-quarters (72.4%) of participants were CRSWs, and almost nine-tenths (87.1%) provided direct consumer support. These figures indicate that, in addition to reaching the target audience (i.e. CRSWs), training reached other Neami staff who support consumers as part of their professional role and would therefore have opportunities to promote oral health.

The survey results indicated that participants' level of self-rated understanding of oral health was high after training. Only one person rated their understanding as 'below average' or 'poor', with more than one-in-five rating it as excellent. Staff confidence in relation to oral health promotion was also high, with the majority of participants rating their confidence as

‘above average’ or ‘excellent’ (ranging from 74.2% to 81.9% for each confidence item). The aim of the training was for Neami CRSWs to feel confident when discussing oral health with consumers and referring them to dental services. The results of this survey indicate this aim was achieved, as the majority of staff who provide direct consumer support rated their confidence levels as ‘above average’ or ‘excellent’ for each item. This finding aligns with other studies where oral health training for non-dental professionals was associated with increased confidence incorporating oral health promotion into their professional role. (20, 25, 262-266)

Satisfaction with the face-to-face training was generally high. The majority of Neami staff found the training to be beneficial. Feedback suggested that the information about oral diseases and prevention strategies included were particularly useful. In addition, comments were made that the training would help staff in managing their own oral health. While a few participants suggested that training could be longer, more than 80 per cent felt that the length of the training was appropriate. Staff rated the content of the training even higher, with over 90 per cent classifying it as ‘very’ or ‘extremely’ appropriate. These results suggest that short face-to-face training sessions are acceptable to staff and therefore offer an appropriate method of building workforce capacity to promote oral health. This aligns with the findings of other studies, where workforce training is a fundamental strategy to increase health promotion capacity within organisations. (267, 268) A systematic review of health promotion capacity building conducted in Australia in 2016 noted that a skilled health promotion workforce is an important enabler to effective evidence-based health promotion action. (269) This is important to consider in the next stage of this project in further developing the capacity of the Neami workforce to promote oral health.

In considering participant satisfaction levels, it was interesting to note the significant differences dependent upon the site the worked at. From the survey data, it could be determined that there were significant differences in opinions on how beneficial the training was, and on the length of the training. However, the survey did not evaluate participant satisfaction with the student presenter. Feedback did suggest some students could have made the session more interactive and engaging for participants, but it is not known if these comments correlate with lower training satisfaction scores. Research has shown that trainer disposition is an important attribute that can influence trainee satisfaction levels. (270-272)

This should be considered in planning future oral health training sessions and in developing BOH student's presentation skills.

The results of this study are limited by the fact that oral health knowledge and confidence levels were not measured prior to delivery of the training. Due to time constraints and advice from Neami representatives on the Project Advisory Group, it was decided not to include a pre-test survey. It was believed that the addition of this survey would impinge on the already limited session time and potentially discourage staff from completing the post-training survey. Although it would have been preferable to extend the time allocated to the face-to-face training, this was not possible. The majority of consumer support services provided by Neami are outreach services and the team meeting is the only time when all staff are on site. This means there are many important issues competing for limited time at the weekly meeting. Although the training sessions were scheduled for half an hour, students did report that these time limits were not strictly adhered to, as staff were engaged and asking questions that meant the training ran over time.

In reviewing the suggestions made in the post-training survey for developing future face-to-face oral health PD, the comments correspond with many of the strategies recommended in the capacity building framework. (36) Participants' opinions affirmed: the need for flexibility and adaptability in designing and implementing training; that content should be tailored to ensure it is relevant to participants and contextually appropriate; and the need for training delivery approaches that cater to different learning styles (e.g. interactive, role play, scenarios). Neami staff expect the use of correct terminology, and educating students to use appropriate language will better prepare them for placement in a community mental health setting. Building sustainability into oral health promotion activities is essential and it was suggested that future training should include strategies to develop partnerships with local dental services. This feedback was considered in planning the oral health PD for Stage Two of this project.

### Limitations

The survey design had a number of limitations. As it used a post-test only design, it was not possible to measure changes in participants' oral health understanding and confidence. In addition, the survey did not assess actual knowledge levels after training but relied on participants' self-reporting their level of understanding. The survey also assessed participants' level of satisfaction with the face-to-face training. The comments in the free-text

questions suggest that some of the participants were aware that the BOH students were inexperienced in delivering oral health education sessions; therefore, Neami staff may have over-estimated their level of satisfaction with the training in order to provide positive feedback to the student presenters. These factors may limit the validity of the survey results. (273) Nevertheless, this study provides important information about the acceptability and appropriateness of short face-to-face oral health training sessions in a community mental health setting.

## Chapter conclusion

This chapter presented process and impact evaluation of short face-to-face training sessions delivered by BOH students at twelve Neami sites in metropolitan Melbourne, in October 2015. The objectives of this face-to-face training were for support staff to understand common oral diseases and their causes, and to be confident in discussing oral health with consumers and supporting them to access dental services. Although limited by the post-test only design, the findings from this survey indicate that the study objectives were achieved. Participants' feedback and opinions on training imply that a short face-to-face training session is an acceptable and appropriate oral health professional development option in a community mental health setting.

Before commencing capacity building efforts in earnest, it was important to investigate oral health promotion activity within Neami. The next chapter, which was the final Stage One study, provides an overview of a web-based cross sectional survey which explored Neami CRSWs oral health-related knowledge, attitudes and professional practices.

## **Chapter 6 – Exploring Neami Community Rehabilitation and Support Workers oral health-related knowledge, attitudes and professional practices: An anonymous cross-sectional web-based survey**

This chapter presents a study undertaken to explore Neami Community Rehabilitation and Support Workers oral health-related knowledge, attitudes and professional practices. The research method utilised in this study was an anonymous cross-sectional web-based survey and it was conducted between November 2015 and March 2016.

## Study overview

Research within Neami indicates that consumers want support to improve their physical health status. Neami is committed to health promotion and oral health remains one of the organisation's physical health priority areas. (32) CRSWs are the Neami team members who provide the majority of direct consumer support services. They are also responsible for administering the Neami Health Prompt screening tool, to identify consumers' unmet health needs and their personal physical health goals. As CRSWs are the staff cohort with the greatest opportunity to engage consumers in oral health conversations, it is important to implement workforce development strategies to build CRSWs capacity to promote oral health.

At the time of this exploratory study, little was known about the oral health-related knowledge, attitudes and professional practices of mental health support workers.<sup>16</sup> Before appropriate professional development activities could be developed, it was necessary to understand what Neami CRSWs already knew about oral health, what their attitudes were to oral health promotion and what their current oral health promotion practices were when working with consumers. Therefore, a cross sectional survey of Neami CRSWs who provide direct consumer support was conducted in November 2015. This study is important to the oral health field, and provides valuable information that can be used in developing oral health promotion programs for community mental health settings.

## Research question

What are the oral health-related knowledge, attitudes and professional practices of Neami Community Rehabilitation and Support Workers?

## Hypotheses

1. CRSWs who have had oral health training in the past 12-months will have better oral health-related KAP than CRSWs who have not had training.
2. CRSWs in Victoria will have better oral health-related KAP than CRSWs in other states.
3. CRSWs who have worked at Neami for at least two years will have better oral health-related KAP than CRSWs who have worked at Neami for less than two years.

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<sup>16</sup> To the best of our knowledge, this was the first survey exploring mental health support workers oral health-related KAP.

## Methods

An anonymous cross-sectional web-based survey of Neami Community Rehabilitation and Support Workers was conducted between November 2015 and March 2016. Ethics approval for this study was granted by the Human Research Ethics Committee at the University of Melbourne (ethics ID 1544795) and by the Research and Evaluation Committee at Neami National (Appendices 4 & 6).

Online surveys have many advantages including speed, economy, convenience and simplicity. (274, 275) Although email surveys have been found to have a lower response rate than paper-based mail surveys, (276) it is common practice for Neami staff to complete web-based questionnaires using an online survey tool (i.e. Survey Gizmo). Therefore, this method was chosen to administer the survey to maintain consistency with organisational protocols and to follow a format with which potential respondents were already familiar.

The 59-item survey instrument (Appendix 11) was purpose-designed to take approximately 15 minutes to complete, as research shows that shorter questionnaires have higher response rates. (277) The majority of the survey questions were five-point Likert items, although it did include some sliding scale and multiple-response questions. Knowledge questions were adapted from validated survey tools used in other studies conducted through the Melbourne Dental School and in consultation with oral health experts. (278, 279) The candidate, in collaboration with the Project Advisory Group, developed the attitudes and professional practices questions. The questionnaire was designed to reflect the wording and question-style used in Neami staff surveys. The survey was created in Survey Gizmo, (280) which was the online survey tool preferred by Neami. It was piloted on a sample of six Neami staff members, who had experience working with consumers but were not part of the study pool, to test validity and reliability before necessary revisions were made.

The self-administered survey was anonymous, but respondents were asked to create a unique identifier code using the same method as in the post-training survey<sup>17</sup> (to allow participant matching when the survey was repeated in Stage Three of this project). No personal information was collected, apart from basic employment details (i.e. site location and years worked at Neami).

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<sup>17</sup> The first three letters of their mother's maiden name and the last two digits of the year they finished high school

The survey included questions to assess CRSWs on the following:

- knowledge about oral health issues (11 items), oral disease prevention (18 items), risk factors and barriers to oral health care (10 items)
- self-rated oral health understanding and confidence (7 items) and their attitudes to oral health promotion (13 items)
- current oral health promotion practices (6 items)
- opinions on oral health-related workforce training (6 items).

Potential participants were all CRSWs currently providing direct support services to Neami consumers. (As previously mentioned, CRSWs are the staff group who implement the Neami Health Prompt and are most likely support consumers to achieve their individual physical health goals, including oral health.) Neami indicated that organisational survey response rates were usually in the region of 35–50% and suggested that, in order to maximise the number of respondents, all CRSWs be invited to participate in the survey. The Project Advisory Group approved this approach. As of November 2015, there were 471 CRSWs employed at over 50 locations throughout Australia. Therefore, the expected sample size was between 165–236 CRSWs. A sample of 128 was deemed large enough to detect a medium effect size of 0.5 between two groups (as outlined in the hypotheses), at a significance level of 0.05 and 80% power (G\* Power © Version 3.1.9.2.)

Neami provided a list of all CRSW email addresses, and email invitations were sent to subjects that included a cover letter explaining the study and a link to the web-based survey, for those wishing to participate. The plain language statement was included in Survey Gizmo (Appendix 11) and respondents were advised that participation was voluntary, and that by choosing to continue they were indicating their consent to participate in the study. CRSWs who did not provide direct consumer support were excluded from the study.

In efforts to maximise response rates, the survey steps outlined by Dillman were followed (281). This included notifying potential participants about the survey prior to the invitation email being sent, keeping the cover letter brief, and sending a follow-up email a week after the invitation email thanking those who had already completed the questionnaire and reminding others of the importance of the study.



## Data analysis

This survey collected quantitative data. Univariate statistics were used to describe the respondents' characteristics (e.g. location, years worked at Neami and participation in oral health training in the previous twelve months) and responses to each of the survey questions. Bivariate analysis of nominal and ordinal variables was performed using Chi-squared and Fisher's Exact tests. In order to perform further analyses, mean scores were calculated from Likert items (responses were scored from 1 through to 5, dependent upon the direction of the responses). The results for grouped Likert items were combined into single variables including: oral health knowledge, self-rated understanding and confidence, attitudes to oral health promotion and perceived barriers to oral health promotion. For continuous variables, Mann-Whitney U tests and Kruskal-Wallis H tests were conducted (significant Kruskal-Wallis H results were followed by pairwise comparisons using Dunn's procedure with Bonferroni corrections for multiple comparisons) to compare:

1. those working in Victoria and those working outside Victoria (differences between individual states were also compared),
2. those who had worked at Neami for more than two years and those who had not, and
3. those who had and those who had not had oral health training.

Correlations were run using Spearman's rho. Linear regression models were computed to assess the relationship between independent variables (e.g. state in which located, years worked at Neami, and participation in oral health training) and the dependent variables of interest (i.e. knowledge, understanding and confidence, barriers to oral health promotion, and attitudes to oral health promotion). Logistic regression analysis was performed to determine the effects of nominal variables (e.g. being located in Victoria, working at Neami for longer than two years, and having participated in oral health training) and ordinal variables (e.g. knowledge, self-rated understanding and confidence, barriers to oral health promotion, and attitudes to oral health promotion) on the provision of oral health support. Normality plots of the residuals and normality tests for standardised residuals identified no violations of the models' assumptions. As this was an exploratory study, all p-values < 0.05 were considered significant. Data manipulation and analysis was conducted using SPSS version 23.0. (261)

## Results

A total of 166 CRSWs responded to the web-based survey (RR 35.24%). However, 23 respondents partially completed the survey, one chose to withdraw and another respondent was disqualified, as they did not currently provide direct consumer support in their work role. This meant the total number of completed surveys included in the analysis was 141, giving a final response rate of 30 per cent.

### Profile of respondents

As mentioned previously, Neami delivers services in five states in Australia. Almost half of respondents were from Victoria (n = 69, 48.93%), with the second highest number being from South Australia (n = 26, 18.4%) (Table 6.1). More than 60 per cent of respondents in each state had worked at Neami for less than two years. In fact, almost three-quarters (n = 104, 73.76%) of all respondents had commenced working with Neami within the previous 24 months. There were no significant differences between states for the number of years worked at Neami (FET,  $p = 0.40$ ).

Table 6.1 Profile of survey respondents, by state (n =141)

|                            |     | NSW |      | QLD |      | SA |      | VIC |      | WA |      | Total |       |
|----------------------------|-----|-----|------|-----|------|----|------|-----|------|----|------|-------|-------|
|                            |     | N   | %    | N   | %    | N  | %    | N   | %    | N  | %    | N     | %     |
| Location                   |     | 23  | 16.3 | 9   | 6.4  | 26 | 18.4 | 69  | 48.9 | 14 | 9.9  | 141   | 100.0 |
| Years worked at Neami      | <1  | 12  | 55.2 | 5   | 55.6 | 8  | 30.8 | 25  | 36.2 | 7  | 50.0 | 57    | 40.4  |
|                            | 1-2 | 4   | 17.4 | 1   | 11.1 | 8  | 30.8 | 30  | 43.5 | 4  | 28.6 | 47    | 33.3  |
|                            | 2-3 | 4   | 17.4 | 2   | 22.2 | 4  | 15.4 | 7   | 10.1 | 1  | 7.1  | 18    | 12.8  |
|                            | 3-4 | 2   | 8.7  | 1   | 11.1 | 5  | 19.2 | 3   | 4.3  | 1  | 7.1  | 12    | 8.5   |
|                            | >4  | 1   | 4.3  | -   | -    | 1  | 3.8  | 4   | 5.8  | 1  | 7.1  | 7     | 5.0   |
| OH training ***            | Yes | 1   | 4.3  | 2   | 22.2 | 3  | 11.5 | 49  | 71.0 | -  | -    | 55    | 39.0  |
|                            | No  | 22  | 95.7 | 7   | 77.8 | 23 | 88.5 | 20  | 29.0 | 14 | 100  | 86    | 61.0  |
| Aware OH program **        | Yes | 13  | 56.5 | 5   | 55.6 | 11 | 42.3 | 57  | 82.6 | 5  | 35.7 | 91    | 64.5  |
|                            | No  | 10  | 43.5 | 4   | 44.4 | 15 | 57.3 | 12  | 17.4 | 9  | 64.3 | 50    | 35.5  |
| Used Neami OH resources*** | Yes | 4   | 17.4 | 3   | 33.3 | 8  | 30.8 | 38  | 55.1 | 2  | 14.3 | 55    | 39.0  |
|                            | No  | 19  | 82.6 | 6   | 66.7 | 18 | 69.2 | 31  | 44.9 | 12 | 85.7 | 86    | 61.0  |

Chi-square tests

NSW = New South Wales, QLD = Queensland, SA = South Australia, VIC = Victoria, WA = Western Australia

\*\* Significant differences at the alpha level  $p < 0.01$

\*\*\* Significant differences at the alpha level  $p < 0.001$

CRSWs were asked if they had participated in oral health training in the preceding twelve months (Table 6.1). Almost two-fifths ( $n = 55$ , 39%) indicated that they had training, the majority of whom were located in Victoria ( $n = 49$ , 89%). The difference between states in training participation was statistically significant (FET,  $p < 0.0001$ ). About seven-in-ten respondents from Victoria ( $n = 49$ , 71.01%) had oral health training, and the majority of those had participated in training sessions provided by the Bachelor of Oral Health students from the Melbourne Dental School ( $n = 42$ , 85.71%). It was interesting to note that nine respondents (Queensland = 1, South Australia = 1, Victoria = 7) had oral health training outside of Neami; unfortunately, no information was gathered about where this training occurred or who it was delivered by.

The majority of respondents were aware of the Neami oral health program ( $n = 91$ , 64.5%) (Table 6.1). More CRSWs in Victoria knew about the oral health program ( $n = 57$ , 82.6%) than those outside of Victoria ( $n = 34$ , 47.2%) ( $\chi^2(2) = 19.829$ ,  $p < 0.0001$ ). Unsurprisingly, less of those who had not had oral health training knew about the Neami oral health program (FET,  $p < 0.0001$ ). The number of years worked at Neami was not associated with awareness of the oral health program.

### Use of the Neami oral health resources

CRSWs were asked if they use the Neami oral health resources. While the majority of respondents were aware of the Neami oral health program, only two-fifths ( $n = 55$ , 39%) had ever used the oral health resources (Table 6.1). Being located in Victoria, working at Neami for more than two years and participation in oral health training were all significantly associated with use of oral health resources ( $p < 0.0001$ ). Victoria was the only state where the majority of CRSWs (55.1%) had used the resources, which was not surprising given that Neami sites in Victoria had been offered oral health training from the BOH students at the Melbourne Dental School. The vast majority of those who used the resources who had also participated in oral health training were in Victoria ( $n = 28$ , 84.8%).

CRSWs who had used the resources ( $n = 55$ ) were asked their opinions on them using six five-point Likert items (Table 6.2). Respondents generally 'agreed' or 'strongly agreed' that they found the resources useful ( $n = 51$ , 92.7%), relevant ( $n = 53$ , 96.4%), informative ( $n = 53$ , 96.4%), user friendly ( $n = 37$ , 67.2%) and comprehensive ( $n = 36$ , 65.4%). The majority of users said they were not confusing ( $n = 34$ , 61.8%); however, opinions on the wordiness of the resources were more neutral. There were no significant differences in responses

dependent upon location or years worked at Neami. Unsurprisingly, those who had participated in oral health training, and therefore had been instructed how to use the resources, found them significantly more informative than those who had not had oral health training ( $\chi^2(2) = 7.064$ ,  $p = 0.019$ ).

Table 6.2 CRSWs' opinions on the Neami oral health resources

|                                                         | Strongly disagree |      | Disagree |      | Neutral |      | Agree |      | Strongly agree |      |
|---------------------------------------------------------|-------------------|------|----------|------|---------|------|-------|------|----------------|------|
|                                                         | N                 | %    | N        | %    | N       | %    | N     | %    | N              | %    |
| Useful                                                  | -                 | -    | -        | -    | 4       | 7.3  | 44    | 80.0 | 7              | 12.7 |
| Relevant                                                | -                 | -    | -        | -    | 2       | 3.6  | 41    | 74.5 | 12             | 21.8 |
| Informative *                                           | -                 | -    | -        | -    | 2       | 3.6  | 43    | 78.2 | 10             | 18.2 |
| User friendly                                           | 1                 | 1.8  | 1        | 1.8  | 16      | 29.1 | 29    | 52.7 | 8              | 14.5 |
| Comprehensive                                           | -                 | -    | 2        | 3.6  | 17      | 30.9 | 30    | 54.5 | 6              | 10.9 |
| Confusing                                               | 7                 | 12.7 | 27       | 49.1 | 16      | 29.1 | 4     | 7.3  | 1              | 1.8  |
| Too much text                                           | 4                 | 7.3  | 15       | 27.3 | 25      | 45.5 | 10    | 18.2 | 1              | 1.8  |
| Chi-square tests                                        |                   |      |          |      |         |      |       |      |                |      |
| * Significant differences at the alpha level $p < 0.05$ |                   |      |          |      |         |      |       |      |                |      |

## Oral health knowledge

This section assessed respondents' knowledge of prevention of dental caries (tooth decay) and periodontal (gum disease), and risk factors associated with oral health. In addition to the Likert-item questions, it included eleven oral health knowledge questions, which were used to calculate respondents' oral health knowledge scores.

### *Caries prevention*

Generally, CRSWs had good understanding of behaviours that can reduce the risk of dental caries (Table 6.3). Almost all respondents believed that brushing teeth ( $n = 140$ , 99.3%) and visiting a dental practitioner regularly ( $n = 132$ , 93.6%) are 'very important' or 'important' in preventing dental caries. Nine-tenths ( $n = 128$ , 90.8%) also believed flossing to be 'very important' or 'important'. The majority of respondents rated fluoride toothpaste 'important' or 'very important' ( $n = 105$ , 74.5%); however, this figure was lower for drinking fluoridated water ( $n = 85$ , 60.3%). The vast majority (>90%) knew that cutting down on sugary foods and drinks was important to reduce the risk of tooth decay, but there was less awareness about the role of chewing sugar free gum after eating in preventing dental caries.

Victorian CRSWs (FET,  $p = 0.046$ ) and those who had participated in oral health (FET,  $p = 0.026$ ) training rated drinking fluoridated as very important more than other groups. Significantly more of those in Victoria also identified chewing sugar free gum as important in caries prevention ( $\chi^2 (3) = 9.021$ ,  $p=0.029$ ). No other significant differences in responses between groups were found.

Table 6.3 CRSWs' opinions on the importance of behaviours in preventing dental caries

|                       | Not at all important |      | Somewhat important |      | Important |      | Very important |      | Do not know |      |
|-----------------------|----------------------|------|--------------------|------|-----------|------|----------------|------|-------------|------|
|                       | N                    | %    | N                  | %    | N         | %    | N              | %    | N           | %    |
| Brushing              | 1                    | .7   | -                  | -    | 12        | 8.5  | 128            | 90.8 | -           | -    |
| Flossing              | 1                    | .7   | 12                 | 8.5  | 29        | 20.6 | 99             | 70.2 | -           | -    |
| Ab mouth rinse        | 21                   | 14.9 | 49                 | 34.8 | 39        | 27.7 | 27             | 19.1 | 5           | 3.5  |
| F water*              | 9                    | 6.4  | 33                 | 23.4 | 38        | 27.0 | 47             | 33.3 | 13          | 9.2  |
| F toothpaste          | 3                    | 2.1  | 20                 | 14.2 | 42        | 29.8 | 63             | 44.7 | 13          | 9.2  |
| Reduce sugary foods   | -                    | -    | 7                  | 5.0  | 22        | 15.6 | 110            | 78.0 | 2           | 1.4  |
| Reduce sugary drinks  | -                    | -    | 4                  | 2.8  | 17        | 12.1 | 118            | 83.7 | 2           | 1.4  |
| Sugar free gum        | 31                   | 22.0 | 44                 | 31.2 | 35        | 24.8 | 15             | 10.6 | 16          | 11.3 |
| Regular dental visits | 1                    | .7   | 6                  | 4.3  | 23        | 16.3 | 109            | 77.3 | 2           | 1.4  |

Chi-square tests

\*Significant differences at the alpha level  $p<0.05$

Mean scores were calculated<sup>18</sup> in order to conduct further analysis and to rank each preventive behaviour according to responses (Table 6.5). Brushing teeth was rated the most important, followed by reducing consumption of sugar sweetened foods and drinks. Victorian CRSWs rated flossing ( $U = 2,911.5$ ,  $z = 2.196$ ,  $p = 0.028$ ) significantly more important in preventing caries than other CRSWs. Those who had participated in oral health training also rated flossing ( $U = 2,434$ ,  $z = 0.582$ ,  $p = 0.013$ ) significantly more important in preventing dental caries, compared to those who had no training. There were no significant differences in mean scores for caries prevention associated with years worked at Neami.

<sup>18</sup> Scored from 'not at all important' = '1' to 'very important' = '4'. 'Do not know' responses were excluded from this analysis.

*Periodontal disease prevention*

CRSWs were asked to rate the importance of the same preventive behaviours in preventing periodontal disease. Only one participant did not know brushing and flossing are important in the prevention of periodontal disease (Table 6.4). Almost all CRSWs (n = 134, 95.1%) were of the opinion that regular dental visits were important or very important. Over eight in 10 (n = 117, 83%) of CRSWs believed using antibacterial mouth rinse has a role to play in preventing periodontal disease, which is similar to the response for the role of mouth rinse in preventing dental caries (81.6%).

Table 6.4 CRSWs' opinions on the importance of behaviours in preventing periodontal disease

|                       | Not at all important |      | Somewhat important |      | Important |      | Very important |      | Do not know |      |
|-----------------------|----------------------|------|--------------------|------|-----------|------|----------------|------|-------------|------|
|                       | N                    | %    | N                  | %    | N         | %    | N              | %    | N           | %    |
| Brushing              | -                    | -    | -                  | -    | 18        | 12.8 | 121            | 85.8 | 1           | .7   |
| Flossing              | -                    | -    | 8                  | 5.7  | 21        | 14.9 | 112            | 79.4 | -           | -    |
| Ab mouth rinse        | 13                   | 9.2  | 30                 | 21.3 | 40        | 28.4 | 47             | 33.3 | 11          | 7.8  |
| F water **            | 16                   | 11.3 | 39                 | 27.7 | 31        | 22.0 | 35             | 24.8 | 20          | 14.2 |
| F toothpaste          | 13                   | 9.2  | 28                 | 19.9 | 33        | 23.4 | 50             | 35.5 | 16          | 11.3 |
| Reduce sugary foods   | 1                    | .7   | 14                 | 9.9  | 35        | 24.8 | 82             | 58.2 | 9           | 6.4  |
| Reduce sugary drinks  | 1                    | .7   | 13                 | 9.2  | 33        | 23.4 | 86             | 61.0 | 8           | 5.7  |
| Sugar free gum        | 27                   | 19.1 | 40                 | 28.4 | 31        | 22.0 | 21             | 14.9 | 22          | 15.6 |
| Regular dental visits | 1                    | .7   | 3                  | 2.1  | 20        | 14.2 | 114            | 80.9 | 3           | 2.1  |

Chi-square tests

\*\*Significant differences at the alpha level  $p < 0.01$ 

While CRSWs generally had good understanding of oral hygiene practices that are important in reducing the risk of periodontal disease, there was some confusion about the role of other behaviours (Table 6.4). The majority of respondents failed to recognise that drinking fluoridated water and using fluoride toothpaste are 'not at all important' in preventing periodontal disease (n = 125, 88.7% and n = 27, 90.7% respectively). Only one person, from New South Wales, correctly answered that cutting down on sugary foods and drinks is 'not at all important' in preventing periodontal disease. In fact, over eighty per cent of participants believed these dietary behaviour changes to be 'important' or 'very important'. Again, there was confusion regarding the role of chewing gum, with only one-fifth (n = 27, 19.1%) correctly indicated that chewing sugar free gum after eating was 'not at all important' in preventing periodontal disease. It was interesting to note that significantly more of those who

had worked at Neami for longer than two years knew that drinking fluoridated water is ‘not at all important’ in preventing periodontal disease (FET,  $p = 0.004$ ). There were no significant differences in responses between groups based on location or participation in oral health training.

Table 6.5 Mean scores for importance of behaviours in preventing dental caries and periodontal disease

|                       | Caries Prevention |     |     |       | Perio Prevention |     |     |       |
|-----------------------|-------------------|-----|-----|-------|------------------|-----|-----|-------|
|                       | Mean              | SE  | N   | Rank† | Mean             | SE  | N   | Rank† |
| Brushing              | 3.89              | .03 | 141 | 1     | 3.87             | .03 | 139 | 1     |
| Flossing              | 3.60 *            | .06 | 141 | 5     | 3.74             | .05 | 141 | 3     |
| Ab mouth rinse        | 2.53              | .09 | 136 | 8     | 2.93             | .09 | 130 | 7     |
| F water               | 2.97              | .09 | 127 | 7     | 2.70             | .94 | 121 | 8     |
| F toothpaste          | 3.29              | .07 | 128 | 6     | 2.97             | .09 | 124 | 6     |
| Reduce sugary foods   | 3.74              | .05 | 139 | 3     | 3.50             | .06 | 132 | 5     |
| Reduce sugary drinks  | 3.82              | .04 | 139 | 2     | 3.53             | .06 | 133 | 4     |
| Sugar free gum        | 2.27              | .09 | 125 | 9     | 2.39             | .09 | 119 | 9     |
| Regular dental visits | 3.73              | .05 | 139 | 4     | 3.79             | .04 | 138 | 2     |

Mann-Whitney U tests

† Rank order based on mean scores for importance of preventive behaviours

\*Significant differences at the alpha level  $p < 0.05$

When comparing mean scores for periodontal prevention behaviours, again, tooth brushing was scored most important (Table 6.5). This was followed by regular dental visits and flossing, which is different from the rank order for caries prevention. No significant differences were found between groups dependent upon location, years at Neami or participation in oral health training.

### *Risk behaviours*

CRSWs were asked their opinion on the importance of a number of risk behaviours known to be associated with adverse health outcomes (nine Likert items), in causing oral health problems (Table 6.6). The majority of respondents recognised that poor diet and nutrition ( $n = 123$ , 87.2%), smoking ( $n = 120$ , 85.1%), excessive alcohol consumption ( $n = 96$ , 68.1%) and illicit drug use (64.5%) are ‘very important’ oral health risk factors. However, less than one-fifth ( $n = 24$ , 17%) of CRSWs knew that lack of physical exercise is ‘not at all important’ in relation to oral health and over one quarter ( $n = 37$ , 26.2%) believed it to be

‘very important’. Over half of participants did not know that excessive sun exposure ( $n = 74$ , 52.5%) or unprotected sexual activity ( $n = 72$ , 51%) are oral health risk factors, demonstrating lack of knowledge regarding the link between sun exposure and oral cancer of the lip and the potential for transmission of sexually transmissible infections (STIs) through unprotected oral sex. There were no significant differences in responses dependent upon location, years worked at Neami or participation in oral health training.

When comparing means scores for each risk behaviour, diet, smoking and alcohol consumption were rated as the most important risk factors (Table 6.7). Of note is that lack of physical activity was thought to be a more important oral health risk factor than unprotected sexual activity or sun exposure. CRSWs in Victoria rated excessive alcohol consumption significantly more important than CRSWs elsewhere ( $U = 2,903$ ,  $z = 2.107$ ,  $p = 0.035$ ). Those who had worked at Neami for less than two years also rated excessive alcohol consumption of greater importance ( $U = 1,532$ ,  $z = -2.240$ ,  $p = 0.025$ ). There were no significant differences dependent upon participation in oral health training.

Table 6.6 Perceived level of importance of risk behaviours in relation to oral health

|                               | Not at all important |      | Somewhat important |      | Important |      | Very important |      | DNK/Missing |      |
|-------------------------------|----------------------|------|--------------------|------|-----------|------|----------------|------|-------------|------|
|                               | N                    | %    | N                  | %    | N         | %    | N              | %    | N           | %    |
| Poor diet and nutrition       | -                    | -    | 1                  | .7   | 16        | 11.3 | 123            | 87.2 | 1           | 0.7  |
| Smoking                       | -                    | -    | 2                  | 1.4  | 19        | 13.5 | 120            | 85.1 | -           | -    |
| Excessive alcohol consumption | -                    | -    | 9                  | 6.4  | 32        | 22.7 | 96             | 68.1 | 4           | 2.8  |
| Lack physical activity        | 24                   | 17.0 | 48                 | 34.0 | 22        | 15.6 | 37             | 26.2 | 10          | 7.1  |
| Excessive sun exposure        | 50                   | 35.5 | 30                 | 21.3 | 13        | 9.2  | 24             | 17.0 | 24          | 17.0 |
| Unprotected sex               | 48                   | 34.0 | 27                 | 19.1 | 15        | 10.6 | 27             | 19.1 | 24          | 17.0 |
| Illicit drug use              | 3                    | 2.1  | 8                  | 5.7  | 35        | 24.8 | 91             | 64.5 | 4           | 2.8  |
| Violence                      | 21                   | 14.9 | 20                 | 14.2 | 32        | 22.7 | 57             | 40.4 | 10          | 7.8  |
| Insufficient vaccinations     | 36                   | 25.5 | 28                 | 19.9 | 18        | 12.8 | 26             | 18.4 | 33          | 23.4 |
| Chi-square tests              |                      |      |                    |      |           |      |                |      |             |      |



Table 6.7 Means for perceived level of importance of risk behaviours in relation to oral health

|                                                                          | Mean | SE   | Rank† |
|--------------------------------------------------------------------------|------|------|-------|
| Poor diet and nutrition                                                  | 3.87 | .030 | 1     |
| Smoking                                                                  | 3.84 | .034 | 2     |
| Excessive alcohol consumption *                                          | 3.64 | .052 | 3     |
| Illicit drug use                                                         | 3.56 | .060 | 4     |
| Violence                                                                 | 2.96 | .098 | 5     |
| Lack physical activity                                                   | 2.55 | .095 | 6     |
| Insufficient vaccinations                                                | 2.31 | .113 | 7     |
| Unprotected sex                                                          | 2.18 | .111 | 8     |
| Excessive sun exposure                                                   | 2.09 | .108 | 9     |
| Chi-square tests                                                         |      |      |       |
| †Rank order based on mean scores for importance of preventive behaviours |      |      |       |
| *Significant differences at the alpha level $p < 0.05$                   |      |      |       |

### Oral health knowledge scores

CRSWs were asked to indicate whether a number of statements about oral health ( $n = 11$ ) were true or false (Table 6.8). Almost all respondents knew that people living with severe mental illness (PLWSMI) experience more oral health issues than the general population ( $n = 135$ , 95.7%), that people with no natural teeth should see an oral health professional regularly ( $n = 130$ , 92.2%) and that increasing sugar consumption will increase tooth decay ( $n = 132$ , 93.6%). Almost nine-tenths ( $n = 125$ , 88.7%) also knew that medications can increase the risk of oral diseases. Although the majority of CRSWs knew that bleeding was not a sign of brushing teeth too hard, one in five ( $n = 31$ , 22%) believed that it was. The majority of respondents ( $n = 113$ , 80.1%) did not know that the bacteria that cause tooth decay can be transmitted from one person to another. In addition, close to a third ( $n = 44$ , 30.5%) did not know that tooth loss was not a normal part of getting older. While half of CRSWs knew heredity is a risk factor for periodontal disease, over 70 per cent ( $n = 100$ ) incorrectly believed heredity is a risk factor for dental caries. Only 20 CRSWs (14.2%) knew that vitamin and mineral supplements cannot help prevent oral diseases.

Table 6.8 CRSWs' responses to oral health knowledge statements

| Oral health statements                                                                | Yes  |      | No   |      | Do not know |      |
|---------------------------------------------------------------------------------------|------|------|------|------|-------------|------|
|                                                                                       | N    | %    | N    | %    | N           | %    |
| PLWSMI experience more oral health problems than the general population *             | 135† | 95.7 | 2    | 1.4  | 4           | 2.8  |
| Vitamin and mineral supplements can help prevent oral diseases                        | 61   | 43.3 | 20†  | 14.2 | 60          | 42.6 |
| Bleeding gums are a sign of brushing teeth too hard **                                | 31   | 22   | 97†  | 68.8 | 13          | 9.2  |
| People with no natural teeth do not need to see an oral health professional regularly | 5    | 3.5  | 130† | 92.2 | 6           | 4.3  |
| The bacteria that cause tooth decay can be transmitted from one person to another     | 28†  | 19.9 | 47   | 33.3 | 66          | 46.8 |
| Medications can increase the risk of oral diseases **                                 | 125† | 88.7 | 3    | 2.1  | 13          | 9.2  |
| Increasing the amount of sugar consumed will increase the amount of tooth decay       | 132† | 93.6 | 6    | 4.3  | 3           | 2.1  |
| Tooth loss is part of getting older                                                   | 24   | 17   | 98†  | 69.5 | 19          | 13.5 |
| Teeth should be brushed with a small headed, soft bristled toothbrush                 | 112† | 79.4 | 4    | 2.8  | 25          | 17.7 |
| Heredity is a risk factor for gum disease                                             | 75†  | 53.2 | 20   | 14.2 | 46          | 32.6 |
| Heredity is a risk factor for tooth decay                                             | 52   | 36.9 | 41†  | 29.1 | 48          | 34.0 |
| Chi-square tests                                                                      |      |      |      |      |             |      |
| † Correct response                                                                    |      |      |      |      |             |      |
| * Significant differences at the alpha level $p < 0.05$                               |      |      |      |      |             |      |
| ** Significant differences at the alpha level $p < 0.01$                              |      |      |      |      |             |      |

Almost all CRSWs in Victoria (97.1%) knew that medications can increase oral health issues, which was significantly more than in those located outside Victoria (FET,  $p = 0.002$ ). More of the CRSWs working at Neami for less than two years knew that people living with severe mental illness experience more oral health issues than the general population (FET,  $p = 0.020$ ). More of those who had participated in oral health training correctly responded to the statements related to medication use (FET,  $p = 0.09$ ) and tooth brushing (FET,  $p = 0.005$ ).

Respondents' knowledge scores were calculated out of a maximum of eleven. The mean knowledge score for all CRSWs was 7.04 (SE 0.127), with a maximum of 10 and minimum of 4 scored (Table 6.9). There were no significant differences in knowledge scores dependent upon being located in Victoria or working at Neami for longer than two years. However, oral health training was associated with significantly higher mean knowledge scores ( $U = 1,885.5$ ,  $z = -2.068$ ,  $p = 0.039$ ). In order to allow more in-depth analysis of results, knowledge scores were also compared by individual state and significant differences were found ( $\chi^2 (4) =$

11.686,  $p = 0.02$ ). CRSWs in Western Australia ( $M = 7.57$ ,  $SE = 0.44$ ) had the highest mean knowledge score, which was significantly higher than those in New South Wales ( $M = 5.96$ ,  $SE = 0.37$ ).

Table 6.9 Comparing mean knowledge scores

|                      | N   | Mean | SE   | Sig. |
|----------------------|-----|------|------|------|
| VIC                  | 69  | 7.23 | .167 | .245 |
| Non-VIC              | 72  | 6.86 | .190 |      |
| >2 years             | 37  | 7.05 | .271 | .754 |
| <2 years             | 104 | 7.04 | .144 |      |
| OH training          | 55  | 7.38 | .177 | .039 |
| No OH training       | 86  | 6.83 | .172 |      |
| All CRSWs            | 141 | 7.04 | .127 |      |
| Mann-Whitney U tests |     |      |      |      |

### Barriers to people living with severe mental illness accessing dental services as perceived by CRSWs

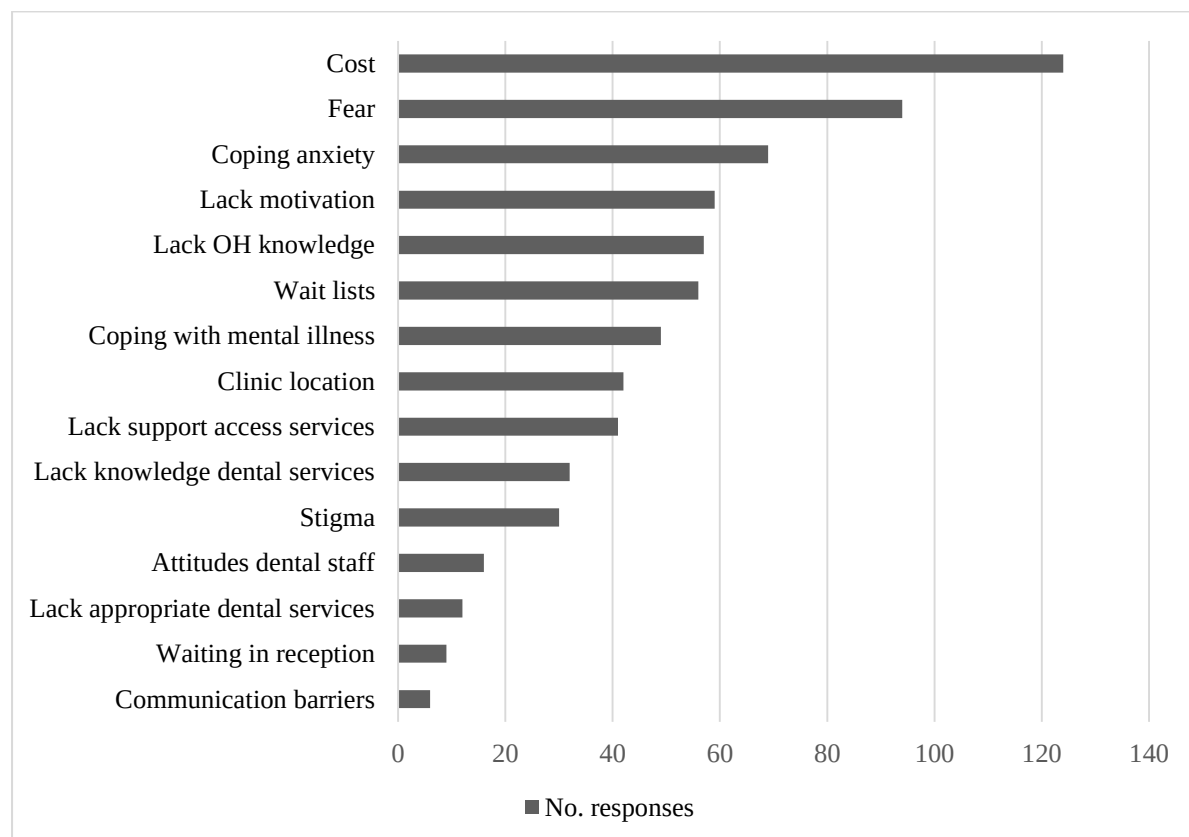
CRSWs opinions were sought on barriers people living with severe mental may experience in accessing dental services. Participants were asked to select what they believe to be the five most important barriers from a list of fifteen possible barriers. Despite the fact that the majority of Neami consumers would have a healthcare card or pension card<sup>19</sup> and therefore be eligible for free or low cost public dental care in all states, cost ( $n = 124$ , 87.9%) was the most frequently selected barrier. Fear, coping with anxiety, lack of motivation and lack of oral health knowledge were the other four most frequently selected barriers (Figure 6.1).

Although CRSWs in Victoria were less likely to select cost as a barrier than those outside of Victoria (82.6% versus 93.1%), the difference did not quite reach statistical significance ( $\chi^2(1) = 3.627$ ,  $p = 0.057$ ). However, a significantly lower proportion of those who selected cost as a barrier had participated in oral health training ( $n = 43$ , 34.7%) ( $\chi^2(1) = 8.104$ ,  $p = 0.004$ ). State in which located and years worked at Neami had no significant association with the selection of cost as a barrier. Respondents working at Neami for longer than two years selected 'lack of knowledge about dental services' significantly more than those who had

<sup>19</sup> Neami does not collect data on consumer concession card status; however, it is assumed by the organisation that the majority of clients would be eligible.

been with the organisation less than two years ( $\chi^2(1) = 4.425, p = 0.035$ ). ‘Waiting times for appointments’ was another barrier where significant differences in were found between states ( $\chi^2(4) = 10.553, p = 0.032$ ); selection ranged from 0% of CRSWs in Queensland to 57.7% in South Australia. Despite the fact that clients referred from mental health services are eligible for priority access to public dental services in Victoria, over two-fifths of Victorian respondents ( $n = 29, 42.0\%$ ) selected wait lists as a barrier. Victorian CRSWs were also more likely to select ‘fear of dental treatment’ as a barrier than their inter-state counterparts were ( $\chi^2(1) = 6.258, p = 0.012$ ).

**Figure 6.1 Barriers to people living with severe mental illness accessing dental services, as perceived by CRSWs**



### CRSWs' self-rated understanding and confidence related to oral health promotion

CRSWS were asked to rate their level of oral health-related understanding and confidence (seven Likert items) (Table 6.10). The majority of Victorian respondents rated their understanding of the links between oral health and mental health as high (52.2%),<sup>20</sup> compared

<sup>20</sup> Categories were collapsed into three levels: low ('poor' and 'below average'), medium ('average') and high ('above average' and 'excellent') for analysis.

to only 35 per cent of those outside Victoria ( $\chi^2 (2) = 7.786, p = 0.020$ ). Significantly more Victorians (52.2%) also rated their confidence using the Neami oral health resources as high compared to those outside of Victoria (22.%) ( $\chi^2 (2) = 18.200, p < 0.0001$ ). When comparing responses in individual states, significantly fewer CRSWs in New South Wales rated their understanding of the links between oral health and general health as 'high' (FET,  $p = 0.001$ ). They also had the lowest proportion of respondents (17.4%) rate their confidence as 'high' in discussing oral health with consumers and using the oral health resources (FET,  $p < 0.01$ ). Those who had oral health training rated themselves significantly higher compared to those who had not training for: understanding of oral health risk factors (FET,  $p = 0.009$ ), understanding of the links between oral health and mental health (FET,  $p = 0.005$ ), and confidence using the Neami oral health resources (FET,  $p < 0.0001$ ). The number of years worked at Neami was not associated with any significant differences in self-rated understanding or confidence.

Table 6.10 CRSWs self-rated oral health-related understanding and confidence

|                                                            | Poor |     | Below average |      | Average |      | Above average |      | Excellent |      |
|------------------------------------------------------------|------|-----|---------------|------|---------|------|---------------|------|-----------|------|
| <b><i>Self-rated level of understanding</i></b>            | No.  | %   | No.           | %    | No.     | %    | No.           | %    | No.       | %    |
| Risk factors associated with poor oral health **           | 1    | 0.7 | 5             | 3.5  | 75      | 53.2 | 53            | 37.6 | 7         | 5    |
| Links between mental health and oral health *              | 1    | 0.7 | 11            | 7.8  | 68      | 48.2 | 53            | 37.6 | 8         | 5.7  |
| Links between oral health and general health and wellbeing | 1    | 0.7 | 5             | 3.5  | 75      | 53.2 | 53            | 37.6 | 7         | 5.0  |
| <b><i>Self-rated level of confidence</i></b>               |      |     |               |      |         |      |               |      |           |      |
| Discussing oral health with consumers                      | 1    | 0.7 | 11            | 7.8  | 73      | 51.8 | 48            | 34.0 | 8         | 5.7  |
| Using Neami oral health resources ***                      | 7    | 5.0 | 25            | 17.7 | 57      | 40.4 | 47            | 33.3 | 5         | 3.5  |
| Supporting consumers with their oral health needs          | 3    | 2.1 | 9             | 6.4  | 61      | 43.3 | 57            | 40.4 | 10        | 7.1  |
| Referring consumers to oral health services                | 1    | 0.7 | 14            | 9.9  | 51      | 36.2 | 50            | 35.5 | 25        | 17.7 |
| Chi-square tests                                           |      |     |               |      |         |      |               |      |           |      |
| * Significant differences at the alpha level $p < 0.05$    |      |     |               |      |         |      |               |      |           |      |
| ** Significant differences at the alpha level $p < 0.01$   |      |     |               |      |         |      |               |      |           |      |
| *** Significant differences at the alpha level $p < 0.001$ |      |     |               |      |         |      |               |      |           |      |

Mean scores were calculated for each item (Table 6.11) and the associations with location, years at Neami and participation in oral health training were explored. Victorians' self-rated

scores were significantly higher than those outside Victoria for understanding oral health risk factors ( $U = 2,939$ ,  $z = 2.137$ ,  $p = 0.033$ ), understanding links between mental health and oral health ( $U = 3,045$ ,  $z = 2.533$ ,  $p = 0.011$ ), confidence using the Neami oral health resources ( $U = 3,483$ ,  $z = 4.364$ ,  $p < 0.0001$ ), and confidence referring consumers to oral health services ( $U = 3,042.5$ ,  $z = 2.426$ ,  $p = 0.015$ ). When comparing results for individual states, CRSWs in New South Wales scored significantly lower than CRSWs in Victoria for understanding the links between mental health and oral health ( $p < 0.05$ ) and referring consumers to dental services ( $p = 0.028$ ).

Means were higher for each item in CRSWs who had oral health training. These results were statistically significant for: understanding oral health risk factors ( $U = 1,770.5$ ,  $z = -2.862$ ,  $p = 0.004$ ); understanding links between mental health and oral health ( $U = 1,633$ ,  $z = -3.388$ ,  $p = 0.001$ ); confidence discussing oral health with consumers ( $U = 1,913.5$ ,  $z = -2.106$ ,  $p = 0.035$ ); confidence using the Neami oral health resources ( $U = 1,456$ ,  $z = -4.070$ ,  $p < 0.0001$ ); confidence supporting consumers with their oral health needs ( $U = 1,779.5$ ,  $z = -2.584$ ,  $p = 0.010$ ); and confidence referring consumers to oral health services ( $U = 1,895$ ,  $z = -2.092$ ,  $p = 0.036$ ). There were no significant differences between mean scores dependent on whether respondents had worked at Neami for more than two years or not.

Table 6.11 Mean scores for self-rated understanding and confidence

|                                                                 | Mean | SE   |
|-----------------------------------------------------------------|------|------|
| <b><i>Understanding questions</i></b>                           |      |      |
| Risk factors associated with poor oral health *                 | 3.44 | .052 |
| Links between mental health and oral health *                   | 3.40 | .063 |
| Links between oral health and general health                    | 3.43 | .057 |
| <b><i>Confidence questions</i></b>                              |      |      |
| Discussing oral health with consumers *                         | 3.36 | .062 |
| Using the Neami oral health resources ***                       | 3.13 | .077 |
| Supporting consumers with their oral health needs **            | 3.44 | .068 |
| Referring consumers to oral health services *                   | 3.60 | .077 |
| <b><i>Mean total understanding and confidence score ***</i></b> | 3.40 | .047 |
| Mann-Whitney U tests                                            |      |      |
| * Significant differences at the alpha level $p < 0.05$         |      |      |
| ** Significant differences at the alpha level $p < 0.01$        |      |      |
| *** Significant differences at the alpha level $p < 0.001$      |      |      |

The results from all seven items were combined to calculate mean self-rated understanding and confidence scores (Table 6.12). Mean scores were significantly higher for CRSWs in Victoria compared to those outside Victoria ( $U = 3,332$ ,  $z = 3.511$ ,  $p < 0.0001$ ), with those in New South Wales scoring the lowest ( $p = 0.001$ ). Self-rated understanding and confidence was also significantly higher for those who had participated in oral health training ( $U = 1,497.5$ ,  $z = -3.680$ ,  $p < 0.0001$ ). Another interesting finding was that CRSWs who used the oral health resources rated their understanding and confidence significantly higher than those who did not use the resources ( $U = 1,506.5$ ,  $z = -3.642$ ,  $p < 0.0001$ ). A significant positive correlation was found between knowledge scores and self-rated understanding and confidence scores ( $r_s = 0.304$ ,  $p < 0.0001$ ,  $n = 141$ ), suggesting those with better knowledge also felt more confident providing oral health support.

Table 6.12 Comparing mean self-rated understanding and confidence scores

|                      | N   | Mean | SE   | Sig.    |
|----------------------|-----|------|------|---------|
| VIC                  | 69  | 3.56 | .062 | < .0001 |
| Non-VIC              | 72  | 3.24 | .066 |         |
| >2 years             | 37  | 3.44 | .082 | .547    |
| <2 years             | 104 | 3.38 | .057 |         |
| OH training          | 55  | 3.62 | .071 | < .0001 |
| No OH training       | 86  | 3.26 | .057 |         |
| All CRSWs            | 141 | 3.40 | .047 |         |
| Mann-Whitney U tests |     |      |      |         |

### CRSWs' attitudes to oral health promotion

Neami support workers were asked five questions to assess their opinions on oral health promotion (Table 6.13). Attitudes to oral health promotion were generally positive. The majority of respondents agreed<sup>21</sup> that 'supporting consumers with their oral health needs should be part of Neami's work' ( $n = 122$ , 86.6%) and that people living with mental illness (PLWMI) should be encouraged to visit a dental practitioner regularly ( $n = 136$ , 97.2%). They were also of the opinion that mental health support workers have a role to play in promoting oral health ( $n = 126$ , 89.3%). Close to half of all respondents ( $n = 64$ , 45.4%) disagreed that the inclusion of oral health promotion into Neami's routine work would leave

<sup>21</sup> Responses were collapsed into 'disagree' (including 'strongly disagree' and 'disagree' responses), 'neutral' ('neither disagree nor agree') and 'agree' (including 'agree' and 'strongly agree' responses).

less time to address clients' mental health-related issues. The majority (n = 80, 57.1%) also disagreed that 'oral health education should only be provided by an oral health professional'. In fact, only 18 CRSWs (12.9%) agreed with this statement about the provision of oral health education.

It was interesting to find that almost all (n = 69, 95.8%) of respondents outside Victoria were of the opinion that they have a role to play in promoting oral health, which was a significantly higher proportion than in Victoria (n = 57, 82.6%) (FET,  $p = 0.016$ ). There were no significant differences in opinions dependent upon years worked at Neami or participation in oral health training.

Table 6.13 CRSWs' attitudes to oral health promotion

|                                                                                  | Strongly disagree |      | Disagree |      | Neutral |      | Agree |      | Strongly agree |      |
|----------------------------------------------------------------------------------|-------------------|------|----------|------|---------|------|-------|------|----------------|------|
|                                                                                  | N                 | %    | N        | %    | N       | %    | N     | %    | N              | %    |
| Supporting consumers with their oral health needs should be part of Neami's work | -                 | -    | 2        | 1.4  | 17      | 12.1 | 73    | 51.8 | 49             | 34.8 |
| PLWMI should be encouraged to visit an oral health professional regularly        | -                 | -    | -        | -    | 4       | 2.8  | 75    | 53.2 | 61             | 43.3 |
| MH support workers have a role to play in promoting oral health *                | -                 | -    | 1        | 0.7  | 14      | 9.9  | 80    | 56.7 | 46             | 32.6 |
| Including OH promotion will leave less time to address consumers' MH needs       | 18                | 12.8 | 46       | 32.6 | 48      | 34.0 | 19    | 13.5 | 10             | 7.1  |
| OH education should only be provided by an oral health professional              | 16                | 11.3 | 64       | 45.4 | 42      | 29.8 | 11    | 7.8  | 7              | 5.0  |
| Chi-square tests                                                                 |                   |      |          |      |         |      |       |      |                |      |
| * Significant differences at the alpha level $p < 0.05$                          |                   |      |          |      |         |      |       |      |                |      |

Mean scores were calculated for each oral health promotion attitudes-related question. Mean total attitudes scores were also calculated. No statistically significant differences in scores were identified between groups, dependent upon location, years at Neami or participation in oral health training. There was no significant correlation between total attitude scores and total knowledge or self-rated understanding and confidence scores.



## Barriers to oral health promotion, as perceived by Neami CRSWs

Survey participants were asked nine Likert item questions to assess their opinions on potential barriers to oral health promotion within Neami.<sup>22</sup> The majority of respondents (n = 93, 65.9%) believed that there are barriers to oral health promotion within the organisation (Table 6.14) and that the lack of consumer interest is an issue (n = 82, 58.2%). Almost two-fifths of CRSWs felt that staff have insufficient knowledge about oral health (n = 53, 37.5%) and that lack of time (n = 53, 37.8%) is a barrier. While over a third of CRSWs did not feel staff had insufficient knowledge about dental services (n = 47, 33.6%) or insufficient access to oral health resources (n = 59, 41.8%), many respondents were of the opinion that these barriers existed within Neami (39% and 26.2% respectively). On a positive note, most CRSWs (n = 125, 88.7%) did not agree that lack of support from Neami management, or attitudes of oral health professionals were barriers to promoting oral health (n = 117, 83%).

Table 6.14 CRSWs' opinions on potential barriers to oral health promotion within Neami

|                                                             | Strongly disagree |      | Disagree |      | Neutral |      | Agree |      | Strongly agree |      |
|-------------------------------------------------------------|-------------------|------|----------|------|---------|------|-------|------|----------------|------|
|                                                             | N                 | %    | N        | %    | N       | %    | N     | %    | N              | %    |
| Oral health low on Neami agenda                             | 8                 | 5.7  | 47       | 33.3 | 61      | 43.3 | 23    | 16.3 | 2              | 1.4  |
| Not enough time when working with consumers                 | 3                 | 2.1  | 42       | 29.8 | 42      | 29.8 | 44    | 31.2 | 9              | 6.4  |
| Consumers' lack of interest in oral health                  | 3                 | 2.1  | 24       | 17.0 | 32      | 22.7 | 65    | 46.1 | 17             | 12.1 |
| Staff have insufficient knowledge about oral health **      | 3                 | 2.1  | 36       | 25.5 | 49      | 34.8 | 48    | 34.0 | 5              | 3.5  |
| Staff have insufficient knowledge about dental services *   | 5                 | 3.5  | 42       | 29.8 | 37      | 26.2 | 49    | 34.8 | 7              | 5.0  |
| Staff have insufficient access to oral health resources *** | 14                | 9.9  | 45       | 31.9 | 45      | 31.9 | 32    | 22.7 | 5              | 3.5  |
| Insufficient support from management *                      | 18                | 12.8 | 57       | 40.4 | 50      | 35.5 | 14    | 9.9  | 2              | 1.4  |
| Attitudes of oral health professionals                      | 5                 | 3.5  | 45       | 31.9 | 67      | 47.5 | 19    | 13.5 | 5              | 3.5  |
| There are no barriers                                       | 37                | 26.2 | 56       | 39.7 | 40      | 28.4 | 5     | 3.5  | 3              | 2.1  |
| Chi-square tests                                            |                   |      |          |      |         |      |       |      |                |      |
| * Significant differences at the alpha level $p < 0.05$     |                   |      |          |      |         |      |       |      |                |      |
| ** Significant differences at the alpha level $p < 0.01$    |                   |      |          |      |         |      |       |      |                |      |

CRSWs in Victoria were less likely to believe that staff had insufficient knowledge about oral health compared to those outside Victoria (FET,  $p = 0.002$ ). In addition, fewer in Victoria

<sup>22</sup> Responses were collapsed into 'disagree' (including 'strongly disagree' and 'disagree' responses), 'neutral' ('neither disagree nor agree') and 'agree' (including 'agree' and 'strongly agree' responses).

agreed that lack of access to oral health resources was a barrier to oral health promotion (FET,  $p = 0.002$ ). In considering training, fewer of those who had oral health training were of the opinion that lack of: knowledge about oral health (FET,  $p < 0.001$ ), knowledge about dental services (FET,  $p = 0.035$ ), access to oral health resources (FET,  $p < 0.001$ ), or support from management (FET,  $p = 0.037$ ) were barriers to oral health promotion.

Mean scores were calculated for each barrier-related question (Table 6.15). Consumers' lack of interest was the highest scoring, indicating this was perceived to be the most important barrier to oral health promotion within Neami. This barrier was followed in importance by: lack of staff knowledge about oral health, lack of time when working with consumers, and lack of staff knowledge about oral health services. It was reassuring to verify that lack of support from management and oral health being low on the Neami agenda were the lowest scoring, indicating CRSWs perceived them to be less important as barriers to promoting oral health.

Table 6.15 Means for potential barriers to oral health promotion within Neami

|                                                         | Mean | SE   |
|---------------------------------------------------------|------|------|
| Consumers' lack of interest in oral health              | 3.49 | .083 |
| Staff have insufficient knowledge about oral health     | 3.11 | .076 |
| Not enough time when working with consumers             | 3.10 | .083 |
| Staff have insufficient knowledge about dental services | 3.08 | .084 |
| Attitudes of oral health professionals                  | 2.82 | .071 |
| Staff have insufficient access to oral health resources | 2.78 | .086 |
| Oral health low on Neami agenda                         | 2.74 | .071 |
| Insufficient support from management                    | 2.47 | .075 |
| There are no barriers                                   | 2.16 | .078 |
| Mann-Whitney U tests                                    |      |      |

The results from the eight Likert items were combined to calculate mean total perceived barriers scores (Table 6.16). Perceived barriers scores were significantly higher outside Victoria than in Victoria ( $U = 1,854.5$ ,  $z = -2.602$ ,  $p = 0.009$ ). Those who had participated in oral health training also believed there were fewer barriers to oral health promotion than those who had no training ( $U = 3,220$ ,  $z = 3.622$ ,  $p < 0.0001$ ). A significant negative correlation was found between perceived barriers scores and total knowledge scores ( $r_s = -0.169$ ,  $p = 0.046$ ,  $n = 141$ ), self-rated understanding and confidence scores ( $r_s = -0.510$ ,  $p <$

0.0001,  $n = 141$ ) and attitudes to oral health promotion scores ( $r_s = -0.244$ ,  $p = 0.004$ ,  $n = 141$ ). This suggests those with better knowledge, better confidence and more positive attitudes to oral health promotion were less likely experience barriers to promoting oral health.

Table 6.16 Comparing means for barriers to oral health promotion

|                      | N   | Mean | SE   | Sig.    |
|----------------------|-----|------|------|---------|
| VIC                  | 69  | 2.93 | .065 | .009    |
| Non-VIC              | 72  | 3.17 | .056 |         |
| >2 years             | 37  | 2.99 | .094 | .469    |
| <2 years             | 104 | 3.07 | .049 |         |
| OH training          | 55  | 2.85 | .068 | < .0001 |
| No OH training       | 86  | 3.17 | .053 |         |
| All CRSWs            | 141 | 3.05 | .044 |         |
| Mann-Whitney U tests |     |      |      |         |

### Oral health promotion practices at Neami National

CRSWs were asked if they practise oral health promotion when working with consumers (Table 6.17). The majority of respondents ( $n = 79$ , 56.0%) indicated that they did not currently engage in oral health promotion practices with clients. Analysis showed that a significantly greater proportion of CRSWs in Victoria (52.2%) practised oral health promotion compared to those outside of Victoria (36.1%) ( $\chi^2 (1) = 3.960$ ,  $p = 0.040$ ). In addition, CRSWs who had participated in oral health training were significantly more likely to provide oral health support (60%), compared to those who had no training (33.7%) ( $\chi^2 (1) = 9.403$ ,  $p = 0.002$ ). While more of those who had worked at Neami for longer than two years practised oral health promotion, this result was not statistically significant (48.6% of those working at Neami for more than two years practised oral health promotion, compared to 42.3% of those who had worked there for a shorter time-period).

Table 6.17 Proportion of CRSWs who practise oral health promotion

|                      | Yes | %    | No | %    | Total | Sig  |
|----------------------|-----|------|----|------|-------|------|
| VIC                  | 36  | 52.2 | 33 | 47.8 | 69    | .040 |
| Non-VIC              | 26  | 36.1 | 46 | 63.9 | 72    |      |
| >2 years             | 18  | 48.6 | 19 | 51.4 | 37    | .317 |
| <2 years             | 44  | 42.3 | 60 | 57.7 | 104   |      |
| OH training          | 33  | 60.0 | 22 | 40.0 | 55    | .002 |
| No OH training       | 29  | 33.7 | 57 | 66.3 | 86    |      |
| All CRSWs            | 62  | 44.0 | 79 | 56.0 | 141   |      |
| Mann-Whitney U tests |     |      |    |      |       |      |

Higher self-rated understanding and confidence was associated with oral health promotion practices ( $U = 1.515$ ,  $z = -3.894$ ,  $p < 0.0001$ ). CRSWs who provided oral health support also had more positive attitudes to oral health promotion ( $U = 1,705$ ,  $z = -3.110$ ,  $p = 0.002$ ) and perceived fewer barriers ( $U = 2,956$ ,  $z = 2.113$ ,  $p = 0.035$ ). However, it was surprising to find that knowledge was not associated with practising oral health promotion ( $p = 0.213$ ).

CRSWs who indicated that they do practice oral health promotion ( $n = 62$ , 44.0%) were asked to estimate the proportion of their clients that they have supported through a range of oral health-related activities (Table 6.18). (Support types were ranked in order of the proportion of consumers provided with each type of and also by the proportion of CRSWs who practice each support activity.) Results indicate that engaging consumers in oral health discussions was the most frequently practised support activity. Almost all (97%) CRSWs who promote oral health reported that they discuss oral health with consumers and refer consumers to dental services; however, results show that they engage in oral health conversations (53.08%) more often than they complete referrals (40.20%). The least frequently provided types of support were making dental appointments (30.25%) and supporting consumers to attend dental appointments (30.88%). Mean scores for each oral health promotion activity were very similar for CRSWs based in Victoria and in other states. Although mean scores were generally higher for respondents who had worked at Neami for longer than two years, the results were not statistically significant. Participation in oral health training was also not associated with differences in oral health support provision.

Respondents were asked what proportion of Neami consumers they believe have or are at risk of poor oral health (Table 6.19). The mean estimate, from all who responded to this question

(n = 136) was that only two-thirds (65.95%) of Neami consumers are at increased oral health risk. There were no statistically significant differences in estimates dependent upon location, years worked at Neami or participation in oral health training.

Table 6.18 Proportion of consumers provided with support, as indicated by CRSWs who practise oral health promotion (n = 62)

|                                                              | Mean % | S.E.  | Median | N (%)   | Rank (N) † | Rank (%) †† |
|--------------------------------------------------------------|--------|-------|--------|---------|------------|-------------|
| Discuss oral health with consumers                           | 53.08  | 3.978 | 50.0   | 60 (97) | 1          | 1           |
| Support consumers to improve their daily oral health care    | 38.02  | 3.942 | 27.0   | 55 (89) | 4          | 4           |
| Use oral health information resources with consumers         | 40.32  | 3.976 | 38.0   | 53 (85) | 5          | 2           |
| Refer consumers to dental services                           | 40.20  | 3.419 | 39.5   | 60 (97) | 1          | 3           |
| Contact the dental clinic to make appointments for consumers | 30.25  | 3.546 | 24.5   | 52 (84) | 6          | 6           |
| Support consumers to attend dental appointments              | 30.88  | 3.499 | 25.5   | 58 (94) | 3          | 5           |

N = number of CRSWs who responded to question

Mann-Whitney U tests

† Rank order for number of CRSWs who responded that they practice each type of support

† † Rank order for percentage of consumers provided with each type of OH support

Table 6.19 Proportion of consumers at increased oral health risk, as perceived by CRSWs

|                      | N   | Mean % | SE    | Sig. |
|----------------------|-----|--------|-------|------|
| VIC                  | 69  | 69.91  | 2.771 | .067 |
| Non-VIC              | 67  | 61.87  | 3.371 |      |
| >2 years             | 37  | 65.14  | 4.055 | .752 |
| <2 years             | 99  | 66.25  | 2.619 |      |
| OH training          | 55  | 62.25  | 3.809 | .240 |
| No OH training       | 81  | 68.46  | 2.610 |      |
| All CRSWs            | 136 | 65.95  | 2.195 |      |
| Mann-Whitney U tests |     |        |       |      |

### CRSWs' opinions on future oral health training

Respondents were asked four questions to assess their opinions on how Neami can support their learning and skills development in relation to oral health (Table 6.20). The majority of

respondents agreed ('strongly agree' or 'agree') this could be done by providing staff education and training on oral health risks and diseases (n = 122, 86.5%), using the Neami oral health resources (n = 116, 82.3%), how to refer consumers to oral health services (n = 114, 80.9%), and supporting consumers to access and attend dental appointments (n = 105, 74.8%). CRSWs who had not had already oral health training were more interested in professional development on oral health risk factors and diseases (FET,  $p = 0.047$ ), using the Neami oral health resources (FET,  $p = 0.002$ ), and supporting MH consumers to access dental appointments (FET,  $p = 0.04$ ).

Table 6.20 CRSWs' opinions on future oral health training topics

|                                                                     | Strongly disagree |     | Disagree |     | Neutral |      | Agree |      | Strongly agree |      |
|---------------------------------------------------------------------|-------------------|-----|----------|-----|---------|------|-------|------|----------------|------|
|                                                                     | N                 | %   | N        | %   | N       | %    | N     | %    | N              | %    |
| Oral health risks and diseases *                                    | 1                 | 0.7 | 2        | 1.4 | 16      | 11.3 | 89    | 63.1 | 33             | 23.4 |
| Using Neami oral health resources **                                | 1                 | 0.7 | 7        | 5.0 | 17      | 12.1 | 72    | 51.1 | 44             | 31.2 |
| How to refer consumers to oral health services                      | 2                 | 1.4 | 6        | 4.3 | 19      | 13.5 | 72    | 51.1 | 42             | 29.8 |
| How to support consumers to access and attend dental appointments * | 2                 | 1.4 | 9        | 6.4 | 25      | 17.7 | 68    | 48.2 | 37             | 26.2 |

Chi-square tests  
 \* Significant differences at the alpha level  $p < 0.05$   
 \*\* Significant differences at the alpha level  $p < 0.01$

Means were compared for each question, which indicated support workers outside Victoria were significantly more interested in training on using the Neami oral health resources ( $U = 2,001$ ,  $z = -2.180$ ,  $p = 0.029$ ) and how to refer consumers for dental care ( $U = 2,023$ ,  $z = -2.077$ ,  $p = 0.038$ ). CRSWs who had participated in oral health training were significantly less interested in education on using the Neami oral health resources ( $U = 3.033$ ,  $z = 3.093$ ,  $p = 0.002$ ) and on supporting consumers to attend dental appointments ( $U = 2,939.5$ ,  $z = 2.613$ ,  $p = 0.009$ ). Interest in future oral health training scores were computed by collating the results from all four Likert items (Table 6.21). Interest in the proposed training topics was significantly higher outside of Victoria ( $U = 1,964$ ,  $z = -2.196$ ,  $p = 0.028$ ) and in those who had not had oral health training ( $U = 3.032$ ,  $z = 2.887$ ,  $p = 0.004$ ), indicating more positive attitudes to oral health PD activities in these groups. A significant positive correlation between interest in future oral health training and attitudes to oral health promotion was found ( $r_s = 0.347$ ,  $p < 0.0001$ ,  $n = 141$ ).

Table 6.21 Mean scores for interest in future oral health training

|                      | N   | Mean | SE   | Sig. |
|----------------------|-----|------|------|------|
| VIC                  | 69  | 3.90 | .087 | .028 |
| Non-VIC              | 72  | 4.14 | .076 |      |
| >2 years             | 37  | 4.07 | .615 | .701 |
| <2 years             | 104 | 4.00 | .721 |      |
| OH training          | 55  | 3.81 | .704 | .004 |
| No OH training       | 86  | 4.15 | .655 |      |
| All CRSWs            | 141 | 3.91 | .076 |      |
| Mann-Whitney U tests |     |      |      |      |

To assist in the development of future oral health-related professional development activities, CRSWs were asked their preferred training delivery mode. Face-to-face training was the most frequently selected ( $n = 62$ , 44%), followed by blended training which combines both face-to-face and online modes ( $n = 57$ , 40.4%). Least popular was eLearning (online) training, which was the preferred training delivery mode for only 15.6 per cent ( $n = 22$ ) of respondents. There were no significant differences in responses dependent upon location, years at Neami or participation in oral health training. Three-fifths of all respondents ( $n = 83$ , 58.9%) indicated they were personally interested in receiving further education and training on how they can support consumers in managing their oral health needs. Interest in training was significantly higher outside of Victoria ( $\chi^2(1) = 6.800$ ,  $p = 0.009$ ) and in those who had not had oral health training ( $\chi^2(1) = 8.637$ ,  $p = 0.003$ ).

### Correlations and regression analysis

As expected, a significant positive correlation was found between knowledge scores and self-rated understanding and confidence scores ( $r_s = 0.304$ ,  $n = 141$ ,  $p < 0.0001$ ), demonstrating that CRSWs with better oral health knowledge also felt more confident providing oral health support when working with consumers (Table 6.22). Those with better knowledge also perceived fewer barriers to incorporating oral health promotion into Neami service delivery ( $r_s = -0.169$ ,  $n = 141$ ,  $p = 0.046$ ). The findings from this study also indicate that CRSWs with higher understanding and confidence scores ( $r_s = -0.510$ ,  $n = 141$ ,  $p < 0.0001$ ) and those with better attitudes to oral health promotion ( $r_s = -0.244$ ,  $n = 141$ ,  $p = 0.004$ ) had significantly lower scores for perceived barriers to oral health promotion (Table 6.22). In addition, those with more positive attitudes to oral health promotion demonstrated more interest in the

proposed oral health training topics ( $r_s = 0.347$ ,  $n = 141$ ,  $p < 0.0001$ ). The results of these correlational analyses suggest that better oral health-related knowledge and attitudes may enhance the capacity of mental health support workers to provide oral health support, and enable them to overcome barriers to promoting oral health for people living with severe mental illness.

Table 6.22 Correlations between oral health knowledge, self-rated understanding and confidence, perceived barriers to oral health promotion and attitudes to oral health promotion.

| Scale                                      | 1        | 2         | 3        | 4        | 5 |
|--------------------------------------------|----------|-----------|----------|----------|---|
| 1. Total knowledge                         | -        |           |          |          |   |
| 2. Self-rated understanding and confidence | .304 *** | -         |          |          |   |
| 3. Total perceived barriers to OHP         | -.169 *  | -.510 *** | -        |          |   |
| 4. Total attitudes to OHP                  | .130     | .173 *    | -.244 ** | -        |   |
| 5. Total interest in OH training topics    | .133     | -.085     | .107     | .347 *** | - |

Spearman's Rho test  
 \* Significant differences at the alpha level  $p < 0.05$   
 \*\* Significant differences at the alpha level  $p < 0.01$   
 \*\*\* Significant differences at the alpha level  $p < 0.001$

The multiple regression model for knowledge (Table 6.23) was significant ( $p = 0.014$ ); however it explained only 12.2% of the variance. Self-rated understanding and confidence was the only independent variable included in the model for which a statistically significant result which was found ( $p = 0.003$ ). The model for self-rated understanding and confidence (Table 6.23) was significant at the level  $p < 0.001$  and explained 39.9% of the variance. The variables knowledge ( $p = 0.003$ ), perceived barriers to oral health promotion ( $p < 0.0001$ ) and practising oral health promotion ( $p = 0.002$ ) contributed significantly to this result. For attitudes to oral health promotion (Table 6.23), the model was significant at the level  $p < 0.001$  and explained 21.5% of the variance. A statistically significant result was found for the variables: participation in oral health training ( $p = 0.039$ ), perceived barriers to oral health promotion ( $p < 0.0001$ ) and practising oral health promotion ( $p < 0.0001$ ). The model for perceived barriers to oral health promotion (Table 6.23) was also statistically significant ( $p < 0.001$ ) and explained 36.2% of the variance. Participation in oral health training ( $p = 0.034$ ), self-rated understanding and confidence ( $p < 0.0001$ ), and attitudes to oral health promotion ( $p < 0.0001$ ) were the variables that contributed significantly to this model.



Table 6.23 Multiple regression analysis results

|                                                | <b>Model 1</b><br>Knowledge | <b>Model 2</b><br>Self-rated<br>understanding<br>and confidence | <b>Model 3</b><br>Attitudes to oral<br>health promotion | <b>Model 4</b><br>Perceived<br>barriers to oral<br>health promotion |
|------------------------------------------------|-----------------------------|-----------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------------|
| Variables                                      | Sig.                        | Sig.                                                            | Sig.                                                    | Sig.                                                                |
| Location                                       | .870                        | .221                                                            | .399                                                    | .734                                                                |
| Years at Neami                                 | .917                        | .718                                                            | .252                                                    | .296                                                                |
| Participation in oral health<br>training       | .213                        | .810                                                            | .039                                                    | .034                                                                |
| Knowledge                                      | -                           | .003                                                            | .154                                                    | .652                                                                |
| Self-rated understanding and<br>confidence     | .003                        | -                                                               | .665                                                    | <.0001                                                              |
| Attitudes to oral health<br>promotion          | .154                        | .665                                                            | -                                                       | <.0001                                                              |
| Perceived barriers to oral health<br>promotion | .652                        | <.0001                                                          | <.0001                                                  | -                                                                   |
| Practices oral health promotion                | .418                        | .002                                                            | <.0001                                                  | .140                                                                |

Model 1:  $F(7, 140) = 2.631$ ,  $p = 0.014$ ,  $R^2 = 0.122$

Model 2:  $F(7, 140) = 12.604$ ,  $p < 0.0001$ ,  $R^2 = 0.399$

Model 3:  $F(7, 140) = 5.206$ ,  $p < 0.0001$ ,  $R^2 = 0.215$

Model 4:  $F(7, 140) = 10.801$ ,  $p < 0.0001$ ,  $R^2 = 0.362$

Binomial logistic regression was performed to ascertain the effects of a number of variables on the likelihood that participants would practise oral health promotion (Table 6.24). The model was statistically significant ( $\chi^2(5, n = 141) = 34.633$ ,  $p < 0.0001$ ); it explained 29.2% of the variance and correctly classified 67.4% of cases. CRSWs who had oral health training were 3.5 times more likely (OR 3.50, 95% CI 1.246 – 9.829,  $p = 0.017$ ) to provide oral health support. The strongest predictors of providing oral health support were self-rated understanding and confidence (OR 4.089, 95% CI 1.629 – 10.263,  $p = 0.003$ ) and attitudes to oral health promotion (OR 3.906, 95% CI 1.765 – 8.648,  $p = 0.001$ ). Location, years at Neami and oral health knowledge did not have an effect.

Table 6.24 Logistic regression model for CRSWs practising oral health promotion

|                                         | B       | SE    | Wald   | df | Sig.  | Exp(B) | 95% CI for Exp(B) |        |
|-----------------------------------------|---------|-------|--------|----|-------|--------|-------------------|--------|
|                                         |         |       |        |    |       |        | Lower             | Upper  |
| Location                                | -.013   | .503  | .001   | 1  | .979  | .987   | .368              | 2.645  |
| Years at Neami                          | .412    | .439  | .880   | 1  | .348  | 1.510  | .638              | 3.574  |
| OH training                             | 1.253   | .527  | 5.655  | 1  | .017  | 3.500  | 1.246             | 9.829  |
| Knowledge                               | -.132   | .142  | .865   | 1  | .352  | .876   | .663              | 1.158  |
| Self-rated understanding and confidence | 1.408   | .470  | 8.995  | 1  | .003  | 4.089  | 1.629             | 10.263 |
| Attitudes to OH promotion               | 1.363   | .405  | 11.292 | 1  | .001  | 3.906  | 1.765             | 8.648  |
| Perceived barriers to OH promotion      | .710    | .465  | 2.329  | 1  | .127  | 2.034  | .817              | 5.060  |
| Constant                                | -12.276 | 3.343 | 13.481 | 1  | <.001 | <.001  |                   |        |

$\chi^2 (5, n = 141) = 34.663, p < 0.0001$ , Nagelkerke  $R^2$  29.2%, 67.4% of cases

### Summary of results

**Hypothesis 1:** *Victorian CRSWs will have better oral health-related KAP than CRSWs outside Victoria.*

In this study, Victorian CRSWs were found to have higher oral health knowledge scores; however, this result was not statistically significant ( $p = 0.145$ ). Victoria-based CRSWs rated their oral health understanding and confidence significantly higher than those outside of Victoria ( $p = 0.001$ ). Contrary to expectations, overall attitudes to oral health promotion were slightly less positive in Victoria ( $n = 69, M = 3.877$ ) than elsewhere ( $n = 72, M = 3.972$ ), but this result was not statistically significant ( $p = 0.311$ ). In addition to this, CRSWs in Victoria were significantly less interested in the proposed training topics than CRSWs in other states ( $p = 0.037$ ). A significantly greater proportion of Victorian respondents provide oral health support (52.2%) compared to respondents outside of Victoria (36.1%) ( $p = 0.040$ ).

These results suggest that CRSWs in Victoria are more confident providing oral health support, perceive fewer barriers to oral health promotion and are more likely to provide oral health support than those outside Victoria. However, this study did not find any significant differences in knowledge dependent upon location.

**Hypothesis 2:** *CRSWs who have worked at Neami for more than two years will have better oral health-related KAP than CRSWs who have worked at Neami for less than two years.*

In this study, no statistically significant differences in KAP scores were found between those who had worked at Neami for longer than two years and those who had not.

***Hypothesis 3:*** *CRSWs who have participated in oral health training in the last 12 months will have better oral health-related KAP than CRSWs who have not participated in oral health training.*

CRSWs who had oral health training were found to have significantly higher knowledge scores ( $p = 0.026$ ) and higher self-rated understanding and confidence scores ( $p < 0.0001$ ). They also perceived fewer barriers to promoting oral health when working with consumers ( $p < 0.0001$ ) and were three times more likely to practice oral health promotion than those who had no oral health training (OR 3.109). Therefore, the results of this study suggest that oral health training is associated with better oral health knowledge, attitudes and professional practices.

## Discussion

This cross-sectional survey explored the oral health-related knowledge, attitudes and professional practices of Community Rehabilitation and Support Workers across Neami national. It found that participation in oral health training is associated with better oral health knowledge, attitudes and professional practices among CRSWs. At the time of conducting this survey, no other published studies investigating the oral health KAP of community mental health support workers were identified. The results of this study provide a valuable insight into oral health KAP in a community mental health setting.

In order to maximise the responses in this exploratory study, all 471 CRSWs working at Neami in November 2015 were invited to participate in the online survey. Only 141 of the 166 surveys received were suitable for inclusion on the final analysis. This final response rate of 30% did not quite reach the expected response of between 35–50% and was lower than that achieved in other KAP surveys of mental health professionals (282-284); however, it was sufficient to perform the required statistical analysis.

Non-response bias threatens the validity and reliability of survey findings, (285) and it was important to determine if the obtained study sample was representative of the broader Neami CRSW population. The majority of survey respondents were from either Victoria (49%) or New South Wales (17%). This reflects the distribution of Neami services, and therefore

CRSW numbers, in late 2015 (286), when Victoria had the highest number of sites ( $n = 22$ ) and New South Wales the second highest ( $n = 14$ ). Three quarters of all respondents had been with Neami for less than two years, which reflected the recent period of rapid organisational growth and the associated increase in staff numbers. (239) Therefore, it was assumed that the study sample was representative of the Neami CRSW population in late 2015.

When considering what factors may have influenced CRSW participation rates, it is possible that, even though the survey was designed to take approximately 15–20 minutes to complete, the length of the questionnaire was a barrier. Research has shown that up to ten minutes is the ideal survey length, and twenty minutes is the maximum recommended completion time. (287) Had the survey been shorter and taken less time to complete, there may have been fewer partially completed surveys, therefore, increasing the final response rate. (However, this would only have increased the response rate to 35%, which is still lower than desired). Another factor that may have contributed to lower participation rates was that Neami was conducting a number of other online surveys at the same time as the oral health survey. The Project Advisory Group was not aware of this overlap in surveys prior to the survey going live, which highlights the need for future oral health surveys to be carefully planned so they do not coincide with other staff surveys.

The vast majority of CRSWs who had participated in oral health training (89%) were located in Victoria. This result was not unexpected, as the University of Melbourne BOH students had delivered face-to-face training at twelve Neami sites in Melbourne just one month prior to the online survey commencing (as discussed in the previous chapter). On the other hand, it was interesting to note that a number of respondents ( $n = 9$ ) had participated in oral health training that was not provided through Neami. Unfortunately, no further information about this training was gathered during this study so it is not known who delivered the training or what it included.

The majority of participants (65%) stated that they were aware of the Neami oral health program. More CRSWs in Victoria were aware of program than those elsewhere (82.6% compared to 47.2%), which was also expected as Neami Victoria had been partnering with the Melbourne Dental School since 2011. However, given that oral health is a Health Promotion Priority area across the whole organisation, the number of CRSWs who knew about the Neami oral health program was lower than anticipated. This may be because oral health had received little attention in some states or individual sites may have developed their

own oral health promotion activities without engaging in what was occurring elsewhere in Neami. Upon reflection, it would have been interesting to determine staff knowledge of each of the Neami Health Promotion Priority areas and to understand the types of staff training and health promotion activities related to each area. (It is recommended that future research be conducted in this area.) In order to increase awareness nationally about the Neami oral health program, Health Promotion Officers in each state should provide relevant training and information to Health Promotion Site Champions, who can then share this information with their individual teams.

The impact of health education resources on promoting positive health behaviours is questionable, (288, 289) however, oral health resources have demonstrated some usefulness in promoting oral health. (290, 291) The majority of respondents (61%) had not used the Neami oral health resources, despite them being readily available on the organisation intranet. It is unclear why this is the case, but possible explanations are that support workers were not informed how to access the resources, that they were using other oral health resources not developed as part of this program,<sup>23</sup> that competing demands limited their capacity to use the resources, or that they simply chose not to use them. In order to maintain consistency in oral health messages and to streamline the provision of oral health resources, collaboration at a national level is recommended to develop a single oral health resource package that can be adapted for use in every state (e.g. to include information about accessing local dental services). The Neami health promotion team, in partnership with the Oral Health Program Advisory Group, should be responsible for updating these resources annually.

In regards to those who did use the oral health resources, it was unsurprising that the majority were CRSWs who had oral health training ( $p < 0.0001$ ). The face-to-face oral health professional development sessions delivered in October 2015 by the Melbourne Dental School BOH students incorporated practical training on using the Neami oral health resources. Training participants were advised how to use the staff resource, which provides information about oral diseases and risk factors, images of oral hygiene products and a flow chart to guide oral health conversations with consumers. (The flow chart was designed to guide an oral health conversation when a 'no' response is elicited to the health prompt question asking consumers if they have had a dental check-up in the past six months, to

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<sup>23</sup> Over the preceding two years, a couple of BOH students from the University of Sydney had been on placement with Neami New South Wales. During their placement, the students had developed some oral health brochures and delivered oral health education to a small number of Neami staff.

determine if addressing their oral health is a physical goal.) The training sessions were also used to familiarise participants with the two consumer pamphlets, one with basic oral health information for consumers and one with information on accessing community dental services. However, despite the fact that face-to-face training incorporated the Neami oral health resources, two-fifths (42.9%) of Victorian CRSWs who had training said they did not use the resources. The survey opened one month after training, which may have been too soon after training for any significant changes in resource use to occur. The use of the oral health resources should be monitored, to determine how frequently they are being used with and if staff and consumers find them useful and appropriate for a community mental health setting.

While CRSWs generally had good knowledge about dental caries prevention, they were less certain about how to prevent periodontal disease. Other studies have also found health professionals to have poor knowledge about periodontal disease (292-295). Key oral health messages about fluoride use and sugar consumption are often generic and do not always state whether they relate to dental caries or periodontal disease prevention (e.g. brush teeth twice a day with fluoride toothpaste, limit consumption of sugar-sweetened foods and drinks). This may contribute to confusion regarding the prevention of individual dental diseases. Nevertheless, it would seem more important to know that particular behaviours can reduce the risk of dental diseases rather than the specific dental disease in question.

In addition, it was interesting to find that the majority of respondents incorrectly believed that 'lack of physical activity' was an oral health risk factor. While physical activity can help maintain a healthy weight, and reduce the likelihood of chronic health conditions associated with periodontal disease (e.g. obesity and type 2 diabetes), (296-302) lack of physical activity is not a recognised oral health risk factor. Alternatively, there is growing evidence that oral sex and excessive sun exposure are linked to oral diseases. However, half of respondents were not aware of these associations indicating a low level of awareness of sun exposure as a risk factor for oral cancer of the lip and of the potential spread of sexually transmissible infections through unprotected oral sex (e.g. Syphilis, Human Papillomaviruses and Herpes Simplex viruses). (303-308) This lack of knowledge about behavioural risk factors associated with oral health is important to consider in the development of future oral health training sessions for community mental health professionals.

Despite more Victorian CRSWs having participated in oral health training, Western Australia had the highest mean knowledge score. However, it should be noted that the group sizes were

uneven (Victoria = 69, Western Australia = 9) and the difference in knowledge between groups was not statistically significant. It is unclear if oral health promotion was a focus in Western Australia prior to the administration of this survey, therefore, the higher knowledge scores could not be explained. Respondents in New South Wales had the lowest mean knowledge score, which was surprising given that, as previously mentioned, Neami New South Wales had partnered with the University of Sydney to develop some oral health brochures for consumers in New South Wales.<sup>24</sup> This study found that support workers who had oral health training had significantly better knowledge than those who had no training ( $p = 0.026$ ). Indeed, there is good evidence that education interventions can significantly increase oral health knowledge. (20, 23, 309) The results of this study support the need to provide regular oral health training for Neami CRSWs and to advocate for the delivery of oral health training in other community mental health organisations.

When asked their opinions on potential ‘barriers’ to people living with severe mental illness accessing dental services, the number one barrier chosen was cost. This is in keeping with the results of a national survey in Australia into the reasons that people avoid or delay dental visits, which also identified cost of dental services as the major barrier. (310) It is believed that the majority of Neami consumers have a concession card (healthcare card or pension card) and are therefore eligible for free public dental care.<sup>25</sup> The fact that cost was the most frequently selected barrier to accessing oral health care calls into question CRSWs awareness of the eligibility criteria for accessing public dental services. This information is particularly pertinent in Victoria, where people living with mental illness referred from a mental health service qualify for priority access to general dental care in community dental clinics and at the Royal Dental Hospital of Melbourne, meaning they will not be placed on a waiting list and will be given the next available appointment. (311) Despite public dental care being free or low cost, the indirect costs associated with dental visits (e.g. travel expenses and time off work) may mean that ‘cost’ remains a barrier (312) and should be considered in efforts to enhance dental services accessibility for people living with severe mental illness.

After cost, the top barriers to dental services reported by CRSWs were fear, anxiety and lack of motivation. These barriers have been cited in numerous studies investigating dental visit avoidance behaviours in the general population and, more specifically, in mental health population groups. (13, 17, 132, 135, 145, 313) Research conducted with consumers of

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<sup>24</sup> The OH resources developed in NSW were not used during this project.

<sup>25</sup> This is anecdotal information from Neami and no data on consumer concession card eligibility was available.

Neami services also highlighted fear and anxiety as barriers they experienced in accessing oral health care. (194) The results of this present study demonstrate that community mental health workers have accurate perceptions of the reasons why people living with mental illness may avoid or delay visiting a dental practitioner.

Overall, Neami Community Rehabilitation and Support Workers rated their oral health understanding and confidence as 'average' or 'above average'. This is in line with the findings of Johnson et al, who reported that the majority of eating disorder professionals in their study rated their knowledge of oral disease, preventive oral care and oral health risks as 'average' or 'above average'. (314) As expected, CRSWs with better oral health knowledge generally rated their understanding and confidence higher ( $p < 0.0001$ ). Oral health training was also associated with significantly better oral health understanding and confidence scores, which was unsurprising given the strong evidence that oral education interventions for non-dental professionals can be effective in building confidence. (20, 23, 309) On the other hand, the positive correlation between use of the oral health resources and understanding and confidence scores ( $p < 0.001$ ) was unanticipated. The findings of this cross-sectional study support the need to implement oral health PD in community mental health settings, to increase staff confidence in the provision of oral health support to mental health clients.

It was encouraging to find that, in general, Neami CRSWs had positive attitudes to oral health promotion. They recognised their role in supporting consumers with their oral health needs and believed oral health promotion should be delivered in community mental health settings. Studies with health professionals from a range of disciplines also found participants to be supportive of oral health promotion programs targeting the population groups they work with, and the need for appropriate strategies to integrate oral health promotion activities into routine service delivery. (20, 21, 25-27, 152, 156, 175, 264, 293, 297) It is hoped that these positive attitudes to oral health promotion can be translated into engagement with the Neami oral health program and improvements in the provision of oral health support for people living with severe mental illness.

Despite recognition of the importance of oral health promotion, the results of this study highlight a number of barriers to effective implementation (e.g. consumers' lack of interest in oral health, staff having insufficient knowledge about oral health and dental services, and lack of time when working with consumers). A recent qualitative study of Western Australian community mental health workers' views on oral health identified similar barriers to this



present study. (175) One significant finding from the present study was that CRSWs with better oral health knowledge and confidence perceived fewer barriers to oral health promotion. This may be because knowledge and confidence equips them to problem-solve and overcome potential barriers to oral health promotion as they arise. Problem-solving is an important skill in health promotion and, according to the framework being used to guide this project, (36) creates sustainability in capacity building approaches. Further research is necessary to understand how community mental health professionals make decisions and address problems as they emerge, which may also prove useful in designing appropriate workforce development strategies to build capacity to promote oral health.

The number of survey respondents who indicated that they practice oral health promotion activities with consumers was lower than anticipated (44%), particularly as oral health has been a Neami health promotion priority since 2011. Despite the survey being validated through pilot testing, the wording of the question may have meant that some CRSWs misinterpreted its meaning and responded that they do not ‘practice oral health-related activities with consumers’ when, in fact, they do. (A couple of comments in the free text box at the end of this section of the survey suggested that oral health-related ‘activities’ may have been confused with demonstrating tooth brushing techniques.) Of those CRSWs who answered that they do practise oral health promotion, more were likely to discuss oral health with their clients than they were to contact a dental clinic or refer clients to dental services. Ideally, mental health support workers who identify that clients have not had a regular dental check-up should refer them to a local dental practice. However, this approach does not align with the Collaborative Recovery Model which is built upon a foundation of consumer autonomy and promotes the individual’s responsibility in managing his or her own health needs and lifestyle choices. (185) People living with severe mental illness often struggle to manage their mental health and daily living needs, so it is understandable that oral health may not always be a priority for them. Although, if a consumer identifies oral health as an area they wish to focus on, community mental health support workers should have the capacity to provide relevant advice and support. (293) The promotion of oral health by non-dental professionals is an evidence-based approach. (20, 23, 297, 309, 315-317). However, it is essential to understand how services are delivered in order to design appropriate oral health promotion strategies to align with models of care (e.g. the Collaborative Recovery Model) and to integrate into existing organisational structures.

Neami CRSWs recognise the relevance of oral health professional development to their role working with consumers. The majority of respondents agreed that Neami could support their learning and skills through the provision of oral health training, and were interested in future education opportunities. Interest in training was particularly high in states outside of Victoria, and among those who had not had any recent oral health training. It was interesting to note that the jurisdictions with the highest interest in oral health training, Queensland and New South Wales, were also those with the lowest knowledge scores. This indicates CRSWs in these states recognise their need for training to enhance their skills in this area. Again, these findings suggest that Neami staff are motivated to improve their oral health promotion skills and that engagement in the next stage of this project will be high.

Survey respondents indicated that they preferred face-to-face training (44%) or blended-training (40.4%) as workplace PD delivery modes, with the least popular professional development option being online training (15.6%). Currently, the emphasis is on the use of blended learning approaches in education and workforce training. Evidence suggests that blended-learning participants appreciate the opportunity to learn from teachers and students in the classroom environment, but also like the flexibility and convenience afforded by utilising online learning materials and courses. (318-321) Research has also shown that employee completion of online courses can be improved by developing content relevant to the adult learner and ensuring organisational support for training. (322) The effectiveness of training delivery modes and workforce preferences should be considered in designing appropriate oral health-related PD for community mental health professionals.

## Limitations

There are a number of limitations associated with this study, which may restrict the generalisability of the findings. The lower than expected response rate weakens the validity of the survey results, as the CRSWs who responded may differ from those who did not (non-response bias). (323) Although it was not possible to determine the actual response rate in each state, the jurisdictional distribution of survey respondents was found to be similar to the staff profile in Neami annual reports. (239, 286) A mixed-mode survey (paper-based and web-based) may have produced a better response rate, (324) however, the cost associated with a postal-survey and Neami's preference for a web-based approach meant the survey was conducted solely on Survey Gizmo. While reminder emails were sent one week after the initial email invitation, the number of responses may have been higher had the survey also

been advertised on the Neami intranet or promoted by Neami management. An ethics amendment was sought to conduct these extra promotional steps; however, the approval was not received until the survey was closing. There were also issues with the timing of the study, as Neami was conducting a number of internal staff surveys at the same time as the oral health survey.<sup>26</sup> Additionally, it would have been preferable to conduct this survey prior to the delivery of the face-to-face training in 2015 in order to provide true baseline data for this project. These constraints on the survey methods are not uncommon in conducting settings-based research and it is believed they do not have a major impact on the quality of the results.

As previously mentioned, it is probable that the wording effects reduced the validity of individual questions; (323) specifically when asking if CRSWs ‘practised oral health-related activities with consumers’. This question aimed to measure the number of CRSWs who provided oral health support; however, comments at the end of this section of the survey indicated that there may have been some confusion regarding the meaning of this question. The survey included a question logic whereby only CRSWs who responded ‘yes’ were able to view and answer questions asking which types of oral health support they provided.<sup>27</sup> This means the survey results may underestimate the actual level of oral health support provided to Neami consumers.

Despite these limitations, this study contributes important information that can be used in developing oral health promotion programs targeting people living with mental illness. There is a need to improve oral health support provided in community mental health settings and it is evident from the results of this survey that oral health training should be included in efforts to build capacity to promote oral health. Future oral health professional development approaches should be contextually appropriately and include simple oral health promotion strategies that align with the organisation service delivery model. It is recommended that this survey be repeated after Stage Two of this project, to measure changes in oral health-related knowledge, attitudes and professional practices among Neami CRSWs.

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<sup>26</sup> This was considered by the Project Advisory Group when planning to repeat the KAP survey in Stage Two of this project.

<sup>27</sup> This KAP survey was repeated in the second stage of the project, to measure changes in oral health-related KAP. In order to allow comparisons, the wording of this question would remain unchanged; however, the question logic was removed so that all survey respondents could answer the questions regarding the different types of oral health promotion activity that they engage in.

## Chapter conclusion

This exploratory cross-sectional web-based survey of Neami Community Rehabilitation and Support Workers was conducted in late 2015. The findings of this survey indicate that there are disparities in the oral health-related knowledge of Neami CRSWs. Attitudes to oral health promotion are generally positive and respondents recognised they can play a role in providing oral health support when working with people living with severe mental illness. The majority of CRSWs did not engage in oral health promotion activities, despite the fact that oral health is a health promotion priority within the organisation. Professional development was associated with better oral health KAP and CRSWs were generally receptive to the idea of participating in oral health training offered through Neami.

The findings from this study highlight the need to develop evidence-based context-specific oral health PD for Neami Community Rehabilitation and Support Workers, to build workforce capacity to promote oral health for people living with severe mental illness.

## **Stage Two - Building Neami workforce capacity to promote oral health**

## Stage Two introduction

The second stage of this thesis describes the process of designing, developing and implementing oral health training activities during Stage Two of this project. As described earlier, the ADDIE model (analyse, design, develop, implement and evaluate) was used in creating the workforce development interventions. This stage begins with a narrative review of relevant literature (Chapter 7), before discussing the methods employed in planning and implementing oral health training (Chapter 8). No training data or results are included in this stage of the thesis, as Stage Three of this project focused on the evaluation of the workforce development activities (process, impact and outcome evaluation).

## **Chapter 7 – Workforce development in action: A narrative review of the literature**

This chapter presents a narrative review of literature relevant to professional development approaches. It explores the effectiveness and appropriateness of different workforce training delivery modes. It also examines literature related to train-the-trainer models and the utilisation of health ‘champions’ in promoting health.

## Rationale

There is a need to build capacity of community mental health professionals to promote oral health for people living with severe mental illness. (1) The results from the cross-sectional survey conducted in Stage One suggest that Neami Community Rehabilitation and Support Workers with better oral health knowledge were more likely to provide oral health support when working with consumers. Other studies have also found that oral health training for non-dental professionals is associated with improved oral health knowledge and confidence in discussing oral health, and an increased likelihood of referring clients to dental services. (158, 264) In the mental health sector, workforce training has been used successfully to increase physical health promotion practices. (170, 171, 282, 325) However, despite the growing understanding of the two-way association between oral health and mental health, there is a paucity of oral health promotion programs targeting people living with mental illness. (138) Therefore, developing the capacity of mental health professionals to promote oral health is important in the efforts to address this gap in oral health promotion and to improve oral health outcomes for people living with severe mental illness.

The participatory action research approach used in Stage One involved cycles of planning, acting, collecting data and reflecting on the results before commencing planning for the next stage (Neami consumers and health promotion staff actively participated in all aspects of this research). This narrative review was conducted early during Stage Two of this project, to understand current evidence-based approaches to workforce development and to assist in the design and development (planning) of oral health training, appropriate for community mental health professionals. The electronic search for relevant peer-reviewed and grey literature published from the year 2000 included Medline, PubMed, Google Scholar and Google Chrome. Key search terms included: ‘capacity building’, ‘learning theory’, ‘workforce development’, ‘workforce training’, ‘professional development’, ‘workforce learning’, ‘blended learning’, ‘online learning’, ‘face-to-face learning’, ‘train-the-trainer’, ‘health promotion champions’ and ‘oral health champions’. Additional literature was identified by manually searching cited references. Publications for which full text was not available or which were not published in English, were excluded from this review.

## Workforce development approaches

The workplace is widely recognised as an environment in which workers can develop knowledge and skills to enhance their work-related performance and practices. (326). Indeed,



workforce development is one of the key action areas in the Framework to Build Capacity to Improve Health, which was used to guide this project. (36) It identifies three ways in which workforce learning may be achieved: incidental learning, informal learning and formal learning.

1. Incidental Learning – Incidental learning has been defined as learning which ‘takes place without a specific motive or a specified formal instruction’. (327) It is a type of ‘informal learning’ that happens in a casual manner, often with a lack of awareness that learning is taking place. (36) While incidental learning occurs frequently in the workplace, it is not generally a component of planned workforce development strategies. (328)
2. Informal Learning – Informal learning occurs when learning activities are not formally structured. (36) In recent years, there has been growing recognition of the importance of informal learning processes in the workplace (e.g. casual interaction with co-workers, surfing the company intranet etc.) (329-331)
3. Formal Learning – Formal learning is when training or learning needs have been identified and ‘formal’ strategies planned to address these needs. (36) Formal learning activities in the workplace are designed to promote the acquisition of specific work-related knowledge or skills. (332)

The purpose of this stage of the project was to build CRSWs’ capacity to promote oral health. Therefore, a formal learning approach was selected as the most appropriate for delivering oral health-related workforce training activities.

In Australia, the Australian Health Practitioner Regulation Agency (AHPRA) sets out the minimum continuing professional development (CPD) requirements for registered health practitioners. (333) AHPRA defines CPD as ‘the means by which members of the profession maintain, improve and broaden their knowledge, expertise and competence, and develop the personal and professional qualities required throughout their professional lives’. Although the majority of CRSWs are not registered health professionals, Neami uses the term ‘professional development’ to describe workforce training (internal and external) provided to Neami staff. Therefore, workforce training was predominantly referred to as professional development (PD) during this project.

## Workplace learning through professional development

The concept of learning is complex and means different things to different people. (334) It can be taken to mean things like acquiring some new knowledge, developing a new skill, developing some form of understanding or a level of competency. Different learners bring different things to the learning setting, such as individual preferred learning styles, prior knowledge, motivation levels and awareness. (334) Although consideration has been given to differences in learning needs, research has often been concerned with which delivery mode is better, face-to-face or technology-based (Table 7.1). (335)

In traditional classroom teaching, face-to-face delivery has been central to teaching and learning. (336) However, workforce development strategies and workplace learning programs need to consider the complexities and dynamics of learners work, family and study commitments. Limiting face-to-face tuition is one response to overcome barriers to learners being at a particular place at a particular time. (337) In recent years, there has been a growing emphasis on enhancing and developing learners' use of educational technologies. (338) The increased availability and accessibility of the internet provided a solution to the educational constraints of time and place. (339) The terms 'e-learning', 'online learning' and 'web-based learning' began to dominate educational contexts. Offering students more flexible approaches to learning was heralded as a way to improve equity in higher education. Online learning enables students to access the most contemporary information from field experts, whilst being able to fit in study around the multifaceted aspects of demanding lives. (337, 339, 340)

**Table 7.1 Summary of main advantages and disadvantages of face-to-face and online learning**

|                      | <b>Face-to-face learning (traditional classroom-based)</b>                                                                                                                                  | <b>Online learning (eLearning)</b>                                                                                                                                                                                                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Advantages</b>    | <ul style="list-style-type: none"> <li>• Interaction and engagement</li> <li>• Immediate feedback from instructors</li> <li>• Adaptability</li> <li>• Opportunity for discussion</li> </ul> | <ul style="list-style-type: none"> <li>• Flexible – not constrained by time and location</li> <li>• Student-centred</li> <li>• Online group/peer discussions</li> <li>• Cost-effective</li> </ul>                                    |
| <b>Disadvantages</b> | <ul style="list-style-type: none"> <li>• Instructor-centred</li> <li>• Constrained by time and location</li> <li>• Generally more costly to deliver</li> </ul>                              | <ul style="list-style-type: none"> <li>• Student isolation</li> <li>• Requires computer literacy (instructor and student)</li> <li>• Requires technology (electronic devices and internet)</li> <li>• High drop-out rates</li> </ul> |

Although online programs are becoming increasingly interactive, they may fail to address the need for social interaction in the learning environment. While many adult learners have work and family commitments that make participating in classroom-based courses difficult, they often do not find online courses satisfying and feel isolated, disconnected and socially excluded. (337, 341-344) In addition, establishing quality online learning programs can be costly and often requires the most up-to-date technology. (337) Massive Open Online Courses, while making higher education freely accessible to thousands of people, have very low course completion rates. (345, 346) Enhancing the relevance of the online course to the learner has been found to reduce dropout rates. (320, 322).

Technology-enabled workforce training solutions are on the rise and play a key role in addressing skills shortages and training needs. (334, 347-350) E-Learning in medical and health professional education has many advantages, and has proven effective in producing sustainable changes in professional knowledge and practices. (351-353) However, the quality of the online resources is a critical component in student satisfaction levels and is essential to consider in designing and developing eLearning modules. (318, 319)

### The shift to blended learning

The modern ‘learner’ needs to manage the competing priorities in their lives, while developing the personal and professional attributes necessary for the contemporary workplace. Offering a blended approach to learning is often preferable to an exclusively e-learning environment. (337) The term ‘blended learning’ is now widely used in teaching institutions. However, there are many interpretations of the blended learning concept and Torrisi-Steele found a lack of consistency in definitions across twenty Australian universities. (339) For the purpose of this project, blended learning was defined as ‘the combination of technology supported self or distance study settings and face-to-face settings’. (354)

Routinely used in schools, higher education facilities, and government and military training settings, blended learning has also become a dominant delivery method in the corporate environment. (341, 355) In 2008, Kim et al. reported survey findings on the current status and future trends of blended learning in workplace settings across five countries (i.e. China, South Korea, Taiwan, the United States and the United Kingdom). (356) Results indicated that blended learning is growing in popularity in both Western and Asian countries.

There is widespread belief that blended approaches are better able to meet the educational needs of students, especially adult learners. (341) Self-directed learning is often viewed as the cornerstone of adult education and learning. (357) Blended delivery allows the best of different learning concepts and methodologies to be combined (336, 354, 358) and is often preferred over single-mode delivery. (337, 359) A study at Deakin University, Melbourne, compared blended and online learning, measuring student perceptions by tracking Student Evaluations of Teaching and performance and by monitoring grade point averages for three business subjects over six years. (319) The study found that blended learning leads to positive student perceptions, but also highlighted the negative student perceptions associated with little or no face-to-face instruction.

Blended learning approaches are now widely used in medical and allied health workforce development. (360-364) The inclusion of e-learning approaches in the health field has significantly improved educational opportunities for students. (321, 351, 352, 362, 363, 365, 366) In a 2016 meta-analysis of blended learning in health professions, Liu et al. found that blended learning was likely more effective, or at least as effective, as single-mode instruction. (367) The blended learning approach offers a cost-effective alternative to traditional classroom-based learning in the delivery of evidence-based medical and allied health education. (368)

Blended learning PD has also proven efficacious in developing skills and confidence in qualified health professionals. (366, 369-372) However, the evidence supporting the inclusion of more than one delivery approach in PD is not always clear-cut. Weglicki, Reynolds and Rivers (369) found that nursing and allied health professionals with responsibility for prescribing had mixed views regarding continuing professional development delivery modes. While some reacted negatively to online training, others preferred the flexibility and convenience e-learning offers. However, it is important to remember that nurse practitioners have contrasting personal skill levels and professional contexts. While this study highlighted the differing opinions on training delivery, it concluded that offering a mix of professional development opportunities was most likely to result in improved confidence and competence amongst nursing and allied health professionals.

When asked their views on training to enhance the provision of primary care services to people living with severe mental illness, nurses highlighted the importance of flexibility in

developing and delivering professional development activities. (373) As was the case with Neami CRSWs in the Stage One cross-sectional survey, the nurse participants in this study indicated a preference for face-to-face training. One of the barriers to participating in online training is that it is frequently difficult to find the time during work hours. Face-to-face training sessions in workplaces are authorised by management and provide opportunities for staff complete learning activities within a pre-determined time-period. These factors must be considered in planning appropriate PD to achieve specific learning objectives.

The success or failure of blended learning relies on how well the online and face-to-face components are integrated, or 'blended' together to attain the specific learning objectives. (341, 354) The evidence presented here supports the utilisation of blended learning in professional development approaches. However, it was unknown if blended learning is more effective in building capacity to promote oral health in a community mental health setting than single mode delivery. Further research is needed to compare the effectiveness of face-to-face, online and blended training delivery modes in building capacity to promote oral health.

### Train the trainer

The train-the-trainer (TTT) model is an approach which initially focuses on training a person or people who will then train other people (e.g. within their organisation or profession). (374) TTT is less costly than traditional expert-led training methods and allows course content to be tailored to local contexts. (375) The outcomes from trainer-led programs have been shown to be as effective as expert-led training. (376) However, some studies have found limited evidence that TTT programs have resulted in translation of knowledge into sustainable changes in practice. (377)

The TTT is a feasible approach to increase workforce capacity in evidence-based practice for a range of health promotion, prevention and management issues. (250, 268, 378-383) This training model is also widely used in the field of mental health and wellbeing. (377, 384-391) The literature search identified only a small number of articles regarding the use of TTT models in the oral health field. (392, 393) The Better Oral Health in Residential Care (BOHRC) is the most significant oral health-related TTT study that has been conducted in Australia. This TTT program, rolled out nationally in 2009, aimed to train two registered nurses or dedicated trainers in every residential aged care facility in Australia, so they could in turn train and support aged care workers in their team in daily oral hygiene care. (24) The program incorporated simple key oral health messages, which were:

1. Brush teeth morning and night
2. Use high fluoride toothpaste on teeth
3. Use a soft brush on gums, tongue and teeth
4. Use an antibacterial product after lunch
5. Keep the mouth moist
6. Cut down on sugar.

It also provided a suite of educational resources including a Professional Portfolio, a Facilitator's Portfolio and a Staff Portfolio. Evaluation of this program found that aged care staff had better oral health knowledge and that they felt more confident and competent in managing residents' oral health care needs. The BOHRC is widely recognised as being successful in improving oral hygiene care in aged care facilities (8); however, the program was not sustained and largely failed to link residents with oral health services. This demonstrates the need to develop local-level partnerships with dental practitioners to facilitate access to timely dental care.

As with any workforce development programs, the training delivery mode must be carefully considered. Online training has proven an effective mode for training future instructors. This approach is particularly useful in resource poor settings or in settings where face-to-face delivery may be difficult. (353) An eLearning supported TTT program in the Netherlands was used to implement the Dutch suicide prevention guideline in mental health care. (394) However, supplementing the program with face-to-face training was found to enhance distribution of the program leading to wider dissemination within the mental health field. In 2012, Pearce et al. conducted a systematic review to determine the most effective way of delivering TTT programs. (395) From the eighteen studies included in the review, (a meta-analysis could not be conducted due to the large heterogeneity between included studies) the authors found that a blended learning approach is most effective in delivering TTT programs. However, they were not able to determine the optimum blend of interventions. In addition, it is not clear from the literature if blended delivery is more effective than single-mode delivery in achieving sustainable knowledge and skills indicating the need for further research in this area.

## The use of health promotion ‘champions’

Health promotion champions have an important role to play in the delivery of settings-based health promotion programs. A ‘proactive and enthusiastic’ champion can be the key to the successful implementation of program activities. (396) ‘Health champions’ have been used to promote a range of health behaviours in a variety of settings including schools, workplaces, communities, aged care facilities and pharmacies. (396-405)

Of particular significance to this project is the role of the Neami Health Promotion Site Champion. Each Neami service is required to identify a HPSC whose responsibility it is to ensure all staff ‘are resourced and have the capacity to support the implementation of Neami’s health promotion strategic directions, priority areas and projects.’ (191) The HPSC may be involved in facilitating or co-facilitating health promotion workshops and presentations with both staff and consumers. The holder of the health promotion portfolio is provided with professional and training opportunities to assist them in this role. To date, this has not included any oral health training from a dental practitioner specifically for Health Promotion Site Champions.

A Canadian study investigated the facilitators and barriers to health promotion practice in five out of eight provinces involved in disseminating the Canadian Heart Health Initiative (CHHI). (406) The presence or absence of a champion, or leader, in capacity building efforts was found to be an important factor in the CHHI in all of the participating provinces. The authors were of the opinion that the fostering of health promotion champions was, perhaps, the most important factor in implementing successful and sustainable health promotion programs at the organisational level. It is probable that the learnings from this initiative may be adapted and applied in a variety of settings.

Launched in 2008, the Altogether Better Programme (ABP) was a five-year program funded through the BIG Lottery in England. (407) The aim of the ABP was to empower people across the Yorkshire and Humber region ‘to improve their own health and that of their families and communities’. The Mental Health and Employment project was a strand of the Altogether Better Programme, which focused on increasing awareness of mental health issues and improving mental health and wellbeing in the workplace. (408) ‘Champions’ were utilised in facilitating and supporting the project implementation and were found to be the ‘driving force for embedding capacity building and system change in organisations’. In addition to utilising champions as part of the MHE project, the ABP included citizens in

volunteer roles as Community Health Champions, Practice Health Champions, Young Health Champions, Pregnancy and Early Years Health Champions, and Health Champions within specialist or hospital services. This award-winning program, which works with over 20,500 volunteer Health Champions, is recognised as an evidence-based approach to improve health and service outcomes. (409) Evaluation of the program found that champions and the participants in the groups and activities run benefitted from increases in social interaction, confidence, wellbeing and health knowledge. In considering the role of Health Champions, it is noteworthy that although they entered the program as volunteers, for many, involvement resulted in significant improvements in their own lives.

The use of oral health champions (OHCs) is included as an evidence-based strategy in the Evidence-Based Oral Health Promotion Resource, which is widely used in Australia. (8) However, the database search for peer-reviewed literature returned very few studies exploring the utilisation of ‘champions’ in oral health. Some research has been conducted in aged care settings, where OHCs have been found to improve staff knowledge and the quality of oral hygiene care provided to residents. (8, 24, 410, 411) A study in Arkansas found that having onsite support from an oral health champion was associated with significantly better oral hygiene care for elderly residents in long-term care facilities (LTCFs). (410) However, this was only a pilot where one of the three facilities participating in the study had an oral health champion present. Another small-scale study involving three LTCFs in eastern Canada found that champions played an important role in the success of the project. (411) Of note is the fact that the OHC role was not a pre-planned component of the study, but rather one that arose during implementation. Champions may have emerged naturally in other oral health projects; however, this cannot be verified from the available literature.

To supplement the database search, a web search using Google Scholar and Google Chrome was conducted. This identified a number of community programs utilising oral health champions; however, the quality of these programs could not be determined due to the limited information available online. (412-414) Knowledge Oral Health Care (KOHC) in the UK, aims to promote oral health awareness in aged care homes and to ensure staff are trained to conduct mandatory oral health assessment for new residents entering a facility. (415) KOHC is a company with approximately 200 dental care professionals (dental hygienists, dental therapists and dental nurses) who provide training for Oral Care Champions (also known as Oral Care Lead) to enable them to train other carers in essential daily mouth care.



At the time of writing, no evaluation data was available for the KOHC program, so it is not known how effective it has been in improving the oral health of aged care residents.

It would seem that the utilisation of a ‘champion’ has proven successful in a variety of settings and for a range of health issues. While there is evidence that champions are used in the mental health field, including at Neami, their role in the oral health field is less well documented. The term ‘oral health champion’ is used quite widely, but there is a paucity of studies investigating the role they play in oral health promotion outside of aged care settings. Further research should be conducted to determine if OHCs can be used effectively to promote oral health in settings other than residential aged care facilities.

## Chapter conclusion

Workforce development is an essential component of capacity building (36) and is a key action area in the Australian National Oral Health Plan. (1) This narrative literature review explored workforce development approaches and suggested blended learning as the delivery mode for oral health-related Professional Development. It also discussed the successful utilisation of train-the-trainer approaches in building capacity, including capacity to promote oral health. Much can be learned from the successes of the BOHRC program; however, the need to collaborate with dental services to develop referral pathways must not be overlooked. ‘Champions’ have been used successfully in health promotion in a range of settings and their utilisation in promoting oral health should be further explored.

The findings from this literature review provide valuable information for this stage of the project, which focused on building workforce capacity to promote oral health. The next chapter outlines the methods used in the design, development and implementation of oral health Professional Development for Neami Community Rehabilitation and Support Workers in New South Wales and Victoria.

## **Chapter 8 – Building capacity to promote oral health: A multi-site quasi-experiment control group design to compare professional development delivery modes**

This chapter describes the design, development and implementation of oral health-related professional development in a community mental health setting. This stage of the project aimed to build capacity of Neami Community Rehabilitation and Support Workers to promote oral health for people living with severe mental illness. Evaluation of the PD was conducted during Stage Three (process, impact and outcome evaluation). Therefore, no data is presented in this chapter.

Stage Two of the project utilised a quasi-experimental control group design in delivering different types of oral health PD (face-to-face training, online training, blended training and no training) to determine which training delivery mode is most appropriate in a community mental health setting. A train-the-trainer style approach was employed, utilising Health Promotion Site Champions to support the implementation of training within individual Neami services.

## Rationale

Workforce development is one of the Foundation Areas in Australia's National Oral Health Plan 2015–2024. (1) Recognising the important role non-dental professionals can play in oral health promotion and screening, it emphasises the need to develop capacity of not only the oral health workforce but also the broader health workforce. For the first time, people living with mental illness are identified in the Plan as a Priority Population group at increased risk of oral health issues requiring targeted oral health strategies. To date, little has been done to build capacity to promote oral health in the mental health sector. Therefore, the workforce development activities conducted during Stage Two of this project are important in efforts to address the need for oral health promotion targeting people living with severe mental illness.

Evidence suggests that any type of training can improve workforce knowledge, but that participants prefer face-to-face or blended learning approaches rather than purely online. (318, 351, 360, 369, 370, 416) It is not clear which training delivery mode results in the greatest translation of knowledge into practice and would therefore be the most appropriate in building capacity to promote oral health. This project aimed to determine which PD delivery approach is most appropriate in a community mental health setting. It compared face-to-face training, online training, blended training and no training.

Adult learners are very different from child learners. 'Pedagogy' is the art and science of teaching children, although, it is regularly applied to adult learners. (417) The less widely used but more accurate model for teaching adults is 'andragogy'. (331) Andragogy is the art and science of helping adults learn. (331) Malcolm Knowles is widely regarded as 'the father of andragogy'. (418) Knowles' model is based on a number of key assumptions about the adult learner. (417) These are:

1. *The need to know.* Before adults commit to learning something, they need to know why they should do so. (417)
2. *The learner's self-concept.* Adults usually have a more independent concept of 'self' compared to children and have the potential to be more self-directed in their learning. (331)
3. *The role of learners' experiences.* Mature learners are themselves a rich learning resource, as they are the product of their accumulated life experiences. Individual adults have their own learning style and requirements in adult education. (417)

4. *Readiness to learn.* Adult learners tend to be ready to learn if they believe they need to know something, particularly if it is necessary to cope with real-life situations. (417, 419)
5. *Orientation to learning.* Mature individuals tend to be motivated by ‘problem-centred, task-oriented, and life-focused’ learning opportunities. (419)

Andragogy is popular with adult trainers and educators in a variety of settings. While the pedagogical model largely emphasises content, andragogy is more focused on the process. (331) It recognises the need to involve learners in the ‘planning, delivery and evaluation of their own learning’. These pedagogical assumptions about adult learners were considered in designing, developing and implementing oral health training activities during Stage Two of this project.

## Research question

Which professional development delivery mode is most appropriate in building capacity to promote oral health in a community mental health setting?

## Methods

The findings from Stage One were used to guide this second stage of the project, which focused on the design, development and implementation<sup>28</sup> of oral health PD to build capacity to promote oral health. This component of the project used a ‘train-the-trainer’ style, quasi-experimental control group design.

A quasi-experiment, which is a variation on the ‘classical’ experimental design, (420) was chosen for this component of the project. Due to the uneven distribution of Neami sites across states and the need to deliver face-to-face training for two of the study groups, randomisation was not feasible. In addition, the study included more than two comparison groups making a quasi-experimental methodology the most appropriate. (421) In order to maximise participation rates, a post-test only design was utilised. As was the case in Stage One, the Neami staff representatives on the Project Advisory Group indicated that a pre-test/post-test design may reduce participation rates and impact on the already limited time available for training. However, the planning took into consideration the availability of data from the exploratory KAP study, which could be used as baseline data to measure changes in oral

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<sup>28</sup> Utilising the ADDIE model for instructional design.

health-related knowledge, attitudes and professional practices at the individual level <sup>29</sup> and at the group level.

For the purposes of this project, Neami sites were divided into four study groups and each was offered different types of oral health PD:

1. Face-to-Face Group – face-to-face (traditional classroom-based) training only.
2. Online Group – online (computer-based) training only.
3. Blended Group – both face-to-face and online training.
4. Control Group – no training.

At Neami, Health Promotion Site Champions are responsible for coordinating health promotion at the site-level and for ensuring support workers are trained and resourced to deliver health promotion activities. As highlighted earlier, the ‘train-the-trainer’ model is an evidence-based approach in creating cost-effective and sustainable workforce development. In addition, the utilisation of ‘champions’ has been shown to increase the success of health promotion programs. Therefore, Neami Health Promotion Site Champions were selected to fulfil the dual role of oral health champion and ‘trainer’ in supporting the implementation of oral health PD within their team. It should be noted that this study did not employ a true TTT approach, as the HPSCs were not responsible for the delivery of the training but were involved in coordinating training and supporting the implementation. The capacity building Framework (36) and the findings from the environmental scan were used in developing the list of responsibilities for HPSCs in each study group (Table 8.1) and consideration was given to the importance of aligning these with their existing duties. (HPSCs are Community Rehabilitation and Support Workers who, in addition to their main role providing consumer support, also manage the health promotion portfolio within their team.)

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<sup>29</sup> By matching participants who completed both the baseline and the follow-up KAP survey using their unique identifier code

**Table 8.1 Role of health promotion site champions, by study group**

|                                                                                                            |                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Face-to-Face Group</b><br>South-Eastern sites in Victoria (n = 9)                                       | <ul style="list-style-type: none"> <li>• Coordinate face-to-face training with BOH student</li> <li>• Ensure staff have access to OH resources</li> <li>• Ensure staff know how to refer consumers to dental services</li> <li>• Promote completion of evaluation surveys</li> </ul>                                                                |
| <b>Online Group</b><br>Sites in New South Wales (n = 15)                                                   | <ul style="list-style-type: none"> <li>• Support staff to complete the online training module</li> <li>• Ensure staff have access to OH resources</li> <li>• Ensure staff know how to refer consumer to dental services</li> <li>• Promote completion of evaluation surveys</li> </ul>                                                              |
| <b>Blended Group</b><br>North-Western sites in Victoria (n = 12)                                           | <ul style="list-style-type: none"> <li>• Coordinate face-to-face training with BOH student</li> <li>• Support staff to complete the online training module</li> <li>• Ensure staff have access to OH resources</li> <li>• Ensure staff know how to refer consumer to dental services</li> <li>• Promote completion of evaluation surveys</li> </ul> |
| <b>Control Group</b><br>Sites in Queensland (n = 3), South Australia (n = 7) and Western Australia (n = 2) | <ul style="list-style-type: none"> <li>• No role specific to this study</li> </ul>                                                                                                                                                                                                                                                                  |

## Study groups

Convenience sampling was used to divide Neami sites (n = 48)<sup>30</sup> into four study groups based on geographic location. Neami sites in Victoria were divided into the two study groups, which included face-to-face training. Victoria has the highest number of Neami sites and of CRSWs and, operates as South-Eastern and North-Western regions. In addition, as the BOH students were located in Melbourne, the delivery of face-to-face training was restricted to Victoria. The South-Eastern sites (n = 9) made up the Face-to-Face Group and the North-Western sites (n = 12) the Blended Group. Sites in New South Wales (n = 15) were allocated to the Online Group. The remaining twelve sites in Queensland (n = 3), South Australia (n = 7) and Western Australia (n = 2) made up the Control Group, who did not receive any oral health training as part of this project.

## Study participants

The intended participants were Neami Community Rehabilitation and Support Workers currently providing direct support services to consumers living with severe mental illness. This was because CRSWs implement the Neami Health Prompt and were the staff cohort

<sup>30</sup> This information was correct at the time of implementing the oral health PD in 2016.

most likely to have opportunities to engage consumers in oral health discussions. However, it was decided to make the face-to-face training available to any Neami team member who wished to participate in training offered at their site and to make the online training available to team members from the Online and Blended Group sites who wished to enrol. The Project Advisory Group made this decision, as they believed that withholding training from non-CRSW staff at participating Neami sites would threaten the implementation process.

### Design and development of oral health professional development

This stage of the project involved the design and development of both face-to-face and online oral health PD. The design phase of the ADDIE model is when learning goals and objectives, and learning activities are conceived. (215) While the development phase is when these design plans are put into action, finalising the learning objectives and creating the learning resources.

The objectives of both training types were to:

1. Build understanding of the links between mental health and oral health
2. Build understanding of common oral diseases and risk factors
3. Build confidence and competence in discussing oral health with consumers
4. Build confidence and competence in supporting consumers to access appropriate oral health care.

General oral health topics were included in both face-to-face and online training, such as key oral health prevention messages (see Figure 8.1), oral diseases and risk factors, discussing oral health with consumers, and referring consumers to dental services. However, they were developed independent of each other and are therefore discussed separately.

#### *Oral health information resources for Neami staff and consumers*

The Neami oral health information resources were updated prior to the delivery of oral health training in October 2015. In reflecting on the feedback from the post-training survey, it was evident that the review of the resources to ensure content was accurate and current was an important part of the PAR approach (consumers and health promotion staff participated in a workshop to review the resources). Consequently, the resources were again reviewed and updated for Victoria and modified for use in the New South Wales context (e.g. to include

information about NSW public dental services) in 2016. The resources used in this stage of the project included:

1. A flow-chart (Figure 8.1) and information resource for staff to guide oral health conversations with consumers (Appendix 7).<sup>31</sup>
2. A template for collecting information about local dental services (public and private) (Appendix 12).
3. A priority access template for referring Victorian consumers to public dental services (Appendix 13).
4. A consumer pamphlet explaining oral health risk factors and simple preventive advice (Appendix 8).
5. A consumer pamphlet explaining how to access public dental services (a separate pamphlet was developed for Victoria and New South Wales). (Appendices 9 & 14).

#### *Online training development*

The purpose of the online PD module was to provide participants with basic oral health information and to encourage them to apply their existing skills (e.g. coaching, motivational interviewing) in supporting consumers to address their oral health needs. The online module was designed to align with the Neami service delivery model (i.e. the CRM) and health promotion practices (i.e. the Physical Health Prompt screening tool) to ensure contextual appropriateness.

An eLearning design consultant was engaged to assist with the design, development and build of the oral health online PD module called ‘Improving oral health for people living with severe mental illness’. The consultant’s fee was paid partly by the Melbourne Dental School, but largely through a ‘special funding’ grant awarded as a one-off financial contribution to the project by Neami.<sup>32</sup> In addition to the Project Advisory Group, Neami staff and consumers participated in the iterative process of creating the content, storyboarding the training outline, building and testing the prototype, to develop the completed online

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<sup>31</sup> As previously discussed, the Neami Health Prompt is offered to consumers every six months and includes an oral health question asking ‘have you had a regular check-up (in the last six months)?’ The flow chart is designed to be used by support workers in guiding an oral health related conversation with a consumer who gives a ‘no’ response to this Health Prompt question. It will assist in determining if the consumer needs support in accessing dental services.

<sup>32</sup> The identification of additional funding sources to expand the program was a strategy recommended in the environmental scan.



### Oral health support flow chart

People living with mental illness are at an increased risk of oral health issues and face significant challenges in accessing appropriate oral health care.

```
graph TD; Q1[Have you had a dental check-up in the last six months?] -- Yes --> Q2[Are you satisfied with the relationship you have with your dental practitioner?]; Q1 -- No --> Q3[Do you have a regular dental practitioner?]; Q2 -- Yes --> A1[Encourage regular dental check-ups (maintenance vs addressing problems)]; Q2 -- No --> Q4[Do you know if you are eligible for public dental care?]; Q3 -- Yes --> Q5[Are you satisfied with the relationship you have with your dental practitioner?]; Q3 -- No --> Q4; Q5 -- Yes --> A2[Encourage regular dental check-ups]; Q5 -- No --> Q4; Q4 -- Yes --> A3[Encourage regular dental check-ups and offer support in accessing oral health services]; Q4 -- No --> A3;
```

**Risk Factors**

**Diet**

Do you frequently consume caffeine, sugar or acidic foods?

**Smoking**

Do you smoke?

**Diabetes**

Do you or any family members have diabetes?

**Medications**

Does your mouth feel dry?

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Improving Mental Health

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SHEFFIELD

The cross-sectional survey conducted in Stage One found that over three-quarters of CRSWs believed Neami could support their learning and skill development through oral health PD. However, the vast majority (84.4%) were of the opinion that PD should include face-to-face training (either face-to-face only or blended training), with only 16 per cent selecting online training as their preferred PD delivery mode. These results highlight the importance of making the online module user-friendly, relevant, interactive and engaging, in an effort to increase staff participation and completion rates.

The online training module was to be implemented prior to the face-to-face training. This was to allow sites in the Blended Group enough time to complete the online training module before participating in the face-to-face training session. The module included a 30-minute oral health module, which incorporated audio and video of Neami consumers and staff, and a resources folder containing the Neami oral health resources and links to useful websites. The

<sup>33</sup> In keeping with the PAR approach.

module was built in Articulate Storyline as a Shareable Content Object Reference Model (SCORM) package, in order to be uploaded onto a web-based Learning Management System (LMS). The LMS chosen to deliver the online training was Course Sites by Blackboard, as it provided a SCORM-compatible online learning platform capable of hosting the interactive online module that could be used for free. (422)

### *Face-to-face training development*

The purpose of the face-to-face training was the same as for the online training, which was, in essence, to improve participants' oral health knowledge and oral health promotion skills. However, the design, development and implementation methods were different. Collaboration and continuous refinement of research methods is central to the PAR approach used in this project. (201) Face-to-face training had already been delivered in October 2015, during Stage One of this project. The findings from the post-training survey emphasised the need for flexibility and adaptability in the planning and delivery of face-to-face training sessions, to ensure contextual relevance to participating Neami sites. In reflecting on this information, it was decided that each site receiving face-to-face oral health training should have the opportunity to design the content to meet individual team learning needs.

Bachelor of Oral Health students from the MDS delivered the face-to-face training sessions in October 2015. This proved an acceptable and low-cost method of delivering face-to-face oral health training sessions at multiple Neami sites, and was therefore replicated in Stage Two. In order to ensure contextual appropriateness, Neami HPSCs and BOH students co-designed and co-developed the content of the training sessions to include essential oral health information<sup>34</sup> and information specific to staff interests and, more importantly, their consumer needs. (As part of the 'train-the-trainer' role, HPSCs consulted with the members of their team to determine what they would like included in the oral health face-to-face training.) The face-to-face training was to be implemented after the online training, to allow sites in the Blended Group to design training to supplement, or 'build' on, the content from the online module.

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<sup>34</sup> As was the case during Stage One, the candidate was responsible for developing course lecture material and preparing the BOH students during class for delivering the face-to-face oral health training sessions.

## Implementation of oral health professional development

### *Training the Health Promotion Site Champions*

Health Promotion Site Champions at sites in each of the study groups were identified by state Health Promotion Officers. The HPSCs were invited to attend a single workshop to prepare, or ‘train’, them to support the delivery of oral health PD within their team. HPSCs are responsible for being the ‘champion’ of health promotion activities within their site; therefore, the workshop was important to educate HPSCs about the poor oral health outcomes experienced by people living with severe mental illness and to promote their active participation in the Neami oral health program. The Victoria and New South Wales HPOs were responsible for coordinating the workshop (time, location and venue, audio-visual requirements, catering) and for supporting the HPSCs to attend the session. Knowles adult learning theory assumptions, (417) discussed earlier in this chapter, were considered in designing and developing the content and preparing for the delivery of the workshop.

In Victoria, the HPO allocated 40 minutes each for the two workshops to be conducted at the South-Eastern Region (Face-to-face Group) and North-Western Region (Blended Group) health promotion meetings. In New South Wales, the HPO planned a 90-minute workshop and invited all HPSCs and Senior Practice Leaders<sup>35</sup> to attend either in person or via teleconference. The workshops covered a range of oral health-related topics. Common oral health issues and prevention were discussed and participants were provided with information about the Neami oral health project. This information was particularly important in NSW as, prior to this time, the Neami oral health project had focused largely on Victoria.

The Neami oral health resources were introduced and workshop attendees were instructed in their use in providing oral health support to consumers and advised where they could be accessed on the organisation intranet. Additionally, workshop attendees were provided with an implementation guide (see Appendix 15 for sample implementation guide) to assist them in:

1. coordinating and facilitating oral health PD in their site,
2. collecting local information about accessing to oral health care to share with their team, and

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<sup>35</sup> Due to the contextual differences between states, the NSW Health Promotion Officer chose to invite Senior Practice Leaders to attend the ‘trainer’ workshop. The HPO wanted to include SPLs to support Site Champions in implementing the OH program, and had the capacity to coordinate this session to include both staff groups.

3. developing partnerships with local public dental services.

The content of the individual workshops and the implementation guides were adapted to suit the needs of each study group (Face-to-Face, Online and Blended groups), to ensure ‘trainers’ were provided with relevant information. Health Promotion Site Champions in Victoria and New South Wales who were unable to attend the workshop were provided with the relevant implementation guide (dependent upon the study group their site was allocated to). Additional support and advice was available to HPSCs from the state HPOs and the candidate.

*Implementation of online professional development*

The online training module was offered at sites in the Online Group and the Blended Group. Community Rehabilitation and Support Workers at these sites were invited to participate in the online oral health PD module via email. In mid-September 2016, the initial email invitation was sent to all CRSWs in NSW and at Neami sites in the North-Western Region of Victoria (n = 256) which comprised of 161 (63%) CRSWs in New South Wales and 95 (37%) in Victoria. (The timing of this invitation meant that CRSWs from the Blended Group had approximately one month to complete the online module prior to delivery on the face-to-face training in mid-October.) The email provided information about the online module and explained that participation was voluntary; it included a unique link to the Course Sites website where participants could enrol. The email also included a link that could be used after enrolment, to take the user directly to the module on Course Sites. In addition to those initially invited to complete the online training module,<sup>36</sup> non-CRSW staff from sites in the Online and Blended Groups could request to enrol via the Course Sites website or by asking their HPSC or HPO to liaise with the candidate to arrange for an email invitation to be sent directly to them.

Once enrolled, participants could access the oral health eLearning module, instructions for completing the training (HPSCs at participating sites also emailed a copy of these instructions to team members), and an oral health resources folder. After completing the module, participants could download a ‘certificate of completion’ and were asked to complete a short web-based evaluation survey. A link was included to take users directly to the web-based survey on Survey Gizmo. The survey questionnaire was modified from the post-training

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<sup>36</sup> The online PD was made available to any staff member based at a study site who expressed interest in participating. However, these non-CRSW participants would be excluded from the follow-up KAP survey.

survey in Stage One, to include a question asking about the types of oral health training completed.

It was important to problem solve any issues associated with implementing the online training in a timely manner; therefore, support was readily accessible during the implementation phase of the online PD to support participants in enrolling and completing the oral health module. In an effort to build ownership of the project, HPSCs were the first point-of-contact for users of the module. If the HPSC was unable to resolve the problem, the state HPOs and then the candidate were also available.

#### *Implementation of face-to-face professional development*

Face-to-face training was offered at sites in the Face-to-Face Group and the Blended Group. The evaluation of the face-to-face oral health training conducted during Stage One of this project reinforced that the weekly team meeting was the most appropriate time to deliver any face-to-face oral health PD. All staff are required to attend and the team meeting and this is the only time CRSWs can participate in PD without affecting their other work commitments. It was therefore decided to follow the same procedures as the previous year in delivering the face-to-face oral health training at the weekly team meeting.

Face-to-face training sessions were delivered in mid-October 2016, to fit with the BOH students' timetable. (Students designed and developed their training sessions during class, for the subject Health Promotion: Applied Health Education, and the delivery was scheduled for the last two weeks of the semester.) The HPSCs, in collaboration with the BOH students, coordinated the content and duration (between 20–40 minutes) of individual training sessions for both the Face-to-Face Group and the Blended Group. The HPSC was also asked to provide the student with: the site location and travel information, the potential number of staff participants, the availability of audio-visual equipment, and any other relevant information. The BOH students were provided with a 'certificate of completion' from the University of Melbourne to be given to staff who participated in the face-to-face training sessions. After training, the BOH students verbally invited staff to complete a paper-based post-training survey. The survey used the questionnaire from the post-training survey in Stage One, but was modified to include a question asking about the types of oral health training completed. Students returned all completed questionnaires to the candidate at the MDS.

## Chapter conclusion

This chapter discussed the design, development and implementation of online and face-to-face oral health professional development conducted during Stage Two of this project. This phase focused on building workforce capacity to promote oral health in a community mental health setting.

Stage Three of this capacity building project was the evaluation phase and included mixed methods process, impact and outcome evaluation. The next chapter will present the implementation results and the findings from both web-based and paper-based post-training evaluation surveys.

## **Stage Three – Process, impact and outcome evaluation of capacity building**

## Stage Three introduction

This was the final stage in this PhD project, the evaluation stage. Evaluation is an integral component of health promotion practice. This stage included a mix of quantitative and qualitative research methods used to collect and analyse process, impact and outcome data (Chapter 9, 10 and 11). The findings from this stage were used in answering the overarching research question ‘what can be done to increase capacity to promote oral health in a community mental health setting?’ In addition, recommendations for practice, research and policy were made on the basis of these results.



## **Chapter 9 – Process and impact evaluation of oral health professional development implemented at Neami sites in Victoria and New South Wales**

This chapter presents results from the implementation of oral health training (face-to-face, online and blended) at Neami sites in Victoria and New South Wales, during Stage Two of this project. This survey was the first component of the evaluation, which aimed to determine which professional development delivery mode is most appropriate to build capacity to promote oral health in a community mental health setting.

A mixed-mode (paper-based and web-based) survey was used to collect process and impact data after delivery of the oral health PD activities in late 2016.

## Study overview

Between September and November 2016, oral health professional development was implemented at Neami sites in Victoria and New South Wales. A multi-site quasi-experimental control group design was used to compare different professional development delivery modes. As mentioned in Chapter 8, Neami sites were divided into four study groups (convenience sampling was used based on geographic location) and each was offered different types of oral health PD:

1. **Face-to-Face Group** – Face-to-face (traditional classroom-based) training only, was offered at nine Neami South-Eastern sites in Victoria.
2. **Online Group** – Online (computer-based) training only, was offered at fifteen Neami sites in New South Wales.
3. **Blended Group** – Both face-to-face and online training, offered at twelve Neami sites in Victoria.
4. **Control Group** – No training offered at the twelve remaining Neami sites in Queensland (n = 3), South Australia (n = 7) and Western Australia (n = 2).

The purpose of the training was to build capacity among Neami CRSWs to promote oral health when working with consumers. The objectives were for support workers to have 1) understanding of common oral diseases and their causes, 2) confidence discussing oral health with consumers, and 3) confidence supporting consumers to access dental services. A mixed-mode post-training survey was used to evaluate both the face-to-face and online oral health training activities. This survey provides valuable information about the process of implementing the different types of oral health PD and the impact of the training on participants.

## Research questions

1. How do participants rate their oral health-related understanding after oral health PD?
2. How do participants rate their oral health-related confidence after oral health PD?
3. How satisfied are participants with oral health PD?
4. What are participants' opinions on the oral health PD?

## Hypotheses

1. Participants from the Blended Group will have higher self-rated understanding and confidence than participants from the Face-to-Face and Online Groups.
2. Participants from the Blended Group will be more satisfied with oral health PD than participants from the Face-to-Face and Online Groups.

## Methods

An anonymous mixed-mode (paper-based and web-based) post-training survey was used to collect process and impact evaluation data after oral health professional development was implemented at Neami sites in New South Wales and Victoria in 2016. (The design, development and implementation of both the face-to-face and online training was discussed in detail in the previous chapter.) This study was approved by the Human Research Ethics Group at the Melbourne Dental School (ethics ID 1544795) and by the Research and Evaluation Committee at Neami National (Appendices 4 & 6).

A sample of 159 was deemed large enough to detect a medium effect size of 0.25 between three groups (as outlined in the hypotheses), at a unidirectional significance level of 0.05 and 80% power (G\* Power © Version 3.1.9.2.)

The quantitative questionnaire was a modified version of the survey tool used in during Stage One of this project (Appendix 10).<sup>37</sup> The questionnaire was amended to include a question asking which types of oral health training respondents had completed. It included seven five-point Likert items to (rated from 'poor' to 'excellent') to determine respondents' self-rated oral health understanding and confidence after training (impact evaluation) and three five-point Likert items to determine respondents' satisfaction with the content, duration and delivery of the oral health PD (process evaluation). Three open-ended questions asked what respondents learned from and liked about the training and ways in which future training could be improved. No personal data was collected from respondents; however, they were asked which Neami site they worked at, their role within the organisation and if they provided direct consumer support. Respondents were also asked to create a unique identifier code<sup>38</sup> to maintain anonymity but enable matching of participants who completed both the paper-based and web-based surveys.

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<sup>37</sup> Discussed as part of the post-training evaluation survey in Stage One of this project.

<sup>38</sup> The first three letters of their mother's maiden name and the last two digits of their last year of high school.

The online module went live in September 2016. Participants in the online training were asked to use a hyperlink in the Course Sites module that redirected them to a web-based version of the post-training survey on Survey Gizmo. A plain language statement explained: the purpose of the survey, that participation was voluntary and that completion of the survey would imply their consent to participate. Reminder emails (which included a link to the web-based evaluation survey) were also sent by state Health Promotion Officers to Health Promotion Site Champions at sites in the Online and Blended Groups, to be forwarded to members of their team. After face-to-face PD in October 2016, the BOH students delivering the training invited all staff who participated in training to complete the paper-based evaluation survey.<sup>39</sup> The students explained the purpose of the survey and verbally invited training participants to complete the questionnaire. Participation was taken as implied consent.

## Data analysis

This survey collected quantitative data. Univariate statistics were used to describe the respondents' characteristics (e.g. role at Neami, site) and responses to each of the survey questions. Descriptive statistics included frequencies, means and standard errors (Likert item responses were scored from '1' for 'poor' or 'not at all' to '5' for 'excellent' or 'extremely'). Bivariate analysis of nominal and ordinal variables was performed using Chi-squared and Fisher's Exact tests. For continuous variables, Mann-Whitney U test and Kruskal-Wallis tests were conducted. Significant Kruskal-Wallis results were followed by Dunn-Bonferroni tests, to determine which groups' means were significantly different. Correlations measuring the strength of association between variables were run using Spearman's Rho. Statistical significance was set at the alpha level  $p < 0.05$ . Data were analysed using SPSS 23.0.(261)

In addition to the quantitative data, the survey collected data from three open-ended questions seeking participants' feedback on the training. Simple content analysis, was used to analyse data from these questions. The steps performed in this analysis were: manually entering data from the paper-based survey into an Excel spreadsheet, searching for patterns in responses and identifying key comments to assist in the design, development and implementation of future oral health PD activities.

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<sup>39</sup> This is the same survey protocol as used after face-to-face training in 2015.

## Results

### Online training

The online oral health professional development was offered at fifteen Neami sites across New South Wales (Online Group) and twelve in Victoria (Blended Group). Ten sites from the Online Group chose to participate (66.7%) and eight from the Blended Group (66.7%) (Table 9.1). A total of 144 users enrolled in the online module. Of those who enrolled, 88 (61.1%) were from the initial CRSW email list ( $n = 256$ ) provided by Neami<sup>40</sup> which included CRSWs working in New South Wales ( $n = 161$ ) and Victoria ( $n = 95$ ), giving a total response rate of 34.4 per cent. Three-fifths of enrolled users from the email list were New South Wales based ( $n = 54$ , 61.3%) with the remaining 34 from Victoria (38.6%); this gave a final response rate of 34.5 per cent from New South Wales and 35.8 per cent from Victoria. It is not known which states the additional 56 (38.9%) users were from or what their role was with Neami, as they were not on the initial email invitation list and this information was not requested during the enrolment process. These users either requested to enrol via the Course Sites website or were sent individual email invitations by the candidate when asked to do so by the New South Wales or Victoria Health Promotion Officer.

Table 9.1 Neami sites that implemented oral health professional development in 2016

| Face-to-face group sites | Online group sites | Blended group sites |
|--------------------------|--------------------|---------------------|
| 1. Abbotsford            | 1. Carrington      | 1. Broadmeadows     |
| 2. Blackburn             | 2. Pagewood        | 2. Brunswick        |
| 3. Croydon               | 3. Campbelltown    | 3. Craigieburn      |
| 4. Frankston             | 4. Ashfield        | 4. Yarraville       |
| 5. Kew                   | 5. Broken Hill     | 5. Heidelberg       |
| 6. Moorabbin YRRS        | 6. Wollongong      | 6. Thomastown       |
| 7. Regent                | 7. Hurstville      | 7. Barwon PARC      |
| 8. Seaford YRRS          | 8. Smithfield      | 8. Northern PARC    |
| 9. Hawthorn              | 9. Maitland        |                     |
|                          | 10. Dubbo          |                     |

The user enrolment figure from the Course Sites website underestimates the number of Neami staff who accessed the online training. Of the ten participating sites in New South Wales, three chose to complete the online module collectively as a team. Feedback from the

<sup>40</sup> As mentioned previously, the initial plan was to offer the online training module to CRSWs only; therefore, Neami provided contact details for all CRSWs working in NSW and Victoria. However, it was decided that non-CRSW staff working at sites where the online module was being implemented could also request to participate in the oral health training.

New South Wales Health Promotion Officer indicated that at least 49 staff completed the online module across these three sites.<sup>41</sup> In Victoria, the Health Promotion Officer was only aware of one site that had completed the training as a team, with fifteen staff members involved. Each of these four sites created a single login and user profile, meaning over 60 additional staff participated in the online training. Therefore, the actual number of Neami staff members who participated in the online oral health PD was likely to be in excess of 200.

The module was designed to take 30-minutes to complete. Activity data from Course Sites indicates that the average length of time that users had the module open for was 2.03 hours. This data also indicates that eight people enrolled in the course but did not open the module at all and that others had it open on their computer for several hours. One user had the module open for 16.13 hours, with the second longest being 7.70 hours. When this outlier and the eight enrolled users who did not open the module were excluded, the average length of time users had the module open was 1.25 hours. While this activity data provides information about the length of time the module was open on Course Sites, it is not possible to determine how long Neami staff actually spent working on the module. After completing the online module, training participants could download a course completion certificate. This certificate was designed as a small incentive to finish the training, however, only 62 (43.1%) of the enrolled users chose to download this certificate.

Despite the web-based survey being easy to access using a link in the online module and in the reminder emails, only 64 participants completed the survey on Survey Gizmo. It was not possible to accurately calculate the web-based survey response rate as the total number of online training participants was an estimate only ( $n \approx 200$ ).<sup>42</sup> Completed web-based surveys were received from participants at ten sites in the Online Group ( $n = 54$ , 84.4%) and from seven sites in the Blended Group ( $n = 10$ , 15.6%). The maximum number of respondents from any site in Victoria was two, whereas, the majority of respondents in New South Wales ( $n = 37$ , 68.5%) were from one of four sites: Broken Hill, Hurstville,<sup>43</sup> Pagewood or Wollongong.

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<sup>41</sup> Hurstville = 26, Campbelltown = 14 and Smithfield = 9.

<sup>42</sup> As a number of sites completed the training as a team.

<sup>43</sup> Hurstville was one of the Online Group sites where the team completed the online oral health PD together. However, it was not known if the survey respondents were part of this group or if they had completed the PD on their own.

As expected, the majority of respondents (76.6%) in the web-based post-training surveys were CRSWs (Online Group  $n = 42$ , Blended Group  $n = 7$ ) (Table 9.2). However, it was interesting to find that over 10 per cent ( $n = 7$ ) were Managers or Senior Practice Leaders. Almost all respondents (92.2%) indicated that they provide direct consumer support, meaning they would have opportunities to discuss oral health with consumers. There were no significant differences between the Online Group and the Blended Group for staff profile and provision of consumer support ( $p > 0.05$ ).

### Face-to-face training

In October 2016, face-to-face oral health training sessions were delivered by second-year BOH students from the Melbourne Dental School at 17 (80.9%) out of the 21 Neami sites in Victoria; eight of the sites were in the Face-to-Face Group and nine in the Blended Group (Table 9.1). Twelve of the sites that participated in face-to-face training in 2016 also had training the previous year.<sup>44</sup> A total of 141 completed paper-based questionnaires were returned; however, eight surveys from participants at one site in the Blended Group were excluded from analysis due to incomplete data.<sup>45</sup> This meant the final number of paper-based surveys included in the data analysis was 133.

Just over half of the surveys were from participants in the Blended Group ( $n = 70$ , 52.6%), with the remainder from staff at sites where face-to-face training only was provided. The number of participants at each site ranged from two to thirteen. The profile of respondents for the paper-based survey followed a similar pattern to that of the web-based survey. The majority were CRSWs (Face-to-Face Group  $n = 45$ , Blended Group  $n = 50$ , 71.4%). Peer Support Workers (who have a lived experience of mental illness and also work closely with consumers) made up another one-tenth of respondents (Face-to-Face Group  $n = 6$ , Blended Group  $n = 8$ , 10.5%). It is noteworthy that 15 per cent of survey respondents were Managers or Senior Practice Leaders, as it was not anticipated that they would choose to participate in the oral health PD. The vast majority of respondents reported that they provide direct consumer support (Face-to-Face Group  $n = 58$ , Blended Group  $n = 62$ , 90.2%). There were no significant differences in respondents' profile between the paper-based and the web-based surveys ( $p > 0.05$ ).

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<sup>44</sup> The new sites for 2016 were Barwon PARC, Hawthorn, Heidelberg, Northern PARC and Thomastown.

<sup>45</sup> The BOH student submitted photographs of the completed forms; however, it was not possible to match the fronts and backs of individual participants' forms using the images.

Table 9.2 Profile of respondents from post-training surveys (n = 197)

|                |     | Web-based<br>(n = 64) |         |            |            | Paper-based<br>(n = 133) |         |            |            | Combined<br>(n = 197) |            |
|----------------|-----|-----------------------|---------|------------|------------|--------------------------|---------|------------|------------|-----------------------|------------|
|                |     | Online                | Blended | Total<br>N | Total<br>% | F2F                      | Blended | Total<br>N | Total<br>% | Total<br>N            | Total<br>% |
| CRSW           |     | 42                    | 7       | 49         | 76.6       | 45                       | 50      | 95         | 71.4       | 144                   | 73.1       |
| Peer-Support   |     | 1                     | 1       | 2          | 3.1        | 6                        | 8       | 14         | 10.5       | 16                    | 8.1        |
| Manager/SPL    |     | 6                     | 1       | 7          | 10.9       | 9                        | 11      | 20         | 15.0       | 27                    | 13.7       |
| Student        |     | 1                     | -       | 1          | 1.6        | 2                        | 1       | 3          | 2.3        | 4                     | 2.0        |
| Other          |     | 4                     | 1       | 5          | 7.8        | 1                        | -       | 1          | 0.8        | 6                     | 3.0        |
| Direct support | Yes | 51                    | 8       | 59         | 92.2       | 58                       | 62      | 120        | 90.2       | 179                   | 90.8       |
|                | No  | 3                     | 2       | 5          | 7.8        | 5                        | 8       | 13         | 9.8        | 18                    | 9.1        |

N = number of staff  
 CRSW = Community Rehabilitation and Support Worker  
 SPL = Senior Practice Leader

Data from both the paper-based (n = 133) and the web-based (n = 64) surveys were merged; therefore, the final number of surveys included in the data analysis for this study was 197. By using the unique identifier code,<sup>46</sup> it was possible to match respondents from the Blended Group who completed both the web-based and the paper-based post training surveys. However, over one-tenth (n = 22, 13.2%) of respondents did not create a unique identifier code. Of the 70 respondents in the Blended Group who completed the paper-based survey, only six (8.6%) also completed the web-based survey after completing the online module (five CRSWs and one Manager/SPL). This figure was much lower than expected.

### Self-rated oral health understanding and confidence after training

As in Stage One, respondents were asked to rate their level of oral health understanding (three questions) and confidence (four questions) after PD using five-point Likert items. The majority of respondents in each study group rated their oral health understanding and confidence as 'above average' or 'excellent' for each question (Table 9.3). Over four-fifths of all respondents rated their understanding of: the risk factors associated with oral health issues (88.4%), the links between mental health and oral health (86.8%), and the links between oral health and general health (85.8%) as 'above average' or 'excellent'. When analysing the differences in responses between study groups, significantly more of those in the Face-to-Face Group (39.7%) responded that their understanding of the link between oral health and

<sup>46</sup> As mentioned previously, respondents created their unique identifier code by combining the first three letters of their mother's maiden name with the last two digits of the year they left school.



mental health was ‘excellent’ compared to the Online (16.7%) and the Blended (18.8%) Groups (FET,  $p = 0.015$ ).

Respondents’ self-rated confidence was also high after oral health training (Table 9.3). The majority of respondents rated their confidence as ‘above average’ or ‘excellent’ for: discussing oral health with consumers (83.2%), using the Neami oral health resources (81.8%), supporting consumers with their oral health needs (83.6%), and referring consumers to oral health services (85.2%). Responses regarding oral health confidence were very similar between study groups; the most noteworthy difference was that significantly more respondents from the Face-to-Face Group rated their confidence using the Neami oral health resources as ‘excellent’ compared to the other study groups (FET,  $p = 0.004$ ).

The results indicated that respondents from sites in the Face-to-Face Group rated their understanding of the links between mental health and oral health significantly higher than those in other groups ( $\chi^2 (2) = 12.282$ ,  $p = 0.002$ ) (Table 9.4). Those in the Face-to-Face Group also felt significantly more confident in discussing oral health with consumers ( $\chi^2 (2) = 6.295$ ,  $p = 0.043$ ), using the Neami oral health resources ( $\chi^2 (2) = 10.211$ ,  $p = 0.006$ ) and referring consumers to oral health services ( $\chi^2 (2) = 8.286$ ,  $p = 0.016$ ). Mean self-rated understanding and confidence was compared between the paper-based and web-based surveys. Respondents from the paper-based survey (after face-to-face training) reported significantly higher confidence levels than those from the web-based survey (after online training) in referring consumers to dental services ( $U = 3442.5$ ,  $p = 0.020$ ).

When comparing self-rated understanding and confidence scores between study groups (Table 9.4), the Face-to-Face Group scored significantly higher than those in both the Online and Blended Groups ( $\chi^2 (2) = 11.380$ ,  $p = 0.003$ ). It was interesting to find, when analysing data from the paper-based survey only (i.e. after face-to-face PD), participants from the Face-to-Face Group still had significantly higher self-rated understanding and confidence compared to participants in the Blended Group ( $U = 1531$ ,  $p = 0.002$ ). These findings indicate that participants from the Face-to-Face Group had better self-rated oral health understanding and confidence after training, which was contrary to the study hypothesis that the Blended Group would have the highest self-rated understanding and confidence after PD.

Table 9.3 Self-rated understanding and confidence responses (n = 197), by study group (%)

|                                                          | F2F  | Online | Blended | All  |
|----------------------------------------------------------|------|--------|---------|------|
| <b>Self-rated oral health understanding</b>              |      |        |         |      |
| <i>Risk factors for poor oral health</i>                 |      |        |         |      |
| Average                                                  | 7.9  | 16.7   | 11.3    | 11.7 |
| Above average                                            | 58.7 | 63.0   | 70.0    | 64.5 |
| Excellent                                                | 33.3 | 20.4   | 18.8    | 23.9 |
| <i>Links between mental health and oral health</i>       |      |        |         |      |
| Average                                                  | 6.3  | 18.5   | 15.0    | 13.2 |
| Above average                                            | 54.0 | 64.8   | 66.3    | 61.9 |
| Excellent *                                              | 39.7 | 16.7   | 18.8    | 24.9 |
| <i>Links between oral health and general health</i>      |      |        |         |      |
| Average                                                  | 12.7 | 14.8   | 15.0    | 14.2 |
| Above average                                            | 55.6 | 68.5   | 71.3    | 65.5 |
| Excellent                                                | 31.7 | 16.7   | 13.8    | 20.3 |
| <i>Discussing oral health with consumers</i>             |      |        |         |      |
| Below average                                            | -    | -      | 0.5     | 0.5  |
| Average                                                  | 11.1 | 22.2   | 16.5    | 16.3 |
| Above average                                            | 55.6 | 55.6   | 67.1    | 60.2 |
| Excellent                                                | 33.3 | 22.2   | 15.2    | 23.0 |
| <b>Self-rated oral health confidence</b>                 |      |        |         |      |
| <i>Using oral health resources</i>                       |      |        |         |      |
| Below average                                            | -    | -      | 0.5     | 0.5  |
| Average *                                                | 7.9  | 25.9   | 20.0    | 17.8 |
| Above average *                                          | 58.7 | 46.3   | 66.3    | 58.4 |
| Excellent *                                              | 33.3 | 27.8   | 12.5    | 23.4 |
| <i>Supporting consumers with their oral health needs</i> |      |        |         |      |
| Below average                                            | -    | 1.9    | 1.3     | 1.0  |
| Average                                                  | 9.5  | 16.7   | 19.0    | 15.3 |
| Above average                                            | 61.9 | 59.3   | 64.6    | 62.2 |
| Excellent                                                | 28.6 | 22.2   | 15.2    | 21.4 |
| <i>Referring consumers to oral health services</i>       |      |        |         |      |
| Below average                                            | -    | 3.7    | -       | 1.0  |
| Average                                                  | 7.9  | 18.5   | 15.2    | 13.8 |
| Above average                                            | 49.2 | 55.6   | 54.4    | 53.1 |
| Excellent                                                | 42.9 | 22.2   | 30.4    | 32.1 |
| Chi-square test                                          |      |        |         |      |
| *Significant differences at the alpha level $p < 0.05$   |      |        |         |      |

Table 9.4 Self-rated understanding and confidence scores, by study group

|                                                           | Study Group | N   | Mean | SE   | Sig. |
|-----------------------------------------------------------|-------------|-----|------|------|------|
| <i>Risk factors for poor oral health</i>                  | F2F         | 63  | 4.25 | .075 | .084 |
|                                                           | Online      | 54  | 4.04 | .083 |      |
|                                                           | Blended     | 80  | 4.08 | .061 |      |
|                                                           | Total       | 197 | 4.12 | .042 |      |
| <i>Links between mental health and oral health</i>        | F2F         | 63  | 4.33 | .075 | .002 |
|                                                           | Online      | 54  | 3.98 | .081 |      |
|                                                           | Blended     | 80  | 4.04 | .065 |      |
|                                                           | Total       | 197 | 4.12 | .043 |      |
| <i>Links between oral health and general health</i>       | F2F         | 63  | 4.19 | .081 | .089 |
|                                                           | Online      | 54  | 4.02 | .077 |      |
|                                                           | Blended     | 80  | 3.99 | .060 |      |
|                                                           | Total       | 197 | 4.06 | .042 |      |
| <i>Discussing oral health with consumers</i>              | F2F         | 63  | 4.22 | .080 | .043 |
|                                                           | Online      | 54  | 4.00 | .092 |      |
|                                                           | Blended     | 79  | 3.96 | .068 |      |
|                                                           | Total       | 196 | 4.06 | .046 |      |
| <i>Using oral health resources</i>                        | F2F         | 63  | 4.25 | .075 | .006 |
|                                                           | Online      | 54  | 4.02 | .101 |      |
|                                                           | Blended     | 80  | 3.90 | .068 |      |
|                                                           | Total       | 197 | 4.05 | .047 |      |
| <i>Supporting consumers with their oral health needs</i>  | F2F         | 63  | 4.19 | .075 | .064 |
|                                                           | Online      | 54  | 4.02 | .093 |      |
|                                                           | Blended     | 79  | 4.15 | .074 |      |
|                                                           | Total       | 196 | 4.04 | .046 |      |
| <i>Referring consumers to oral health services</i>        | F2F         | 63  | 4.35 | .079 | .016 |
|                                                           | Online      | 54  | 3.96 | .102 |      |
|                                                           | Blended     | 79  | 4.15 | .074 |      |
|                                                           | Total       | 196 | 4.16 | .049 |      |
| <i>Mean self-rated understanding and confidence score</i> | F2F         | 63  | 4.26 | .059 | .003 |
|                                                           | Online      | 54  | 4.01 | .075 |      |
|                                                           | Blended     | 80  | 4.01 | .050 |      |
|                                                           | Total       | 197 | 4.09 | .036 |      |
| n = number of respondents                                 |             |     |      |      |      |
| Kruskal-Wallis test                                       |             |     |      |      |      |

### Participants' satisfaction with oral health training

In order to determine how satisfied participants were with the oral health PD, they were asked their opinion on the content, the length and how beneficial the training was using three five-point Likert items (Table 9.5). Opinions on oral health training were generally very positive, with the majority responding that the training was 'very' or 'extremely' beneficial (77.6%)

and that the length (81.1%) and content (89.3%) of the training was ‘very’ or ‘extremely’ appropriate. When comparing responses between study groups, the Face-to-Face Group responded ‘extremely’ significantly more frequently than other study groups for each of the satisfaction questions ( $p < 0.05$ ).

Means were calculated for each question and overall training satisfaction scores were calculated by combining data from all three questions (Table 9.6). While all questions scored quite high, the appropriateness of the content achieved the highest mean score (mean 4.12, SE .042), followed by the length (mean 3.96, SE .043) and how beneficial training was (mean 3.91, SE .049). The Face-to-Face Group scored significantly higher for each question ( $p < 0.05$ ) and their overall training satisfaction scores were significantly higher than for the other study groups ( $\chi^2(3) = 17.775$ ,  $p < 0.001$ ). When comparisons were made between the paper-based and web-based surveys, respondents were significantly more satisfied with the face-to-face training than with the online training ( $U = 3740$ ,  $p = 0.022$ ). It was also interesting to note, when analysing data from the paper-based survey only (after the delivery of face-to-face training), participants from the Face-to-Face Group still had significantly higher training satisfaction scores compared to participants in the Blended Group ( $U = 1449$ ,  $p < 0.0001$ ).

Table 9.5 Satisfaction with oral health training, by study group (%)

|                   | F2F  | Online | Blended | All  |
|-------------------|------|--------|---------|------|
| <i>Beneficial</i> |      |        |         |      |
| Not at all        | -    | 1.9    | -       | 0.5  |
| Slightly          | 1.6  | -      | 2.5     | 1.5  |
| Somewhat *        | 9.5  | 25.9   | 25.0    | 20.3 |
| Very              | 63.5 | 57.4   | 62.5    | 61.4 |
| Extremely *       | 25.4 | 14.8   | 10.0    | 16.2 |
| <i>Length</i>     |      |        |         |      |
| Slightly          | 1.6  | -      | -       | 0.5  |
| Somewhat ***      | 6.5  | 35.2   | 16.3    | 18.4 |
| Very              | 64.5 | 55.6   | 73.8    | 65.8 |
| Extremely ***     | 27.4 | 9.3    | 10.0    | 15.3 |
| <i>Content</i>    |      |        |         |      |
| Slightly          | 1.6  | -      | -       | 0.5  |
| Somewhat          | 4.8  | 16.7   | 10.0    | 10.2 |
| Very              | 54.8 | 66.7   | 75.0    | 66.3 |
| Extremely **      | 38.7 | 16.7   | 15.0    | 23.0 |

Chi-Square test

\*Significant differences at the alpha level  $p < 0.05$

\*\* Significant differences at the alpha level  $p < 0.01$

\*\*\*Significant differences at the alpha level  $p < 0.001$

There was a significant positive correlation between mean understanding and confidence scores and training satisfaction scores ( $r_s = 0.325$ ,  $n = 197$ ,  $p < 0.0001$ ), suggesting that those who were more satisfied with the oral health training also scored their oral health understanding and confidence higher.

As previously mentioned, six respondents from the Blended Group completed both the web-based and the paper-based post-training surveys. Despite the mean scores for each question being slightly higher after face-to-face training, no statistically significant differences were found for understanding and confidence or training satisfaction when comparing individuals' responses after face-to-face and online PD.

Table 9.6 Mean scores for satisfaction with oral health training, by study group

|                          | Study Group | N   | Mean | SE   | Sig.   |
|--------------------------|-------------|-----|------|------|--------|
| <i>Beneficial</i>        | F2F         | 63  | 4.13 | .080 | .018   |
|                          | Online      | 54  | 3.83 | .102 |        |
|                          | Blended     | 80  | 3.80 | .072 |        |
|                          | Total       | 197 | 3.91 | .049 |        |
| <i>Length</i>            | F2F         | 62  | 4.18 | .078 | .001   |
|                          | Online      | 54  | 3.74 | .084 |        |
|                          | Blended     | 80  | 3.94 | .057 |        |
|                          | Total       | 196 | 3.96 | .043 |        |
| <i>Content</i>           | F2F         | 62  | 4.31 | .082 | .007   |
|                          | Online      | 54  | 4.00 | .079 |        |
|                          | Blended     | 80  | 4.05 | .056 |        |
|                          | Total       | 196 | 4.12 | .042 |        |
| <i>Mean satisfaction</i> | F2F         | 63  | 4.20 | .069 | < .001 |
|                          | Online      | 54  | 3.86 | .076 |        |
|                          | Blended     | 80  | 3.92 | .049 |        |
|                          | Total       | 197 | 4.00 | .038 |        |

n = number of respondents

Kruskal-Wallis test

## Participant feedback

The post-training survey included three open-ended questions asking respondents a) what they had learned, b) what they found useful and c) how the training could be improved. The paper-based survey responses, which included data collected after face-to-face training, were generally positive and similar to those given after the face-to-face training delivered during Stage One. Participants commented that their oral health knowledge had increased, particularly in relation to oral diseases and prevention, and that they now knew how to refer

consumers to dental services. They appreciated the students' efforts in tailoring the content to their site-needs and they found the scenario-based discussions useful, as this allowed more in-depth exploration of issues specific to the consumer groups that they work with. There were some comments that the training time could be longer, but overall the feedback was very positive.

*'It was quite interactive – kept me stimulated. The questions after each topic were helpful too in bringing together the info learned and making it purposeful.'* (Paper-based survey respondent)

A number of respondents from the Blended Group commented on the online module, even though they were completing the paper-based survey after the face-to-face training. A small number (n = 3) highlighted the technical challenges they experienced when completing the online module (as previously discussed). Other Neami staff provided feedback on the usefulness of having the opportunity to complete both the online and the face-to-face PD, recognising the value of blended delivery of professional development.

*'Having the blended training was really useful in finding knowledge gaps and targeting the information.'* (Paper-based survey respondent)

In regards to web-based survey responses, staff comments on what they found useful about the PD were similar to those from the paper-based survey (e.g. improved oral health knowledge and disease prevention). In addition, they found the videos of consumers and staff valuable and enjoyed the interactivity of the online module. Out of the 31 Neami staff members who responded to the question asking how the training could be improved, twelve (38.7%) were in relation to the technical issues in loading the module and playing the videos. However, despite the technical issues encountered, participants also made many positive comments about online training supporting its appropriateness as an oral health PD approach for Neami.

*'The module was VERY slow to run - particularly the videos but even switching between topics took a long time. CRSWs would struggle to stay motivated to complete this when they have competing tasks/priorities.'* (Web-based survey respondent)

*‘Hearing from experience of worker and consumer allowed me to gain an insight on how to start having conversations around oral health with consumers.’ (Web-based survey respondent)*

*‘[the training] has inspired me to bring this up with consumers.’ (Web-based survey respondent)*

## Summary of results

**Hypothesis 1:** Participants from the Blended Group will have higher self-rated understanding and confidence than participants from the Face-to-Face Group and Online Group.

Participants generally rated their oral health-related understanding and confidence ‘above average’ or ‘excellent’ after both face-to-face and online professional development. However, results indicated that it was participants from the Face-to-Face Group who had significantly higher self-rated understanding and confidence compared to participants from both the Online and Blended Groups.

**Hypothesis 2:** Participants from the Blended Group will have higher levels of satisfaction with training compared to participants from the Face-to-Face Group and Online Group.

Participants were generally ‘very’ or ‘extremely’ satisfied with both face-to-face and online professional development. However, results indicated that participants from the Face-to-Face Group were significantly more satisfied with training than participants from both the Online and Blended Groups.

## Discussion

It was hypothesised that participants from the Blended Group would have higher self-rated oral health-related understanding and confidence and would be more satisfied with oral health professional development than participants from the Face-to-Face and Online Groups. However, the results of this study indicated that the Face-to-Face Group had significantly higher self-rated understanding and confidence and higher training satisfaction. This process and impact survey was the first phase in the project evaluation. It forms an important component of the project evaluation stage, in determining which professional development delivery mode is most appropriate to build capacity to promote oral health in a community mental health setting.

A total of 144 Neami staff enrolled in the online module. While the majority of users (61.1%) were from the initial email invitation list, an additional 56 users requested to participate of their own volition. This demonstrates that Neami staff are interested in oral health PD, even if they are not in a role where they administer the Health Prompt to consumers. However, the response rate from the initial invitation list (256 CRSWs in New South Wales and Victoria) was lower than expected, at only 34.4 per cent.

There were some major challenges with the Course Sites hosting platform, which may have contributed to the low response rate. When the initial email invitation was sent out, Course Sites generated four emails to each invitee. Each email included a unique link to the module, which could be used to create a Course Sites user login and to access the module once registered. (The module could also be accessed via the Course Sites website, which required the user to enter their login and password details manually.) This made it difficult to monitor invitation status, to determine who had ‘accepted’ the invitation, as names were repeated on the invitation list four times. In addition to this error, the Health Promotion Site Champions were not aware that the email link could only be used once and a number of them, in efforts to support the implementation of training and to encourage staff participation, forwarded the invitation to members of their team. Receiving multiple email invitations from Course Sites, coupled with receiving the email invitation from the HPSC, created considerable confusion for many CRSWs in accessing the online oral health module.

Communication issues were not the only problem with the Learning Management System (LMS) used. As discussed previously, the hosting platform used for the online module was Course Sites by Blackboard. (422) Course Sites was recommended by Learning Environments at the University of Melbourne as it is similar to the LMS used at the University (with which the candidate is familiar), is free to use and technical support is also available from Course Sites. Feedback from HPSCs indicated that there were significant technological issues with the website, which meant that the online module would not load, was very slow to load, or that the audio and videos would not play. Information technology can act as both an enabler and a barrier in online education. (423, 424) Although it is not possible to accurately measure the level of impact, it is likely these technological problems compromised participation in (reducing the number of CRSWs who accepted the email invitation to enrol) and completion of (reducing the number of enrolled users who progressed to the end of the training) the online professional development module.



Having the ability to extract user data and to monitor course activity are important features of a LMS. Using Course Sites, it is possible to calculate the number of registered users, the length of time they had the module open for, and the number of people who completed the module who chose to download the certificate of completion. However, it was not possible to track users' progress in the module to determine if they had finished it, or where non-completers dropped out. As part of online course evaluation, it is important to monitor retention and completion rates and to determine course dropout patterns. (425-428) One suggestion to improve the user-friendliness of the online oral health PD is the inclusion of a status bar, enabling participants to track their progress in the module. This feature and improved methods of monitoring course completion should be added to the module before offering it to other users.

The findings from Stage One of this project highlighted the need for flexibility and contextual appropriateness in the design and delivery of workforce development approaches at Neami. A number of HPSCs asked their colleagues how they would prefer to complete the online module. Some sites decided they would all complete it at the same time on their individual computers, while a number of sites chose to do the training collectively as a team during the weekly meeting time. Shared decision-making, which involves collaboration between the client and mental health professional in making decisions about treatment and care, has become a prominent feature of recovery-oriented mental health care. (429-432) Shared decision-making has also proven effective in the workplace, in promoting the health and wellbeing of staff. (433, 434) This study highlights the shared decision-making processes that operate within Neami teams and demonstrates the effectiveness of utilising the HPSCs to 'champion' the implementation oral health PD.

The shared decision-making strategies applied by the HPSCs were practical approaches to ensure the maximum number of staff completed the module with the minimum amount of interference to normal working practices. However, the downside to teams completing the module together is that only one user login was created, making it difficult to accurately calculate the number of people who completed the module. This problem was overcome by asking the state Health Promotion Officers to ascertain which sites had completed the training together, if a single login was created and how many staff completed the training collectively. Furthermore, as those who did not have a login to the Course Sites website would not be able to access the 'resources folder' in the module, Health Promotion Officers provided HPSCs

with electronic copies of the Neami oral health resources to share with their colleagues. These problem-solving examples are evidence of the capacity within Neami to adapt the oral health program to the contextual differences between sites. This problem solving ability is one of the key dimensions outlined in the capacity building framework guiding this project. (36)

Promotion of the oral health PD occurred via the organisation intranet and communications from the HPSCs. It is against the organisation philosophy at Neami to offer incentives (e.g. payment, prizes, gifts etc.) to encourage participation in professional development or in research activities (e.g. surveys). However, a 'certificate of completion' was available to participants after they completed the online and face-to-face training. Users of the online module were provided with instructions for downloading the certificate from the Course Sites website.

The fact that less than half (43.1%) of enrolled users chose to download the certificate seems to indicate that it was not a useful 'incentive'. Under Australian National Law, all registered health practitioners are required to undertake continuing professional development (CPD). (435) The majority of Neami CRSWs are not registered health professionals and are therefore not required to provide evidence of participation in CPD. In designing appropriate PD, particularly for non-registered health professionals with no legislated CPD requirement, it is important to consider the purpose of the training and its relevance to learners' professional role, and the quality of instructors and learning materials. (436-438) These factors are important to consider when oral health PD is voluntary, in developing strategies to motivate staff to participate.

Only two-fifths (44.4%) of the enrolled users from the online module completed the web-based post-training survey, despite HPSCs promoting participation at team meetings and via email. The majority of survey respondents were from New South Wales (84.4%). It is possible that the lower response rate in Victoria is due to survey fatigue or because they also participated in the face-to-face training and therefore completed the paper-based survey (a number of respondents in the paper-based survey commented on the online module, even though they had just completed face-to-face training). Time constraints (e.g. in building and testing the online module, and in the BOH students' availability to deliver the face-to-face training sessions) meant that there was only one month between the online module going live and the delivery face-to-face professional development. This meant that participants in the

Blended Group may have completed the online training just prior to the face-to-face training, or not accessed the module at all.

BOH students distributed paper-based surveys after the delivery of face-to-face training sessions. While it cannot be said with absolute certainty, it is believed that the response rate to the paper-based post-training survey was 100 per cent. Students reported on the number of staff who participated in face-to-face training and the number of completed surveys. No students indicated that any training participant chose not to complete the post-training survey. Traditional paper-based surveys often have higher response rates than web-based surveys, but are often associated with higher costs (e.g. postage). (439-441) Paper-based surveys immediately after training activities are low cost, as no postage is required, and cause little inconvenience to respondents. One strategy that may have improved the response rate to the web-based survey is the distribution of paper-based surveys by the HPSCs at sites participating in the online PD.

The majority of respondents in both the web-based and paper-based surveys were CRSWs (73.1%), meaning that the training reached the target audience. It is also important to note that the vast majority (90.1%) of all respondents, regardless of their professional role, provide direct consumer support meaning they may have opportunities to engage consumers in oral health-related conversations. Almost 14 per cent of respondents were Managers or Senior Practice Leaders who have the capacity to direct and support staff to participate in professional development activities. This participation demonstrates management-level endorsement of and engagement with this oral health project, which is also recognised as an important element in capacity building approaches. (36) Furthermore, the results of this survey are evidence of the project reach and supports the provision of oral health PD to staff other than CRSWs, regardless of their role in providing consumer support.

In considering the impact of oral health PD, participants' level of self-rated understanding and confidence was generally high in both web-based and paper-based surveys. However, confidence providing oral health support was significantly higher after face-to-face training compared to after online training. When understanding and confidence was compared between study groups, those in the Face-to-Face Group scored significantly higher than the Online Group or Blended Group. It was expected that understanding and confidence would be higher in the paper-based survey (after face-to-face training) compared to the web-based survey (after online training). On the other hand, it was not expected that the Blended Group

would score significantly lower than the Face-to-Face Group in the paper-based survey (after face-to-face training). It is difficult to determine why these significant differences occurred; one possibility is that Neami staff in the Blended Group who had recently completed the online module did not find that the face-to-face training further improved their oral health knowledge. Indeed, a couple of survey respondents commented that they had learnt nothing new from the sessions with the BOH students. When implementing future oral health PD activities, it is important to achieve not only the right mix of activities (to include face-to-face and/or online) and training content but to carefully plan when training will be implemented, considering the optimal time between training activities.

While it was found that satisfaction with training was generally high after both the face-to-face and online training, once again, respondents in the Face-to-Face Group reported significantly higher satisfaction levels compared to those in the other study groups. This was another interesting and unexpected result, as it was hypothesised that those in the Blended Group would be more satisfied with training. There are many factors that can affect the quality of, and therefore the satisfaction with, professional development. (442-444) When considering the differences between the Face-to-Face Group and the Blended Group (in the paper-based survey), it is possible that the lack of standardised face-to-face training (e.g. variability in the quality of ‘teaching’ by the BOH students, in the content and in the availability of audio-visual resources) influenced satisfaction. Another factor that may have contributed to lower training satisfaction levels in the Blended Group is the technological issues with the online module. Even though the paper-based survey was evaluating the face-to-face training, a number of respondents commented on the challenges in completing the online module. They may have seen the paper-based survey as an opportunity to provide feedback on both types of training at the same time (only ten participants from the Blended Group complete the web-based survey). Another key finding was that those who were more satisfied with training also rated their oral health understanding and confidence higher. These results highlight the importance of developing high quality PD, with which participants are satisfied, to enhance the training impact on participants’ oral health knowledge and their confidence in providing oral health support.

In building capacity to promote oral health, it is essential that workforce development is context specific and avoids ‘pre-packaged’ training approaches. (36) The feedback from the Stage One post-training survey was used to inform the design and development of the oral

health training delivered in Stage Two of this project. Suggestions for improvements included making training more relevant to Neami and tailoring the content of the face-to-face training to individual site-needs. Participant feedback in this study indicated participants believed that the training was relevant to Neami and fit with the organisation service delivery model (i.e. CRM). The majority of suggestions for improving the training were related to the technology and hosting platform (i.e. Course Sites), having more time for discussion during the face-to-face training (meaning longer session time) and linking with local dental services. These improvements are relatively easy to implement and should be incorporated into future oral health PD at Neami.

### Limitations

This study had a number of limitations, which reduces the generalisability of the findings. The post-test only design means it was not possible to measure changes in respondents' oral health-related understanding and confidence as a result of participating in training. While the response rate was very high for the paper-based survey, it was less than 50 per cent for the web-based survey. In addition, the number of respondents who completed both the paper-based and web-based surveys was much lower than expected. The survey also relied on respondents self-reporting their level of oral health knowledge rather than assessing actual knowledge. Consequently, the results may be biased meaning they do not represent the true level of understanding and confidence after training or the true level of satisfaction with both the face-to-face and the online PD. However, this survey is only the first stage in evaluating the oral health professional development implemented during Stage Two of this project. The results of this study provide valuable process and impact data that will be considered in combination with additional evaluation data in determining which PD delivery mode is most appropriate to build capacity to promote oral health in a community mental health setting.

### Chapter conclusion

This chapter presented findings from a mixed-mode (paper-based and web-based) post-training evaluation survey conducted during Stage Three of this project. The study was the first phase in evaluating oral health training delivered in late 2016. Results indicated that both face-to-face and online professional development are effective in building community mental health professionals' capacity to promote oral health. However, face-to-face delivery of training achieved better self-rated understanding and confidence levels and higher satisfaction levels among participants.

Stage Three of this project involves a three-phase evaluation, in which all process, impact and outcome data is considered separately and in combination, to determine which PD delivery mode is most appropriate to build workforce capacity to promote oral health in a community mental health setting. The findings from this study provide valuable information about the implementation of training. The next chapter presents qualitative evaluation data, from focus groups and semi-structured interviews with Neami Health Promotion Officers and Health Promotion Site Champions, and also from BOH students who delivered the face-to-face oral health training sessions. This qualitative study is the second phase in the evaluation of this project.

## **Chapter 10 – Qualitative process evaluation of oral health professional development activities**

This chapter presents the second component of the project evaluation. Qualitative methods were used in evaluating the process of implementing oral health professional development in Neami sites in New South Wales and Victoria in late 2016. Focus groups and semi-structured interviews associated with this phase of the evaluation were conducted in March 2017.

## Study overview

Qualitative research methods were utilised in this study to evaluate the process of planning and implementing the oral health professional development in late 2016. The purpose of this process evaluation was to understand: how professional development activities were coordinated and facilitated; the contextual similarities and differences (e.g. between sites, dependent upon training delivery mode); and how the professional development could be improved for future training participants. It also sought to explore the experiences (associated with participating in this project) of the Bachelor of Oral Health students who delivered the face-to-face training sessions in Victoria.

The qualitative methods used in this study included focus groups and semi-structured interviews. This study provides important data used (in combination with impact and outcome evaluation data) to determine the effectiveness of this project in building capacity to promote oral health in a community mental health setting.

## Research question

What are the barriers and enablers to implementing oral health professional development in Neami sites in New South Wales and Victoria?

## Methods

Process evaluation activities were conducted in March 2017. The qualitative research methods used included:

1. Semi-structured interviews with the Neami State Health Promotion Officers in New South Wales and Victoria, to explore the unique perspective of each HPO in supporting this oral health project, and the contextual differences between states.
2. Focus group and semi-structured interviews with Health Promotion Site Champions at sites in New South Wales and Victoria.
3. Focus group interviews with Bachelor of Oral Health students who delivered face-to-face training at sites in New South Wales and Victoria.



All interviews were moderated by the candidate<sup>47</sup> and were audio-recorded and transcribed verbatim.

In line with the participatory action research approach, Neami consumers and health promotion staff representatives on the Project Advisory Group were involved in designing the process evaluation action. This included: development of the focus group and interview guides, determining the participant recruitment process and planning for how the interviews and focus groups should be conducted. Ethics approval was granted by the University of Melbourne Human Research Ethics Committee (ethics ID 1648458) and by the Neami National Research and Evaluation Committee (Appendices 5 and 6).

### Semi-structured interviews with Neami Health Promotion Officers

The state Health Promotion Officers in New South Wales and Victoria were invited via email to participate in a single face-to-face semi-structured interview of 40–60 minutes' duration. The invitation email included a plain language statement (Appendix 16) explaining the study and a participation consent form (Appendix 17). It also advised that participation was voluntary and that the interview would be scheduled at a time and place of their choosing. An interview guide (Appendix 18) was developed for the semi-structured interviews that included a list of open-ended questions. These questions were used to guide the interview, but also to allow opportunities to explore themes that arose during the process. (445) Topics covered in the guide included: capacity; staff engagement; health promotion skills of the interviewee; support; and the overall quality of the oral health training. This guide was developed collaboratively by the Project Advisory Group.

### Focus-group and semi-structured interviews with Neami Health Promotion Site Champions

All Health Promotion Site Champions (or other staff members responsible for coordinating oral health training) at sites that participated in oral health PD were invited via email to participate in a single 60-minute focus group. The email (including the plain language statement and consent form),<sup>48</sup> was sent from the Neami state HPO, as this is the protocol within the organisation for recruiting staff to participate in focus groups related to health promotion. The HPO also posted a flyer on the Neami intranet advertising the focus groups

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<sup>47</sup> One PhD candidate's Supervisors co-facilitated the focus groups with the BOH students at the Melbourne Dental School.

<sup>48</sup> The same template was used for the PLS and consent forms for the HPOs and HPSCs.

and asking for expressions of interest in participating. A follow up reminder email was sent one week after the initial email invitation. Interested HPSCs were contacted by the HPO, who was responsible for coordinating all interviews. The estimated sample size was 6–10 participants per focus group.

Three focus group sessions with HPSCs were planned, one for each intervention group (Face-to-face, Online and Blended). However, in recognising the potential barriers to attending face-to-face focus groups (e.g. location, work commitments, work hours etc.), it was decided that HPSCs who expressed interest in participating but could not attend the focus group in-person would be offered semi-structured interviews (face-to-face, via Skype or over the phone) as an alternative option. The same list of open-ended questions used in the semi-structured interviews with HPOs (Appendix 18) were used in the focus group and semi-structured interviews with HPSCs.

### Focus-group interviews with Bachelor of Oral Health students

All BOH students who delivered face-to-face oral health training at Neami sites in 2016 were invited via email to participate in a single 60-minute focus group. The email (including the PLS and consent form), was sent by the candidate (Appendices 19 & 20). The candidate, who was responsible for coordinating the focus groups on the Melbourne Dental School premises, contacted students who expressed interest in participating.

Two focus group sessions with BOH students were planned, one for each intervention group where face-to-face training was delivered (Face-to-face and Blended Groups). The estimated sample size was 6–10 students per focus group. A focus group guide (Appendix 21) was developed that included a list of open-ended questions covering: preparation for delivering the face-to-face training, delivery of the training session and self-evaluation.

### Data analysis

In this study, thematic analysis was used to explore the coordination and implementation of oral health professional development activities in 2016. The steps outlined by Liamputtong and Perry in the text *Research Methods in Health*, 2013 (446) were used for the analysis of the qualitative interview data.<sup>49</sup> This involved four stages of analysis:

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<sup>49</sup> Both supervisors of the graduate researcher coded a sample of transcribed data, to discuss codes and reach consensus on the themes.

1. Descriptive coding or open coding, which is the initial stages of coding and data sorting.
2. Focused coding, is beginning to use codes to make sense of the data.
3. Axial or interpretive coding, is the reorganising of codes into more abstract themes.
4. Selective coding is the identification of central or ‘core’ themes.

Axial codes (sub-themes) for the core themes from the interviews with the Neami Health Promotion Officers and the Health Promotion Site Champions were mapped against the three dimensions of capacity building (infrastructure, sustainability and problem solving) as described in the Framework used to guide this project. (36) Data from the semi-structured interviews and focus groups were analysed using NVivo 11 software (QSR International Pty Ltd, updated 2017).

## Results

### Interviews with Neami health promotion staff

Both the Health Promotion Officer from New South Wales and from Victoria agreed to participate in semi-structured interviews. Both interviews were conducted face-to-face; one in Melbourne and one in Sydney.

A single focus group interview was conducted in Sydney, with six participants from sites that participated in the online professional development (four Health Promotion Site Champions and two Senior Practice Leaders).

There were a number of challenges recruiting study participants and coordinating the Face-to-Face Group and Blended Group focus group sessions in Victoria.<sup>50</sup> Therefore, semi-structured interviews were conducted with six HPSCs one-on-one (three each from the Face-to-Face and Online Groups). Due to barriers preventing HPSCs from participating face-to-face, three of interviews were conducted over the phone. Approximately six hours of discussion resulted from the interview sessions with Neami health promotion staff.

Thematic analysis for the focus groups and semi-structured interviews with health promotion staff identified five core themes: structures within Neami influencing oral health promotion; flexibility and adaptability in workforce development; the key role of ‘champions’ in

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<sup>50</sup> The main issue preventing Site Champions from participating in focus groups was the launch of Neami Victoria’s new service ‘Me Well’ that is funded through the National Disability Insurance Scheme. At the time of conducting these interviews, Neami sites in Victoria were transitioning to this new service delivery model.

program implementation; multi-level leadership; and developing and maintaining partnerships. It became evident when mapping ‘codes’ associated with these themes against the dimensions of capacity building from the Framework for Building Capacity to Improve Health (36) that they are not mutually exclusive and considerable overlap exists between them (Table 10.1).

**Table 10.1. Mapping sub-themes against the dimensions of capacity building from the framework**

| Core Themes                                                           | Dimensions of capacity building                                                                                                                                             |                                                                                                                                                           |                                                                                                                                                     |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                       | Infrastructure                                                                                                                                                              | Sustainability                                                                                                                                            | Problem solving                                                                                                                                     |
| <b>Structures within Neami influencing oral health promotion</b>      | <ul style="list-style-type: none"> <li>• Health Prompt survey</li> <li>• Health promotion priority areas</li> <li>• Commitment to HP</li> <li>• Consumer-centred</li> </ul> | <ul style="list-style-type: none"> <li>• Every 6/12</li> <li>• Ongoing priority</li> <li>• Accountability</li> <li>• Resources allocated to HP</li> </ul> | <ul style="list-style-type: none"> <li>• Annual health promotion planning</li> <li>• HP Checklist</li> <li>• Integrated health promotion</li> </ul> |
| <b>Flexibility and adaptability in workforce development approach</b> | <ul style="list-style-type: none"> <li>• Learning and Development</li> <li>• Outreach service delivery</li> </ul>                                                           | <ul style="list-style-type: none"> <li>• Core training</li> <li>• Booster sessions</li> </ul>                                                             | <ul style="list-style-type: none"> <li>• Team decision making</li> <li>• Tailoring to suit team needs</li> <li>• IT challenges</li> </ul>           |
| <b>Key role of ‘champions’ in program implementation</b>              | <ul style="list-style-type: none"> <li>• Key person at site-level</li> <li>• Liaise with HPO</li> </ul>                                                                     | <ul style="list-style-type: none"> <li>• TTT – ‘champions’</li> <li>• Support from HPO and manager</li> </ul>                                             | <ul style="list-style-type: none"> <li>• Project management skills</li> </ul>                                                                       |
| <b>Multi-level leadership</b>                                         | <ul style="list-style-type: none"> <li>• Health promotion roles in Neami</li> <li>• Management support</li> </ul>                                                           | <ul style="list-style-type: none"> <li>• Context specific</li> <li>• Compulsory training</li> </ul>                                                       | <ul style="list-style-type: none"> <li>• Capacity of HPOs &amp; HPSCs</li> </ul>                                                                    |
| <b>Developing and maintaining partnerships</b>                        | <ul style="list-style-type: none"> <li>• Collaboration with consumers</li> <li>• Local level partnerships</li> </ul>                                                        | <ul style="list-style-type: none"> <li>• Referral processes</li> <li>• F2F training</li> </ul>                                                            | <ul style="list-style-type: none"> <li>• Consumer-centred</li> <li>• Timely access to care</li> <li>• Evidence-based OHP</li> </ul>                 |

### Structures within Neami influencing oral health promotion

Interview data draws attention to Neami’s commitment to addressing consumers’ oral health needs. Participants recognised the importance of oral health, even if oral health promotion may not be a particular area of interest for them (e.g. ‘dental isn’t my most exciting subject, no offence’). Efforts were being made to incorporate oral health messages when discussing other physical health areas, which is evidence that the training was effective in promoting integration of oral health into other health promotion activities.

Health promotion is viewed as ‘core business’ at Neami. Oral health is a health promotion ‘priority area’ and annual planning days are seen as an opportunity to review health promotion activities and address any high-level challenges in implementation. Participants recognised that the Health Prompt screening tool (which includes an oral health question and is offered to Neami consumers every six-months), ensures that oral health remains firmly on the health promotion agenda. They suggested that the health promotion ‘checklist’ to monitor health promotion activity at the site-level, which is completed by HPSCs one to two times annually, should be updated to include more questions regarding oral health promotion activities.

*‘Looking at, let’s say for example the data that we’re getting back around the Health Prompt and people not having or seeing dentists. It’s still, in a lot of states and sites, the number one “no” answer.’ (HPO1)*

*‘What I got from the face-to-face training<sup>51</sup> with was that the more you try and integrate oral health within health, thinking about health, it’s more that the way we think about it as separate from health, is what the barrier is. You know, if we just try and integrate it all together in terms of how we deliver the service and how we talk about health with people, I think that might help keep it on the agenda.’ (F4)<sup>52</sup>*

*‘We were talking about building in those key messages, so if someone’s smoking and building in those oral health messages, supporting staff around being able to build those key messages in a bit more, I found that really helpful when I sat in on the training.’ (O3)*

### Flexibility and adaptability in workforce development approach

When reflecting on the implementation of the oral health PD, participants discussed a range of barriers and enablers. The diversity in the strategies used to support the oral health program reinforced the need for oral health training approaches to be flexible and adaptable to the contextual needs of different teams. Shared decision-making was a key strategy in a number of sites. Health Prompt Site Champions engaged teams in deciding how and when they wished to complete the online training module, with some choosing to work through it collectively. This collaborative planning process was important to enable participation, as

<sup>51</sup> The participant was talking about the workshop to train Health Promotion Site Champions in implementing the project, conducted in Sydney by the graduate researcher.

<sup>52</sup> HPSCs were coded according to their study group (i.e. F = Face-to-Face, O = Online and B = Blended). Students were also coded according to the study group for which they delivered face-to-face training (i.e. SF = Face-to-Face, and SB = Blended).

CRSWs spend the majority of their time providing outreach support rather than based in an office. HPSCs from the Face-to-Face and Blended Groups valued the opportunity to co-plan the face-to-face training with the BOH student, to tailor the content to suit their site needs. This made the training relevant to their individual contexts.

*'I felt like it was really easy to integrate into my work and also see a real value in health promotion and this being one of the sort of key parts of health promotion, it felt like it all went quite smoothly.'* (F3)

*'At our site, we discussed it as a team, what would work best and decided to do it in our team meeting on a Wednesday morning, and the people who weren't able to do it then, I just followed up. So I'm pretty sure everyone did the training at our site, like the managers and SPL [Senior Practice Leader] did the training as well, so everyone did it all together, so it wasn't just CRSWs.'* (O5)

*'People were able to sort out what questions hadn't been answered in the online, or what did they want to know more about, so then we could feed that back to the student so they came prepared with things that we were interested in and wanting to know more about, so it made it more purposeful and more meaningful.'* (B3)

*'I guess I think what was good too about the training was that it didn't, I guess when CRSWs and support facilitators, often you know consumers think you're the expert in things, so it wasn't framed in a way of making us the experts in all things oral health.'* (O5)

In considering future oral health training activities and the facilitators for the broader implementation of the Neami oral health program, participants suggested that the Learning and Development team at Neami take on the responsibility of delivering the online module. Issues with the Course Sites hosting platform and frustration with creating 'another login' were identified as barriers to staff completing the online module. There was consensus in the Online Group focus group that the e-learning oral health module should be incorporated into new staff induction training. They also strongly emphasised the need for regular 'booster' sessions (face-to-face discussion sessions) to ensure that staff knowledge and skills related to oral health promotion remain current.

## The key role of ‘champions’ in program implementation

The Health Promotion Site Champions were the key people responsible for coordinating and supporting the implementation of the oral health PD at the site level. They found the training ‘straightforward’ to implement and used a variety of strategies (e.g. flyers, posters, email and verbal communications etc.) to engage staff in the project. It was apparent that the HPSCs had the project management skills and the capacity to take on the ‘champion’ role and adapt the implementation of the oral health project to ensure it was relevant and appropriate for their site.

*‘I guess it depends on the person’s personality type. I know that some people feel bulldozed by the rest of the team. I’ve done other projects before, with health promotion, and the team can be like ‘another paperwork’ and you might feel really strongly about how it’s going to benefit a consumer but if you can’t get the rest of the team on board you can feel bulldozed by them.’ (F1)*

Health Promotion Site Champions who were newer to the role of managing the health promotion portfolio were a little less confident in overseeing the oral health PD implementation. However, participants implied they could approach the state Health Promotion Officers, and to a lesser extent their Site Managers, if they needed extra support. While the HPSCs were the key person overseeing the project implementation, it was evident that having a good relationship with supervisors was also essential.

*‘Site Champions and managers that are engaged with health promotion, you can see there’s a health promoting culture within their work place. They have Health Prompt completion rates that are quite high, but it’s an ongoing challenge, how to engage Site Champions or managers that have different priorities to oral health, or health promotion generally.’ (HPO2)*

*‘I think prior to picking up the [health promotion] portfolio, it [oral health] wouldn’t have been on my radar as much as it is now, so I think it’s an incredibly important project and that more people [Neami consumers] are going to be supported, I think that’s fantastic.’ (F3)*

## Multi-level leadership

Health Promotion Officers and Health Promotion Site Champions have different levels of responsibility in coordinating health promotion projects. However, the need for collaboration between the roles was discussed and the mutual respect and support between them was apparent. The HPOs drew attention to the HPSCs' understanding of contextual differences between sites, which is important in leading projects within individual teams. All of the HPSCs found the oral health PD straightforward to implement and felt they could seek support from their colleagues and the HPOs if necessary.

Although participants felt they had the capacity to fulfil their health promotion roles, they believed that Neami senior management and executives should be more actively involved in health promotion within the organisation. There was an awareness that senior-level staff have a more in-depth understanding of the economic and political environment influencing the organisation and service operation. They also have the authority to make participation in oral health professional development compulsory, which was a strategy proposed to sustain oral health promotion at Neami.

*'I try to understand the bigger picture as much as possible and keep up to date, but at that point in time my manager is a step above me and really sees the broad implications, and is also very familiar with the current environment as well, you know, the political dynamic environment within Neami. So I think having support from management is vital.'*  
(HPO1)

*'I think higher management need to be involved. Maybe regional managers and state managers, and that it needs to be plugged by them and even presented, so for yourself [the candidate] to be invited to the senior leadership forum to present this, what's happening and how Neami is so involved, and what we've been doing, and how we've been working over the last few years.'* (HPO2)

## Developing and maintaining partnerships

The qualitative data affirmed that the partnership between Neami support workers and the consumers they work with is central to organisation operations. Participants described how support provision must align with the Collaborative Recovery Model and focus on achieving personal goals identified by consumers. They highlighted that oral health might need to 'take



a back seat' if consumers have more important issues (e.g. housing, employment) to deal with at that time.

*'Often, I would reinforce that this is not Neami's agenda this is actually consumers telling us that they want and need this help, so coming from the consumers voice rather than top down Neami's voice.'* (HPO1)

*'So, I think people are, not necessarily interested in dental, cos, sorry, I have no interest at all, but I do have an interest as part of my clients' health and that is a big issue when they come into our services.'* (F4)

A number of participants talked about partnerships with local dental clinics and referral pathways for consumer to access services. A few Victorian HPSCs<sup>53</sup> shared stories describing how they had facilitated consumer dental visits to address their oral health problems (see 'shared consumer stories' below). A couple of consumers had been experiencing dental pain for a considerable amount of time (one for three years), without any hope of getting care in the near future. Participants in the Online Group session discussed collaboration with the National Dental Foundation, which provides pro bono dental care to people from disadvantaged backgrounds. (447) The Health Promotion Officer in New South Wales was also aware of a partnership being developed between one site and a local community dental service, where outreach dental services using a mobile dental van were being planned for Neami consumers.

*'What stood out for that person in particular was that they, prior to linking in with Neami they had been on a waiting list for about three years and they had called during that period to try and get a sense of when they could get an appointment. So they had been experiencing pain for a reasonable period of time without accessing, or having capacity to access dental health or see a dentist, and then from the moment of sending through the referral, literally within days they'd been contacted and days after that had an appointment.'* (F3)

During the Online focus group, one of the HPSCs shared their experience of partnering with the University of Sydney to coordinate a face-to-face oral health education session delivered by local Bachelor of Oral Health students. This session was described as acting as a 'booster'

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<sup>53</sup> As mentioned previously, clients of mental health services are eligible to priority access to dental services if they have a health care card or pensioner card.

to what staff already knew. This prompted discussion among the group regarding the value of having both face-to-face and online training and how beneficial having both would be, particularly in accommodating different learning styles. It was suggested that local dental practitioners could be invited to provide Neami teams with current evidence-based information, but there was concern that if there was a cost associated with this it may act as a barrier.

*'Our CRM booster sessions, they're usually just discussions because we've had the training ... so I guess whether the booster be, not so much doing the training all over again but having a discussion about, 'do you still remember, have you, what have you gotten out of it, do you still remember the resources, has anyone linked in people?' So, maybe something a little bit less formal than actually sitting down and doing the training again.'* (O6)

## Focus groups with BOH students

Nine of the Bachelor of Oral Health students who had delivered face-to-face training agreed to participate in the study. There were five students in the Blended PD focus group session and four in the Online PD focus group. This number was lower than anticipated; however, both sessions ran for approximately one hour and each student contributed to the group discussion.

Thematic analysis of the BOH focus groups data identified three core themes: personal growth, preparation for practice and interprofessional practice.

## Building capacity of BOH students

Although the aim of the focus groups was to evaluate the face-to-face training sessions, it was interesting to note that all of the students described positive learning experiences and personal growth from participating in this project. For most students, this was their first time giving a presentation and they were apprehensive about talking to a group of professionals. The differences in students' personalities and communication styles were apparent, and it was interesting to note the diversity in their preparation and delivery approaches. Some students reported communication challenges with the Neami HPSCs, which affected their preparation (e.g. lack of or delayed responses to emails). However, this seemed to build their capacity to be flexible and 'able to improvise on the spot' and to incorporate contingencies in their

planning processes (e.g. preparing content, printing power point slides in case no projector was available etc.)

*'It was more personal growth, like right after the presentation, you know, getting in the car to drive home, the satisfaction of actually delivering it to, real like adults in the world ... and that satisfaction, it makes you feel good that you know your stuff.'* (SB4)

*'You have to think on the fly sometimes, if the conversation's hijacked a bit with some sort of important topic, maybe you need to do that first and swap it around a little bit.'* (SB1)

In general, students found the experience rewarding and beneficial. One student did mention feeling 'judged' and a bit intimidated about participants completing the evaluation form (which was an interesting comment, considering people living with mental illness often fear being 'judged'), but on the whole students valued receiving immediate feedback about their presentation. Areas of personal growth identified during the focus groups included developing a sense of responsibility, communication and presentation skills, self-confidence, a sense of satisfaction and of personal achievement. Only one student found the experience of planning and delivering the session negative, but even they found it valuable to their personal growth saying 'you can throw yourself in awkward situations and deal with it, like it's going to happen'.

*'I think in terms of feeling confident about yourself and your knowledge, as you know you were really helpful and really good, and obviously this is definitely something that grows over time, the more you talk to people about it the better you'll get at it and the more confident you'll feel.'* (SB2)

### Preparation for practice

Students recognised that participation in this project helped to prepare them for their final year of study and to develop skills that would prove useful in their future career as oral health therapists. There were multiple comments about this being their first 'real world' experience as an oral health professional outside of the teaching clinic environment. Delivering the training session helped to boost and refine their communication skills, particularly in pitching oral health information at the right level. This was also deemed beneficial to their clinic-based interactions with individual patients. As their first experience in oral health promotion,

participants said planning and delivering oral health education sessions was challenging but rewarding; all students agreed this activity that should remain in the course curriculum.

*'For me personally, I think it was a good refresher, learning this information for myself again, because then I was able to relay that to my patients and I felt that little bit more comfortable talking about it, and kind of making it a lot more simple than it would have been when we were taught it.'* (SB2)

*'I guess it kind of informs you for the future as well, and yeah, I guess it was kind of an area that I was really interested in, in terms of health promotion, because we're so clinically focused, yeah, it was really good.'* (SF3)

*'It was good to actually get feedback, because from your patient you don't get any feedback at all, so you don't know whether the information you've given is actually helpful to them, or their opinions. But at Neami, because we were able to get to evaluations. I think that was really helpful for us in terms of how we think we should change the way that we explore, you know, ideas to patients, whether we need to simplify them, or whether we need to change anything so that it'll easier for them to understand as well.'* (SB2)

### Interprofessional practice

While it was daunting for the students to coordinate the oral health training sessions with the HPSCs, they appreciated that forcing them out of their 'comfort zone' was beneficial to their learning. BOH students at the University of Melbourne receive didactic education on the importance of interprofessional practice, but this was their first opportunity to work collaboratively with professionals from a different discipline. It seems that participating in this project built the capacity of the BOH students to work not only on their own, but also in an interprofessional environment.

*'I think as soon as the responsibility shifts from the lecturer to yourself it totally changes things, like, we're being the, erm, somebody to go out into community and teach them about oral health and the referral pathways.'* (SF4)

*'I just think it was an overall good experience to understand how what we do, can be, can impact sort of a different career basically. How everything's kind of, and the whole thing interdisciplinary care and how we can all work together to help people that. Maybe we've*

*never come in contact with, but somehow we're influencing them through this, and I think the people as well, they're the really interesting people to talk to and their opinions were very valid and coming from a different angle than probably where ours come from with our background.' (SF2)*

*'I think maybe going into it with the mindset that, I think you [the candidate] mentioned it, that you're not trying to make them oral health professionals, but rather seeing how it can sort of slot into what they're already doing and finding where their strengths are as workers. Like, we talked a lot about motivational interviewing which was already a concept that they were familiar with.' (SF3)*

### Common themes between Neami staff and the BOH students

There were some common themes identified between the qualitative data from the Victorian HPSCs and the BOH students. Both highlighted challenges in identifying topics for the face-to-face training content and the importance of tailoring the content to suit the participants' needs. They suggested circulation of a document or 'checklist' for staff to indicate if they had completed oral health training previously, and what they would like to learn more about.

*'Like a google doc or something, for them to actually provide them a google doc that has headlines or what they want to learn, have they done this, tick yes, you know, have you had the session before, tick yes, or something like that, just because it would've just been nice to know really about the other knowledge.' (SB1)*

*'We got to say this time, it's actually gonna be more around what we actually want to know from the site, what kind of questions do you actually have and it's gonna be tailored to that. Then it was more like "oh, okay", it was more engaging for the staff.' (F1)*

Both staff and students also recognised the importance of making face-to-face training sessions interactive and discussed the inclusion of role-play and scenario-based activities.

*'Thinking of the face to face, being able to kind of role model those messages and role play how someone might deliver that, in a real life situation, in the face to face training would probably be beneficial to do that.' (E5)*

*'The way we delivered this session was way more interactive, so they, everyone engaged, and I think that really makes a difference.' (SB1)*

There was consensus that an informal approach was preferable for workplace professional development. Some of the students were surprised at how informal the setting was, but this made them more relaxed in delivering their presentation. In general, feedback from the Victorian HPSCs about the face-to-face training was very positive and suggested that students came appropriately prepared and delivered their presentations well.

*'I think making it fun is the best thing, and I think that's why I love having the face to face as well, cause you get all the cards and the information and stuff, and it's pretty simple, like keep it simple. I think most of the work we do is pretty complex, so coming into something equally as complex, people aren't interested in, so making it really simple and fun I think are the most important things.'* (B2)

## Consumer stories shared

The goal of this project was to increase oral health support provided to Neami consumers. Some of the Health Promotion Site Champions shared success stories describing how they, or a colleague, had supported consumers in accessing dental services. Below are some excerpts from interviews where HPSCs shared stories about consumers' oral health care.

*'For an example, one [consumer] mentioned that he didn't brush his teeth at all, which I just assumed that he did. I just, you know, it's an assumption that you might make, and you know, one person that I took to the dentist needed two teeth pulled out and the dentist said that he would have been in extreme pain, but he was just putting up with it. But, if you never had the conversation you don't know that, that really is affecting their mental health because they're in strong pain all the time.'* (F1)

*'As I said, every single person here has been to the dentist in the last month. Some have been getting ongoing fillings, root canal, all that kind of stuff, so it's been pretty full-on here. Two wisdom teeth taken out two weeks ago, so there's a bit ... no ... two had two wisdom teeth out two weeks ago. So it's been kind of, you know, it's always on our agenda.'* (F2, Youth Residential Service)

*'I've just had recently two experiences of working alongside of two consumers that have just linked in to free dental health, in the last sort of week and a half or two weeks and I think that part of that has come through the health prompt. So the health prompt has sort of raised ... that one of the people I'm working alongside, they've had significant pain for*

*a couple of years ongoing and it had only sort of come to attention ... through doing the health prompt, and then through having those conversations and following through.’ (F3)*

## Discussion

This study found that it can be ‘straightforward’ to implement oral health professional development in a community mental health setting; however, it highlighted the importance of having a key person to ‘champion’ the project in individual teams. The results of this study contribute to research exploring the utilisation of non-dental professionals in the provision of oral health support. Training the ‘broader health workforce’ in oral health promotion is one of the key recommendations in the NOHP, particularly when trying to reach priority population groups at higher risk of oral diseases (e.g. people living with mental illness, Aboriginal and Torres Strait Islander peoples, socially disadvantaged etc.) (1) This study provides valuable information about implementing oral health professional development and should be considered in developing future oral health professional training programs for non-dental professionals.

Thematic analysis of Neami staff transcripts revealed five core themes highlighting the contextual differences in the coordination and implementation of oral health training in different sites (structures within Neami influencing oral health promotion, flexibility and adaptability in workforce development, key roles of ‘champions’, multi-level leadership and developing and maintaining partnerships). These themes and associated sub-themes were mapped against the three dimensions of capacity building (infrastructure, program sustainability and problem solving) to assess participants’ perceptions about the relevant barriers and enablers. These findings form an important component of the overall project evaluation in determining if this project was successful in building capacity to promote oral health in a community mental health setting.

The barriers and enablers to implementing the oral health project identified in this study are similar to those identified in other studies evaluating health promotion programs. They include the presence or lack of: management support; skilled health promotion staff; resource allocation to health promotion, partnerships and leadership. (269, 406) In their systematic review of the evidence for reorienting health services to increase health promotion capacity, McFarlane et al. found that competing priorities and lack of funding were important also barriers to health promotion. (269) These factors were not identified as barriers in this present

study. Neami is committed to health promotion, for both consumers and staff, and has the policies and structures in place to support physical health promotion, including oral health. (448)

The findings from this study indicate that Neami Health Promotion Site Champions had the capacity to problem solve any issues that arose in implementing this project and to adapt the oral health training to suit their individual contexts. Participants discussed challenges with the oral health training (e.g. technical issues with the online module, difficulties getting staff to come up with topics to include in face-to-face training), but had the skills to manage these issues and suggested strategies to overcome them in future PD activities. Evidence demonstrates that ‘champions’ can be used as a facilitator in health promotion interventions. (401, 402, 449, 450) The results of this study support the utilisation of oral health ‘champions’ in the development and implementation of oral health promotion programs.

The participatory action research approach meant that all oral health professional development activities in this project were collaboratively planned by oral health experts and by Neami consumers, health promotion staff and support workers. Alignment with the Collaborative Recovery Model and the Neami Health Prompt screening tool was central to PD design, in order to integrate oral health promotion into existing health promotion practices (e.g. including oral health messages when discussing other physical health issues). Data from this qualitative evaluation suggests these were key strengths of this project, and that they fit with the three dimensions of capacity building.

Travers et al. emphasised the need for health promotion activities to be ‘readily incorporated into existing work processes’. (451) There is also growing focus on integrated health promotion<sup>54</sup> and the need for ‘common risk factor’ approaches<sup>55</sup> in promoting health and preventing chronic diseases. (1, 8, 199, 452-455) In a recent qualitative study exploring mental health professionals views on oral health, Scrine et al. suggested that more needed to be done to support mental health professionals to ‘incorporate oral health in a more holistic, coordinated and integrated approach to care.’ (175) These strategies to increase the provision of oral health support fit with those outlined in the National Oral Health Plan. (1)

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<sup>54</sup> Defined as ‘working in a collaborative manner using a mix of health promotion interventions and capacity building strategies to address priority health and wellbeing issues’.

<sup>55</sup> ‘The common risk factor approach addresses risk factors common to many chronic conditions’ (Sheiham & Watt, 2000).



Three core themes emerged from the Bachelor of Oral Health student transcripts: personal growth, preparation for practice, and interprofessional practice. These results suggest that participating in the design and delivery of oral health education sessions is a worthwhile experience for BOH students. The findings from this study are similar to others, where experiences outside the usual teaching environment, both clinical and non-clinical, have proved to be beneficial to dental and oral health students' professional learning and personal development. (456-459) The BOH students recognised the importance of interprofessional practice and the need to work collaboratively with non-dental professionals. There is growing focus on the development of multi-disciplinary teams (including a range of health care providers) and the integration of oral health care into general health services. (154, 460-463) Participation in this project provided BOH students with their first opportunity for 'interprofessional practice' and engagement in non-clinical activities outside of their teaching environment. This process evaluation indicates that participation in this project was an overwhelmingly positive experience for both the students and the Neami staff.

This qualitative evaluation study was guided by the Framework for Building Capacity to Improve Health. (36) When mapping the themes and sub-themes identified from Neami staff data against the dimensions of capacity building (Table 10.1), it was apparent that this project has achieved considerable success in building capacity to promote oral health through workforce development. However, this process also identified areas where more work needs to be done to develop infrastructure, sustainability and problem solving to enhance oral health promotion at Neami. Recommendations to address these issues will be made in the final discussion, in pulling together all components of the project evaluation (process, impact and outcome).

## Limitations

This component of the project evaluation has a number of limitations. In Victoria, it was not possible to recruit HPSCs to participate in focus group sessions. Therefore, it was necessary to conduct individual semi-structured interviews that eliminated the chance for group discussion and obtaining a collective perspective on the oral health PD implementation in Victoria. (464) The focus groups and semi-structured interviews were conducted in March 2017, which was four months after the delivery of face-to-face training (and up to five months after completion of the online module). Therefore, recall bias may limit the validity of results. While it may be a limitation in evaluating the training content (e.g. some of the

participants found it difficult to remember the content of the training), the lapse in time since training meant participants had more opportunities to apply their oral health knowledge and skills in practice (as is evidenced by the ‘consumer stories’ shared).

The results of this study should be considered within the limits of qualitative process evaluation of oral health professional development. The purpose was to understand how oral health training activities were coordinated and implemented and to identify any associated barriers and enablers. As such, this study is very context specific; however, the findings may be applicable to other community mental health services and prove useful in planning oral health training for non-dental professionals.

Despite the limitations, this study contributes important information about the coordination and implementation of oral health professional development activities in Neami sites in New South Wales and Victoria. The core themes and sub-themes identified from the Neami staff data revealed a number of enablers supporting this oral health project; of these, the role of the ‘champion’ was most important. The BOH student data not only added to the process evaluation, but also confirmed that participation in this project was beneficial to the students’ learning and personal growth. These findings demonstrate the need to develop more oral health promotion programs where mental health and oral health professionals can work collaboratively to address the persistently poor oral health outcomes experienced by people living with mental illness.

## Chapter conclusion

This qualitative process evaluation study found that oral health ‘champions’ can be used effectively to coordinate and facilitate oral health professional development in a community mental health setting. The results suggest that, if activities are collaboratively designed and contextually appropriate, oral health programs can be straightforward to implement.

The findings from this study were considered in combination with other Stage Three evaluation data, in determining if this project was successful in building capacity to promote oral health in a community mental health setting. The next chapter will present the final stage of the evaluation, the follow-up cross-sectional survey measuring changes in Community Rehabilitation and Support Workers oral health-related knowledge, attitudes and professional practices.

## **Chapter 11 – Measuring changes in oral health-related KAP: Follow-up cross-sectional survey of Neami Community Rehabilitation and Support Workers**

This chapter presents the final stage in the evaluation of this project, a follow-up (outcome evaluation) cross-sectional web-based survey of Neami Community Rehabilitation and Support Workers measuring changes in their oral health-related knowledge, attitudes and professional practices. This was a repeat of the Stage One KAP survey; it was conducted six months after delivery of the face-to-face oral health professional development and was open between April and June 2017.

## Study overview

This study was the final phase in the project evaluation, which assists in determining if this project was successful in building capacity to promote oral health. The findings from this study are important to the oral health field and to the community mental health sector, and can be used in developing contextually appropriate oral health-related workforce training solutions for community mental health professionals.

The purpose of this study was to determine which workforce training delivery mode was most effective in improving Community Rehabilitation and Support Workers' oral health-related knowledge, attitudes and professional practices. Between September and November 2016, oral health professional development was implemented at Neami sites in Victoria and New South Wales. The multi-site quasi-experimental control group design compared oral health KAP after face-to-face, online, blended or no professional development. The anonymous web-based cross-sectional survey used during Stage One of this project was repeated in this study, in order to measure changes in Support Workers KAP.

## Research question

Which professional development delivery mode results in better oral health-related knowledge, attitudes and professional practices?

## Hypothesis

Community Rehabilitation and Support Workers in the Blended Group will have better oral health-related knowledge, attitudes and professional practices than those in other study groups.

## Methods

An anonymous cross-sectional web-based survey of Neami Community Rehabilitation and Support Workers was conducted in April 2016, six months after the delivery of face-to-face oral health PD. This study repeated the protocol used in the Stage One cross-sectional survey. Ethics approval for this study was granted by the Human Research Ethics Committee at the

University of Melbourne (ethics ID 1544795)<sup>56</sup> and by the Research and Evaluation Committee at Neami National (Appendices 4 and 6).

Survey Gizmo was the web-based survey software used in this follow-up cross-sectional survey. The survey instrument (Appendix 22) was a modified version of the 59-item oral health KAP questionnaire used during Stage One of this project.<sup>57</sup> The majority of the survey questions were five-point Likert items, although some sliding scale and multiple-response questions were also included. The survey was amended to ask which types of oral health training (face-to-face, online or blended) CRSWs had completed in the previous twelve months, rather than simply if they had or had not had training. All questions from the baseline survey were included and, in order to allow responses to be compared between surveys, the wording of questions remained unchanged. However, comments in the initial survey indicated that the question ‘Do you practise oral health-related activities with consumers?’ was confusing to some respondents. Therefore, the ‘logic’<sup>58</sup> to this question was removed in the follow-up survey so that all CRSWs could respond to the additional five questions asking about the types of oral health support they provide, even if they answered that they did not currently practise ‘oral health-related activities’.

In order to maintain anonymity but enable individuals who completed both the baseline and follow-up survey to be matched, respondents were again asked to enter their unique identifier code (the first three letters of their mother’s maiden name and the last two digits of the year they finished high school). No personal information was collected, apart from basic employment details (i.e. site location and years worked at Neami). The follow-up survey assessed CRSWs’:

- knowledge about oral health issues (11 items), oral disease prevention (18 items), risk factors and barriers to oral health care (10 items),
- self-rated oral health understanding and confidence (7 items) and their attitudes to oral health promotion (13 items), and
- current oral health promotion practices (6 items).
- opinions on oral health-related workforce training (6 items).

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<sup>56</sup> The survey tool was modified for use in this follow up survey; this amendment was approved by the Human Research Ethics Committee at the University of Melbourne.

<sup>57</sup> The Stage One cross-sectional survey exploring Neami CRSWs oral health-related knowledge, attitudes and professional practices.

<sup>58</sup> This question included a logic that prevented CRSWs who answered ‘no’ from viewing the next five questions asking about provision of different types of oral health support.

An extra section for CRSWs who also held the Health Promotion Site Champion portfolio was added to the questionnaire (13 items). This section asked about their role supporting oral health promotion within their team. (A question logic was included so this section was only visible to those who indicated that they held to role of Health Promotion Site Champion.)

As in the baseline KAP survey, potential participants were CRSWs currently providing direct support services to Neami consumers. (CRSWs were not required to have completed the baseline survey to participate.) The response rate in the baseline KAP survey was lower than anticipated at only 35 per cent, with only 30 per cent included in the final data analysis. Therefore, all CRSWs were invited to participate in the survey in order to maximise the number of respondents. As of April 2016, Neami employed 416 CRSWs at over 50 locations throughout Australia. If the baseline survey response rate of 30–35 per cent was achieved, the expected sample size would be between 125–146 respondents. It was determined that a sample of 128 would be large enough to detect a medium-large effect size of 0.3 when testing differences in KAP between the four study groups (Face-to-Face, Online, Blended and Control), at a unidirectional significance level of 0.05 and 80% power (G\* Power © Version 3.1.9.2.)

Neami provided a list of all CRSW email addresses, and email invitations were sent to subjects that included a cover letter explaining the study and a link to the web-based survey, for those wishing to participate. The plain language statement, which explained that this was a repeat of the survey conducted in 2015, was included in Survey Gizmo. (The PLS advised that the study was interested in responses from CRSWs who had completed the baseline survey and also those who were completing the survey for the first time.) Respondents were advised that participation was voluntary, and that by choosing to continue they were indicating their consent to participate in the study. CRSWs who did not provide direct consumer support were excluded from the study.

As was the case in the baseline KAP survey, the steps outlined by Dillman were followed in order to maximise survey response rates (281). This included the Health Promotion Site Champions notifying potential participants about the survey prior to the invitation email being sent; keeping the cover letter brief; and sending a follow-up email a week after the invitation email thanking those who had already completed the questionnaire and reminding others of the importance of the study. In addition to these steps, the survey was promoted via the Neami intranet and also at the site-level by HPSCs. (As discussed previously, an ethics

amendment was sought during the Stage One KAP study to implement these extra participant recruitment strategies.)

The survey aimed to measure changes in CRSWs oral health-related KAP, at the individual and group level, to determine which study group had the greatest improvements. The inclusion of the unique identifier code<sup>59</sup> maintained respondents' anonymity, but made it possible to match data from individuals who completed both the baseline and follow-up survey.

## Data analysis

This survey collected quantitative data. Univariate statistics were used to describe the respondents' characteristics (e.g. location, years worked at Neami and participation in oral health training in the previous 12 months) and responses to each of the survey questions. Bivariate analysis of nominal and ordinal variables was performed using Chi-squared and Fisher's Exact tests. In order to perform further analyses, mean scores were calculated from Likert items (responses were scored from 1 through to 5, dependent upon the direction of the responses). The results for grouped Likert items were combined into single variables including: oral health knowledge, self-rated understanding and confidence, attitudes to oral health promotion and perceived barriers to oral health promotion. For continuous variables, Mann-Whitney U test and Kruskal-Wallis H tests were conducted. Significant Kruskal-Wallis results were followed by pairwise comparisons using Dunn's procedure with Bonferroni corrections for multiple comparisons.

Comparisons were made between study groups (i.e. Face-to-Face Group, Online Group, Blended Group and Control Group)<sup>60</sup> and also between those who had and those who had not participated in oral health training. To account for any contamination of study groups (e.g. participants in the Blended Group who did not complete both face-to-face and online training), results were also compared by actual training type completed.

Correlations between dependent variables of interest (i.e. knowledge, self-rated understanding and confidence, attitudes to oral health promotion and perceived barriers to oral health promotion) were run using Spearman's rho. Linear regression models were computed to assess the relationship between independent variables (i.e. study group and

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<sup>59</sup> As used in the previous KAP survey.

<sup>60</sup> Neami sites were allocated to study groups dependent upon their location.

participation in oral health training) and dependent variables of interest (i.e. knowledge, understanding and confidence, barriers to oral health promotion, and attitudes to oral health promotion). Dummy variables were used to compare study groups, using the Control Group as the reference group. Logistic regression analysis was performed to determine the effects of predictor variables on the practice of oral health promotion. Normality plots of the residuals and normality tests for standardised residuals identified no violations of the models' assumptions.

While the data from the baseline survey was compared by state, the follow-up survey was interested in differences between groups dependent upon oral health training delivery mode. In order for comparisons to be made between the baseline and follow-up surveys, respondents to the baseline survey were allocated to groups (i.e. Face-to-Face Group, Online Group, Blended Group and Control Group) dependent upon the location of the Neami site at which they worked.

All p-values < 0.05 were considered significant. Data manipulation and analysis was conducted using SPSS version 23.0. (261)

## Results

The total number of surveys received was 197, giving an overall response rate of 47.4 per cent. However, 46 respondents partially completed the survey, two chose to withdraw, and another ten respondents were disqualified as they did not provide direct consumer support. Therefore, the number of completed surveys included in the analysis was 139, giving a final response rate of 33.4 per cent. This sample size was large enough to compare KAP between the baseline and follow-up survey. However, of the 139 CRSWs, only thirteen (9.3%) had also completed the baseline KAP survey conducted during Stage One. This means the majority of the respondents from the baseline KAP survey (n = 128, 90.8%) were lost to follow-up.<sup>61</sup>

### Profile of respondents

There was an unequal response rate among states and study groups (Table 11.1). Almost half of respondents were from New South Wales (n = 66, 47.1%), with Victoria (n = 47, 33.8%) having the second highest number of respondents. All Neami New South Wales sites were in the Online Group; however, Victoria made up both the Face-to-Face Group (n = 19, 13.8%)

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<sup>61</sup> There were 141 respondents in the baseline KAP survey.



and the Blended Group (n = 27, 19.6%). (It was expected that Victoria would have the highest number of respondents.) The Control Group (CRSWs from Queensland, South Australia and Western Australia) comprised less than twenty per cent (n = 27, 19.6%) of survey respondents.

Respondents' profile was compared between the baseline and follow-up survey. The proportion of respondents from sites in the Online Group increased significantly from 16.3% in the baseline survey to 46.7% in the follow-up survey; however, there were significant reductions in the Face-to-Face Group (from 29.8% in baseline to 13.8% in follow-up) and Control Group (from 34.8% to 9.7%) ( $\chi^2(3) = 35.058, p < 0.0001$ ). One respondent did not indicate which site they worked at in Victoria and they had not participated in any type of oral health training (meaning they could not be allocated to either the Face-to-Face or the Blended Group), so was excluded from any analysis by study group.

Table 11.1 Profile of survey respondents, by study group

|                         |         | F2F |      | Online |      | Blended |      | Control |      | Total |       |
|-------------------------|---------|-----|------|--------|------|---------|------|---------|------|-------|-------|
|                         |         | N   | %    | N      | %    | N       | %    | N       | %    | N     | %     |
| Study group             |         | 19  | 13.8 | 65     | 47.1 | 27      | 19.6 | 27      | 19.6 | 138   | 100.0 |
| >2 years at Neami       | Yes     | 11  | 57.9 | 34     | 53.1 | 13      | 48.1 | 17      | 63.0 | 75    | 54.7  |
|                         | No      | 8   | 42.1 | 30     | 46.9 | 14      | 51.9 | 10      | 37.0 | 62    | 45.3  |
| OH training ***         | Yes     | 11  | 57.9 | 37     | 57.8 | 19      | 70.4 | 1       | 3.7  | 68    | 49.6  |
|                         | No      | 8   | 42.1 | 27     | 42.2 | 8       | 29.6 | 26      | 96.3 | 69    | 50.4  |
| Training type completed | F2F     | 10  | 90.9 | 11     | 29.7 | 12      | 63.2 | -       | -    | 33    | 49.3  |
|                         | Online  | 1   | 9.1  | 21     | 56.8 | 1       | 5.3  | -       | -    | 23    | 34.3  |
|                         | Blended | -   | -    | 5      | 13.5 | 6       | 31.6 | -       | -    | 11    | 16.4  |
| Aware OH program ***    | Yes     | 14  | 73.7 | 51     | 78.5 | 24      | 88.9 | 11      | 40.7 | 100   | 72.5  |
|                         | No      | 5   | 26.3 | 14     | 21.5 | 3       | 11.1 | 16      | 59.3 | 38    | 27.5  |

Chi-square tests

\*\*\* Significant differences at the alpha level  $p < 0.0001$

Over half (n = 75, 54.7%) of all respondents had worked at Neami for more than two years (Table 11.1). This was significantly higher than in the baseline survey ( $\chi^2(1) = 10.638, p = 0.001$ ) where majority of respondents (73.8%) had worked at Neami for less than two years. There were no significant differences between study groups for the length of time worked at Neami ( $p = 0.716$ ).

Half of all survey respondents ( $n = 68$ , 49.6%) had participated in oral health training in the previous 12-months (Table 11.1). Almost all of those (95.6%) had participated in oral health PD offered through Neami. As expected, significantly fewer CRSWs in the Control group had participated in OH training compared to those in the intervention groups ( $\chi^2 (3) = 29.660$ ,  $p < 0.0001$ ). In fact, only one person out of 27 in the Control Group had OH training in the preceding year (they did not indicate which type of training they had completed). When considering only the intervention groups only (excluding the Control Group) about three-fifths of respondents (60.9%) had completed oral health PD. Over one-third ( $n = 16$ , 34.8%) of CRSWs in Victoria had not participated in oral health PD, despite face-to-face training being delivered at the weekly team meeting in all but one of the sites at which they worked. However, it is worth noting that the majority of CRSWs from intervention sites who had not participated in OH training had been working at Neami for less than one year (63%), so may not have been with the organisation when PD was delivered.

### Study group versus training type

Despite efforts to limit access to the training mode relevant to each group, the results indicate considerable contamination of the study groups (Table 11.1). Sixteen respondents from the Online Group indicated that they had participated in face-to-face training, eleven of whom had not actually completed the online training.<sup>62</sup> Only six (22.2%) of those in the Blended Group had completed both face-to-face and online training, and twelve had participated in face-to-face training only. One of the 27 respondents in the Control Group had oral health training in the preceding year, but they did not indicate the training delivery mode.

The majority of CRSWs ( $n = 100$ , 72.5%) knew about the Neami oral health program (Table 11.1); this result was significantly higher than in the baseline survey<sup>63</sup> ( $\chi^2 (2) = 6.030$ ,  $p = 0.049$ ). As expected, significantly less CRSWs in the Control Group knew about the program (FET,  $p < 0.0001$ ). Over 80% of respondents in the intervention groups knew about the program, with the Online Group having the highest level of awareness (88.9%). Over one-third (35.4%) of those who knew about the oral health program had not actually participated in oral health training in the preceding year.

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<sup>62</sup> This group was supposed to have online PD only.

<sup>63</sup> 65% of baseline survey respondents were aware of the OH program.

## Use of the Neami OH resources

While almost three quarters of all respondents (72.5%) were aware of the Neami oral health program, less than half ( $n = 62$ , 44.6%) had used the Neami oral health resources. This figure increased slightly (48.6%) when the Control Group was excluded. The Blended Group had higher usage (59.3%) than the Online (49.2%) and Face-to-Face (31.6%) groups, however this finding was not statistically significant ( $p = 0.084$ ). CRSWs who had worked at Neami for more than two years were significantly more likely to use the oral health resources ( $\chi^2 (1) = 12.182$ ,  $p < 0.0001$ ). Oral health PD was also associated with resource use, as the majority of those who used the resources (66.1%) had participated in OH training ( $\chi^2 (1) = 12.794$ ,  $p = 0.001$ ). Although there was a small increase between the baseline (39.0%) and the follow-up (44.6%) surveys in the use of the resources, this result was not statistically significant ( $p = 0.204$ ).

CRSWs who had used the resources ( $n = 62$ ) were asked their opinions on them using six five-point Likert items (Table 11.2). Respondents' opinions on the resources were generally positive. The vast majority 'agreed' or 'strongly agreed' that they were useful (93.6%), relevant (91.9%) and informative (91.9%). Although the proportions were lower, the majority of respondents also indicated that the resources were user-friendly (80.6%) and comprehensive (66.8%). Generally, Neami CRSWs did not find the resources to be confusing or to contain too much text. There were no significant differences in opinions on the oral health resources between study groups. Significantly more of those who had OH training 'strongly agreed' that the resources were user-friendly (FET,  $p = 0.24$ ); this difference was not dependent upon the type of training completed.

Table 11.2. CRSWs' opinions on the Neami oral health resources

|                 | Strongly disagree |      | Disagree |      | Neutral |      | Agree |      | Strongly agree |      |
|-----------------|-------------------|------|----------|------|---------|------|-------|------|----------------|------|
|                 | N                 | %    | N        | %    | N       | %    | N     | %    | N              | %    |
| Useful          | -                 | -    | -        | -    | 4       | 6.5  | 52    | 83.9 | 6              | 9.7  |
| Relevant        | -                 | -    | -        | -    | 5       | 8.1  | 48    | 77.4 | 9              | 14.5 |
| Informative     | -                 | -    | 1        | 1.6  | 4       | 6.5  | 47    | 75.8 | 10             | 16.1 |
| User friendly * | -                 | -    | 1        | 1.6  | 11      | 17.7 | 42    | 67.7 | 8              | 12.9 |
| Comprehensive   | -                 | -    | 1        | 1.6  | 19      | 30.6 | 35    | 56.5 | 7              | 11.3 |
| Confusing       | 9                 | 14.8 | 34       | 55.7 | 11      | 18.0 | 6     | 9.8  | 1              | 1.6  |
| Too much text   | 6                 | 9.8  | 21       | 34.4 | 23      | 37.7 | 10    | 16.4 | 1              | 1.6  |

Chi-square tests

\*Significant differences at the alpha level  $p < 0.05$

## Oral health knowledge

This section of the survey assessed CRSWs knowledge of: prevention of dental caries (tooth decay) and periodontal (gum disease), and risk factors associated with oral health. In addition to these Likert-item questions,<sup>64</sup> it included 11 oral health knowledge questions, which were used to calculate respondents' oral health knowledge scores.

### *Caries prevention*

Almost all participants (>97%) believed that brushing teeth was 'very important' and that visiting a dental practitioner regularly was 'important or 'very important' in preventing dental caries (Table 11.3). While the majority of respondents (>83%) knew that fluoridated water and fluoride toothpaste had a role to play in preventing dental caries, they were less likely to rate drinking fluoridated water as 'very important'. Almost all CRSWs believed that cutting down on sugary foods and drinks was 'important' or 'very important'; however, more than a quarter (n = 37, 26.6%) did not recognise that chewing sugar free gum after eating could help prevent dental caries.

Table 11.3 CRSWs' opinions on the importance of behaviours in preventing dental caries

|                       | Not at all important |      | Somewhat important |      | Important |      | Very important |      | Do not know |      |
|-----------------------|----------------------|------|--------------------|------|-----------|------|----------------|------|-------------|------|
|                       | N                    | %    | N                  | %    | N         | %    | N              | %    | N           | %    |
| Brushing              | -                    | -    | -                  | -    | 3         | 2.2  | 136            | 97.8 | -           | -    |
| Flossing              | -                    | -    | 10                 | 7.2  | 34        | 24.6 | 94             | 68.1 | -           | -    |
| Ab mouth rinse        | 18                   | 12.9 | 49                 | 35.3 | 35        | 25.2 | 34             | 24.5 | 3           | 2.2  |
| F water **            | 12                   | 8.6  | 31                 | 22.3 | 31        | 22.3 | 54             | 38.8 | 10          | 7.2  |
| F toothpaste *        | 4                    | 2.9  | 21                 | 15.1 | 31        | 22.3 | 72             | 51.8 | 10          | 7.2  |
| Reduce sugary foods   | -                    | -    | 2                  | 1.4  | 28        | 20.1 | 109            | 78.4 | -           | -    |
| Reduce sugary drinks  | -                    | -    | 3                  | 2.2  | 22        | 15.8 | 113            | 81.3 | -           | -    |
| Sugar free gum **     | 23                   | 16.5 | 45                 | 32.4 | 24        | 17.3 | 33             | 23.7 | 14          | 10.1 |
| Regular dental visits | -                    | -    | 4                  | 2.9  | 26        | 18.7 | 109            | 78.4 | -           | -    |

Chi-square tests

\*Significant differences at the alpha level  $p < 0.05$

\*\*Significant differences at the alpha level  $p < 0.01$

<sup>64</sup> The survey included the same nine preventive behaviours for both dental caries and periodontal disease.

Respondents in the Control Group were more likely to answer that they did not know if fluoridated water was important in caries prevention and less likely to select 'very important' as their response ( $\chi^2 (12) = 27.195$ ,  $p = 0.007$ ). Significantly more CRSWs who participated in oral health training (32.1%) rated fluoride toothpaste as 'very important' compared to those who had no training (20.4%) (FET,  $p = 0.034$ ). CRSWs who had no OH training were also more likely to rate chewing sugar free gum after eating as 'not at all important' ( $\chi^2 (4) = 13.473$ ,  $p = 0.009$ ).

Mean scores were calculated for each item<sup>65</sup> in order to conduct further analysis and to rank the importance of each preventive behaviour according to participants' responses (Table 11.5). It was interesting to find that, although there was variation in the mean scores for each item, the order of importance based on the mean scores remained unchanged between the baseline and follow-up KAP surveys. There was a statistically significant difference between study groups in importance of antibacterial mouth rinse (the Online Group rated it more important than the Blended and Control groups) in preventing dental caries ( $\chi^2 (3) = 8.013$ ,  $p = 0.046$ ). The Face-to-Face Group rated regular dental visits significantly less important than the Online and Control groups ( $\chi^2 (3) = 8.180$ ,  $p = 0.042$ ). CRSWs who had oral health PD rated use of fluoride toothpaste ( $U = 1,476.5$ ,  $z = -2.91$ ,  $p = 0.004$ ) and chewing sugar free gum ( $U = 1,381$ ,  $z = -2.942$ ,  $p = 0.003$ ) significantly more important than those who had no OH training.

### *Perio prevention*

The results suggest there was still considerable confusion about the prevention of periodontal disease. The vast majority (>95%) of respondents felt that oral hygiene (brushing and flossing) and regular dental visits were 'important' or 'very important' in preventing periodontal disease (Table 11.4). However, most respondents failed to recognise that drinking fluoridated water and using fluoride toothpaste are 'not at all important' in preventing periodontal disease. Almost nine-tenths also believed dietary behaviour changes to reduce sugar were 'important' or 'very important'. Only one person knew that reducing sugar consumption is not a preventive behaviour related to periodontal disease; in fact, this was the only respondent who correctly answered that fluoride use, sugar consumption and chewing sugar free gum were 'not at all important' in preventing gum disease. However, this result may be due to chance rather than knowledge.

<sup>65</sup> Scored from 'not at all important' = '1' to 'very important' = '4'. 'Do not know' responses were excluded from this analysis.

Respondents in the Online Group rated the consumption of sugary drinks as ‘very important’ more frequently than those in other study groups (FET,  $p = 0.020$ ). The Face-to-Face Group were less likely to rate regular dental visits as ‘very important’, particularly in comparison to the Online Group (FET,  $p = 0.026$ ). When considering the differences in responses dependent upon participation in oral health PD, those who had training rated antibacterial mouth rinse ‘very important’ more frequently than those who had no training ( $\chi^2 (3) = 8.796$ ,  $p = 0.032$ ). CRSWs who had oral health training were also more likely to rate use of fluoride toothpaste as ‘very important’ ( $\chi^2 (3) = 8.667$ ,  $p = 0.034$ ).

Table 11.4 CRSWs’ opinions on the importance of behaviours in preventing periodontal disease

|                         | Not at all important |      | Somewhat important |      | Important |      | Very important |      | Do not know |      |
|-------------------------|----------------------|------|--------------------|------|-----------|------|----------------|------|-------------|------|
|                         | N                    | %    | N                  | %    | N         | %    | N              | %    | N           | %    |
| Brushing                | -                    | -    | 1                  | 0.7  | 13        | 9.4  | 125            | 89.9 | -           | -    |
| Flossing                | -                    | -    | 6                  | 4.3  | 24        | 17.3 | 108            | 77.7 | 1           | 0.7  |
| Ab mouth rinse *        | 12                   | 8.6  | 31                 | 22.3 | 34        | 24.5 | 57             | 41.0 | 5           | 3.6  |
| F water                 | 15                   | 10.8 | 31                 | 22.3 | 30        | 21.6 | 50             | 36.0 | 13          | 9.4  |
| F toothpaste *          | 10                   | 7.2  | 24                 | 18.0 | 31        | 22.3 | 59             | 42.4 | 13          | 9.4  |
| Reduce sugary foods     | 1                    | 0.7  | 11                 | 7.9  | 33        | 23.7 | 91             | 65.5 | 3           | 2.2  |
| Reduce sugary drinks *  | 1                    | 0.7  | 11                 | 7.9  | 30        | 21.6 | 93             | 66.9 | 3           | 2.2  |
| Sugar free gum          | 17                   | 12.2 | 33                 | 23.7 | 27        | 19.4 | 45             | 32.4 | 15          | 10.8 |
| Regular dental visits * | -                    | -    | 1                  | 0.7  | 21        | 15.1 | 117            | 84.2 | -           | -    |

Chi-square tests

\*Significant differences at the alpha level  $p < 0.05$ 

Mean scores were calculated for each item and preventive behaviours were ranked for importance according to these results (Table 11.5). As was the finding with mean scores for dental caries prevention, there was no change between the baseline and follow-up survey in order of importance (based on mean scores) for each preventive behaviour in relation to periodontal disease. The Control Group rated drinking fluoridated water significantly less important than the Online Group and the Face-to-Face Group ( $\chi^2 (3) = 8.637$ ,  $p = 0.035$ ). The Online Group rated consumption of sugary foods ( $\chi^2 (3) = 9.238$ ,  $p = 0.026$ ) and sugary drinks ( $\chi^2 (3) = 10.089$ ,  $p = 0.018$ ) significantly more important than the Face-to-Face and Blended groups. The results indicate that the Face-to-Face Group believed regular dental visits to be less important than the Online and Control groups ( $\chi^2 (3) = 9.267$ ,  $p = 0.026$ ).

CRSWs who had participated in oral health PD rated the use of fluoride toothpaste as significantly more important compared to those who had no oral health training ( $U = 1,396.5$ ,  $z = -2.807$ ,  $p = 0.005$ ). There were no other significant differences dependent upon participation in oral health PD.

Table 11.5 Mean scores for importance of behaviours in preventing dental caries and periodontal disease

|                       | Caries Prevention |      |     |       | Perio Prevention |      |     |       |
|-----------------------|-------------------|------|-----|-------|------------------|------|-----|-------|
|                       | Mean              | SE   | N   | Rank† | Mean             | SE   | N   | Rank† |
| Brushing              | 3.98              | .012 | 139 | 1     | 3.89             | .028 | 139 | 1     |
| Flossing              | 3.61              | .053 | 138 | 5     | 3.74             | .045 | 138 | 3     |
| Ab mouth rinse        | 2.63*             | .086 | 136 | 8     | 3.01             | .087 | 134 | 7     |
| F water               | 2.99              | .095 | 128 | 7     | 2.91*            | .094 | 126 | 8     |
| F toothpaste          | 3.34**            | .080 | 128 | 6     | 3.11**           | .089 | 125 | 6     |
| Reduce sugary foods   | 3.77              | .039 | 139 | 3     | 3.57*            | .058 | 136 | 5     |
| Reduce sugary drinks  | 3.80              | .039 | 138 | 2     | 3.59*            | .058 | 135 | 4     |
| Sugar free gum        | 2.54**            | .096 | 125 | 9     | 2.82             | .098 | 122 | 9     |
| Regular dental visits | 3.76              | .042 | 139 | 4     | 3.83             | .033 | 139 | 2     |

Mann-Whitney U and Kruskal-Wallis H tests

† Rank order based on mean scores for importance of preventive behaviours

\*Significant differences at the alpha level  $p < 0.05$

\*\*Significant differences at the alpha level  $p < 0.01$

### *Risk behaviours*

Participants were asked their opinion on the importance of a number of risk behaviours (associated with adverse physical health outcomes) in causing oral health problems, using the same nine Likert items from the baseline survey (Table 11.6). The majority of respondents recognised that poor diet and nutrition ( $n = 119$ , 85.6%), smoking ( $n = 122$ , 87.8%), excessive alcohol consumption ( $n = 88$ , 63.3%) and illicit drug use ( $n = 99$ , 71.2%) are ‘very important’ oral health risk factors. Two-fifths (42.4%) responded that violence was ‘very important’ in relation to oral health problems. However, only twenty participants (14.4%) knew that lack of physical exercise is ‘not at all important’ in relation to oral health and over a half ( $n = 70$ , 51.4%) believed it to be ‘very important’ or ‘important’. A third of participants believed that excessive sun exposure ( $n = 45$ , 32.4%) and unprotected sexual activity ( $n = 44$ , 31.7%) were ‘not at all important’ in relation to oral health. While on the other hand, thirty per cent ( $n = 55$ ) were of the opinion that insufficient vaccinations was an ‘important’ or ‘very important’ oral health risk factor.

Respondents who had participated in oral health training were more likely to rate diet and nutrition (FET,  $p = 0.013$ ) and smoking and tobacco use (FET,  $p = 0.036$ ) as ‘very important’. There were no other differences in responses dependent upon study group or participation in oral health training.

Table 11.6 Perceived level of importance of risk behaviours in relation to oral health problems

|                               | Not at all important |      | Somewhat important |      | Important |      | Very important |      | DNK/Missing |      |
|-------------------------------|----------------------|------|--------------------|------|-----------|------|----------------|------|-------------|------|
|                               | N                    | %    | N                  | %    | N         | %    | N              | %    | N           | %    |
| Poor diet and nutrition *     | 1                    | 0.7  | 1                  | 0.7  | 18        | 12.9 | 119            | 85.6 | -           | -    |
| Smoking *                     | -                    | -    | -                  | -    | 17        | 12.2 | 122            | 87.8 | -           | -    |
| Excessive alcohol consumption | -                    | -    | 10                 | 7.2  | 37        | 26.6 | 88             | 63.3 | 4           | 2.9  |
| Lack physical activity        | 20                   | 14.4 | 39                 | 28.1 | 34        | 24.5 | 36             | 25.9 | 10          | 7.2  |
| Excessive sun exposure        | 45                   | 32.4 | 33                 | 23.7 | 19        | 13.7 | 20             | 14.4 | 22          | 15.8 |
| Unprotected sex               | 44                   | 31.7 | 28                 | 20.1 | 22        | 15.8 | 27             | 19.4 | 18          | 12.9 |
| Illicit drug use              | -                    | -    | 7                  | 5.0  | 31        | 22.3 | 99             | 71.2 | 1           | 0.7  |
| Violence                      | 17                   | 12.2 | 19                 | 13.7 | 36        | 25.9 | 59             | 42.4 | 8           | 5.8  |
| Insufficient vaccinations     | 30                   | 21.6 | 40                 | 28.8 | 14        | 10.1 | 28             | 20.1 | 27          | 19.4 |

Chi-square tests

\*Significant differences at the alpha level  $p < 0.05$

Risk factors were ranked in order of importance based on mean scores (Table 11.7). ‘Smoking and tobacco use’ was rated most important in causing oral health problems, followed by diet and nutrition, illicit drug use and excessive alcohol consumption. There were no significant differences between study groups, or dependent upon participation in oral health PD. It was interesting to note the change between the baseline and follow-up survey, based on the mean scores, in the order of the top four most important risk behaviours. While poor diet and nutrition had the highest mean score in the baseline survey, smoking and tobacco use had the highest score in the follow-up survey. Despite these changes in order of importance, the differences between the baseline and follow-up survey were not statistically significant.



Table 11.7 Means for perceived level of importance of risk behaviours in relation to oral health problems

|                               | Mean | SE   | Rank †    |          |
|-------------------------------|------|------|-----------|----------|
|                               |      |      | Follow-up | Baseline |
| Poor diet and nutrition *     | 3.83 | .038 | 2         | 1        |
| Smoking and tobacco use *     | 3.88 | .028 | 1         | 2        |
| Excessive alcohol consumption | 3.58 | .054 | 4         | 3        |
| Lack of physical activity     | 2.67 | .092 | 6         | 6        |
| Excessive sun exposure        | 2.12 | .102 | 9         | 9        |
| Unprotected sexual activity   | 2.26 | .107 | 8         | 8        |
| Illicit drug use              | 3.67 | .049 | 3         | 4        |
| Violence                      | 3.05 | .093 | 5         | 5        |
| Insufficient vaccinations     | 2.36 | .107 | 7         | 7        |

Mann-Whitney U and Kruskal-Wallis H tests

†Rank order based on mean scores for importance of risk behaviours

\*Significant differences at the alpha level  $p < 0.05$ *Oral health knowledge scores*

CRSWs were asked to indicate whether a number of statements about oral health ( $n = 11$ ) were true or false (Table 11.8). The vast majority of respondents knew that: people living with mental illness experience more oral health issues than the general population ( $n = 136$ , 98.6%), that medications can increase the risk of oral diseases ( $n = 126$ , 91.3%), that increasing sugar consumption will increase tooth decay ( $n = 127$ , 92.7%), and that people who have no natural teeth should see an oral health professional regularly ( $n = 124$ , 89.9%). The majority of respondents also knew that teeth should be brushed with a small head, soft bristled toothbrush ( $n = 14$ , 82.6%) and that bleeding gums are not a sign of brushing teeth too hard ( $n = 83$ , 60.1%). However, only a quarter of respondents ( $n = 37$ , 26.8%) knew that the bacteria that cause tooth decay can be transmitted from one person to another, with over one-third ( $n = 50$ , 36.2%) believing this was not possible. While three-fifths ( $n = 86$ , 61.9%) of CRSWs correctly indicated that genetics is important in an individuals' risk of periodontal disease, over a quarter responded that they 'do not know' if heredity is linked to periodontal disease or dental caries.

Table 11.8 CRSWs' responses to oral health knowledge statements

| Oral health statements                                                                  | Yes  |      | No   |      | Do not know |      |
|-----------------------------------------------------------------------------------------|------|------|------|------|-------------|------|
|                                                                                         | N    | %    | N    | %    | N           | %    |
| PLWSMI experience more oral health problems than the general population                 | 137† | 98.6 | 1    | 0.7  | 1           | 0.7  |
| Vitamin and mineral supplements can help prevent oral diseases                          | 58   | 41.7 | 27†  | 19.4 | 54          | 38.8 |
| Bleeding gums are a sign of brushing teeth too hard                                     | 44   | 31.7 | 84†  | 60.4 | 11          | 7.9  |
| People with no natural teeth do not need to see an oral health professional regularly * | 10   | 7.2  | 125† | 89.9 | 4           | 2.9  |
| The bacteria that cause tooth decay can be transmitted from one person to another       | 37†  | 26.6 | 50   | 36.0 | 52          | 37.4 |
| Medications can increase the risk of oral diseases **                                   | 127† | 91.4 | 3    | 2.2  | 9           | 6.5  |
| Increasing the amount of sugar consumed will increase the amount of tooth decay         | 128† | 92.1 | 7    | 5.0  | 3           | 2.2  |
| Tooth loss is part of getting older                                                     | 28   | 20.1 | 95†  | 68.3 | 15          | 10.8 |
| Teeth should be brushed with a small headed, soft bristled toothbrush                   | 115† | 82.7 | 9    | 6.5  | 15          | 10.8 |
| Heredity is a risk factor for gum disease                                               | 86†  | 61.9 | 17   | 12.2 | 36          | 25.9 |
| Heredity is a risk factor for tooth decay                                               | 62   | 44.6 | 38†  | 27.3 | 39          | 28.1 |
| Chi-square tests                                                                        |      |      |      |      |             |      |
| † Correct response                                                                      |      |      |      |      |             |      |
| *Significant differences at the alpha level $p < 0.05$                                  |      |      |      |      |             |      |
| **Significant differences at the alpha level $p < 0.01$                                 |      |      |      |      |             |      |

Statistically significant differences in responses were found between study groups for the statement 'people with no natural teeth do not need to see an oral health professional regularly', with those in the Online Group answering 'yes' more frequently for this statement (FET,  $p = 0.026$ ). More CRSWs who had participated oral health PD correctly answered that people with no natural teeth do need to have regular oral health check-ups (FET,  $p = 0.039$ ), and that medications can increase the risk of oral diseases (FET,  $p = 0.006$ ). There were no significant differences in responses dependent upon the type of oral health training.

Total knowledge scores were calculated out of a maximum of eleven (responses were scored '1' for the correct answer and '0' for the incorrect answer and 'do not know'). The highest knowledge score was ten and the lowest was three. The mean knowledge score for all CRSWs was 7.19 (SE 0.120) and the median score was seven. There were no statistically significant differences dependent upon study group or upon participation in any mode of oral health training (Table 11.9).

Table 11.9 Comparing mean knowledge scores

|                                           | Mean | SE   | N   | Sig. |
|-------------------------------------------|------|------|-----|------|
| F2F                                       | 6.95 | .371 | 19  |      |
| Online                                    | 7.32 | .180 | 65  | .437 |
| Blended                                   | 7.30 | .249 | 27  |      |
| Control                                   | 6.93 | .261 | 27  |      |
| OH training                               | 7.34 | .160 | 68  |      |
| No OH training                            | 7.04 | .180 | 70  | .257 |
| All CRSWs                                 | 7.19 | .121 | 138 |      |
| Mann-Whitney U and Kruskal-Wallis H tests |      |      |     |      |

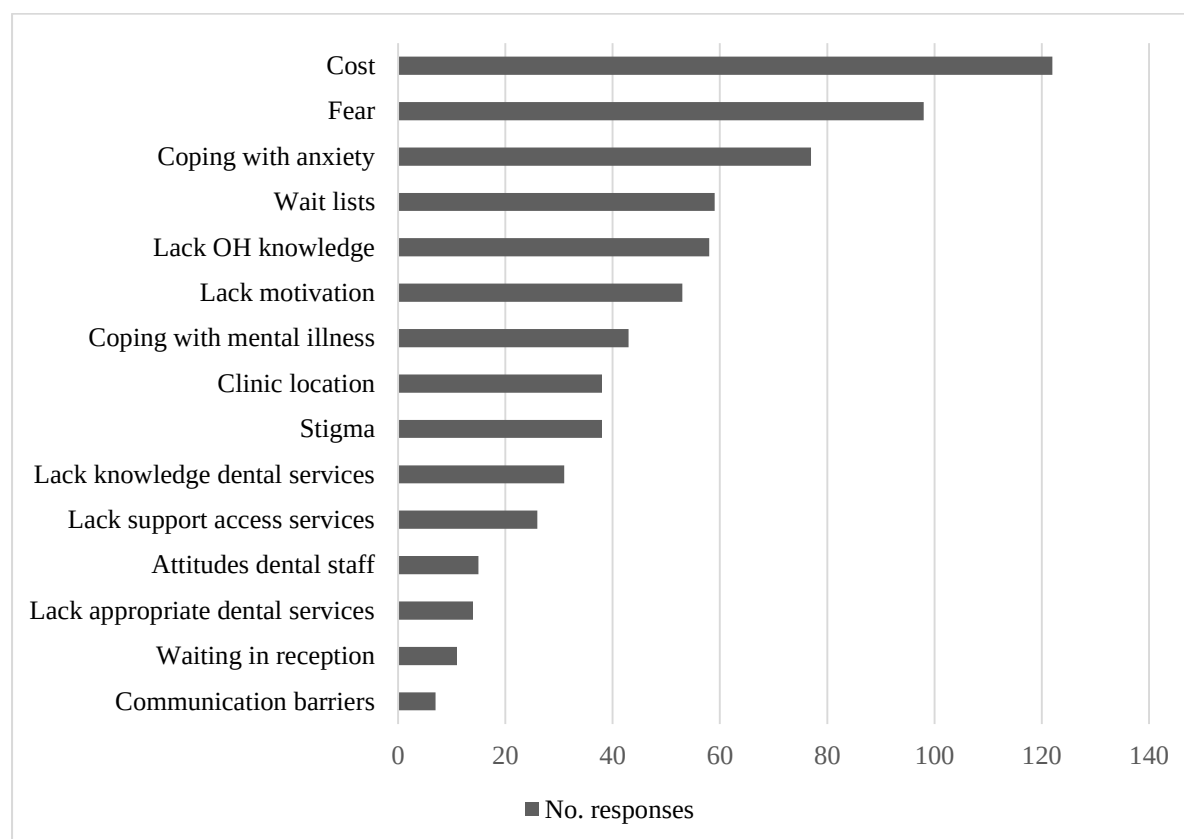
Knowledge scores in the baseline and follow-up surveys were compared, but were not found to be significantly different ( $U = 10,251$ ,  $z = 0.682$ ,  $p = 0.495$ ). When comparing differences dependent upon study group,<sup>66</sup> knowledge scores increased significantly in the Online Group between the baseline ( $M = 5.96$ ,  $SE 0.374$ ) and follow-up ( $M = 7.32$ ,  $SE 0.180$ ) surveys ( $U = 1,072.5$ ,  $z = 3.147$ ,  $p = 0.002$ ). No other significant differences between knowledge scores in the baseline and follow-up surveys were found.

### Barriers to people living with severe mental illness accessing dental services as perceived by CRSWs

CRSWs were asked their opinion on potential barriers to people living with severe mental illness accessing dental services. Respondents selected what they perceived to be the five most important barriers from a list of fifteen. As was the case in the baseline survey, cost ( $n = 122$ , 87.8%) was the most frequently selected barrier (Figure 11.1). After cost, fear ( $n = 98$ , 70.5%) and anxiety (55.4%) were the most frequently selected. The least frequently selected barriers were ‘attitudes of dental staff’ ( $n = 15$ , 10.8%), ‘lack of support services’ ( $n = 14$ , 10.1%), ‘waiting in reception’ ( $n = 11$ , 7.9%) and ‘communication barriers’ ( $n = 7$ , 5.0%). All seven of the CRSWs who selected language and communication as a barrier were in the Online Group. CRSWs in the Blended Group selected lack of motivation as a barrier more frequently than CRSWs in the Online Group (FET,  $p = 0.005$ ). There were no other statistically significant differences in responses dependent upon study group or participation in oral health PD.

<sup>66</sup> CRSWs in the baseline survey were included in study groups dependent upon the Neami site at which they worked.

**Figure 11.1 Barriers to people living with severe mental illness accessing dental services, as perceived by CRSW**



When comparing results between the baseline and follow-up survey, there were no changes in the order for the three most frequently and four least frequently selected barriers. There was a significant reduction in the proportion of CRSWs who selected ‘lack of support to access dental services’ as a barrier in the follow-up survey, compared to the baseline survey ( $\chi^2(1) = 4.138$ ,  $p = 0.042$ ). There were no other significant differences between surveys for perceived barriers to people living with severe mental illness accessing dental services.

### CRSWs self-rated oral health understanding and confidence related to oral health promotion

CRSWS were asked to rate their level of oral health understanding and confidence (seven Likert items) from ‘poor’ to ‘excellent’ (Table 11.10).<sup>67</sup> A greater proportion of CRSWs in the Blended Group rated their understanding as high (‘above average’ or ‘excellent’) for each question, compared to other study groups, but these results were not statistically significant.

<sup>67</sup> Categories were collapsed into three levels: low (‘poor’ and ‘below average’), medium (‘average’) and high (‘above average’ and ‘excellent’) for analysis.

The Control Group had the lowest proportion of CRSWs who rated their confidence high for discussing oral health with consumers (29.6%) and using the OH resources (22.2%). More respondents in the Online Group rated their confidence providing oral health support as high (47.7%) compared to the other study groups. However, the Face-to-Face Group (57.9%) had the largest proportion of participants with high levels of confidence referring consumers to dental services. These differences in study groups were not found to be statistically significant.

Table 11.10. CRSWs' self-rated oral health-related understanding and confidence

|                                                              | Poor |     | Below average |      | Average |      | Above average |      | Excellent |      |
|--------------------------------------------------------------|------|-----|---------------|------|---------|------|---------------|------|-----------|------|
|                                                              | No.  | %   | No.           | %    | No.     | %    | No.           | %    | No.       | %    |
| <b>Self-rated level of understanding</b>                     |      |     |               |      |         |      |               |      |           |      |
| Risk factors associated with poor oral health **             | -    | -   | 3             | 2.2  | 77      | 55.4 | 57            | 41.0 | 2         | 1.4  |
| Links between mental health and oral health **               | -    | -   | 7             | 5.0  | 70      | 50.4 | 59            | 42.4 | 3         | 2.2  |
| Links between oral health and general health and wellbeing * | -    | -   | 7             | 5.0  | 71      | 51.1 | 56            | 40.3 | 5         | 3.6  |
| <b>Self-rated level of confidence</b>                        |      |     |               |      |         |      |               |      |           |      |
| Discussing oral health with consumers***                     | -    | -   | 11            | 7.9  | 75      | 54.0 | 42            | 30.2 | 11        | 7.9  |
| Using Neami oral health resources ***                        | 7    | 5.0 | 17            | 12.2 | 63      | 45.3 | 43            | 30.9 | 9         | 6.5  |
| Supporting consumers with their oral health needs            | -    | -   | 7             | 5.0  | 69      | 49.6 | 49            | 35.3 | 14        | 10.1 |
| Referring consumers to oral health services                  | 1    | 0.7 | 10            | 7.2  | 61      | 43.9 | 45            | 32.4 | 22        | 15.8 |
| Chi-square tests                                             |      |     |               |      |         |      |               |      |           |      |
| * Significant differences at the alpha level $p < 0.05$      |      |     |               |      |         |      |               |      |           |      |
| ** Significant differences at the alpha level $p < 0.01$     |      |     |               |      |         |      |               |      |           |      |
| *** Significant differences at the alpha level $p = 0.001$   |      |     |               |      |         |      |               |      |           |      |

More CRSWs who had participated in oral health PD rated their understanding and confidence as high compared to those who had no training. These differences were statistically significant for understanding of: oral health risk factors (FET,  $p = 0.005$ ), the links between mental health and oral health (FET,  $p = 0.005$ ), and the links between oral health and general health (FET,  $p = 0.021$ ). In relation to self-rated confidence, the differences between those who had and had not participated in oral health training were statistically significant for discussing oral health with consumers (FET,  $p = 0.001$ ) and using the Neami oral health resources ( $\chi^2(2) = 13.542$ ,  $p = 0.001$ ). Mean scores were calculated for

each item (Table 11.11) and for total self-rated understanding and confidence,<sup>68</sup> and comparisons between study groups and dependent upon oral health training explored. CRSWs felt most confident in referring consumers to oral health services and least confident in using the Neami oral health resources. Confidence using the Neami oral health resources was significantly lower in the Control Group than in the Blended Group ( $\chi^2(3) = 8.279$ ,  $p = 0.041$ ). CRSWs who had oral health PD scored significantly higher ( $p < 0.05$ ) for all questions, except confidence referring consumers to dental services. Even if CRSWs had not had oral health PD they felt confident making dental referrals.

When comparing mean self-rated understanding and confidence scores (Table 11.12), those who had any type of oral health training scored significantly higher than those who had not ( $U = 1,542$ ,  $z = -3.593$ ,  $p < 0.0001$ ). There was a significant positive correlation between oral health knowledge scores and total self-rated understanding and confidence scores ( $r_s = 0.230$ ,  $p = 0.007$ ,  $n = 139$ ).

Table 11.11 Mean scores for self-rated understanding and confidence

|                                                                  | Mean | SE   |
|------------------------------------------------------------------|------|------|
| <b><i>Understanding questions</i></b>                            |      |      |
| Risk factors associated with poor oral health **                 | 3.42 | .048 |
| Links between mental health and oral health **                   | 3.42 | .053 |
| Links between oral health and general health *                   | 3.43 | .055 |
| <b><i>Confidence questions</i></b>                               |      |      |
| Discussing oral health with consumers ***                        | 3.38 | .063 |
| Using the Neami oral health resources *                          | 3.22 | .078 |
| Supporting consumers with their oral health needs *              | 3.51 | .063 |
| Referring consumers to oral health services                      | 3.56 | .074 |
| <b><i>Mean self-rated understanding and confidence score</i></b> | 3.42 | .050 |
| Mann-Whitney U and Kruskal-Wallis H tests                        |      |      |
| * Significant differences at the alpha level $p < 0.05$          |      |      |
| ** Significant differences at the alpha level $p < 0.01$         |      |      |
| *** Significant differences at the alpha level $p < 0.001$       |      |      |

<sup>68</sup> The results of all seven Likert items were combined to calculate total self-rated understanding and confidence scores.

Table 11.12 Mean total self-rated understanding and confidence scores

|                                               | Mean | SE   | N   | Sig.   |
|-----------------------------------------------|------|------|-----|--------|
| <b><i>Study group</i></b>                     |      |      |     |        |
| F2F group                                     | 3.43 | .148 | 19  | .287   |
| Online group                                  | 3.45 | .081 | 65  |        |
| Blended group                                 | 3.52 | .080 | 27  |        |
| Control group                                 | 3.23 | .102 | 27  |        |
| <b><i>Participation in oral health PD</i></b> |      |      |     |        |
| Yes                                           | 3.59 | .067 | 68  | <.0001 |
| No                                            | 3.26 | .068 | 70  |        |
| <b><i>All CRSWs</i></b>                       | 3.42 | .050 | 138 |        |
| Mann-Whitney U and Kruskal-Wallis H tests     |      |      |     |        |

Differences between surveys, in self-rated understanding and confidence, were investigated. Significant improvements in the Online Group were found in the follow-up survey for understanding the links between mental health and oral health ( $U = 1,069$ ,  $z = 3.386$ ,  $p = 0.001$ ) and understanding the links between mental health and general health ( $U = 956$ ,  $z = 2.221$ ,  $p = 0.026$ ). The Online Group also had significant improvements in confidence discussing oral health ( $U = 941.5$ ,  $z = 2.063$ ,  $p = 0.039$ ), using the Neami oral health resources ( $U = 981.5$ ,  $z = 2.375$ ,  $p = 0.018$ ) and referring consumers to oral health services ( $U = 945.5$ ,  $z = 1.988$ ,  $p = 0.047$ ). Total self-rated understanding and confidence increased significantly in the Online Group ( $U = 1,022$ ,  $z = 2.620$ ,  $p = 0.009$ ), but there were no significant changes in other groups.

### CRSWs attitudes to oral health promotion

Five questions were used to assess respondents' attitudes to oral health promotion at Neami (Table 11.13). Overall, support workers' attitudes to oral health promotion were positive. The vast majority of CRSWs agreed ('agreed' or 'strongly agreed') that 'supporting consumers with their oral health needs should be part of Neami's work' ( $n = 129$ , 92.8%), that people living with mental illness 'should be encouraged to visit an oral health professional regularly' ( $n = 132$ , 94.9%) and that 'mental health support workers have a role to play in promoting oral health' ( $n = 123$ , 88.6%). The majority ( $n = 68$ , 56.1%) disagreed ('disagreed' or 'strongly disagreed') that oral health education should only be provided by an oral health professional; however, over a fifth ( $n = 30$ , 21.5%) felt that including oral health support into

Neami's routine work would leave less time to address consumers' mental health-related issues.

There were no statistically significant differences in responses between study groups. Significantly more of those who had any OH training 'strongly agreed' that mental health consumers should be encouraged to visit a dental practitioner regularly (FET,  $p = 0.047$ ) and that mental health support workers had a role to play in promoting oral health (FET,  $p = 0.029$ ).

Table 11.13 CRSWs' attitudes to oral health promotion for people living with severe mental illness

|                                                                                                                                 | Strongly disagree |      | Disagree |      | Neutral |      | Agree |      | Strongly agree |      |
|---------------------------------------------------------------------------------------------------------------------------------|-------------------|------|----------|------|---------|------|-------|------|----------------|------|
|                                                                                                                                 | N                 | %    | N        | %    | N       | %    | N     | %    | N              | %    |
| Supporting consumers with their oral health needs should be part of Neami's work                                                | -                 | -    | 1        | 0.7  | 9       | 6.5  | 79    | 56.8 | 50             | 36.0 |
| PLWMI should be encouraged to visit an oral health professional regularly *                                                     | -                 | -    | -        | -    | 7       | 5.0  | 74    | 53.2 | 58             | 41.7 |
| Mental health support workers have a role to play in promoting oral health *                                                    | -                 | -    | 2        | 1.4  | 13      | 9.4  | 69    | 49.6 | 54             | 38.8 |
| Including oral health support into Neami's routine work will leave less time to address consumers' mental health-related issues | 18                | 12.9 | 46       | 33.1 | 45      | 32.4 | 23    | 16.5 | 7              | 5.0  |
| Oral health education should only be provided by an oral health professional                                                    | 12                | 8.6  | 66       | 47.5 | 43      | 30.9 | 15    | 10.8 | 3              | 2.2  |
| Chi-square tests                                                                                                                |                   |      |          |      |         |      |       |      |                |      |
| * Significant differences at the alpha level $p < 0.05$                                                                         |                   |      |          |      |         |      |       |      |                |      |

Mean scores were calculated, out of a possible score of five, for each question and indicated the level of staff agreement with each statement.<sup>69</sup> No significant differences in mean scores were found between study groups or dependent upon participation in OH training (Table 11.14). Mean total attitudes to oral health promotion scores were calculated and differences between groups explored.<sup>70</sup> Again, no significant difference was found between study groups ( $p = 0.323$ ) or dependent upon participation in any type of oral health training ( $p = 0.557$ ). A significant positive correlation was found between attitudes to oral health promotion and self-rated understanding and confidence scores ( $r_s = 0.203$ ,  $p = 0.016$ ,  $n = 139$ ). Interestingly,

<sup>69</sup> For the first three questions, a higher mean score indicated more positive attitudes to oral health promotion. The direction was reversed in the final two attitudes questions, where lower mean scores were more positive.

<sup>70</sup> Results for each question were coded from one to five so that higher scores indicated more positive attitudes to oral health promotion.



knowledge was not found to correlate with attitudes to oral health promotion ( $r_s = 0.124$ ,  $p = 0.146$ ,  $n = 139$ ).

Mean scores were compared between baseline and follow-up surveys (for all respondents) for each question and for total attitudes scores; differences were also compared at the study group level. No statistically significant differences were found.

Table 11.14 Mean attitudes to oral health promotion in Neami

|                                               | Mean | SE   | N   | Sig. |
|-----------------------------------------------|------|------|-----|------|
| <b><i>Study group</i></b>                     |      |      |     |      |
| F2F group                                     | 3.71 | .109 | 19  | .323 |
| Online group                                  | 3.94 | .072 | 65  |      |
| Blended group                                 | 3.76 | .084 | 27  |      |
| Control group                                 | 3.89 | .116 | 27  |      |
| <b><i>Participation in oral health PD</i></b> |      |      |     |      |
| Yes                                           | 3.89 | .062 | 68  | .557 |
| No                                            | 3.85 | .070 | 70  |      |
| <b><i>All CRSWs</i></b>                       | 3.87 | .055 | 138 |      |
| Mann-Whitney U and Kruskal-Wallis H tests     |      |      |     |      |

### Barriers to oral health promotion, as perceived by CRSWs

The majority of respondents ( $n = 97$ , 69.7%) believed that there are barriers to oral health promotion within Neami (Table 11.15). A third were of the opinion that lack of time is a barrier ( $n = 50$ , 36.2%), and almost two thirds felt that consumers' lack of interest in oral health was an issue ( $n = 83$ , 61.1%). It was very positive to note that hardly any (2.9%) agreed that lack of management support was a barrier. Also, only one in 10 CRSWs ( $n = 16$ , 11.5%) believed that oral health is low on the Neami agenda, or that attitudes of oral health professionals are a concern ( $n = 17$ , 12.2%).

When comparing responses between study groups for individual 'barriers' questions, no significant differences were found. CRSWs who had participated in OH training did not believe that lack of: knowledge about oral health (FET,  $p < 0.0001$ ), knowledge about dental services (FET,  $p = 0.005$ ), access to oral health resources (FET,  $p < 0.0001$ ), and support from management (FET,  $p = 0.001$ ), were barriers to oral health promotion at Neami.

Table 11.15 CRSWs' opinions on barriers to oral health promotion at Neami

|                                                               | Strongly disagree |      | Disagree |      | Neutral |      | Agree |      | Strongly agree |     |
|---------------------------------------------------------------|-------------------|------|----------|------|---------|------|-------|------|----------------|-----|
|                                                               | N                 | %    | N        | %    | N       | %    | N     | %    | N              | %   |
| Oral health low on Neami agenda                               | 11                | 7.9  | 50       | 36.0 | 62      | 44.6 | 14    | 10.1 | 2              | 1.4 |
| Not enough time when working with consumers                   | 4                 | 2.9  | 44       | 31.7 | 41      | 29.5 | 42    | 30.2 | 8              | 5.8 |
| Consumers' lack of interest in oral health                    | 2                 | 1.4  | 24       | 17.3 | 30      | 21.6 | 74    | 53.2 | 9              | 6.5 |
| Staff have insufficient knowledge about oral health ***       | 5                 | 3.6  | 44       | 31.7 | 48      | 34.5 | 41    | 29.5 | 1              | 0.7 |
| Staff have insufficient knowledge about dental services **    | 8                 | 5.8  | 42       | 30.4 | 38      | 27.5 | 47    | 34.1 | 3              | 2.2 |
| Staff have insufficient access to oral health resources ***   | 11                | 8.0  | 63       | 45.7 | 44      | 31.9 | 20    | 14.5 | -              | -   |
| Insufficient support from management ***                      | 18                | 12.9 | 72       | 51.8 | 45      | 32.4 | 4     | 2.9  | -              | -   |
| Attitudes of oral health professionals                        | 10                | 7.2  | 51       | 36.7 | 61      | 43.9 | 17    | 12.2 | -              | -   |
| There are no barriers                                         | 33                | 23.7 | 64       | 46.0 | 28      | 20.1 | 9     | 6.5  | 5              | 3.6 |
| Chi-square tests                                              |                   |      |          |      |         |      |       |      |                |     |
| ** Significant differences at the alpha level $p < 0.01$      |                   |      |          |      |         |      |       |      |                |     |
| *** Significant differences at the alpha level $p \leq 0.001$ |                   |      |          |      |         |      |       |      |                |     |

When comparing means for individual questions (Table 11.16), consumers' lack of interest in oral health and time constraints were rated as the top barriers to oral health promotion. The Blended Group believed time constraints were a more significant barrier than both the Online and Control Groups ( $\chi^2(3) = 10.912$ ,  $p = 0.012$ ). The Control Group were of the opinion that staff lack of oral health knowledge and lack of access to oral health resources were significant barriers ( $p < 0.05$ ). CRSWs who had participated in oral health PD rated all barriers of lower importance than those who did not have training. Their results were significantly lower for: staff lack of knowledge about oral health ( $U = 3,358.5$ ,  $z = 4.394$ ,  $p < 0.0001$ ); staff lack of knowledge about dental services ( $U = 3,072.5$ ,  $z = 3.280$ ,  $p = 0.001$ ); lack of access to oral health resources ( $U = 3,512.5$ ,  $z = 5.429$ ,  $p < 0.0001$ ); insufficient support from management ( $U = 3,110.5$ ,  $z = 3.433$ ,  $p = 0.001$ ); and attitudes of oral health professionals ( $U = 2,975.5$ ,  $z = 2.727$ ,  $p = 0.006$ ).

Table 11.16 Means for perceived barriers to oral health promotion within Neami

|                                                             | Mean | SE   |
|-------------------------------------------------------------|------|------|
| Consumers' lack of interest in oral health                  | 3.46 | .077 |
| Not enough time when working with consumers *               | 3.04 | .083 |
| Staff have insufficient knowledge about dental services *** | 2.96 | .084 |
| Staff have insufficient knowledge about oral health ***     | 2.91 | .075 |
| Oral health low on Neami agenda                             | 2.61 | .070 |
| Insufficient support from management ***                    | 2.61 | .060 |
| Staff have insufficient access to oral health resources *** | 2.52 | .071 |
| Attitudes of oral health professionals **                   | 2.21 | .067 |
| There are no barriers                                       | 2.20 | .084 |
| * Significant differences at the alpha level $p < 0.05$     |      |      |
| ** Significant differences at the alpha level $p < 0.01$    |      |      |
| *** Significant differences at the alpha level $p < 0.001$  |      |      |

Mean perceived barriers scores were calculated and differences between groups investigated (Table 11.17). There were no significant differences dependent upon study group ( $\chi^2 (3) = 3.347$ ,  $p = 0.341$ ). However, analysis did reveal a significant difference in perceived barriers scores between those who had and had not had training ( $U = 3,254$ ,  $z = 3.736$ ,  $p < 0.0001$ ). This means CRSWs who had participated in any type of oral health PD perceived fewer barriers to promoting oral health within Neami.

A significant negative correlation was found between barriers scores and both knowledge ( $r_s = -0.173$ ,  $n = 139$ ,  $p = 0.041$ ) and self-rated understanding and confidence scores ( $r_s = -0.490$ ,  $n = 139$ ,  $p < 0.0001$ ) indicating that those with better knowledge those who rated their oral health understanding and confidence higher perceived fewer barriers to oral health promotion. In addition, those with more positive attitudes to oral health promotion experienced less oral health promotion barriers ( $r_s = -0.253$ ,  $n = 139$ ,  $p = 0.003$ ).

Table 11.17 Comparing means for perceived barriers to oral health promotion

|                                               | Mean | SE   | N   | Sig.   |
|-----------------------------------------------|------|------|-----|--------|
| <b><i>Study group</i></b>                     |      |      |     |        |
| F2F group                                     | 2.69 | .110 | 19  | .341   |
| Online group                                  | 2.82 | .067 | 65  |        |
| Blended group                                 | 2.70 | .098 | 27  |        |
| Control group                                 | 2.89 | .109 | 27  |        |
| <b><i>Participation in oral health PD</i></b> |      |      |     |        |
| Yes                                           | 2.63 | .062 | 68  | < .001 |
| No                                            | 2.95 | .59  | 70  |        |
| <b><i>All CRSWs</i></b>                       | 2.79 | .045 | 138 |        |
| Mann-Whitney U and Kruskal-Wallis H tests     |      |      |     |        |

Results were compared between the baseline and follow-up surveys. Overall, CRSWs in the follow-up survey perceived less barriers to oral health promotion than those in the baseline survey ( $U = 8,390.5$ ,  $z = -2.085$ ,  $p = 0.037$ ). Individual barriers that were rated significantly less of an impediment in the follow-up survey were lack of access to oral health resources ( $U = 8,362.5$ ,  $z = -2.135$ ,  $p = 0.033$ ) and lack of support from management ( $U = 8,538$ ,  $z = -2.007$ ,  $p = 0.045$ ). CRSWs from sites in the Online Group rated staff lack of knowledge significantly less important in the follow-up survey ( $U = 457.5$ ,  $z = -2.912$ ,  $p = 0.004$ ). Access to oral health resources was also less of an issue for the Online Group when the KAP survey was repeated ( $U = 495$ ,  $z = -2.561$ ,  $p = 0.010$ ). Respondents from the Blended Group believed lack of management support to be less of a barrier in the follow-up survey ( $U = 260.5$ ,  $z = -1.993$ ,  $p = 0.046$ ).

### Oral health promotion practices at Neami National

This project aimed to increase oral health support provided to Neami clients. CRSWs were asked if they practised ‘oral health related activities with consumers’. (The wording of this question remained the same as for the baseline survey, despite comments indicating that this question may have caused some confusion to respondents.) While the majority of respondents ( $n = 82$ , 59%) practised oral health promotion, two-fifths ( $n = 57$ , 41%) said they did not (Table 11.18). CRSWs who had oral health PD were more likely to engage in oral health promotion than those who had not completed oral health training (70.6% versus 47.1%) ( $\chi^2(1) = 7.821$ ,  $p = 0.005$ ). There were no significant differences between study groups. Results indicated that CRSWs with higher self-rated understanding and confidence were more likely

to practice oral health promotion ( $U = 1,675$ ,  $z = -2.852$ ,  $p = 0.004$ ). Although knowledge scores and attitudes to oral health promotion scores were slightly higher, and perceived barriers to oral health promotion scores were slightly lower in CRSWs who actively promote oral health, these results were not found to be statistically significant.

Table 11.18 Proportion of CRSWs who practise oral health promotion

|                                           | Y  | %    | N  | %    | Total | Sig. |
|-------------------------------------------|----|------|----|------|-------|------|
| <b>Study group</b>                        |    |      |    |      |       |      |
| F2F group                                 | 12 | 63.2 | 7  | 36.8 | 19    | .334 |
| Online group                              | 43 | 66.2 | 22 | 33.8 | 65    |      |
| Blended group                             | 14 | 51.9 | 13 | 48.1 | 27    |      |
| Control group                             | 13 | 48.1 | 14 | 51.9 | 27    |      |
| <b>Participation in oral health PD</b>    |    |      |    |      |       |      |
| Yes                                       | 48 | 70.6 | 20 | 29.4 | 68    | .005 |
| No                                        | 33 | 47.1 | 37 | 52.9 | 70    |      |
| <b>All CRSWs</b>                          | 82 | 59.0 | 57 | 41.0 | 139   |      |
| Mann-Whitney U and Kruskal-Wallis H tests |    |      |    |      |       |      |

Just over two-fifths (44%) of CRSWs in the baseline survey indicated that they practice oral health promotion activities; this figure increased significantly to almost three-fifths (59%) in the follow-up survey ( $\chi^2(1) = 6.323$ ,  $p = 0.012$ ). The most notable change was in the Online Group, where only one-third (34.8%) of the baseline respondents provided oral health support compared to two-thirds (66.2%) in the follow-up survey ( $\chi^2(1) = 6.861$ ,  $p = 0.009$ ).

CRSWs were asked to estimate the proportion of their clients that they have supported through a range of oral health promotion activities (Table 11.19). All participants were able to respond to this section, regardless of whether they answered ‘yes’ to the question asking if they practice oral health-related activities with consumers.<sup>71</sup> While only three-fifths (59%) of the follow-up survey respondents said they actively promoted oral health, the vast majority of them ( $n = 130$ , 93.5%) indicated that they do in fact discuss oral health with some of the consumers they work with. In addition, more than three-quarters indicated that they provide other types of oral health support including: supporting consumers to improve their daily oral health care ( $n = 122$ , 87.8%); using the oral health resources with consumers ( $n = 108$ , 77.7%); referring consumers to dental services ( $n = 120$ , 86.3%); contacting the dental clinic

<sup>71</sup> In the baseline survey, these questions were only made available to those who responded ‘yes’ to indicate they practice oral health-related activities with consumers. This question logic was removed in the follow-up survey.

to make appointments ( $n = 109$ , 78.4%); and supporting consumers to attend dental appointments ( $n = 111$ , 79.9%). These results suggest that the wording of the question asking them if they engaged in oral health related activities with consumers was indeed misinterpreted. No significant differences were found dependent upon study group or participation in oral health PD.

Table 11.19 Proportion of consumers provided with different oral health support types

|                                                              | Consumers % |      |        | CRSW |    |
|--------------------------------------------------------------|-------------|------|--------|------|----|
|                                                              | Mean        | SE   | Median | n    | %  |
| Discuss oral health with consumers                           | 44.41       | 2.72 | 48.0   | 130  | 94 |
| Support consumers to improve their daily oral health care    | 32.54       | 2.31 | 27.0   | 122  | 88 |
| Use oral health information resources with consumers         | 34.36       | 2.76 | 25.5   | 108  | 78 |
| Refer consumers to dental services                           | 41.28       | 2.95 | 36.0   | 120  | 86 |
| Contact the dental clinic to make appointments for consumers | 33.88       | 2.83 | 26.0   | 109  | 78 |
| Support consumers to attend dental appointments              | 39.33       | 2.91 | 35.0   | 111  | 80 |
| n = number of CRSWs who responded to question                |             |      |        |      |    |
| Mann-Whitney U and Kruskal-Wallis H tests                    |             |      |        |      |    |

In making comparisons between the baseline and follow-up survey, only those who answered ‘yes’ to the question asking if they practice oral health-related activities with consumers were included in the analysis.<sup>72</sup> There was an increase in the follow-up survey in the proportion of consumers being referred to dental clinics, being supported by CRSWs contacting dental clinics to make appointments and being supported in attending dental appointments (Table 11.20). However, the difference was statistically significant for ‘support consumers to attend dental appointments’ only ( $U = 2,622$ ,  $z = 2.836$ ,  $p = 0.005$ ). Therefore, the results of this survey indicate that Neami CRSWs are providing more support to consumers to enable them to access dental services.

<sup>72</sup> Only those who answered ‘yes’ in the baseline survey could complete the section asking about the types of activities provided.

Table 11.20 Proportion of consumers provided with support, as indicated by CRSWs who responded that they do practise oral health promotion

|                                                              | Baseline (n = 62) |      |    | Follow-up (n = 82) |      |    | Sig. |
|--------------------------------------------------------------|-------------------|------|----|--------------------|------|----|------|
|                                                              | Mean              | SE   | N  | Mean               | SE   | N  |      |
| Discuss oral health with consumers                           | 53.08             | 3.98 | 60 | 51.60              | 3.43 | 82 | .815 |
| Support consumers to improve their daily oral health care    | 38.02             | 3.94 | 55 | 38.09              | 3.00 | 80 | .868 |
| Use oral health information resources with consumers         | 40.32             | 3.98 | 53 | 39.51              | 3.48 | 74 | .795 |
| Refer consumers to dental services                           | 40.20             | 3.42 | 60 | 47.27              | 3.65 | 78 | .270 |
| Contact the dental clinic to make appointments for consumers | 30.25             | 3.55 | 52 | 40.75              | 3.63 | 72 | .105 |
| Support consumers to attend dental appointments              | 30.88             | 3.50 | 58 | 46.56              | 3.73 | 70 | .005 |
| Mann-Whitney U tests                                         |                   |      |    |                    |      |    |      |

Participants were asked to estimate the proportion of their clients who are at risk of, or have, poor oral health (Table 11.21). The mean estimated proportion was 62.9% (S.E. 2.21). There were significant differences between study groups ( $\chi^2 (3) = 11.414$ ,  $p = 0.010$ ), with the Blended Group believing that consumers were less at risk than the Online Group ( $p = 0.034$ ). No difference was found dependent upon participation in oral health PD. When comparing responses to this question in the baseline and follow-up surveys, no significant differences in estimates were found.

Table 11.21 Proportion of consumers at increased oral health risk, as perceived by CRSWs

|                                               | Mean % | SE   | N   | Sig. |
|-----------------------------------------------|--------|------|-----|------|
| <b><i>Study group</i></b>                     |        |      |     |      |
| F2F group                                     | 53.58  | 5.86 | 19  | .010 |
| Online group                                  | 69.12  | 3.22 | 65  |      |
| Blended group                                 | 51.37  | 5.74 | 27  |      |
| Control group                                 | 66.33  | 3.20 | 27  |      |
| <b><i>Participation in oral health PD</i></b> |        |      |     |      |
| Yes                                           | 62.50  | 3.54 | 68  | .978 |
| No                                            | 63.33  | 2.83 | 70  |      |
| <b><i>All CRSWs</i></b>                       | 62.96  | 2.22 | 138 |      |
| Mann-Whitney U and Kruskal-Wallis H tests     |        |      |     |      |

### CRSWs' opinions on future oral health training

CRSWs were asked four questions to assess their opinions on how Neami can support their learning and skills development in relation to oral health (Table 11.22). The majority of

respondents ‘agreed’ or ‘strongly agreed’ this could be done by providing staff education and training on: oral health risks and diseases (n = 116, 83.5%); using the Neami oral health resources (n = 118, 84.9%); how to refer consumers to oral health services (n = 109, 78.4%); and supporting consumers to access and attend dental appointments (n = 96, 69.1%). No statistically significant differences were found between study groups or dependent upon training completion.

Table 11.22 CRSWs’ opinions on future oral health training topics

|                                                        | Strongly disagree |     | Disagree |     | Neutral |      | Agree |      | Strongly agree |      |
|--------------------------------------------------------|-------------------|-----|----------|-----|---------|------|-------|------|----------------|------|
|                                                        | N                 | %   | N        | %   | N       | %    | N     | %    | N              | %    |
| Oral health risk and diseases                          | -                 | -   | 4        | 2.9 | 19      | 13.7 | 86    | 61.9 | 30             | 21.6 |
| Using the Neami OH resources                           | 1                 | 0.7 | 1        | 0.7 | 19      | 13.7 | 84    | 60.4 | 34             | 24.5 |
| How to refer consumers to oral health services         | -                 | -   | 3        | 2.2 | 26      | 18.7 | 74    | 53.2 | 35             | 25.2 |
| How to support consumers to attend dental appointments | -                 | -   | 8        | 5.8 | 35      | 25.2 | 66    | 47.5 | 30             | 21.6 |
| Chi-square tests                                       |                   |     |          |     |         |      |       |      |                |      |

When comparing means, the topic that generated the greatest level of interest among all CRSWs was training to use the Neami oral health resources. Respondents were least interested in learning how to refer consumers to oral health services. The Online Group was interested in further training on oral diseases and risk factors ( $\chi^2 (3) = 10.792$ ,  $p = 0.013$ ). While the Face-to-Face Group was least interested in education on supporting consumers to access dental services ( $\chi^2 (3) = 10.928$ ,  $p = 0.012$ ). CRSWs who had not completed oral health PD were significantly more interested in training on oral health risk factors ( $U = 2,840$ ,  $z = 2.259$ ,  $p = 0.024$ ) and using the Neami oral health resources ( $U = 2,796.5$ ,  $z = 2.028$ ,  $p = 0.043$ ). The results for all four Likert items were combined to calculate mean interest in future oral health training scores and no statistically significant differences were found dependent upon study group or oral health training (Table 11.23). However, analysis indicated that CRSWs with more positive attitudes to oral health promotion also had more interest in oral health training ( $r_s = 0.277$ ,  $n = 139$ ,  $p = 0.001$ ).



Table 11.23 Mean scores for interest in future oral health training

|                                               | Mean | SE   | N   | Sig. |
|-----------------------------------------------|------|------|-----|------|
| <b><i>Study group</i></b>                     |      |      |     |      |
| F2F group                                     | 3.63 | .159 | 19  | .055 |
| Online group                                  | 4.10 | .070 | 65  |      |
| Blended group                                 | 3.86 | .120 | 27  |      |
| Control group                                 | 4.06 | .118 | 27  |      |
| <b><i>Participation in oral health PD</i></b> |      |      |     |      |
| Yes                                           | 3.91 | .081 | 68  | .144 |
| No                                            | 4.07 | .069 | 70  |      |
| <b><i>All CRSWs</i></b>                       | 3.99 | .053 | 138 |      |
| Mann-Whitney U and Kruskal-Wallis H tests     |      |      |     |      |

When asked what their preferred PD delivery mode was, more respondents selected face-to-face training (n = 63, 45.3%) or blended training (n = 60, 43.2%) as their mode of choice. Only one-tenth (n = 16, 11.5%) chose online training as the best delivery mode for workforce development. The results for this question were similar to those in the baseline survey, where only 15.8% of respondents preferred online training ( $\chi^2(2) = 1.018$ ,  $p = 0.601$ ).

The majority of respondents (n = 77, 55.8%) were interested in receiving further oral health information or training on supporting consumers to manage their oral health needs. Although almost half of those who had already participated in oral health PD (n = 31, 45.6%) were interested, significantly more of those who had not participated in oral health training (n = 46, 65.7%) indicated they would like to improve their skills in this area ( $\chi^2(1) = 5.665$ ,  $p = 0.017$ ).

### Correlations and regression analysis

CRSWs with better oral health knowledge scores rated their level of understanding higher and felt more confident promoting oral health ( $r_s = 0.230$ ,  $n = 139$ ,  $p = 0.007$ ) (Table 11.24). They also perceived less barriers to oral health promotion within Neami ( $r_s = -0.173$ ,  $p = 0.041$ ,  $n = 139$ ). Those with better self-rated understanding and confidence scores had more-positive attitudes to oral health promotion ( $r_s = 0.203$ ,  $p = 0.016$ ,  $n = 139$ ) and were also less concerned about potential barriers to oral health promotion ( $r_s = -0.490$ ,  $p < 0.0001$ ,  $n = 139$ ). Those with less-positive attitudes to oral health promotion also felt barriers were more of an issue to implementing oral health promotion ( $r_s = -0.253$ ,  $p = 0.003$ ,  $n = 139$ ). These results

suggest that those with better oral health knowledge and attitudes feel more confident providing oral health support and experience fewer barriers to implementation.

Table 11.24 Correlations between oral health knowledge, understanding and confidence, perceived barriers and attitudes to oral health promotion.

| Scale                                      | 1       | 2         | 3        | 4    | 5 |
|--------------------------------------------|---------|-----------|----------|------|---|
| 1. Total knowledge                         | -       |           |          |      |   |
| 2. Self-rated understanding and confidence | .230 ** | -         |          |      |   |
| 3. Total attitudes to OHP                  | .124    | .203 *    | -        |      |   |
| 4. Total perceived barriers to OHP         | -.173 * | -.490 *** | -.253 ** | -    |   |
| 5. Total interest in OH training topics    | -.081   | -.048     | .277 **  | .077 | - |

Spearman's Rho tests  
 \* Significant differences at the alpha level  $p < 0.05$   
 \*\* Significant differences at the alpha level  $p < 0.01$   
 \*\*\* Significant differences at the alpha level  $p < 0.001$

The multiple regression model for oral health knowledge was not statistically significant (Table 11.25). The model for self-rated understanding and confidence was significant at the level  $p < 0.001$  and explained 27.3% of the variance (Table 11.25). A statistically significant result was found for the variables: perceived barriers to oral health promotion ( $p < 0.0001$ ) and practising oral health promotion ( $p = 0.022$ ). Study group (dummy variables were used, with the Control Group as the reference variable) and participation in oral health PD did not have a significant effect.

The model for attitudes to oral health promotion was significant at the level  $p = 0.017$ ; however, it explained only 7.8% of the variance (Table 11.25). A statistically significant result was found for perceived barriers to oral health promotion ( $p = 0.010$ ). Study group and participation in oral health PD did not have a significant effect.

The model for perceived barriers to oral health promotion (Table 11.25) was significant at the level  $p < 0.0001$  and explained 27.5% of the variance. A statistically significant result was found for the variables: participation in oral health training ( $p = 0.010$ ), self-rated understanding and confidence ( $P < 0.0001$ ) and attitudes to oral health promotion ( $p = 0.010$ ). Again, study group and participation were not found to have a significant effect on results.

Table 11.25 Multiple regression analysis

|                                             | <b>Model 1</b><br>Knowledge | <b>Model 2</b><br>Self-rated<br>understanding<br>and confidence | <b>Model 3</b><br>Attitudes to oral<br>health promotion | <b>Model 4</b><br>Perceived<br>barriers to oral<br>health promotion |
|---------------------------------------------|-----------------------------|-----------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------------|
| Variables                                   | Sig.                        | Sig.                                                            | Sig.                                                    | Sig.                                                                |
| Knowledge                                   | -                           | .070                                                            | .567                                                    | .664                                                                |
| Self-rated understanding and confidence     | .070                        | -                                                               | .249                                                    | <.0001                                                              |
| Attitudes to oral health promotion          | .567                        | .249                                                            | -                                                       | .010                                                                |
| Perceived barriers to oral health promotion | .664                        | <.0001                                                          | .010                                                    | -                                                                   |
| Participation in oral health training       | .987                        | .377                                                            | .710                                                    | .010                                                                |
| Practices oral health promotion             | .711                        | .022                                                            | .588                                                    | .460                                                                |

Model 1:  $F(8, 129) = 1.244$ ,  $p = 0.279$ ,  $R^2 = 0.014$

Model 2:  $F(8, 129) = 7.430$ ,  $p < 0.0001$ ,  $R^2 = 0.273$

Model 3:  $F(8, 129) = 2.451$ ,  $p = 0.017$ ,  $R^2 = 0.078$

Model 4:  $F(8, 129) = 7.512$ ,  $p < 0.0001$ ,  $R^2 = 0.275$

Binomial logistic regression was performed to ascertain the effects of variables of interest on the likelihood that participants would practice oral health promotion (Table 11.26). The model was statistically significant ( $\chi^2(8, n = 137) = 16.970$ ,  $p = 0.030$ ); it explained 15.7% of the variance and correctly classified 65.7% of cases. CRSWs who had oral health training were more than twice as likely (OR 2.485, 95% CI 1.050 – 5.884,  $p = 0.038$ ) to provide oral health support, compared to those who did not have training. The strongest predictor of providing oral health support was self-rated understanding and confidence (OR 2.707, 95% CI 1.198 – 6.117,  $p = 0.017$ ). Neither study group nor knowledge had a significant effect on oral health promotion practices.

Table 11.26. Logistic regression model for CRSWs practising oral health promotion

|                                                                                                   | B      | SE    | Sig. | Odds Ratio | 95% CI for OR |       |
|---------------------------------------------------------------------------------------------------|--------|-------|------|------------|---------------|-------|
|                                                                                                   |        |       |      |            | Lower         | Upper |
| Study Group                                                                                       |        |       | .420 |            |               |       |
| F2F                                                                                               | .045   | .686  | .948 | 1.046      | .272          | 4.016 |
| Online                                                                                            | .105   | .529  | .843 | 1.111      | .394          | 3.132 |
| Blended                                                                                           | -.724  | .644  | .261 | .485       | .137          | 1.714 |
| Participation in OH training                                                                      | .910   | .440  | .038 | 2.485      | 1.050         | 5.884 |
| Knowledge                                                                                         | .049   | .133  | .714 | 1.050      | .809          | 1.364 |
| Self-rated understanding and confidence                                                           | .996   | .416  | .017 | 2.707      | 1.198         | 6.117 |
| Attitudes to OH promotion                                                                         | -.177  | .364  | .626 | .838       | .410          | 1.710 |
| Constant                                                                                          | -1.832 | 1.812 | .312 | .160       |               |       |
| $\chi^2 (8, n = 137) = 16.970, p = 0.030, \text{Nagelkerke } R^2 15.7\%, 65.7\% \text{ of cases}$ |        |       |      |            |               |       |

### Survey results from Health Promotion Site Champions

Of the 139 CRSWs who completed the follow-up survey, 21 (15.8%) were also Health Promotion Site Champions (Face-to-face Group = 2, Online Group = 10, Blended Group = 4, Control Group = 4). Two-thirds of the HPSCs (66.7%) had participated in oral health PD in the preceding twelve-months.

HPSCs estimated the proportion of the health promotion portfolio allocated to oral health during the previous six months (mean 34.3%, S.E. 4.11) and also how much of the portfolio they think should be spent on oral health promotion (mean 30.9%, S.E. 3.36). It was noteworthy that HPSCs who had participated in oral health PD spent significantly more time working on oral health-related activities ( $U = 16.5, z = -1.989, p = 0.046$ ).

HPSCs were asked about challenges they may have experienced supporting oral health promotion within their team (Table 11.27). The majority (61.9%) did not feel that they lacked confidence discussing oral health promotion with their team. Almost half ‘strongly disagreed’ or ‘disagreed’ (47.6%) that they had insufficient training in oral health promotion. It was encouraging to find that those who had participated in oral health PD believed they had sufficient training to support oral health promotion ( $\chi^2 (1) = 10.875, p = 0.010$ ). Half of HPSCs agreed (47.6%) that lack of time was an issue, and that other priority physical areas reduced the amount of time they can devote to oral health. However, lack of staff interest was not a significant concern. In fact, only 14.3 per cent thought it was a barrier to oral health promotion.

Table 11.27 Challenges experienced by HPSCs (%) in supporting oral health promotion (n = 21)

|                                               | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|-----------------------------------------------|-------------------|----------|---------|-------|----------------|
| Insufficient training in OHP **               | 9.5               | 38.1     | 19.0    | 28.6  | 4.8            |
| Not enough time for OHP                       | 9.5               | 19.0     | 23.8    | 47.6  | -              |
| Lack of staff interest in OHP                 | 4.8               | 23.8     | 57.1    | 14.3  | -              |
| Lack confidence discussing OHP with staff     | 9.5               | 52.4     | 19.0    | 19.0  | -              |
| Other physical health priorities take up time | 4.8               | 9.5      | 38.1    | 38.1  | 9.5            |
| Staff lack confidence in OHP                  | 4.8               | 42.9     | 42.9    | 9.5   | -              |

\*\*Significant differences at the alpha level  $p = 0.01$

HPSCs' oral health knowledge, understanding and confidence, attitudes to oral health promotion and oral health promotion practices were compared to respondents who do not hold the health promotion portfolio. No statistically significant differences were found.

### Comparing data from the baseline and follow-up surveys

As mentioned prior, only thirteen respondents completed both the baseline and the follow-up survey. This meant the loss to follow-up was more than 90% of participants (128 out of 141). Of the thirteen matched cases, two were in the Face-to-Face Group, five in the Online Group, four in the Blended Group and two in the Control Group.

Overall, six CRSWs (46.2%) had participated in oral health PD in 2015 and nine (69.2%) in 2016. There was considerable contamination of the groups and only seven of the thirteen CRSWs (53.8%) met the oral health PD requirements for the study group to which they were allocated (i.e. completed face-to-face training only, online training only, both training types or no training). Eight CRSWs (61.5%) had moved to a different Neami site between the 2015 and 2016 surveys.<sup>73</sup> Five of the Victorian respondents (Face-to-Face and Blended groups) indicated they had participated in oral health training in both the baseline and follow-up survey. One Victorian respondent who had face-to-face training in 2015 moved to a Blended Group site but did not participate in any oral health PD in 2016; this was the only respondent who had training in 2015 but not in 2016.

Despite the low numbers of participants who repeated the online survey, paired Wilcoxon Signed Rank analysis was performed to compare matched respondents data from the baseline

<sup>73</sup> Movement between sites is relatively common at Neami; however, this contaminates the study groups when CRSWs move from a site in one study group to a site in another group.

and follow-up surveys (Table 11.28). There was an increase in knowledge, understanding and confidence, and attitudes to oral health promotion scores in the follow-up survey; however, the result was only statistically significant for understanding and confidence scores ( $z = -2.376$ ,  $p = 0.017$ ). While there was a reduction in perceived barriers to oral health promotion in the follow-up survey, this finding was not statistically significant ( $p = 0.054$ ). It is unlikely that these results are meaningful and should therefore be interpreted with caution.

Table 11.28 Comparing baseline and follow-up mean scores for matched CRSWs (n = 13)

|                                         | Baseline |      | Follow-up |      | Sig. |
|-----------------------------------------|----------|------|-----------|------|------|
|                                         | Mean     | SE   | Mean      | SE   |      |
| Knowledge                               | 7.04     | .274 | 7.08      | .043 | .803 |
| Self-rated understanding and confidence | 3.48     | .094 | 3.64      | .143 | .017 |
| Attitudes OHP                           | 3.88     | .096 | 3.88      | .149 | .623 |
| Barriers OHP                            | 2.54     | .129 | 2.35      | .201 | .054 |
| Wilcoxon Signed Rank tests              |          |      |           |      |      |

In order to compare results for all of those who had (n = 108, 42.9%) and had not (n = 143, 56.7%) participated in oral health PD, the data from the baseline and follow-up survey was merged (Table 11.29). (Matched respondents who had completed both KAP surveys were excluded from this analysis). Oral health PD was associated with significantly better knowledge ( $U = 6,574.5$ ,  $z = -2.059$ ,  $p = 0.039$ ) and self-rated understanding and confidence ( $U = 5,163$ ,  $z = -4.515$ ,  $p < 0.0001$ ). CRSWs who had oral health PD also perceived fewer barriers to oral health promotion at Neami ( $U = 10,396.5$ ,  $z = 4.710$ ,  $p < 0.0001$ ) and were more likely to engage in oral health promotion (67.6% of those who had training, compared to only 39.9% of those who had not) ( $\chi^2(1) = 18,953$ ,  $p < 0.0001$ ). Although oral health KAP was lower among those who had not had oral health training, it was promising to find that they were interested in participating in future oral health training activities ( $U = 9,005$ ,  $z = 2.325$ ,  $p = 0.020$ ).

Table 11.29 Comparing all CRSWs (baseline and follow-up surveys), by participation in OH training (n = 251)

|                                               | Training<br>(n = 108) |      | No training<br>(n = 143) |      | Sig.    |
|-----------------------------------------------|-----------------------|------|--------------------------|------|---------|
|                                               | Mean                  | SE   | Mean                     | SE   |         |
| Oral health knowledge score                   | 7.35                  | .126 | 6.94                     | .132 | .039    |
| Self-rated understanding and confidence score | 3.60                  | .053 | 3.26                     | .047 | < .0001 |
| Attitudes to OHP score                        | 3.88                  | .052 | 3.92                     | .048 | .602    |
| Perceived barriers to OHP score               | 2.73                  | .048 | 3.03                     | .042 | < .0001 |
| Interest in OH training topics score          | 3.92                  | .062 | 4.12                     | .051 | .020    |

n = CRSWs (excluding matched participants)  
Mann-Whitney U tests

### Summary of results

It was hypothesised that CRSWs in the Blended Group would have better oral health-related knowledge, attitudes and professional practices than those in other study groups. However, the results of this study did not support this hypothesis. When considering knowledge scores, no significant difference was found between study groups, or dependent upon participation in oral health training. When comparing results between the baseline and follow-up surveys, the Online Group was the only group found to have a significant increase in oral health knowledge scores ( $p = 0.002$ ).<sup>74</sup>

This study also explored differences in respondents' self-rated understanding and confidence in relation to oral health. Oral health training was associated with significantly higher self-rated understanding and confidence ( $p < 0.0001$ ), which was not dependent upon the type of training completed. As was the case for knowledge scores, the Online Group was the only study group where a statistically significant increase in self-rated understanding and confidence was detected between the baseline and follow-up surveys.

Attitudes of participants to oral health promotion were generally positive. When comparing attitudes between study groups, no significant differences were found. In addition, no significant differences were found in attitudes to oral health promotion between the baseline and follow-up surveys.

<sup>74</sup> This result is at the group level, as only five CRSWs in the Online Group completed both baseline and follow-up surveys.

In this present survey, any oral health training was associated with significantly lower perceived barriers to oral health promotion ( $p < 0.0001$ ) and better oral health promotion practices ( $p = 0.005$ ). Overall, there was a significant increase between the baseline and follow-up survey in the provision of oral health support ( $p = 0.012$ ). Again, it was the Online Group who demonstrated the greatest improvement in oral health promotion ( $p = 0.009$ ).

Respondents with higher oral health knowledge were found to have significantly higher self-rated oral health understanding and confidence. Those with better self-rated understanding and confidence also had significantly more positive attitudes to oral health promotion and were more likely to engage in oral health promotion activities. In addition, they perceived fewer barriers to oral health promotion within Neami. Regression modelling found that the strongest predictors of practising oral health promotion were participation in oral health training ( $p = 0.038$ ) and self-rated understanding and confidence ( $p = 0.017$ ). Therefore, the findings of this study suggest that those who had any oral health training feel more confident and are more likely to actively promote oral health when working with consumers.

## Discussion

The results of this study suggest that oral health professional development is effective in increasing the provision of oral health support in a community mental health setting. The type of training (face-to-face, online or blended) was not found to be significant. CRSWs who had any type of training were more confident in promoting oral health and perceived less barriers within Neami to oral health promotion than those who had no training. There is currently a lack of oral health promotion programs targeting people living with mental illness in the community. This study provides important information about the effectiveness of oral health professional development in building capacity to promote oral health in a community mental health setting.

It was hypothesised that those who had blended training (both face-to-face and online) would have better oral health-related knowledge, attitudes and professional practices. However, the results of this study did not support this hypothesis. There were no significant differences between study groups or dependent upon the type of training completed. This is in line with the results of a recent systematic review of the effectiveness of public health capacity building interventions, which found that confidence and professional practices can be improved through participation in a range of interventions (e.g. internet-based instruction,



self-directed learning, training and workshops). (465) Other studies have also found no significant difference in learning outcomes between different learning delivery approaches. (364, 466-471)

Student achievement levels may be similar between online and face-to-face classes, but satisfaction with traditional classroom teaching is often higher. (344, 467) The Stage Three post-training survey presented in Chapter 9 found that participants were more satisfied with face-to-face teaching. However, blended learning activities have also demonstrated effectiveness and a mix of delivery approaches is preferred in many situations. (359, 472-474) The use of 'pre-packaged ideas and strategies' should be avoided in capacity building efforts. (36) This study supports the proposition that the training delivery mode is not the most critical factor to success and that individual learners' and contextual needs (e.g. considering issues such as availability to attend classroom based sessions and technological requirements) should be the central focus.

Staff engagement in oral health PD was good. Three-fifths of CRSWs in the intervention groups (Face-to-Face, Online and Blended) had participated in oral health training in the preceding year. This was a very positive result, as completion of oral health training was not compulsory. While it was easy for CRSWs in Victoria to participate in face-to-face training sessions delivered at the weekly team meeting, completion of the online module required more individual effort. Despite this, more than half (50.7%) of those who had oral health training had completed the online module; one third (34.3%) had completed online training only. This suggests that even if online professional development is the least preferred training delivery mode, community mental health workers are motivated to participate.

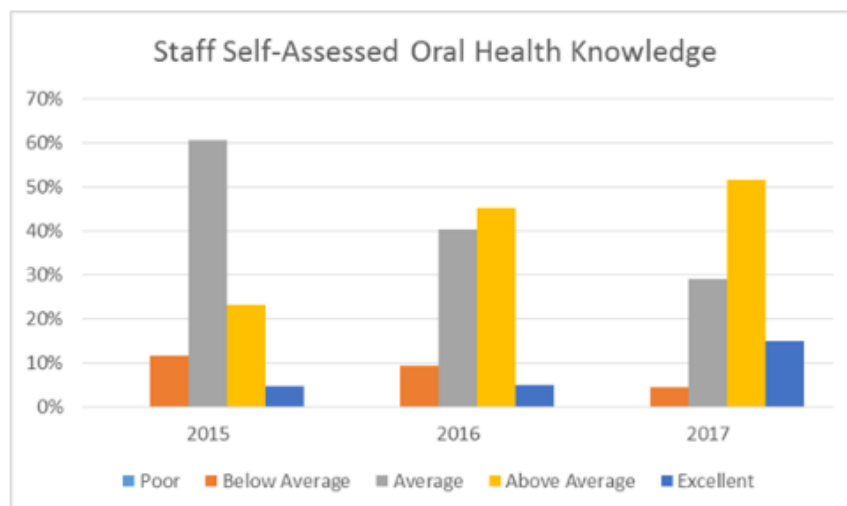
There was little change between baseline and follow-up cross-sectional surveys in CRSWs opinions on behaviours to prevent dental caries and periodontal disease. Responses on the importance of behavioural risk factors were also relatively consistent. The most notable finding was that, despite the inclusion of oral health risk factors in training content, respondents again rated excessive sun exposure and unprotected sexual activity less important than 'lack of physical activity' in causing oral health problems. Other studies have also found that health professionals frequently fail to identify sun exposure as a risk factor for oral cancer. (475-477) There is also a lack of understanding amongst the general population of the risks associated with unprotected oral sex. (478-482) Further education and training in

discussing oral health risk factors (particularly for sensitive topics such as oral sex) is necessary for professionals who practice oral health promotion. (477)

While no significant differences in knowledge scores were found dependent upon study group or participation in oral health PD, a significant increase in knowledge was found between the baseline and follow-up surveys for participants from sites in the Online Group (CRSWs based in New South Wales). This finding may be explained in part by the fact that participants from New South Wales had the lowest knowledge scores in the baseline survey. Also, Victorian participants (Face-to-Face and Blended Groups) may have had higher pre-existing oral health knowledge prior to Stage Two as they may have participated in face-to-face training in 2015 (Stage One). However, due to the low number of participants that completed both KAP surveys and the fact that the follow-up survey did not ask if they had also completed training in 2015, it was not possible to investigate this finding further.

There is independent evidence that Neami staff self-rated oral health knowledge increased during this PhD project (Figure 11.2). Staff who provide direct consumer support are surveyed annually about health promotion practices and oral health was found to be the physical health area where staff reported the most significant increase in knowledge between 2015 and 2017.

**Figure 11.2 CRSWs' self-assessed oral health knowledge 2015–17**



Source: Neami email communication, 1<sup>st</sup> February 2018.

The main purpose of the professional development was to increase capacity of CRSWs to provide oral health support for people living with severe mental illness. Binomial logistic regression found that participation in oral health training and self-rated understanding and confidence were the strongest predictors of oral health promotion practices (Tables 11.25 and 11.26). This is similar to the results of other studies investigating oral health promotion, where developing confidence rather than knowledge was a key factor in the provision of oral health support. (158, 262, 264) The results of this study suggest that any type of oral health training can be effective in building confidence in practising oral health promotion. This contributes to the evidence base that professional development for non-dental professionals can enhance oral health promotion practices and that future training activities should focus more on building confidence than knowledge.

Overall, CRSWs had generally positive attitudes to oral health promotion. They recognised they have a role to play in supporting consumers with their oral health needs and believed Neami should provide oral health support services. These findings reflect those from the baseline survey and confirm those from other studies exploring non-dental professionals' attitudes to oral health promotion. (21, 158, 294, 483) Negative attitudes to oral health have been identified, particularly in aged care settings where staff are responsible for managing elderly residents' daily oral hygiene care. (484, 485) However, oral health training has proved successful in improving aged care workers understanding of the importance of oral health care for older people and their willingness to provide oral hygiene care. (24, 486) It was noteworthy that even CRSWs who had not had any training were positive about promoting oral health for people living with severe mental illness.

There are many factors to contemplate in designing appropriate workforce development activities and in selecting training delivery modes. One such consideration is learner preference. Although the web-based post-training survey found that satisfaction with the online module was high, the results of this present study and the baseline KAP survey suggest that online-only PD is the least popular option among Neami CRSWs. While there has been an increase in the acceptance of online training programs, it seems that many learners still prefer to have opportunities for face-to-face discussion. (335, 487) However, tailoring of online training to make it relevant to learners can make it more desirable as the training mode-of-choice. (488, 489) Oral health experts from the Melbourne Dental School and Neami consumers and staff collaboratively designed the online module used in this project.

The fact that the content was ‘tailored’ to Neami is likely to have increased satisfaction levels, even though more CRSWs indicated that they prefer face-to-face professional development.

The HPSCs estimated that they spent around one-third of their time allocated to the health promotion portfolio working on the oral health project. This was quite high, especially considering there are four other health promotion priority areas. This level of focus on oral health is unlikely to be sustained long-term. This assumption is supported by qualitative evaluation data, where HPSCs discussed their capacity to ‘prioritise’ oral health or other physical health areas dependent upon the health promotion calendar of events and activities at any given time. However, rather than placing the oral health project at risk, this may actually enhance sustainability as it makes it more manageable and adaptable to fit with their existing workload.

## Limitations

This study has a number of limitations that may affect the validity of the results. The study groups were unequal, with the Online Group (47.1%) comprising almost half of all participants. Although steps were taken to address this sampling issue in the statistical analysis, it is possible that the internal validity of study results may be affected. The possible contamination of intervention groups may also be a limitation, where CRSWs did not complete the professional development activities relevant to their study group (e.g. over half of the participants at sites in the Blended Group completed face-to-face training only). This was also considered in analysing the data and KAP results were compared by study group and also dependent upon the actual training type completed. The type of training was not found to be significantly associated with CRSWs knowledge, attitudes and professional practices; it was participation in any training that was important.

This study aimed to measure changes in KAP between the baseline and follow-up surveys. However, the majority of CRSWs who completed the baseline survey were lost to follow-up (90.8%). Although the results for the matched participants ( $n = 13$ ) may not be meaningful, it was possible to make comparisons between groups (dependent upon the Neami site they worked at and which study group the site was allocated to). It was also possible to combine the results from both the baseline and follow-up surveys (excluding the thirteen matched participants) to compare all of those who had and had not had any oral health training. This demonstrated that training was associated with significantly better knowledge and self-rated

understanding and confidence, less perceived barriers to oral health promotion and increased likelihood of providing oral health support. These findings highlight the effectiveness of oral health training in building capacity to promote oral health.

While it is important to recognise that this study is context specific, the findings contribute to the evidence base that building workforce capacity is effective in increasing oral health promotion. However, no significant differences in oral health KAP outcomes dependent upon training delivery mode were found. These results are relevant to Neami and the broader mental health field, as they suggest the focus should be on designing oral health professional development activities that are contextually appropriate rather than on a specific training delivery mode. This is particularly relevant in settings where it may not be possible to follow the current trend in providing blended learning workforce development approaches.

## Chapter conclusion

The results of this follow-up cross-sectional survey (outcome evaluation) suggest that oral health professional development can be effective in building workforce capacity to promote oral health in a community mental health setting. While there has been a shift towards blended learning in workforce training, this study did not find blended delivery of oral health PD to be more effective than single-mode. However, it did find that CRSWs who had any type of oral health training were more confident about oral health promotion and were more likely to provide oral health support when working with consumers. Both face-to-face and online training delivery modes have advantages and disadvantages. However, professional development activities are often determined by, or constrained by, contextual differences and available resources. This study has important implications in the field of oral health promotion, as it supports the design, development and implementation of a variety of workforce training solutions, which can be adapted for use in a range of mental health settings.

This chapter presented the final component of the project evaluation. The combined findings from all evaluation activities (process, impact and outcome) will be discussed in the next chapter. This will answer the overarching research question, ‘What can be done to increase capacity to promote oral health in a community mental health setting?’

## **Chapter 12 – Synthesis of project findings and discussion**

This chapter summarises the key findings from this PhD research project. Each individual component of the project has been discussed at length in the relevant chapters of this thesis. Therefore, this chapter focuses on drawing together and integrating the findings to answer the overarching research question, ‘What can be done to build capacity to promote oral health in a community mental health setting?’

This chapter also discusses research challenges and the limitations and strengths of this PhD project. It highlights the practical implications of the project findings and makes suggestions for future research directions. Finally, it presents the project conclusions considering the combined results of this capacity building project.

## Key project findings and implications

This PhD project provides valuable new evidence of what can be done to build capacity to promote oral health in a community mental health setting. To the best of our knowledge, this is the first program of its kind in Australia. At the time of conducting the baseline cross-sectional survey (November 2015), no other published studies investigating community mental health professionals oral health promotion practices were identified. Therefore, this study provides important preliminary data about oral health knowledge, attitudes and professional practices in a community mental health service. Since then, a study has been published which explores eating disorder professionals' perceptions of oral health knowledge, which claims to be the first with this group of health professionals. (314) While this study provides useful information about eating disorder professionals, it is not as in depth as the baseline KAP study (Chapter 6) conducted during this PhD project. Also published in 2017, was a qualitative study investigating Western Australian mental health professionals' views on the oral health of mental health clients. (175) Despite the small number of participants ( $n = 9$ ), the results of this study highlighted the need for oral health training for mental health professionals, in order to integrate oral health promotion and support into their existing practices. It is believed that Smile for Health provides a good foundation on which to build a more comprehensive oral health-related training program for community-based, and potentially hospital-based, mental health professionals.

In answering the research question, 'What can be done to build capacity to promote oral health in a community mental health setting?' the key findings of this PhD project were that:

1. any type of oral health-related professional development is effective in increasing workforce capacity to promote oral health,
2. professional development activities must be 'tailored' to be contextually appropriate,
3. oral health 'champions' are important enablers in implementing oral health promotion, and
4. participatory action research is an appropriate, context-specific approach in building capacity to promote oral health in a community mental health setting.

## **Finding 1: Any type of oral health-related professional development can be used to build workforce capacity to promote oral health for people living with severe mental illness**

This PhD project provides evidence that oral health-related professional development can increase capacity to promote oral health in a community mental health setting. While participants were more satisfied with face-to-face training, any type of oral health PD (face-to-face, online or blended) resulted in Neami staff feeling more confident about oral health promotion and was associated with increased provision of oral health support. Importantly, actual oral health knowledge was not found to be significantly associated with Community Rehabilitation and Support Workers' oral health promotion practices.

In their recent study, Martin et al. compared four modes of training (face-to-face, videoconference, online and blended) for registered health professionals in Queensland, Australia. (490) Similar to the results of this PhD project, the study found comparable outcomes between the different training delivery modes (three-months after training). However, this study is limited by the fact that it had no control group and was unable to match participants across the data collection time-points (as was the case with this PhD project). The authors reported that 'immense care' was taken to ensure consistency between the four training modes, in the way information was delivered to participants. They highlight this 'consistency' as key to achieving successful outcomes across all delivery modes. In contrast, this PhD project found that similar outcomes can be achieved between different modes and without a consistent approach to the delivery or facilitation of training. In this project, face-to-face training content and delivery was planned collaboratively between individual BOH students and HPSCs. In addition, HPSCs had the capacity to adapt the implementation of the online training dependent upon their site needs. (While the majority of online training participants completed the module individually, a number of sites chose to work through the module as a team.) The findings of this PhD project suggest that a more flexible approach in delivering professional development activities, which may lack consistency across training modes and between groups of participants, can also be effective.

The results of this PhD project align with other studies that found no significant differences in learning outcomes between different education delivery approaches. (364, 466-471, 491) However, while student achievement levels may be similar across modes, satisfaction with traditional classroom teaching is generally found to be higher. (344, 467) This is also the case



in workforce professional development, where participants often prefer approaches that include face-to-face activities. (318, 351, 360, 369, 370, 416) The post-training survey conducted in the evaluation stage of this project indicated that satisfaction is significantly higher after face-to-face training. In addition, qualitative interview data and follow-up cross-sectional survey data highlighted that single-mode online training is the least preferred delivery option. In many settings, blended learning has become the education and training delivery mode of choice. (359, 472, 473) This PhD project supports the use of a range of training activities, which will cater to different learning styles and preferences, as no significant differences in oral health-related knowledge, attitudes and professional practices were found between face-to-face, online and blended modes.

While there has been a shift towards blended learning models in workforce training, it is important to recognise that it may not always be possible to supplement online learning with face-to-face sessions (due to constraints on resources, time, access etc.) Self-directed, online learning has proven effective in increasing knowledge, skills and confidence of Australian mental health professionals in relation to the National Practice Standards for the Mental Health Workforce. (492, 493) A recent systematic review and meta-analysis compared online training (to deliver clinical interventions) of licensed health care professionals with other training methods (i.e. interactive workshop, taught lecture and written manual). (494) Fourteen randomised controlled trials were included in this review, which found online training to be as effective as other training types, with little difference in knowledge and clinical behaviours. However, the trials included in the review did not provide baseline data and did not include any longer term follow-up assessing professional practices. This PhD project contributes to the evidence base that online training can be as effective as other training methods in developing sustainable professional practices (six-months after training). This information is important to any organisation or service focusing on workforce development strategies to build capacity to improve health, particularly in settings where face-to-face training activities may not be practicable.

## **Finding 2: Professional development activities must be ‘tailored’ to be contextually appropriate**

The results of this PhD project highlight the importance of ‘tailoring’ oral health-related professional development activities to be contextually appropriate. One of the principles in the capacity building framework is to ‘avoid pre-packaged ideas and strategies’. (36) This

principle emphasises the review of all key action areas (i.e. organisational development, workforce development, resource allocation, leadership and partnerships), as there is no ‘one size fits all’ approach in capacity building. Although the primary focus was on workforce development, each of the key action areas was considered in this project. In all stages of this project (during the analysis, design, development, implementation and evaluation), the need for flexibility and adaptability was addressed. This project affirms the central role that individuals can play in research teams, and that skills and support needs tend to evolve over the duration of a project.

It is apparent that there are many contextual differences in the way Neami operates between states, and even between sites. As mentioned in the background to this project (Chapter 2), Neami provides a range of mental health services in diverse communities across Australia. According to the results of this project, the training delivery mode is not a critical factor in building capacity to promote oral health. Evaluation suggested the tailoring of training to: align with the organisation philosophies; integrate into the service delivery model; and to address the needs of individual teams enhanced the acceptability and relevance of the oral health training. Due to the rollout of the National Disability Insurance Scheme (NDIS) in 2018, Neami is currently experiencing considerable organisational change in funding and service delivery. To date, these changes have largely affected Neami services in Victoria, where ‘Me Well’ now operates as a purely NDIS funded Neami program. However, the Project Advisory Group indicated that Neami NDIS-funded services will soon commence outside of Victoria. Therefore, in order for the Neami oral health program to be sustainable, it needs to continue to be adaptable for use in an ever changing and evolving environment.

There is good evidence that tailored interventions are effective in improving or establishing professional practices. While a 2010 Cochrane systematic review (including 26 trials) found that interventions addressing barriers to behaviour change can improve professional practices, it recommended further research be conducted to compare ‘tailored’ training interventions with others that have not been tailored. (495) It seems rather counterintuitive to conduct studies to determine if non-tailored interventions are equally as effective, when existing research demonstrates there is a preference for customised education and training. (496, 497) Indeed, there is a plethora of websites, both Australian and international, offering training that is ‘tailored’ to the needs of organisations and workforces. (498-502) The findings from

this PhD project also confirm that the unique training needs of potential participants should be recognised, particularly in developing future oral health training programs.

### **Finding 3: Oral health ‘champions’ are key enablers in implementing oral health promotion in a community mental health setting**

The leadership role of the Health Promotion Site Champions in supporting the implementation of this oral health project at the site level was a key factor in its success. This project did not recruit oral health ‘champions’ but rather capitalised on existing health promotion structures within Neami, which meant utilising HPSCs who already manage the health promotion portfolio, are responsible for overseeing health promotion action, and for ensuring staff are appropriately trained and resourced in the health promotion priority areas. While HPSCs were provided with some basic training and implementation guides to support them in their ‘trainer’ role, the evaluation indicated that they already had the skills and capacity to coordinate and facilitate oral health training for their team. The HPSCs acted as the liaison person with the BOH students (in planning the face-to-face training), with the State Health Promotion Officers (in communicating updates about the oral health project) and with the PhD candidate (in problem-solving technological issues related to the online module). In many instances, they also liaised with the local dental services and were instrumental in facilitating dental referrals enabling consumers to access oral health care.

This PhD project provides valuable evidence supporting the use of ‘oral health champions’ in promoting oral health. Research has demonstrated that ‘champions’ are a facilitator in health promotion interventions. (449) However, as discussed in Chapter 7, there is limited empirical research regarding the use of ‘oral health champions’ in oral health promotion programs. It is likely that key individuals who support the implementation of many oral health programs are not actually identified as ‘champions’; the lack of consistent terminology means literature searches may miss relevant studies. Dental Health Services Victoria is the leading public oral health agency in Victoria. DHSV’s newly launched ‘Supporting Every Smile for persons living with a disability’ website describes an oral health champion as ‘someone who takes the lead on oral health’. (503) It highlights the important role that oral health champions can play in supporting oral health and emphasises that they do not need to be oral health experts. These DHSV messages align with those used in this PhD project, in encouraging HPSCs and CRSWs to promote oral health.

The organisational structures within Neami mean that it is the Health Promotion Site Champion's role to oversee health promotion projects within their team. While they were not responsible for the delivery of oral health training in this PhD project, they did play an important role in coordination and facilitation of professional development activities. Qualitative data revealed that some HPSCs led group discussions about oral health and implementing oral health promotion practices. Others facilitated team-based completion of the online training module. Consequently, it can be said that the HPSCs role in this PhD project was a mix of 'oral health champion' and 'trainer'.

Recent studies have found train-the-trainer models to be effective in training professionals from a range of health-related fields. Some such training examples are: community pharmacists in cardiovascular health, (504) nurses in coronary artery disease management, (505) oncology nurses in communication, (506) social services workers in developing community-based family interventions, in sexual violence prevention in schools, (507) and in training healthcare professionals in providing psychosocial support to breast cancer survivors. (385) Workforce shortages in child mental health services have also prompted the expansion of a TTT program training 'Family Peer Advocates' to increase access to appropriately skilled workers. (384) Interestingly, the authors of this study suggest that different training modalities should be evaluated for effectiveness, particularly given the increase in web-based training models. A 2018 systematic review of TTT models for resuscitation training in low resource settings found TTT approaches effective in increasing knowledge and skills; however, there was limited evidence that the impacts of these programs are sustainable. (508) The findings of this review demonstrate the importance of regular training updates and ongoing support for trainers. Although this PhD project did not follow a true train-the-trainer methodology, the findings support the use of TTT approaches to build capacity of non-dental professionals to promote oral health.

#### **Finding 4: Participatory action research provides an appropriate, context-specific approach in a community mental health setting**

Participatory action research lends itself well to building capacity to promote oral health in a community mental health setting. In the PAR approach, 'informants become co-researchers and hence have their voices heard in all aspects of the research'. (509) Meaningful collaboration with Neami consumers and staff was a central focus of this PhD project. The Neami 'voice' was included in each component of the project analysis, design, development,

implementation and evaluation model. All three stages of this project involved periods of planning, acting, observing (including data collection and feedback) and reflecting. This reflective cycle provided opportunities to problem solve any issues as they arose, which is core ‘dimension’ in capacity building. (36)

At the commencement of this project, the methodology and research plan were undecided; however, the project aim to ‘develop a contextually appropriate approach to build capacity to promote oral health’ was already clearly defined. The PAR approach used allowed this project to evolve and grow, to adapt and change, to be responsive to Neami organisational constraints. Effective capacity building is underpinned by the principles of mutual trust between partners, and respecting and valuing pre-existing capacities. The fact that Neami and the Melbourne Dental School had been working collaboratively since 2011 meant that a solid foundation of trust was already well established. In addition, the environmental scan (Chapter 4) conducted in the early stages of this project enabled the identification of skills, structures and resources within Neami that could be applied to oral health promotion (e.g. motivational interviewing and coaching skills, alignment with the Neami Physical Health Prompt and the Collaborative Recovery Model). This in-depth understanding of the organisation assisted in the development of multi-level integrated strategies, which is known to enhance the effectiveness of capacity building efforts. (36)

In their 2018 scoping review of action research in the healthcare field (124 studies were included in this review), Cordeiro and Soares found that participation levels ranged from ‘no real input or power in the research process’ up to ‘democratic knowledge sharing and development of collective understanding’. (510) The studies included in the review covered action research conducted in a diverse range of healthcare settings around the world. Based on their objectives, the studies were categorised into three domains: 1) organisational, 2) individual, and 3) collective. It was interesting to note that studies conducted in Australia and Latin America had the highest levels of ‘democratic participation’ (according to Cornwall’s conceptual framework for participation levels). (510) The authors highlighted that this study was limited by the fact that all 124 studies were qualitative, even though this was not part of the review inclusion criteria. This PhD project contributes both quantitative and qualitative data demonstrating the effectiveness of action research in building health promotion capacity.

Qualitative research is now widely accepted as a ‘crucial component for increasing our understanding of health’. (198) There is a growing body of qualitative evidence that PAR can

be used successfully to develop models of health promotion in health service and community settings. (248, 511-517) The participatory practitioner-informed approach has been heralded as the ‘missing link in the evidence debate’, in translating evidence into practice. (248) In the mental health field, involving consumers as researchers has the potential to transform the service and to be transformational for the consumer-researcher. (518, 519) Neami has a ‘strong commitment to best practice in consumer participation and leadership’. (255) The learnings from this PhD project may assist in the design of PAR health promotion projects in other health service settings.

### **Limitations and strengths of this PhD project**

This PhD project used an organisation-based three stage mixed methods PAR design. There are many methodological challenges in conducting research within organisations or ‘settings’. One of the major challenges is evaluating the impact and effectiveness of programs. (520) The rigour versus relevance debate is also one that has received considerable attention across a variety of disciplines such as education, management and health. (521-523) This PhD project encountered a number of impediments to achieving scientific rigour in this organisation-based research (e.g. lack of randomisation of Neami sites to study groups, potential contamination of study groups, loss to follow-up between cross-sectional KAP surveys, logistical challenges in conducting qualitative interviews).<sup>75</sup> In addition, the context-specific nature of the project may limit the generalisability of the findings to other organisations and other settings. There is a good argument for the embedding of randomised controlled trials in action research. (524) If well planned, this approach may prove useful in addressing the need for both research rigour and contextual appropriateness in capacity building and oral health promotion programs.

Although mentioned above as a limitation, context specificity is also one of the main strengths of this PhD project. In building capacity to promote oral health, using a PAR approach meant that the strategies developed and actions implemented were contextually appropriate. While the quantitative quasi-experimental methods employed provided evidence to support the implementation of oral health professional development, it was the qualitative data that provided insight into the contextual differences between Neami sites. More importantly, it was the inductive thematic analysis that allowed the themes and sub-themes identified to be mapped against the dimensions of capacity building (i.e. health infrastructure

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<sup>75</sup> Each of these limitations was discussed in detail in the relevant earlier chapters of this thesis.

or service development, program maintenance and sustainability, and problem solving capabilities) (36) to determine the barriers and enablers to the project implementation. This ‘triangulation’ of research methods and the multi-level (process, impact and outcome) evaluation, although it created logistical complexities, is a strength of this capacity building project.

## Recommendations for practice

The wider rollout of the Neami Smile for Health oral health program is recommended. To date, it has been implemented in Victoria and New South Wales only; however, sites in Queensland, South Australia and Western Australia have already expressed interest in participating. Based on the evaluation results, some specific recommendations are made to support the national implementation of Smile for Health.

It is essential that PD in the workplace is relevant to the local context. (525, 526) Indeed, ‘capacity building is a highly context-dependent’ concept. (527) Context is described as ‘the range of physical, economic, political, organisational and cultural environments within which a program sits.’ (36) While process evaluation of the oral health PD indicated that it was contextually-appropriate, it is essential that the ‘participatory’ approach be continued and expanded (e.g. continuing to utilise ‘champions’ at the site level, involving higher-level management and engaging new external partners, such as dental services and other community mental health services). This will ensure the Smile for Health oral health program remains ‘responsive to context’ and relevant to the way the Neami services operate in different states.

Neami has a dedicated Learning and Development (L&D) team of professional trainers, who are responsible for the delivery of Neami’s core internal training programs. (183) Neami is preparing to launch an organisation-based Learning Management System (LMS) and it is recommended that L&D take on the responsibility of hosting the oral health module on the new LMS. This will help address many of the issues that arose during the implementation of the online training (e.g. accessing the module, creating user logins, seeking technical support). Staff also recommended (in the qualitative process evaluation) that the online module be included in new staff induction training. There were also some suggestions during the evaluation and from the Project Advisory Group that the online module be made available to Neami consumers. This approach has demonstrated effectiveness in educating community-

based older people in Victoria. (528) Both of these actions align with the Neami health promotion framework and are therefore recommended to Neami L&D. (32)

The creation of both formal and informal oral health-related learning opportunities is recommended. Formal professional development plays a crucial role in developing specific knowledge and skills in the workplace. However, the value of informal learning processes in developing workforce skills is often under recognised. (529) In their recent meta-analysis, Cerasoli et al. found that informal learning behaviours in the workplace are associated with better attitudes, knowledge and skills, and performance. (330) Evaluation of this PhD project highlights that Neami CRSWs value discussing oral health promotion as a team. Creating opportunities for learners to collaborate and ‘come together’ may improve the effectiveness of PD approaches in health care settings. (530)

It therefore seems prudent to consider the value of formal and informal workforce training in parallel (332) and integrating both approaches in efforts to build capacity to promote oral health. In addition to formal online and face-to-face training, more informal ‘booster’ sessions (e.g. team discussions on challenges and successes in supporting consumers with their oral health needs, working collaboratively to coordinate site-level oral health promotion activities and to problem-solve barriers to implementing Smile for Health) are recommended to build and sustain capacity to promote oral health. This regular reinforcement of oral health information is important in enhancing and sustaining oral health promotion practices of non-dental professionals, particularly in settings where there is high staff turnover (e.g. aged care settings, mental health settings). (8, 179)

It is recommended that Smile for Health be implemented in other community mental health settings. Program reach can be enhanced and sustainability maintained through Neami taking the leadership role in delivering the oral health module to other services and organisations. The Centre for Recovery Oriented Practice (CROP) is a Neami operated evidence-based practice training service. (531) It currently offers training in the following:

- Foundations of Recovery Oriented Practice
- Collaborative Recovery Model
- Optimal Health Program
- Assess and Respond to Suicide



- Mental Health Literacy
- Launching Pad (training for consumers and carers by peers).

The addition of the online oral health module to the suite of CROP training programs is proposed. Through the CROP, Neami has the existing capacity (skills, structures, resources and relationships) to deliver this module in a range of mental health settings. Oral health experts from the Melbourne Dental School will continue to provide evidence-based oral health information and resources for inclusion in the training program.

The expansion of Smile for Health into other mental health services will require the formation of new partnerships between mental health and oral health services. The development of partnerships is a key element in building and maintaining capacity to promote health and prevent illness. (532) One of the resources developed during this PhD project was a Local Oral Health Services form. This document should be updated for inclusion with the online training to guide mental health services in establishing local-level partnerships with oral health services (e.g. dental schools, public dental clinics and private dental practices). The establishment of these partnerships will assist in creating referral pathways for people living with severe mental illness to access oral health care and promote interprofessional collaborative relationships.

In considering interprofessional practice between oral health and mental health professionals to promote oral health for people living with severe mental illness, the need to build capacity of dental practitioners to provide appropriate oral health care and support is apparent. People living with mental illness face many barriers in accessing oral health care. (16, 35, 132, 194) While mental health professionals can support consumers in getting to the dental practice, dental practitioners need training to reduce the negative experiences of people living with severe mental illness when they are in the clinical setting. (15, 89, 175, 195, 533, 534) Professional development for dental practitioners can draw on positive psychology and strengths-based theoretical approaches, which are increasingly being applied in the mental health sector, to develop competence in providing appropriate care for people living with severe mental illness. (186, 247, 535-539) One evidence-based training program that can be used to improve awareness of and communication about mental illness in the dental clinic setting is Mental Health First Aid (MHFA). Mental Health First Aid Australia is a not-for-profit organisation that focuses on mental health training. Mental health first aid is ‘the help

provided to a person who is developing a mental health problem, experiencing a worsening of an existing mental health problem or in a mental health crisis.’ MHFA offers a range of traditional face-to-face (12-hour classroom-based training) and blended courses (eight-hour online module followed by a four-hour face-to-face training session). Currently in Australia, blended MHFA courses are available for workplaces, Australian legal professionals, pharmacists and tertiary students only. The opportunity to provide blended MHFA training tailored for oral health professionals (e.g. including relevant patients stories and clinical scenarios, based in the dental clinic) should be explored, particularly given the challenges for many in attending face-to-face training. Completion of this course will provide valuable knowledge and skills to oral health professionals and contributes 12-hours towards clinicians’ continuing professional development (which is a requirement for registered dental practitioners). (540)

## Recommendations for research

There is a need to explore oral health-related knowledge, attitudes and professional practices in other mental health settings. As mentioned earlier, it is believed this oral health KAP survey is the first to be conducted in a community mental health setting. However, the generalisability of survey findings are limited as all of the participants were Neami CRSWs. It is suggested that the survey questionnaire be modified for use in other mental health settings, which would provide a broader picture of oral health support provision in Australian mental health services.

It is important to determine if oral health promotion programs targeting people living with severe mental illness such as Smile for Health translate to increased access to dental services and improvements in oral health. This will require better monitoring of referrals from mental health services to dental services. CareLink+ is the client-management software system used at Neami. One of the strategies suggested in Stage One (Chapter 4) was to improve monitoring of oral health promotion activities at Neami. This has not yet been achieved; therefore, it is recommended that Neami explore ways in which the provision of oral health support to consumers and referrals to dental services can be better recorded and monitored. Public dental services also have a role to play in reporting dental service utilisation by people living with severe mental illness. As discussed prior, mental health clients in Victoria are eligible for priority access to public dental services if referred from a mental health service. However, it is unclear if this referral criterion is widely known. Indeed, it was apparent from

conducting this project that many Neami staff in Victoria were not aware of this eligibility to priority access. Collaborative research between mental health and oral health services can be used to monitor dental service utilisation (e.g. attendance for routine dental check-up, emergency or pain appointment, preventive care or other dental treatment) to develop strategies to enhance access to oral health care for people living with mental illness.

This PhD project provides evidence that community mental health professionals can provide oral health support to people living with severe mental illness. This approach aligns with the recommendations in Australia's National Oral Health Plan. (1) Indeed, the role of non-dental professionals in promoting oral health, particularly for disadvantaged and hard to reach populations, is currently a topical issue. (1, 8, 29, 541-545) While this project has focused on building capacity in a community mental health setting, people living with severe mental illness are in contact with a range of health care providers (e.g. pharmacists, general medical practitioners, nurses etc.), all of whom can play a role in promoting oral health. Pharmacists in particular,<sup>76</sup> given the frequency and nature of contact, are ideally placed to provide opportunistic oral health advice when people are collecting their medications. (26, 27, 546) Australian pharmacists are interested in oral health training. (547) The potential role of pharmacists (and other allied health professionals) in oral health promotion, particularly for people with mental illness, should be further investigated.

## Recommendations for policy

People living with severe mental illness are at higher risk of oral disease and it is essential that they have timely access to preventively focused oral health care. It is believed that this capacity building project is the largest of its kind in Australia. Indeed, there is little evidence of any systematic or comprehensive oral health promotion programs targeting people living with severe mental illness. This PhD project operated on a minimal budget<sup>77</sup> and the impact and reach of the oral health training is testament to the level of commitment within Neami to improving oral health for consumers. People living with mental illness are recognised in the Australian NOHP as a priority population group with additional and/or specialised health care needs. (1) When considering the Foundation Areas in achieving the goals outlined in the NOHP, the findings from the PhD project can be used to advocate for:

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<sup>76</sup> Given the link between psychotropic medication use and dry mouth.

<sup>77</sup> The most significant expense was in developing the online module, which was funded through the Melbourne Dental School and a special grant from Neami.

1. widespread implementation of oral health promotion programs targeting people living with severe mental illness
2. making oral health services more accessible to people living with severe mental illness
3. appropriate training of oral health professionals to provide care for people living with severe mental illness, and
4. improved monitoring of oral health of people living with severe mental illness.

These improvements require increased political commitment to fund oral health services for disadvantaged populations, such as those living with mental illness.

## Thesis conclusion

The Smile for Health program provides a contextually appropriate approach to build capacity to promote oral health in a community mental health setting. The oral health-related professional development activities delivered during this project were effective in increasing the provision of oral health support to people living with severe mental illness. It is recommended that Smile for Health be rolled out nationally within Neami and considered for implementation in other community mental health services.

This PhD thesis provides evidence that there are many existing capacities in community mental health settings that can be adapted and applied to oral health promotion. It demonstrates that any type of training (face-to-face, online or blended) can be effective in increasing oral health promotion practices. However, it is essential that oral health training activities are designed to be contextually appropriate and are tailored to suit participants' learning needs. These research findings are valuable, as they emphasise the importance of focusing on the quality of training content rather than on the delivery mode. This information is particularly significant for resource-constrained settings, where it may be possible to provide single-mode professional development only. This project also highlights the key role of oral health 'champions' in coordinating and facilitating the implementation of oral health promotion within individual teams. Therefore, this thesis contributes to the evidence base supporting the utilisation of 'champions' in the oral health field.

People living with severe mental illness require specialised oral health programs. More must be done to develop targeted oral health promotion strategies and to improve access to

appropriate oral health care. Future policy directions must enhance the focus on sustainable solutions to address the oral health needs of people living with severe mental illness. Smile for Health provides evidence of what can be done to increase oral health promotion in a community mental health setting. The Framework for Building Capacity to Improve Health provided a practical map for each stage of this project. (36) The use of this framework is recommended in developing future programs to build capacity to promote oral health for people living with severe mental illness.

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## Appendices

### Appendix 1: Article published in New Paradigm Journal

# Smile for Health: An evidence-based oral health promotion program for people living with severe mental illness

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'Oral health is fundamental to overall health, wellbeing and quality of life. A healthy mouth enables people to eat, speak and socialise without pain, discomfort or embarrassment.' (Council of Australian Governments' Oral Health Monitoring Group, 2015)

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People living with severe mental illness are at increased risk of oral health problems and face significant challenges in accessing appropriate oral health care (Baghaie et al. 2017, Kisely 2016, Kisely et al. 2015, Laloo et al. 2013, Kisely et al. 2016). Just as mental health and physical health are inextricably linked (Glew and Chapman 2016), there is also a bidirectional link between mental health and oral health (Kisely 2016).

People living with severe mental illness often experience anxiety and phobia related to dental treatment (Crego et al. 2014, Lenk et al. 2013, Pohjola et al. 2011). Psychotropic medications (e.g. antidepressants, antipsychotics, anti-anxiety drugs) can cause dry mouth, increasing the risk of oral diseases (Laloo et al., 2013). One systematic review found people living with severe mental illness are almost three times more likely to have lost all of their teeth, compared to the general population (Kisely et al. 2015).

Fear, stigma, cost of care, and communication issues are barriers to accessing timely dental care (Ho et al. 2017, McKibbin et al. 2015, Lenk et al. 2013, Crego et al. 2014). The behavioural risk factors for oral diseases (e.g. poor diet, smoking and unsafe alcohol consumption) are also associated with other chronic health conditions (e.g. diabetes, cardiovascular disease, respiratory diseases, cancer) (Dental Health Services Victoria (DHSV) 2011) These links are important to consider in the development of more integrated approaches to promoting and supporting general health and wellbeing.



**Roisin McGrath** is Lecturer Oral Health & PhD Candidate, Oral Health – CRC, Melbourne Dental School, The University of Melbourne

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**Professor Julie Satur** is Head of Oral Health, Oral Health – CRC, Melbourne Dental School, The University of Melbourne

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**Professor Rodrigo Marino** is Professor of Population Oral Health, Oral Health – CRC, Melbourne Dental School, The University of Melbourne

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**Rebecca M Meldrum** was Health Promotion Officer Victoria, Neami National

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**Vicki Langan** is Health and Wellbeing Manager NSW, Neami National

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**Petrina M Hilton** is Health Promotion Officer Victoria, Neami National

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**Glen Tobias** is State Manager Victoria, Neami National



The majority of dental diseases are preventable, and oral health promotion programs are essential in prevention, screening and early detection efforts. (DHSV 2017). Australia's National Oral Health Plan 2015-2024 recognises people living with mental illness as a Priority Population group requiring targeted oral health support and care (Oral Health Monitoring Group 2015).

There is strong evidence that non-dental professionals (e.g. aged care professionals, midwives) can play an important role in promoting oral health (Lewis and Fricker 2009, Johnson et al. 2015, Rogers 2011, George et al. 2016). Community mental health professionals are ideally placed to initiate conversations with consumers about oral health, to offer basic oral health information and to facilitate consumer access to oral health services (Neami National, Meldrum et al. 2018). To date, this approach to oral health promotion has been limited in the mental health sector.

### Building capacity with 'Smile for Health'

'Smile for Health' is a partnership program between Neami National (a community mental health service) and the Melbourne Dental School (The University of Melbourne). Utilising the New South Wales Framework for Building Capacity to Improve Health (NSW Health Department 2001) the program developed contextually appropriate professional development for Neami Community Rehabilitation and Support Workers (CRSWs) to improve oral health promotion practices.

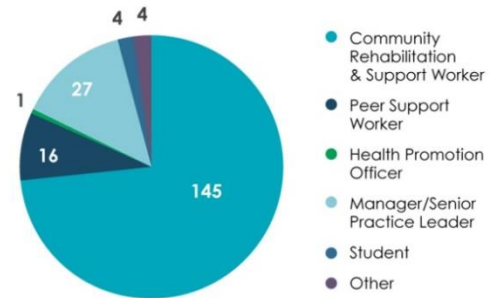
The program utilised a Participatory Action Research approach, involving a repetitive cyclic process of planning, acting and reflecting (Townsend 2013). Participatory action research was translated into practical, evidence-based approaches to deliver oral health support for people living with severe mental illness. Staff training focused on applying existing communication and support skills (e.g. motivational interviewing, recovery coaching) to oral health.

Professional development included a mix of short, 30 minute, face-to-face training sessions (delivered at weekly team meetings) and an eLearning module, which was designed in collaboration with Neami consumers and staff. Health Promotion Site Champions (HPSCs) in each site coordinated program implementation within their team. Bachelor of Oral Health students from the University of Melbourne delivered the face-to-face training sessions at Neami sites in Victoria.

Smile for Health was initially implemented in Victoria, before expanding into New South Wales in 2016. Mixed methods (quantitative and qualitative) were used in collecting relevant process, impact and outcome evaluation data. Ethics approval was granted by the University of Melbourne Human Research Ethics Committee and by the Neami National Research and Evaluation Committee.

**The program was simple to implement and relevant to the way in which Neami services are delivered.**

Figure 1. Training participants' role within Neami



### Evaluation of the program

In 2015, 118 Neami staff in 12 Victorian sites participated in face-to-face training sessions. This increased in 2016 to 141 staff in 17 Victorian sites participating in face-to-face training and 144 in Victoria (eight sites) and New South Wales (ten sites) enrolled in the online training module. Over 90 per cent (n=178) of those who participated in oral health training had a role at Neami which involved direct consumer support, meaning they have opportunities to engage consumers in oral health related conversations.

Post-training surveys indicated that three-quarters (n=145, 73.6%) of training participants were CRSWs (see Figure 1). It was expected that almost all training participants would be CRSWs, who are responsible for providing the majority of consumer rehabilitation and support services, so the engagement of other Neami staff members was an unanticipated positive result.

Annual appraisal of health promotion action within Victoria found that Neami staff reported significant improvements in their oral health knowledge in 2015-16 and 2016-17. After training, staff reported high levels of understanding and confidence in relation to oral health (see Figures 1 & 2). The majority were also 'very' or 'extremely' satisfied with the training provided (see Figure 4).

Process, impact and outcome evaluation of the oral health program included post-training surveys (paper-based and web-based), semi-structured interviews and focus groups, and an anonymous cross-sectional survey of Neami CRSWs. The evaluation found that support workers who had oral health training provided consumers with significantly more oral health support than those who did not have training. Support workers generally had positive attitudes to oral health promotion, however, those who had oral health training perceived fewer barriers to promoting oral health when working with consumers.

**Figure 2.** Self-rated understanding after oral health training

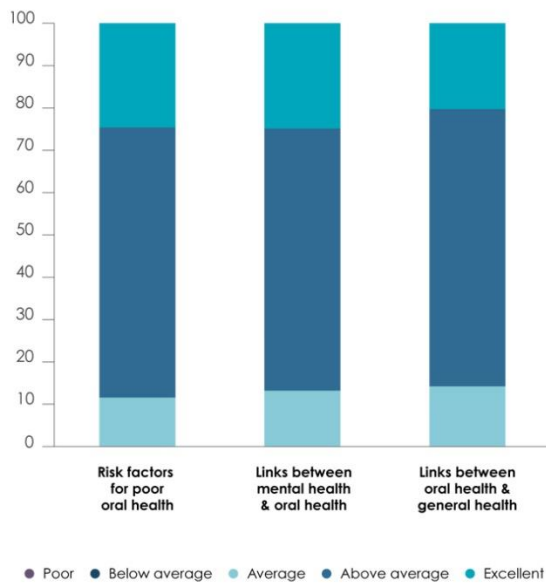
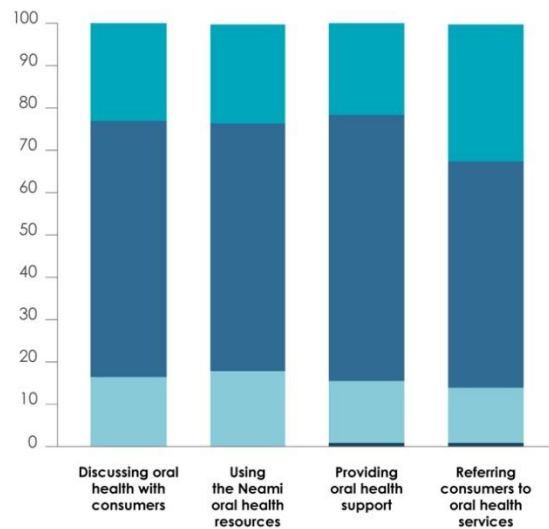


**Figure 3.** Self-rated confidence after oral health training



## Qualitative feedback from staff highlights that:

- They understand the importance of oral health and recognise they have a role to play in supporting consumers to address their oral health needs.
- The program was simple to implement and relevant to the way in which Neami services are delivered.
- They found the training valuable and contextually appropriate, as it was tailored to the needs of the consumer group that they work with and aligned with the Collaborative Recovery Model used at Neami to create a professional working alliance between consumers and support workers, and to facilitate an environment of learning, growth and empowerment (Marshall 2008).
- They prefer face-to-face training, as it provides opportunities to ask questions, discuss scenarios where oral health promotion may prove challenging, and share success stories where consumers have been supported to improve their oral health. (Post-training survey evaluation also found that staff satisfaction with training was significantly higher after face-to-face training than after online training  $t(195) = -1.417, p = 0.044$ ).

**Smile for Health proved an innovative, low-cost, and sustainable oral health promotion program in a community mental health setting.**

## “

[The consumer] had been on a waiting list for about 3 years and they had called during that period to try and get a sense of when they could get an appointment. . . . so they had been experiencing pain for a reasonable period of time without accessing, or having capacity to access dental health or see a dentist. And then, from the moment of sending through the referral, literally within days, they'd been contacted and days after that had an appointment.

## ”

(Quote from Neami HPSC about supporting a consumer)

## Where to from here?

To the best of our knowledge, this is the largest scale oral health promotion program conducted in a community mental health service, both nationally and internationally.

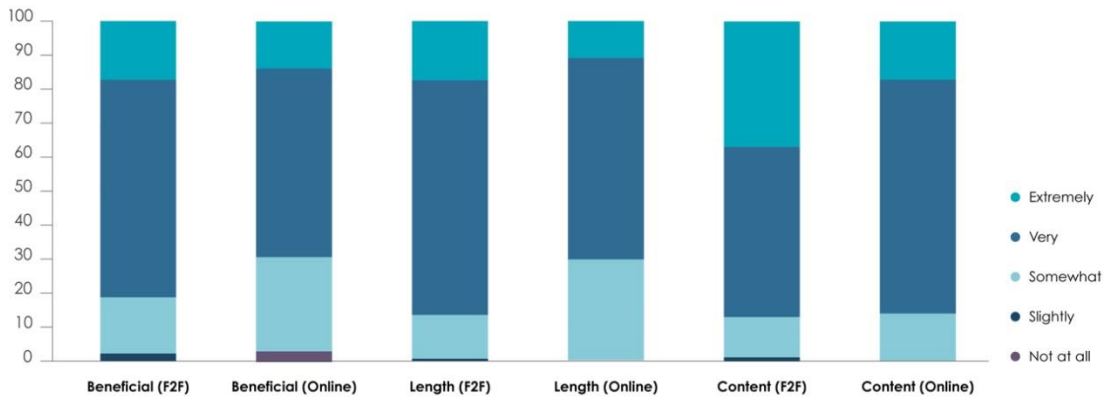
Initially implemented in Victoria and New South Wales, it is planned to be rolled out in other Neami sites in Queensland, South Australia and Western Australia.

It is also envisioned that the eLearning module will be made available across the broader mental health sector, contributing to a sustainable and evidence-based approach to promoting oral health for people living with severe mental illness (Neami National).

## Conclusion

Targeted oral health promotion strategies are essential to improve oral health for people living with mental illness. The Smile for Health project demonstrated that contextually appropriate oral health training can increase the provision

**Figure 4.** Satisfaction with oral health training



of oral health support to people living with severe mental illness, including oral health advice and referrals to dental services.

Integrating oral health messages into existing health promotion activities proved an effective and acceptable approach. Smile for Health proved an innovative, low-cost, and sustainable oral health promotion program in a community mental health setting. It has been implemented in Neami sites in Victoria and New South Wales, and will be rolled out nationally in 2018.

*This project was funded by Neami National, the Oral Health Collaborative Research Centre and the Melbourne Dental School. It was supported by Colgate through product donation.*

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## Appendix 2: Article published in Dental Health Journal, UK

# ORAL HEALTH CARE FOR PEOPLE LIVING WITH MENTAL ILLNESS: WHAT DO WE NEED TO KNOW AS DENTAL PRACTITIONERS?

Roisin McGrath

Mental health is seen as 'a continuum, ranging from having good mental health to having mental illness'.<sup>1</sup> As we move through the different stages of our lives, our position along this continuum will vary.

Mental health problems and mental illness are a global public health issue. Mental illness is a major cause of disability and is one of the leading contributors to the overall burden of disease.<sup>2</sup> While it is difficult to accurately measure the prevalence of mental illness, it is estimated that:

- Almost half of all adults will experience mental illness during their lifetime;
- One-in-six people over the age of 16 years had a common mental illness in the past week;
- A third of those who identify as having mental health problems have not been formally diagnosed.<sup>3</sup>

Commonly diagnosed mental disorders include anxiety disorders (social phobias, panic disorder, OCD), affective or 'mood' disorders (depression, post-natal depression) and substance-use disorders.<sup>1</sup> Lower prevalence but more severe mental disorders include schizophrenia and bi-polar disorder.

### Living with mental illness

People living with mental illness (PLWMI) experience poorer physical health outcomes than the general population with higher rates of obesity, cardiovascular disease and type 2 diabetes.<sup>4-6</sup> They are also at increased risk of oral health problems and face barriers in accessing appropriate oral health care.<sup>7-9</sup> One of the most significant oral health risk factors for PLWMI is psychotropic medications (e.g. antidepressants, mood stabilisers, antipsychotics) which can cause dry mouth.<sup>10</sup> People with mental illness are also more likely to smoke, to have diets high in sugar and caffeine and to have difficulties maintaining good oral hygiene. Barriers to dental care frequently experienced by PLWMI include cost, fear and anxiety, stigma and discrimination, being overwhelmed managing their mental and physical health, and apathy about oral health.<sup>11</sup>

As dental practitioners, it is essential to understand not only the oral risk factors commonly experienced by PLWMI but also how we as clinicians can support them in accessing timely and affordable, preventively focussed oral health care.

As a current University of Melbourne PhD candidate, I have been fortunate to work collaboratively with Neami National, an Australian community mental health service, to develop 'Smile for Health', an oral health promotion programme for people living with severe mental illness. The goal of my project is to build capacity within Neami to support mental health consumers with their oral health needs. Workforce training, including face-to-face and eLearning modules, was delivered to increase staff knowledge about oral health and to facilitate referrals to dental services. The implementation of training was supported by state Health Promotion Officers and by Health Promotion Site Champions in each participating Neami site.

Consumer engagement is an evidence-based approach in designing appropriate targeted health promotion activities.<sup>12</sup> Neami consumers,

with a lived experience of severe mental illness, were meaningfully involved in all stages of the project design, implementation and evaluation. These consumer advisors suggested a number of strategies for dental practitioners to use in providing oral health care for PLWMI. These include:

### Consider becoming an accredited Mental Health First Aider (MHFA)

This means completing a two-day course that covers basic mental health first aid training and managing mental health crises. MHFA was developed in Australia and was first piloted in Scotland in 2003, before being introduced to the rest of the UK between 2005 and 2008. It is recommended that all members of the dental team participate in MHFA training.

### Examine your attitudes and beliefs in relation to mental illness

Misconceptions and stereotypes about PLWMI are widespread. Remember how common mental illness is. It is highly probable that you or someone close to you will suffer mental health issues at some stage in their life.

### Consider the barriers experienced by the patient in accessing dental care

We need to recognise the effort that it may have taken for our patients to make it to their dental appointment. Those who experience anxiety related to dental visits may have had to prepare for days in advance, to practice mindfulness strategies, to discuss the visit with their support worker, to take medication to sleep the night before or to reduce their anxiety on the day of their appointment. Acknowledge their achievement in making it to see you.

Build some flexibility into the appointment making process. Give them the option of making appointments in advance or being on a cancellation list and offered an appointment on the day. If they do not turn up for their appointment, it may be because their fear and anxiety was just too overwhelming for them. Rather than calling to admonish them for not attending, ask if they are okay and what you can do to support them in getting to future appointments.

### Provide a 'support call' rather than a reminder call

If you know your patient has a mental disorder or anxiety about dental visits, ask them how you and your team can support them to attend their appointments. Most dental practices call patients to remind them about their upcoming appointment, to reduce the likelihood of 'no shows'. A 'support call', ideally from the clinician, or dental assistant, who will be providing the dental care, will give the patient an opportunity to raise any concerns they have about the visit and more importantly demonstrate that we understand and care about the challenges PLWMI face.

### Consider the waiting room and check in process

For many PLWMI, the waiting room can trigger an anxiety attack.

Busy reception staff, who may just be doing their job efficiently, can be intimidating to a person with a mental disorder. Simply sitting in the waiting room can be extremely overwhelming – I am sure we all know of at least one patient who checked in at reception, but left the practice before seeing the dental practitioner. My consumer advisors have suggested:

- Asking if the patient would like to wait in their car or outside until you are ready to bring them through to your surgery.
- Asking them if they would prefer to wait in an empty surgery or another room away from the reception area. This is particularly useful for those with social anxiety.

### Good communication is key

Our patients may not always feel comfortable disclosing their mental health status, so we should strive to ensure our surgery is a 'safe space' where they can share and discuss sensitive information without fear of judgement or discrimination. If they do choose to open up about their mental illness, acknowledge that this may have been difficult for them (thank them for trusting you with such personal information – this validation is important). However, you must take care not to ask intrusive questions, which may cause distress or even trigger an anxiety attack, particularly for people with post-traumatic stress disorder. Speak in a warm and reassuring tone, but try to avoid coming across as condescending by saying things like 'you're ok' and 'well done' too frequently.

### Work collaboratively with your patients

It is time to move away from the notion of 'patient compliance' with our advice and recommendations.

As dental practitioners, we often set idealistic goals and unrealistic expectations, which set patients up for failure. We need to work collaboratively with them to identify their own personal oral health goals and to develop strategies to support them in achieving them (use motivational interviewing techniques). For PLWMI, oral health may not currently be a priority but as they move through their recovery process, they may reach a stage where they are better able to address their oral health issues. We must provide appropriate support depending on their needs and wants at that time.

### Create an appropriate clinical environment

My consumer advisors have recommended some very simple strategies to create a clinical environment that is appropriate for PLWMI:

- Ask: 'What can I do to make you more comfortable?', '...to help with your anxiety?', '...to support you in attending dental appointments?'
- Advise them to consider bringing a support person with them to dental appointments.
- Make sure you inform the patient if you are running late. This unexpected or unexplained delay will only add to their anxiety levels.
- Let the patient choose the background music, offer headphones, offer audio books, or ask if they would prefer a quiet environment

### Give control to the patient

People living with mental illness often fear the feeling of powerlessness and loss of control. Set appointment boundaries and time limits, and stick to them. Determine if they would prefer you to explain everything you are doing, or not; it can be a case of 'too much' information or 'not enough' – each person is different. Use pre-agreed 'stop' signals, so the patient knows that they can have a break at any time they choose. Recognise the signs of distress – stop, acknowledge their symptoms and ask 'how can I help you?'

### Simple prevention strategies

People living with mental illness may not always be able to modify their oral health risks (e.g. psychotropic medications, diet, smoking, diabetes) without additional support from dental and non-dental professionals. Even if they are not at a stage in their recovery where they can prioritise oral health, some simple prevention strategies can be effective. Our oral health promotion programme uses simple key prevention messages such as: brush teeth twice a day with fluoride toothpaste; clean in between



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teeth daily; limit sugary foods and drinks in between meals; drink plenty of tap water; and visit a dental practitioner every six months. For high caries risk individuals, higher concentration fluoride toothpaste can be recommended and topical fluoride varnish applied in surgery.

### Reflect on your own mental health

Being a dental practitioner is an exciting, rewarding and challenging career. However, just as mental illness is common in our patients, it is also common amongst our profession. We need to foster an environment where we can speak openly about mental health and recognise when we, or our colleagues, are experiencing mental health issues. There is no shame in having a mental illness. We cannot let the fear of stigma, judgement or embarrassment prevent us from receiving appropriate mental health care. Preventing mental health problems or promoting recovery to good mental health is important for us all.



FIGURE 1. SMILE FOR HEALTH IS AN ORAL HEALTH PROMOTION PROGRAMME DEVELOPED IN PARTNERSHIP BY THE MELBOURNE DENTAL SCHOOL AND NEAMI NATIONAL, AN AUSTRALIAN COMMUNITY MENTAL HEALTH SERVICE, FOR PEOPLE LIVING WITH SEVERE MENTAL ILLNESS.

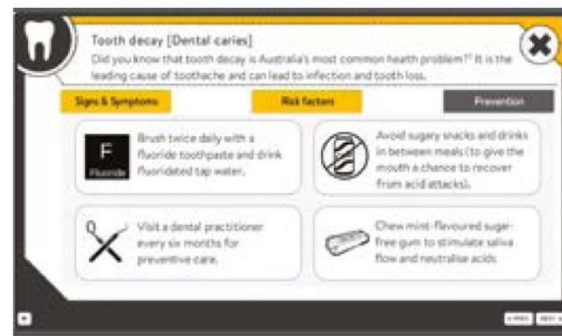


FIGURE 2. IMAGES TAKEN FROM THE ORAL HEALTH ELEARNING MODULE FOR NEAMI STAFF

### ABOUT THE AUTHOR:

Roisin McGrath is a UK trained dental hygienist and therapist, who has been living and working in Australia for over 16 years. She is currently a full-time PhD candidate with the Oral Health – CRC at the University of Melbourne and her research focuses on promoting oral health for people living with severe mental illness. The 'Smile for Health' programme was funded by Neami National, the Melbourne Dental School and the Oral Health – CRC and supported by Colgate through product donation.

### CORRESPONDENCE:

Email: mcgrathr@student.unimelb.edu.au

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## Appendix 3: Mental Health Service Awards, Letter of Commendation

**The  
Mental Health Service  
Awards  
of Australia and New Zealand  
2018**

**Letter of Commendation**

To

***Smile for Health:***

*Building capacity in a community mental health setting  
to promote and support oral health for people living  
with severe mental illness*

**Congratulations!**

Your service was nominated for a letter of commendation by  
TheMHS Awards judging panel in the

***General Category for Programs and Services***

This letter is in recognition of the quality aspects of the service,  
and to encourage continuing growth and development.



Signed on behalf of the panel by

**Lynnette Dunbar  
TheMHS Awards Manager**

## Appendix 4: Ethics Approval 1544795



9 February 2017

Prof J.G. Satur  
Melbourne Dental School  
The University of Melbourne

Dear Prof Satur

I am pleased to advise that the Melbourne Dental School Human Ethics Advisory Group has approved the following Minimal Risk Project.

Project title: **Evaluation of oral health-related training delivered to community mental health support workers**  
Researchers: **Prof J G Satur, Prof R J Marino, R McGrath**  
Ethics ID: **1648458.1**

The Project has been approved for the period: **09-Feb-2017 to 31-Dec-2017.**

It is your responsibility to ensure that all people associated with the Project are made aware of what has actually been approved.

Research projects are normally approved to 31 December of the year of approval. Projects may be renewed yearly for up to a total of five years upon receipt of a satisfactory annual report. If a project is to continue beyond five years a new application will normally need to be submitted.

Please note that the following conditions apply to your approval. Failure to abide by these conditions may result in suspension or discontinuation of approval and/or disciplinary action.

(a) **Limit of Approval:** Approval is limited strictly to the research as submitted in your Project application.

(b) **Amendments to Project:** Any subsequent variations or modifications you might wish to make to the Project must be notified formally to the Human Ethics Advisory Group for further consideration and approval before the revised Project can commence. If the Human Ethics Advisory Group considers that the proposed amendments are significant, you may be required to submit a new application for approval of the revised Project.

(c) **Incidents or adverse effects:** Researchers must report immediately to the Advisory Group and the relevant Sub-Committee anything which might affect the ethical acceptance of the protocol including adverse effects on participants or unforeseen events that might affect continued ethical acceptability of the Project. Failure to do so may result in suspension or cancellation of approval.

(d) **Monitoring:** All projects are subject to monitoring at any time by the Human Research Ethics Committee.

(e) **Annual Report:** Please be aware that the Human Research Ethics Committee requires that researchers submit an annual report on each of their projects at the end of the year, or at the conclusion of a project if it continues for less than this time. Failure to submit an annual report will mean that ethics approval will lapse.

(f) **Auditing:** All projects may be subject to audit by members of the Sub-Committee.

Please quote the ethics registration number and the name of the Project in any future correspondence.

On behalf of the Ethics Committee I wish you well in your research.

Yours sincerely

A handwritten signature in black ink, appearing to read 'John Clement'.

Prof John Clement - Chair  
Melbourne Dental School Human Ethics Advisory Group



## Appendix 5: Ethics Approval 1648458

15 September 2015

A/Prof J.G. Satur

Melbourne Dental School  
The University of Melbourne

Dear A/Prof Satur

I am pleased to advise that the Melbourne Dental School Human Ethics Advisory Group has approved the following Minimal Risk Project.

Project title: **Exploring the capacity of Community Rehabilitation Support Workers to promote oral health among consumers experiencing serious mental illness**  
Researchers: **Miss R Meldrum, A/Prof R J Marino, Mr S Turut, A/Prof J G Satur, R McGrath**  
Ethics ID: **1544795.1**

The Project has been approved for the period: **15-Sep-2015 to 31-Dec-2015.**

It is your responsibility to ensure that all people associated with the Project are made aware of what has actually been approved.

Research projects are normally approved to 31 December of the year of approval. Projects may be renewed yearly for up to a total of five years upon receipt of a satisfactory annual report. If a project is to continue beyond five years a new application will normally need to be submitted.

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- (c) **Incidents or adverse affects:** Researchers must report immediately to the Advisory Group and the relevant Sub-Committee anything which might affect the ethical acceptance of the protocol including adverse effects on participants or unforeseen events that might affect continued ethical acceptability of the Project. Failure to do so may result in suspension or cancellation of approval.
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- (f) **Auditing:** All projects may be subject to audit by members of the Sub-Committee.

Please quote the ethics registration number and the name of the Project in any future correspondence.

On behalf of the Ethics Committee I wish you well in your research.

Yours sincerely

Prof John Clement - Chair  
Melbourne Dental School Human Ethics Advisory Group

**Melbourne Dental School**  
The University of Melbourne, Victoria 3010 Australia  
T: +61 3 9341 1500 F: +61 3 9341 1599 E: enquiries@dent.unimelb.edu.au  
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## Appendix 6: Neami National Letter of Support



18/06/2015

Chairperson,  
Human Ethics Advisory Committee,  
Melbourne Dental School,  
University of Melbourne.

Dear Professor John Clement,

Re: Ethics ID 1544795.1: 'Exploring the oral health-related knowledge, attitudes and professional practices of Community Rehabilitation and Support Workers who provide outreach support to consumers experiencing serious mental illness'

I am writing to confirm support for Ms Roisin McGrath (PhD student, Melbourne Dental School, University of Melbourne) to conduct oral health-related research within our organization, for the duration of her PhD candidature. The Melbourne Dental School and Neami have been working collaboratively over the last four years to plan, implement and evaluate oral health projects which aim to support Neami consumers to improve and maintain their oral health. This project builds on the previous work conducted and will focus on workforce development to build capacity in oral health promotion.

I, Sacha Miezis, on behalf of Neami agree to work collaboratively with the Melbourne Dental School on this oral health project and to provide project support, including:

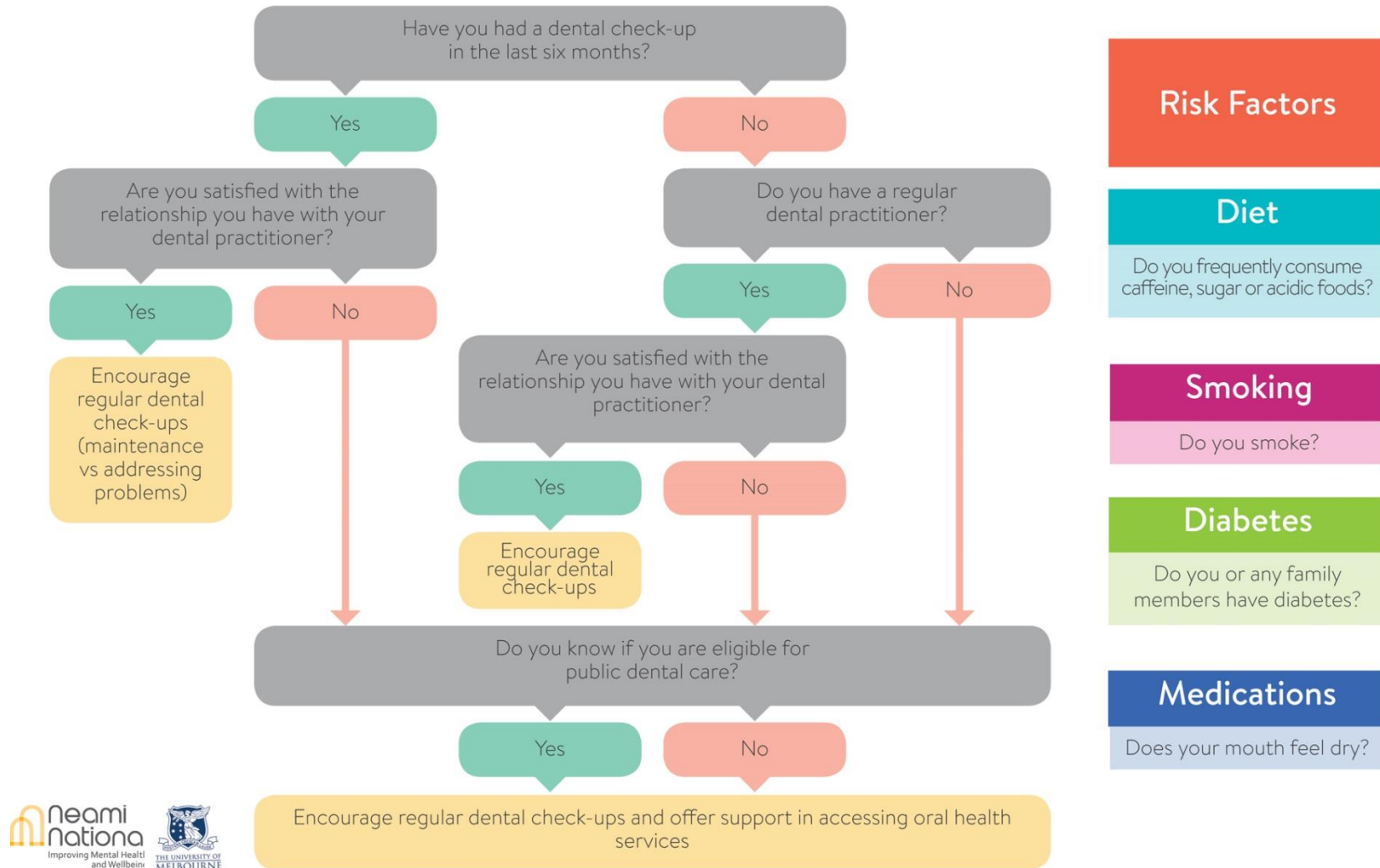
- Access to Neami resources and administration support
- Recruitment of study participants (staff and consumers), including reimbursement if applicable
- The provision of venue and organisational support
- The supervision of the PhD student while she is undertaking research within our organisation

Signed: .....  
Date: 18/6/15 .....

## Appendix 7: Oral Health Support Flow Chart (staff information resource)

### Oral health support flow chart

People living with mental illness are at an increased risk of oral health issues and face significant challenges in accessing appropriate oral health care.



## Oral health preventative information - key messages

### Key oral health messages

- Brush teeth twice a day with a small-headed, soft-bristled toothbrush
- Use a fluoride toothpaste
- Clean in between teeth daily with floss or inter-dental brushes
- Limit sugary foods and drinks in between meals
- Drink plenty of tap water
- Visit a dental or oral health professional every six months

| Diet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Smoking                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Diabetes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Medications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| <p><b>People living with mental illness have significantly more decayed and missing teeth</b></p> <p><i>Discuss preventive treatment with dental professional</i></p> <ul style="list-style-type: none"> <li>• Mouth bacteria breakdown sugars from the diet and produce acid which dissolves the tooth structure (enamel and dentine) and can lead to cavities (holes) forming</li> <li>• Tooth decay is the major cause of toothache, and can result in pain, infection and tooth loss</li> <li>• Frequent consumption of sugars (especially in sweet sticky foods) will increase the risk of tooth decay</li> <li>• Acidic foods and drinks will soften and erode the tooth structure</li> </ul> <p><b>Limiting dietary effects on oral health</b></p> <ul style="list-style-type: none"> <li>• Limit the frequency of consuming sugary foods (e.g., cakes, biscuits &amp; chocolate) and avoid sticky lollies and sweets, which will cling to the tooth surface for longer</li> <li>• Limit the frequency of consuming acidic food and drinks (e.g. citrus fruits, soft-drinks)</li> <li>• Use sugar substitutes when possible</li> <li>• Have sweet treats occasionally, but have them at meal times and avoid sweet snacks or drinks in between meals</li> <li>• Drink plenty of tap water</li> <li>• Chew mint sugar-free gum after eating to stimulate saliva production and wash away dietary acids</li> </ul> | <p><b>Around 60% of individuals accessing Neami services identify as a smoker*</b></p> <p><i>Quitline can offer support</i></p> <ul style="list-style-type: none"> <li>• Smoking is one of the most significant risk factors in the development and progression of gum disease, often resulting in teeth getting loose or being extracted (taken out)</li> <li>• Smoking is the major cause of mouth and throat cancer (smokers are up to 16 times more likely to develop oral cancer than non-smokers)</li> <li>• People who smoke frequently get stained teeth and bad breath (halitosis)</li> </ul> <p><b>Limiting the effects of smoking on oral health</b></p> <ul style="list-style-type: none"> <li>• Stop smoking – quitting smoking can significantly improve oral health. (Quit online training is available to Neami staff-<a href="http://www.quit.org.au/resource-centre/training/online-learning">http://www.quit.org.au/resource-centre/training/online-learning</a>)</li> <li>• Alternatively, try to cut down the number of cigarettes you smoke</li> <li>• Consider Nicotine Replacement Therapy (NRT) options</li> </ul> <p><i>* Neami Health Prompt data (2015)</i></p> | <p><b>People living with severe mental illness are three times more likely to develop type-2 diabetes</b></p> <p><i>Discuss diabetes management with Diabetes Educator</i></p> <ul style="list-style-type: none"> <li>• If diabetes is not well-controlled people may experience more severe gum disease</li> <li>• Individuals with diabetes are at increased risk of tooth decay as their saliva can contain high levels of glucose and they can get very dry mouths</li> <li>• Individuals with diabetes are at increased risk of infections (in the mouth and elsewhere in the body) and often have reduced healing capacity</li> </ul> <p><b>Limiting the effects of diabetes on oral health</b></p> <ul style="list-style-type: none"> <li>• Ensure diabetes is well controlled and monitor blood glucose levels</li> <li>• Ensure optimal oral hygiene practices and follow the oral health messages</li> </ul> | <p><b>Dry mouth is a very common side effect of medications such as anti-depressants and anti-psychotics</b></p> <p><i>Discuss medication effects with GP</i></p> <ul style="list-style-type: none"> <li>• 'Dry mouth' occurs when there is a decrease in salivary flow</li> <li>• Saliva contains many factors which protect and lubricate the mouth</li> <li>• Dry mouth is associated with tooth decay (dental caries), gum disease, periodontitis, tooth erosion, difficulty eating or swallowing and mouth discomfort</li> </ul> <p><b>Limiting the effects of dry mouth</b></p> <ul style="list-style-type: none"> <li>• Drink plenty of tap water - carry a water bottle</li> <li>• Drink water by the glass or half-glass - constant sipping will wash away remaining saliva</li> <li>• Limit consumption of caffeine or alcohol - they can reduce saliva flow</li> <li>• Chew mint sugar-free gum to stimulate saliva flow</li> <li>• Good oral hygiene</li> </ul> |



## Oral health- examples of recommended products

### Oral hygiene



Soft toothbrush/ fluoride toothpaste



Inter-dental brushes



Floss or flossettes

### Dry Mouth



Drink tap water



Dry-mouth alcohol free mouthwash



Dry-mouth gel

### Sugar-free, mint, chewing gum

Chewing sugar-free MINT chewing gum, stimulates saliva production



### Sugar substitutes



Natural sweeteners



Artificial sweeteners

## Appendix 8: Improving Your Oral Health (consumer information resource)

### Is your oral health at risk?

You are at a higher risk of developing oral diseases or oral health issues such as dental decay and periodontal (gum) disease if you:

- frequently consume sugar-sweetened, acidic, or caffeinated foods or drinks, and/or
- are a smoker, and/or
- have diabetes, and/or
- take medications.

### Risk Factors

Diet

Smoking

Diabetes

Medications

### How to improve your oral health

#### Oral hygiene

- Brush teeth twice a day with a small-headed, soft-bristled toothbrush
- Use a fluoride toothpaste
- Clean in between teeth daily with floss or interdental brushes
- Limit sugary foods and drinks in between meals
- Drink plenty of tap water
- Visit a dental practitioner every six months

#### Professional support

- Visit your dental practitioner regularly – every six months (your dental practitioner may advise you to visit more or less frequently, depending on your oral health risks)
- Your GP can advise you about your medications
- Your Diabetes Educator can support you in managing your diabetes
- Quitline can offer you advice and support on stopping or reducing smoking

Speak with your support worker about accessing dental services and other professional support

Proudly supported by



## Improving Your Oral Health

### Preventative Information



A healthy mouth not only makes you feel good, it also helps to protect your general health and wellbeing.

Image credit: kenishirote/shutterstock

### Diet

- Mouth bacteria breakdown sugars from the diet and produce acid which dissolves the tooth surface and can lead to tooth cavities (holes)
- Tooth decay is the major cause of toothache and can result in pain, infection and tooth loss

#### Limiting the effects of diet

- Limit sugary foods and drinks in between meals – if you want a sweet treat, have it at meal times
- Use sugar substitutes when possible (e.g. use Equal in tea and coffee)
- Try to avoid sticky sweets and lollies – they will stick to your teeth for longer
- Drink plenty of tap water – during and after eating
- Use a fluoride toothpaste
- Chew mint sugar-free gum after eating – this can stimulate saliva flow to wash away dietary acids



Glass image credit: shutterstock/ mylisa

### Smoking

- Smoking is one of the most significant risk factors in the development and progression of gum disease, often resulting in teeth getting loose or being taken out
- Smoking is the major cause of mouth and throat cancer (smokers are up to 16 times more likely to develop oral cancer than non-smokers)
- Smoking causes stained teeth and bad breath (halitosis)

#### Limiting the effects of smoking

- Try to stop smoking – quitting can significantly improve your oral health (speak to your support worker for advice on quitting)
- Alternatively, try to cut down on the number of cigarettes you smoke
- Consider Nicotine Replacement Therapy (NRT) to help you quit or cut down smoking

### Diabetes

- If diabetes is not well-controlled, people can frequently experience more severe gum disease
- People with diabetes may have more glucose in their saliva (increasing their risk of tooth decay) and often get dry mouth
- People with diabetes often have a lower resistance to mouth infections and may not heal well

#### Limiting the effects of diabetes

- Try to keep your diabetes well controlled – monitor your blood glucose levels and seek support from your diabetes educator
- Maintain good oral hygiene

### Medications

- Medications can decrease the amount of saliva produced, causing dry mouth
- Saliva has protective agents, which are essential for the health of your mouth, teeth and gums
- A decrease in saliva in your mouth means there is less protection against the bacteria and dietary acids that cause oral diseases

#### Limiting the effects of dry-mouth

- Drink plenty of tap water – drink a full or half glass at a time, as constantly sipping washes away remaining saliva
- Try to limit caffeine and alcohol as they contribute to dry mouth
- Chew mint sugar-free gum – chewing gum can stimulate saliva flow
- Consider using a 'dry mouth' mouthwash or gel – your oral or dental professional or pharmacist can help you choose the best product for you

## Appendix 9: You and Your Oral Health (VIC consumer information resource)

### Your appointment

#### How do I make an appointment?

- Call your local Community Dental Clinic to make an appointment (details on back of brochure)  
To apply for priority access :
  - a. Notify the dental receptionist that you are eligible for priority access
  - b. If required, request a letter of recommendation from your Neami worker to apply for priority access

#### What will I need to take to my appointment?

- The dental receptionist will advise what you need to bring, such as a Healthcare card or pensioner concession card and Medicare card.

Your Neami worker can assist you with any of the above steps.

### Dental clinic contact list

#### Royal Dental Hospital

720 Swanston St, Carlton

In an emergency or for general enquiries call (03) 9341 1000 or 1800 833 038 (country call)

#### Other community dental clinics

There are over 80 community dental clinics in Victoria. To find a clinic near you telephone (03) 9431 1000 or go to [www.dhsv.org.au](http://www.dhsv.org.au) and search under clinic locations.

Aboriginal and Torres Strait Islander peoples can speak with and Aboriginal Liaison Officer (Tuesday-Thursday) by calling (03) 9341 1163

My local dental clinic is:

.....  
.....  
.....

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Cover image: Shutterstock/ Nata-Lia



### You and your oral health

#### Community dental clinics





## Oral health

### Introduction to oral health

A healthy mouth not only makes you feel good, it also helps to protect your general health and wellbeing. Good oral health can increase confidence and self-esteem.

Keep your mouth healthy by:

- Drinking plenty of tap water
- Eating fresh fruits and vegetables
- Brushing your teeth twice daily with fluoride toothpaste
- Clean in between your teeth daily
- See a dental practitioner regularly (every 6 months)

*“Good oral health practices and regular checkups are important to maintain a healthy mouth and prevent dental diseases.*

*Only visiting an oral health professional [when you have] a dental problem [and not practising good oral health routines] increases the risk of losing teeth and experiencing greater limitations in everyday activities such as eating, talking, and sleeping.”*

*- Lecturer, Melbourne Dental School*

## Eligibility and services

Eligible Victorians can access public oral health care at The Royal Dental Hospital of Melbourne or at any Community Dental Clinic.

### Eligibility

To be eligible for public oral health care you must have a valid health care card or pensioner concession card.

### What dental services are covered?

- Check-ups, advice and cleaning
- Fillings and extractions
- Emergencies
- Dentures
- Specialist care (Dental Hospital only)

### Will I go on a waiting list?

Most dental clinics will have a waiting list. However, priority access is available when supported by a letter of recommendation from your support worker. Priority access enables you to get the next available appointment.

### Will I have to pay for dental services?

If you have a valid health care card or pensioner concession card then a fee of \$26.50 applies per visit.

The most you will need to pay for a complete course of general dental care is \$106 including examination and all general dental treatment.

Speak with your Neami worker for more information regarding priority access or fee exemptions and for assistance in locating your closest community dental clinic.

*“So with the Health Prompt... it really started the whole conversation.*

*[My worker] helped me get all the way to the point I was in there... [it] really helped me get past my first boundary.*

*Once I had that first visit finished, I felt more capable of doing it by myself.”*

*- Consumer comment*

## Appendix 10: Oral Health Training Evaluation Survey



### ORAL HEALTH TRAINING EVALUATION

**Delivery mode: face-to-face**

**Neami Site:**

**Date:**

**Your unique identifier code:**

*Please create your unique identifier code by writing the first 3 letters of your mother's maiden name (i.e. her surname when she was born) and the last 2 digits of the year you left high school. For example, if your mother was called Georgina Jones before she was married and your last year of high school was 1997 your unique identifier code would be JON97.*

**Unique identifier**

|  |  |  |  |  |
|--|--|--|--|--|
|  |  |  |  |  |
|--|--|--|--|--|

**What is your role within Neami?**

- |                                 |                          |                                |                          |
|---------------------------------|--------------------------|--------------------------------|--------------------------|
| Consumer participation officer  | <input type="checkbox"/> | Project worker/officer         | <input type="checkbox"/> |
| Student                         | <input type="checkbox"/> | Direct support (CRSW)          | <input type="checkbox"/> |
| Peer support                    | <input type="checkbox"/> | Manager/Senior Practice Leader | <input type="checkbox"/> |
| Head office/Operational support | <input type="checkbox"/> | Other (please specify)         | <input type="checkbox"/> |

**Do you provide direct consumer support?**

Yes ☐ No ☐

**After the oral health training, how would you rate yourself for each of the following items?**

*For each item, please rate your response from 'poor' to 'excellent'.*

|                                                                                      | Poor                     | Below<br>average         | Average                  | Above<br>average         | Excellent                |
|--------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Your understanding of the risk factors associated with poor oral health              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Your understanding of the links between mental health and oral health                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Your understanding of the links between oral health and general health and wellbeing | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Your confidence in discussing oral health with consumers                             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Your confidence in using the Neami oral health information resources                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Your confidence in supporting consumers with their oral health needs                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Your confidence in referring consumers to oral health services                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

## *Appendices*

### **What are your thoughts on the oral health training?**

*For each of the following items, please circle the most appropriate response from 'not at all' to 'extremely'*

Was the oral health training beneficial?

Not at all              Slightly              Somewhat              Very              Extremely

Was the length of the training appropriate?

Not at all              Slightly              Somewhat              Very              Extremely

Was the content of the training appropriate?

Not at all              Slightly              Somewhat              Very              Extremely

What did you learn from this training?

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What did you find most useful about this training?

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Can you suggest how this training could be improved? Have you any other comments?

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*Thank you for completing this survey*

## Appendix 11: CRSW Plain Language Statement and Survey

# Community Rehabilitation Support Workers oral health-related knowledge, attitudes and professional practices

### Information about the study and instructions for completing the online survey

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You are invited to participate in this research project, which is being conducted by Ms Roisin McGrath (PhD candidate) from the Melbourne Dental School at the University of Melbourne, in partnership with Neami National. This study aims to assess CRSWs knowledge of and attitudes to oral health, and the types of oral health-related support provided to consumers. We are asking CRSWs employed by Neami who provide outreach consumer support to take part in this study by completing an online survey. The questions from this survey will also be used in the future to measure changes in CRSWs oral health-related knowledge, attitudes and professional practices. Completing the questionnaire will take approximately 10-15 minutes of your time.

If you agree to participate, please click 'continue' to answer the online questionnaire in your own time. We encourage your participation; however, please note that your participation is **voluntary**, and that there are no penalties if you choose not to participate. You are also free to withdraw your consent at any time, and to withdraw unprocessed data previously supplied.

All the information collected from the questionnaire is confidential. Because this study is interested in the overall responses of the group, your name will not be required and will not appear in any publishable form. Only researchers involved in this project will have access to the responses. All data will be stored in a secure place, and security passwords will be required to access information stored on computers. Data will be destroyed after five years.

There are no personal benefits for participation in this study. However, the information collected from this survey will be used in the design and development of an oral health-related workforce training package for mental health support workers.

There are no potential risks or side effects associated with your participation in this study. Please note that if we receive your completed survey, we will assume that you have consented to participating in the study.

If you have any questions about this study, or would like additional information to assist you, please feel free to contact:

A/Prof Julie Satur (Principal Supervisor) at: [juliegs@unimelb.edu.au](mailto:juliegs@unimelb.edu.au) or (03) 93411530

A/Prof Rodrigo Mariño (Supervisor) at: [rmarino@unimelb.edu.au](mailto:rmarino@unimelb.edu.au) or (03) 93411558

Ms Rebecca Meldrum (Supervisor) at: [rebecca.meldrum@neaminational.org.au](mailto:rebecca.meldrum@neaminational.org.au) or (03) 94595455

Mr Serhat Turut (Supervisor) at: [serhat.turut@neaminational.org.au](mailto:serhat.turut@neaminational.org.au) or (03) 94813277

Ms Roisin McGrath (Student) at: [mcgrathr@student.unimelb.edu.au](mailto:mcgrathr@student.unimelb.edu.au) or 0408990646

This study has been reviewed and received ethics clearance by the Human Research Ethics Committee at the University of Melbourne (1544795.1). However, the final decision to participate is yours. If you have any comments or concerns resulting from your participation in this study, please contact the Executive Officer, Human Research Ethics, the University of Melbourne, phone (03) 9344 2073 or fax (03) 9347 6739.

By clicking "continue" at the bottom of this page, you will indicate that you understand the risks and responsibilities outlined above and agree to participate in the study. You can choose not to participate by clicking "withdraw".

1. Would you like to continue or withdraw? \*

☐ Continue

☐ Withdraw

#### Staff details

---

2. At which site are you located?

Yarraville

Rosanna

Wollongong

3. Does your current role as a Community Rehabilitation Support Worker involve outreach consumer support?

- ☐ Yes
- ☐ No

4. How long have you worked at Neami?

- ☐ Less than 1 year
- ☐ 1-2 years
- ☐ 2-3 years
- ☐ 3-4 years
- ☐ 5+ years

5. Have you participated in any oral health-related training in the past 12 months?

- ☐ Yes
- ☐ No

6. If yes, was this training/education provided through Neami?

- ☐ Yes
- ☐ No

---

**Section 1**



**Page description:**

For each the following items, please select the most appropriate response to reflect your opinion.

7. Are you aware of the Neami Oral Health Program?

- ☐ Yes
- ☐ No
- ☐ Unsure

8. Have you used the Neami oral health information resources?

- ☐ Yes
- ☐ No
- ☐ Unsure

9. If you have used the Neami oral health information resources, what is your opinion of them?

Please select the response that most closely reflects your opinion from 'strongly disagree' to 'strongly agree'

|                           | Strongly disagree     | Disagree              | Neither agree nor disagree | Agree                 | Strongly agree        |
|---------------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| Useful                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Relevant                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Informative               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| User friendly             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Comprehensive             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Confusing                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Too much text (too wordy) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |



10. How important do you think each of the following is in preventing dental caries (tooth decay)?

*Please select the response that most closely reflects your opinion from 'not at all important' to 'very important'.*

|                                                  | Not at all<br>important | Somewhat<br>important | Important             | Very<br>important     | Do<br>not<br>know     |
|--------------------------------------------------|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Brushing teeth                                   | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Using dental floss                               | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Using an antibacterial<br>mouthrinse             | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Drinking fluoridated tap<br>water                | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Using fluoridated<br>toothpaste                  | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Cutting down on<br>frequency of sugary<br>drinks | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Cutting down on<br>frequency of sugary foods     | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Chewing sugar free gum<br>after eating           | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Regular visits to a dental<br>professional       | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

11. How important do you think each of the following is in preventing periodontal disease (gum disease)?

*Please select the response that most closely reflects your opinion from 'not at all important' to 'very important'.*

|                                                  | Not at all<br>important | Somewhat<br>important | Important             | Very<br>important     | Do<br>not<br>know     |
|--------------------------------------------------|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Brushing teeth                                   | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Using dental floss                               | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Using antibacterial<br>mouthrinse                | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Drinking fluoridated tap<br>water                | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Using fluoridated<br>toothpaste                  | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Cutting down on<br>frequency of sugary<br>drinks | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Cutting down on<br>frequency of sugary foods     | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Chewing sugar free gum<br>after eating           | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Regular visits to a dental<br>professional       | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

12. A number of behavioural risk factors are known to be associated with poor physical health and wellbeing. How important or not important is each of these risk factors in causing oral health problems?

*Please select the response that most closely reflects your opinion from 'not at all important' to 'very important'.*

|                               | Not at all important  | Somewhat important    | Important             | Very important        | Do not know           |
|-------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Poor diet and nutrition       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Smoking and tobacco use       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Excessive alcohol consumption | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Lack of physical activity     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Excessive sun exposure        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Unprotected sexual activity   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Illicit drug use              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Violence                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Insufficient vaccinations     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

13. What are your beliefs about oral health?

*Please select the response that most closely reflects your opinion.*

|                                                                                                          | Yes                   | No                    | Do not know           |
|----------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|
| People living with serious mental illness experience more oral health issues than the general population | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Vitamin and mineral supplements can help prevent oral diseases                                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Bleeding gums are a sign of brushing teeth too hard                                                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| People with no natural teeth do not need to see a dental health professional regularly                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The bacteria that cause tooth decay can be transmitted from one person to another                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Medications can increase the risk of oral diseases                                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Increasing the amount of sugar consumed will increase the amount of tooth decay                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tooth loss is part of getting older                                                                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Teeth should be brushed with a small head, soft bristled toothbrush                                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Heredity (genetics) is a risk factor for gum disease                                                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Heredity (genetics) is a risk factor for tooth decay                                                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

14. What barriers prevent people living with mental illness from accessing dental services?

*Please select the five most important barriers (in your opinion).*

- ☐ Stigma
- ☐ Cost
- ☐ Location of dental clinics (transportation)
- ☐ Fear of dental treatment
- ☐ Waiting time to get an appointment (wait lists)
- ☐ Waiting time in dental clinic reception area
- ☐ Attitudes of dental staff
- ☐ Language and communication barriers
- ☐ Lack of motivation
- ☐ Coping with illness
- ☐ Coping with anxiety
- ☐ Lack of knowledge about oral health
- ☐ Lack of knowledge about dental services
- ☐ Lack of appropriate dental services
- ☐ Lack of support to access dental services

15. Do you have any comments about this section?

## Section 2

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**Page description:**

*For each of the following items, please select the most appropriate response. Remember there is no right or wrong answer.*

16. How would you rate your current oral health-related knowledge and confidence?

*Please rate your response from 'poor' to 'excellent' for each item.*

|                                                                                      | Poor                  | Below average         | Average               | Above average         | Excellent             |
|--------------------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Your understanding of the risk factors associated with poor oral health              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your understanding of the links between mental health and oral health                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your understanding of the links between oral health and general health and wellbeing | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your confidence in discussing oral health with consumers                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your confidence in using the Neami oral health information resources                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your confidence in supporting consumers with their oral health needs                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your confidence in referring consumers to oral health services                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

17. What is your opinion on oral health support for people living with mental illness?

Please select the response for each item that most closely reflects your opinion, from 'strongly disagree' to 'strongly agree'.

|                                                                                                                                 | Strongly disagree     | disagree              | Neither disagree nor agree | Agree                 | Strongly agree        |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| Supporting consumers with their oral health needs should be part of the Neami's work                                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| People living with a mental illness should be encouraged to visit a dental professional regularly                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Mental health support workers have a role to play in promoting oral health                                                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Including oral health support into Neami's routine work will leave less time to address consumers' mental health-related issues | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Oral health education should only be provided by an oral health professional                                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |

18. What are the barriers to oral health promotion within Neami National?

Please select the response for each item that most closely reflects your opinion, from 'strongly disagree' to 'strongly agree'.

|                                                         | Strongly disagree     | Disagree              | Neither disagree nor agree | Agree                 | Strongly agree        |
|---------------------------------------------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| Oral health is low on the Neami health agenda           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Not enough time when working with consumers             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Consumers lack of interest in oral health               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Staff have insufficient knowledge about oral health     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Staff have insufficient knowledge about dental services | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Staff have insufficient access to oral health resources | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Inadequate support from management                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Attitudes of oral health professionals                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| There are no barriers                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |

19. Do you have any comments about this section?



### Section 3

---

**Page description:**

*For each the following items, please select the most appropriate response.  
Remember there is no right or wrong answer.*

20. Do you practice oral health-related activities with consumers?

☐ Yes

☐ No

21. If you answered 'yes', how many of the consumers that you support do you practice each of the oral health-related activities listed below?

*Please indicate your responses from 'none' to 'all' on the sliding scales.*

| None                                                                                     | Half                 |
|------------------------------------------------------------------------------------------|----------------------|
| Discuss oral health with consumers                                                       | <input type="text"/> |
| Support consumers to improve their daily oral health care                                | <input type="text"/> |
| Use oral health information resources with consumers                                     | <input type="text"/> |
| Refer consumers to dental services or clinics                                            | <input type="text"/> |
| Contact the dental clinic to make appointments for consumers                             | <input type="text"/> |
| Support consumers to attend dental appointments (physically or via strategy development) | <input type="text"/> |

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22. How many of the consumers that you support are at risk of or have poor oral health?

Please indicate your response from 'none' to 'all' on the sliding scale.



23. How can Neami support your learning and skills, in relation to oral health?

Please select the response for each item that most closely reflects your opinion, from 'strongly disagree' to 'strongly agree'.

|                                                                                                           | Strongly disagree     | Disagree              | Neither disagree nor agree | Agree                 | Strongly agree        |
|-----------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| Provide staff education and training on oral health risks and diseases                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Provide staff education and training on using the Neami oral health information resources                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Provide staff education and training on how to refer consumers to oral health services                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Provide staff education and training on how to support consumers to access and attend dental appointments | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |

24. What is your preferred delivery method for workplace training and education sessions?

*Please select one response only.*

- ☐ Face-to-face (classroom style) sessions
- ☐ E-learning (online or computer-based) sessions
- ☐ A combination of both face-to-face and e-learning sessions

25. Are you interested in receiving any further information/training on how you can support consumers to manage their oral health needs?

- ☐ Yes
- ☐ No

26. If you answered 'yes', what would you like?

**Thank You!**

---

***Thank you for taking part in our survey. Your response is very important to us.***

## Appendix 12: Local Oral Health Services Information



### Local Oral Health Services Information

The purpose of this document is to provide support staff with important information about accessing local oral health services. This form should be completed annually, alongside the Health Promotion Service Checklist.

Liaising with local dental clinics provides an opportunity to establish relationships with oral health professionals and to facilitate smoother referral pathways for consumers of Neami to access appropriate and timely oral health care.

| ACCESSING PUBLIC ORAL HEALTH SERVICES                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------|
| <p>Name of local public dental service/s:</p> <p>Address:</p> <p>Telephone Number(s):</p>                                          |
| <p>Eligibility for public oral health services: (ask what documentation is required e.g. health care card, Medicare card etc.)</p> |
| <p>Costs of care: (ask if consumers of mental health services are eligible for free care)</p>                                      |
| <p>Waiting lists for appointments: (ask if consumers of mental health services are eligible for priority access to services)</p>   |
| <p>Preferred dental practitioner: (ask which dental practitioner may be best suited to caring for consumers with anxiety)</p>      |
| <p>What to do in the case of a dental emergency?</p>                                                                               |

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| ACCESSING PRIVATE ORAL HEALTH SERVICES                                                                                 |
|------------------------------------------------------------------------------------------------------------------------|
| Name of local private dental service/s:<br><br>Address:<br><br><br>Telephone Number(s):                                |
| Costs of care: (ask what is the standard cost for a dental check-up)                                                   |
| Payment plans: (ask if the clinic has any payment plan options for consumers who cannot afford to pay large lump sums) |
| Preferred dental practitioner: (ask which dental practitioner may be best suited to caring for consumers with anxiety) |
| What to do in the case of a dental emergency?                                                                          |

For more information, speak with your local state-based Health Promotion Officer.

## Appendix 13: VIC Public Dental Services Priority Access Referral Template



### **PRIORITY ACCESS**

#### **Community Health and Dental Health Services**

##### **CONSUMER DETAILS**

Name: .....

Address: .....

Contact Number: .....

Date of Birth: .....

##### **SUPPORT WORKER DETAILS**

Name: .....

Position: .....

Organisation: .....

Address: .....

Contact Number: .....

Email Address: .....

##### **NATURE OF REFERRAL (E.G. TOOTH PAIN, DIABETES MANAGEMENT SUPPORT)**

.....

.....

.....

**Note:** Registered clients of mental health and disability services are eligible for priority access. People who have priority access must be offered the next available appointment for general care and must not be placed on the general care wait list.

(Community Health priority tools, Published by the Victorian Government Department of Health, 2009)

**Signature:** (Neami staff member) .....

**Date:** .....

## Appendix 14: You and Your Oral Health (NSW consumer information resource)

### Your appointment

#### How do I make an appointment?

Call your Local Health District public dental call centre (details on back of this brochure) or ask your Neami worker for support.

Call centre staff will ask:

- For your concession card and Medicare card numbers
- Some questions about your teeth and mouth, so they can give you an appointment based on your oral health needs.

#### What will I need to take to my appointment?

Bring your healthcare card or pensioner concession card and Medicare card to your appointments. Staff at the public dental call centre will advise if you need to bring anything else to your appointment.

Your Neami worker can assist you with any of the above steps.

### Dental clinic contact list

There are over 170 public dental clinics in NSW. To find a clinic near you, call your Local Health Districts public dental call centres (see table below for contact details).

| Local Health District | Phone Number                                   |
|-----------------------|------------------------------------------------|
| Sydney                | (02) 9293 3333                                 |
| South Western Sydney  |                                                |
| South Eastern Sydney  | 1300 134 226                                   |
| Illawarra Shoalhaven  | 1300 369 651                                   |
| Northern NSW          | 1300 651 625                                   |
| Mid North Coast       |                                                |
| Hunter New England    |                                                |
| Central Coast         | 1300 789 404                                   |
| Northern Sydney       | 1300 732 503                                   |
| Murrumbidgee          | 1800 450 046                                   |
| Southern NSW          |                                                |
| Western Sydney        | (02) 9845 6766 or 1300 739 949 (landline only) |
| Nepean Blue Mountains |                                                |
| Far West              | 1300 552 626                                   |
| Western NSW           |                                                |

My local dental clinic is:

.....  
.....

Proudly supported by



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### You and your oral health

#### Public Dental Clinics in NSW





## Oral health

### Introduction to oral health

A healthy mouth not only makes you feel good, it also helps to protect your general health and wellbeing. Good oral health can increase confidence and self-esteem.

Keep your mouth healthy by:

- Drinking plenty of tap water
- Eating fresh fruits and vegetables
- Brushing your teeth twice daily with fluoride toothpaste
- Floss in between your teeth daily
- See a dental or oral health professional regularly (every 6 months)

*“Good oral health practices and regular checkups are important to maintain a healthy mouth and prevent dental diseases.*

*Only visiting an oral health professional [when you have] a dental problem [and not practising good oral health routines] increases the risk of losing teeth and experiencing greater limitations in everyday activities such as eating, talking, and sleeping.”*

*- Lecturer, Melbourne Dental School*

## Eligibility and services

### Eligibility

To be eligible for public oral health care in NSW you must have a valid Government healthcare card or pensioner concession card and a Medicare card.

### What dental services are covered?

- Check-ups, advice and cleaning
- Fillings and extractions
- Emergencies
- Dentures
- Specialist care (Westmead Centre for Oral Health and Sydney Dental Hospital only)

### Will I go on a waiting list?

Most public dental clinics in NSW have a waiting list. You may be placed on a waiting list, offered an appointment at a clinic other than your local public dental clinic (which has a shorter waiting list) or offered a voucher to use at a local private dental practice. If your dental condition gets worse while you are waiting for an appointment, contact your public dental call centre to discuss more urgent care.

### Will I have to pay for dental services?

Free oral health care is available at all NSW public dental clinics and also at private dental practices, when using an authorised voucher (public dental clinic staff will provide advice on using vouchers).

Speak with your Neami worker for more information regarding accessing free public oral health care and for assistance in locating your closest public dental clinic.

*“So with the Health Prompt... it really started the whole conversation.*

*[My worker] helped me get all the way to the point I was in there... [it] really helped me get past my first boundary.*

*Once I had that first visit finished, I felt more capable of doing it by myself.”*

*- Consumer comment*

## Appendix 15: HPSC Implementation Guide for Blended Learning Group



### Oral Health ‘Blended’ Professional Development: Implementation Guide

#### Why is Oral Health important to consumers?

Research has shown that people living with severe mental illness are at increased risk of oral health issues, compared to the general population, and face significant barriers in accessing appropriate oral health care<sup>1</sup>.

Oral health is fundamental to general health, wellbeing and quality of life. A healthy mouth enables people to ‘eat, speak and socialise without pain, discomfort or embarrassment.’<sup>2</sup> There is strong evidence of links between oral health and general health, such as:

- a) Poor oral health is associated with major chronic diseases (e.g. cardiovascular disease and diabetes)
- b) Oral diseases and many chronic diseases share common risk factors (i.e. tobacco use, excess alcohol consumption and poor diet).

#### Rationale for the Oral Health Program

Neami consumers have indicated that their top goal is to improve their physical health, including oral health. Research within Neami has also demonstrated that CRSWs believe that Oral Health Promotion should be part of service delivery.

Oral health promotion targeting people living with mental illness has been seriously lacking. The Oral Health Program has evolved as a result of Neami’s commitment to creating appropriate staff Professional Development (PD) opportunities, in an effort to improve consumer oral health outcomes. It has been designed to utilise the existing skills of CRSWs and recognises the importance of the collaborative relationship between the consumer and support worker.

#### Oral Health Program Outline

- The Oral Health Program is a partnership between Neami and the Melbourne Dental School, the University of Melbourne.
- The program aims to build capacity to improve oral health for people living with severe mental illness.
- Oral Health PD has been developed to ensure staff are appropriately skilled and resourced to promote and support consumers’ oral health.
- Certificates will be provided to all staff who complete Oral Health PD.
- The pilot stage will be used to determine which PD delivery mode (face-to-face, online or a mix of both) is most effective. The results of the pilot evaluation will inform the national roll out of Oral Health PD.
- HPSCs are being asked to support the implementation of Oral Health PD within their site.

<sup>1</sup> Kisley, S., Quek, L.H., Pais, J., Laloo, R., Johnson, N.W., Lawrence, D. (2011) *Advanced dental disease in people with severe mental illness: systematic review and meta-analysis*. The British Journal of Psychiatry. 199: 187-193.

<sup>2</sup> Healthy Mouths Healthy Lives: Australia’s National Oral Health Plan 2015-2024

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- HPSCs are also being asked to ensure up-to-date information about local oral health services is available to staff (see Local Oral Health Services Information document).

### Blended approach (combined face-to-face and e-learning) to Oral Health professional development

- Half of all Victorian sites are allocated to the 'blended-learning' PD group.
- As a member of the blended-learning group, staff at your site will have access to the online Oral Health module in September and also the opportunity to participate in a 30 minute face-to-face PD session in October, which will be tailored to suit your site needs.
- We recognise that completing both types of PD requires additional time commitment from your team, but research shows that blended learning achieves better outcomes than single-mode learning.

#### **E-Learning (online) PD**

- The online PD is being piloted in during September 2016.
- The Oral Health module will take approximately 30 minutes to complete.
- CRSWs will be invited to participate via email, which will include the link to the online module and instructions on completing the PD.
- HPSCs are being asked to:
  - 1) Actively promote completion of the Oral Health PD among your team.
  - 2) Provide feedback to state HPOs about Oral Health PD (e.g. staff completion rates, issues with the online module etc.)
  - 3) Provide CRSWs with information about available Neami oral health resources and how to access local oral health services.

#### **Face-to-face PD**

- Face-to-face PD is being delivered in October 2016.
- Sessions will be delivered by Bachelor of Oral Health students from the University of Melbourne.
- Sessions will run for 20-30 minutes and will be scheduled during your weekly staff meetings.
- HPSCs are being asked to:
  - 1) Coordinate the PD session with the student (e.g. time, date, location, duration, a/v requirements, etc.)
  - 2) Plan the session content with the student - what information would be most useful to your team (e.g. discussing oral health with consumers, medications and dry mouth, accessing emergency dental care, daily oral hygiene care etc.)?
  - 3) Promote the PD session among your team
  - 4) Facilitate the PD session at your site (welcome and introduce the student, provide a/v support, ask staff to complete feedback forms after the session)
  - 5) Provide CRSWs with information about available Neami oral health resources and how to access local oral health services.

### Program evaluation

- All staff who participate in PD will be asked to complete a short post-training survey.

- Six months after Oral Health PD has been delivered, all CRSWs will be invited via email to complete an online survey to measure oral health knowledge, attitudes and professional practices (KAP). This survey was originally conducted in November 2015 and is being repeated to measure changes.
- HPSCs are being asked to encourage ALL CRSWs to complete the online survey, regardless of whether they completed the original survey or participated in any oral health training. (The survey is interested in measuring oral health KAP at the site, state and national level as well as at the individual level.)
- The online survey includes a short section specifically for HPSCs to provide feedback on oral health promotion (e.g. challenges and successes) within their site.

### Benefits to staff from participating in Oral Health PD

- Develop a better understanding of oral health and why it is important to people living with severe mental illness
- Build staff confidence and competence in supporting consumers to improve their oral health outcomes
- Develop better referral pathways to local oral health services
- Assist Neami in developing appropriate Oral Health PD to be rolled out nationally

### Overcoming barriers to participating in Oral Health PD

- The Oral Health Program is strongly supported and endorsed by Neami's National Leadership Team (NLT). This professional development has been developed in collaboration the Neami Health Promotion Team, Research and Evaluation Team and Learning and Development Team.
- Service Management have been briefed on the project and will support HPSCs in leading the implementation of Oral Health PD as appropriate.
- Staff may identify barriers or concerns around the Program when they are invited to participate in PD. This provides a good opportunity to highlight some possible barriers and to discuss how they could be addressed (see examples below).

#### **'There is not enough time'**

##### **Response:**

We understand that time is pressured among staff, however this project and focus has been deemed a priority by the NLT and will enable improved oral health outcomes for consumers.

#### **'This is too much focus on oral health'**

##### **Response:**

This program has been developed in response to the physical health needs identified by consumers. Research conducted in 2014 indicated oral health was a concern for many consumers and the Health Prompt data highlights current low rates of consumers having regular dental checks ups. Considering the potential impact of poor oral health on consumers' general physical health, their self-confidence, and on their ability to eat, speak and interact in social situations, the focus on improving consumer's oral health outcomes is very important.

#### **'We had oral health training last year'**

##### **Response:**

The 2016 Oral Health professional development program includes a new online module and the content of face-to-face PD sessions are being tailored to meet individual site needs. All



staff who participate in Oral Health PD this year should find it informative and it is beneficial to have this opportunity to refresh and update oral health knowledge.

**‘We need strategies to support staff to complete the online module’**

Response:

One option is to schedule a time for all team members to complete the online module simultaneously. This is a great solution as it: ensures time has been allocated to complete the PD; encourages the participation of all team members in the office; provides an opportunity for staff to work through the content together and to discuss any experiences they may have had supporting consumers’ oral health needs.

**‘It may be difficult to encourage team members to participate in Oral Health PD’**

Response:

Sharing key information about the program will help staff to understand its importance to Neami, and its relevance to their professional role within the organisation. Key points include:

- People living with mental illness are identified in the Australian National Oral Health Plan (2015-2024) as a priority population group at higher risk of poor oral health
- This is an innovative approach to build capacity to improve oral health for consumers living with severe mental illness
- It contributes to the evidence base for effective oral health promotion by non-dental professionals – which is a novel idea in community mental health setting
- Neami is committed to improving consumers' oral health and has invested considerable resources (human and financial) in this project
- Neami consumers have consistently indicated that their number one goal is to improve their physical health
- Staff are not expected to be experts in oral health
- Staff already have the skills necessary for oral health promotion - consider oral health in supporting consumers with other physical health goals
- Staff will receive a certificate of completion, recognising their participation in the program.

For more information, speak with your state-based Health Promotion Officer

## Appendix 16: Process Evaluation (sample plain language statement)



### ***Process evaluation of oral health training delivered to Neami National staff – Health Promotion Officer semi-structured interviews***

#### **Introduction**

You are invited to participate in this research project, which is being conducted by Ms Roisin McGrath (PhD candidate) from the Melbourne Dental School at the University of Melbourne, in partnership with Neami National. In late 2016, oral health training was delivered to Neami sites in New South Wales and Victoria. Staff had the opportunity to participate in different types of training (face-to-face, eLearning or blended learning), dependent upon their site location. State Health Promotion Officers (HPOs) played an essential role in the design and implementation of oral health training within their state. This study aims to explore HPOs experience from their participation in the Neami oral health program and to seek their opinions on how the training program can be improved before it is rolled out nationally.

#### **What will I be asked to do?**

We are asking HPOs in New South Wales and Victoria to take part in this study by participating in a semi-structured interview. The session will be scheduled at time and location of your choice (interviews may be conducted over the phone or in-person) and will take approximately 40-60 minutes of your time. With your permission, the interview will be audio recorded and transcribed so that we make an accurate record of what was said. The questions asked will be about your experience planning and implementing the Neami oral health training in your state and your thoughts on how this program could be improved before it is more widely implemented. The information provided will be used for research purposes only.

#### **How will my confidentiality be protected?**

All the information collected from the interview is confidential. We will remove any references to personal information that might allow someone to guess your identity from the data before we analyze it; however, it is possible that you may be identifiable due to the small sample size. When the research has been completed, a brief summary of the findings will be available to you if you wish. The results may also be presented at academic conferences or in publications. All data will be stored in a secure place, and security passwords will be required to access information stored on computers. Data will be destroyed after five years.

#### **How do I agree to participate?**

If you agree to participate, please indicate that you have read and understood this information by signing the accompanying consent form and returning it to Ms Roisin McGrath. We encourage your participation; however, please note that your participation is completely voluntary, and that there are no penalties if you choose not to participate. You are also free to withdraw your consent at any time, and to withdraw any unprocessed data previously supplied.

**Where can I get further information?**

If you have any questions about this study, or would like additional information to assist you, please feel free to contact:

A/Prof Julie Satur (Principal Supervisor) at: [juliegs@unimelb.edu.au](mailto:juliegs@unimelb.edu.au) or (03) 93411530

Prof Rodrigo Mariño (Supervisor) at: [rmarino@unimelb.edu.au](mailto:rmarino@unimelb.edu.au) or (03) 93411558

Ms Roisin McGrath (Student) at: [mcgrathr@student.unimelb.edu.au](mailto:mcgrathr@student.unimelb.edu.au) or 0408990646.

This research project has been approved by the Human Research Ethics Committee of The University of Melbourne (ethics ID 1648458). If you have any concerns or complaints about the conduct of this research project, which you do not wish to discuss with the research team, you should contact the Manager, Human Research Ethics, Office for Research Ethics and Integrity, University of Melbourne, VIC 3010. Tel: +61 3 8344 2073 or Email: [humanethics-complaints@unimelb.edu.au](mailto:humanethics-complaints@unimelb.edu.au). All complaints will be treated confidentially. In any correspondence please provide the name of the research team or the name or ethics ID number of the research project.

## Appendix 17: Process Evaluation (sample consent form)



### MELBOURNE DENTAL SCHOOL

Faculty of Medicine, Dentistry and Health Sciences, Parkville Campus

#### Consent form for persons participating in the research project “Evaluation of oral health training delivered to staff of Neami National”

Name of participant: \_\_\_\_\_

Names of investigators: A/Prof Julie Satur (Supervisor), Prof Rodrigo Marino (Supervisor), Ms Roisin McGrath (PhD candidate)

1. I consent to participate in this project, the details of which have been explained to me, and I have been provided with a written plain language statement to keep.
2. I understand that after I sign and return this consent form it will be retained by the researchers.
3. I understand that my participation will involve participation in an interview and I agree that the researchers may use the results as described in the plain language statement.
4. I acknowledge that:
  - (a) the possible effects of participating in the interview have been explained to my satisfaction;
  - (b) I have been informed that I am free to withdraw from the project at any time without explanation or penalty, and to also withdraw any unprocessed data I have provided;
  - (c) the project is for the purpose of research;
  - (d) I have been informed that the confidentiality of the information I provide will be protected as much as possible under the law. I understand that because the number of participants in these interviews is small there is a risk that my information might be identifiable, despite these protections,
  - (e) I have been informed that, with my consent, the interview will be audio recorded and transcribed and will be stored securely at The University of Melbourne and data will be destroyed after five years;
  - (f) my name will be referred to by a pseudonym in any publications arising from the research;
  - (g) I have been informed that a copy of the research findings will be forwarded to me, should I require this.

I consent to my verbal answers being audio recorded and transcribed

☐ Yes ☐ No  
(Please tick)

I wish to receive a copy of the summary project report on research findings  
(If yes, please supply an email address)

☐ Yes ☐ No  
(Please tick)

Email address: \_\_\_\_\_

Participant signature: \_\_\_\_\_

Date: \_\_\_\_\_



## Appendix 18: Process evaluation (sample interview guide)

### **HPO semi-structured interview guide**

‘Process evaluation of oral health training.’

#### **Resources required:**

- HPO plain language statement and information
- HPO consent forms
- Telephone (if interview is conducted over the phone)
- Audio recording device (iphone), pens and paper for notetaking
- Water/glasses (if on Neami premises)
- Tissue box (if on Neami premises)

Prior to commencement of the interview, the graduate student researcher will speak to the participant conversationally to create a relaxed environment. The graduate student researcher and the participants are already acquainted, as they have been working collaboratively on the design and implementation of this project.

#### **Introduction**

Once settled, the graduate student researcher will introduce the topic and the relevance of this research to the participant i.e.

‘I want to thank you for agreeing to this interview – I really appreciate you giving up your time.’

‘So, before we start I’ll just give a bit of background on why this interview is being conducted. Late last year, we implemented oral health training for Neami staff in Victoria and New South Wales. The training involved different delivery modes, meaning all Neami sites in New South Wales were offered online training only, half of Neami sites in Victoria were offered face-to-face training only, and the remaining sites in Victoria were offered both online and face-to-face training.’

‘As a Neami Health Promotion Officer, you played a central role in coordinating the oral health training within your state. The information you provide today will be used to understand the processes used in planning and implementing the oral health training, and to determine how the training can be improved before it is rolled out nationally within the organisation.’

‘Please feel free to share your point of view. We are here to learn from your experiences, both positive and negative.’

‘Now, I just want to check that you’ve had a chance to read the plain language statement. Do you have any questions about this?’

‘I’m planning to record today’s interview, so that I can capture all our discussion accurately. After the interview, I will be transcribing the audio recording into written format. As there are only two Health Promotion Officers participating in these interviews, it is possible you may be identified from the information you provide. I hope this is okay with you. Please feel free to let me know if you have any concerns.’

‘Do you have any questions before we begin?’

‘Let’s start then ...’

### **Topics and questions**

#### **Capacity**

1. How were you involved in the planning and implementation of the oral health project?
2. How did you manage your competing priorities to coordinate the oral health training?
3. What could be done to increase the capacity of Health Promotion Officers in rolling out oral health training in all Neami sites?

#### **Staff engagement**

4. What strategies did you use to engage staff in the oral health project? What worked well? What would you do differently?
5. What barriers did staff identify to participating in oral health training? How did you manage these barriers?
6. What staff engagement strategies could Health Promotion Officers use in rolling out oral health training in all Neami sites?

#### **Skills**

7. What skills did you use in planning and implementing the oral health project?
8. What skills would be useful to Health Promotion Officers in rolling out oral health training in all Neami sites?

#### **Support**

9. What support did you receive from Neami in planning and implementing the oral health project?
10. What support should be provided to Health Promotion Officers in rolling out oral health training in all Neami sites?

**Oral health training**

11. What feedback have you received about the oral health training? What did staff like/not like?
12. How could the training be improved, before it is rolled out nationally?

**Other**

13. Have you any other comments/feedback about the oral health project?

**Finishing the interview**

‘Thank your time today. We really appreciate this opportunity to understand your experiences planning and implementing the oral health training and your suggestions for improvements. The process from here is that I will transcribe what we have spoken about today. I will maintain your privacy by removing your name in the transcripts and replacing them with a number or code. The transcripts will then be analysed by my supervisors and I. The transcripts will be censored of your name so that analysis of the information will not include confidential details about yourself. Themes and connections will be drawn out of them, so that we are able to make recommendations for improving the oral health training and for developing future staff training packages. We will be publishing our findings – in journal articles and reports etcetera – so that other mental health professionals, dental practitioners and researchers are able to read and follow on with further research if needed.’

‘If you have any questions or concerns, please feel free to speak to us afterward, or to call us on the phone numbers we have given you on the plain language statement. We are more than happy to talk to you further about this project.’

## Appendix 19: Process Evaluation BOH PLS



### ***Process evaluation of oral health training delivered by Bachelor of Oral Health students to Neami National staff – focus group interviews***

#### **Introduction**

You are invited to participate in this research project, which is being conducted by Ms Roisin McGrath (PhD candidate) from the Melbourne Dental School at the University of Melbourne, in partnership with Neami National. In late 2016, oral health training was delivered by 2<sup>nd</sup> year Bachelor of Oral Health (BOH) students to Neami staff in 17 sites in Victoria. Eight sites received face-to-face oral health training only and the remaining nine sites were also offered online training. Students were responsible for the planning, delivery and evaluation of the face-to-face training sessions, which included individualised content based on the Neami site needs. This study aims to explore BOH students' learning experiences from participating in the Neami oral health training and to seek their opinions on how the training program can be improved before it is rolled out nationally.

#### **What will I be asked to do?**

We are asking BOH students who delivered oral health training to Neami staff in 2016 to take part in this study by participating in a focus group discussion with 8-9 other BOH students. Two focus group sessions will be conducted, one for students who delivered training in sites that had face-to-face training only and one for students who delivered training in sites that were also offered the online oral health training. The session will be scheduled at time and location arranged by A/Prof Julie Satur and will take approximately 60 minutes of your time. With your permission, the focus group will be audio recorded and transcribed so that we make an accurate record of what was said. The questions asked will be about your experience planning, delivering and evaluating your Neami oral health training session and your thoughts on how this program could be improved. The information provided will be used for research purposes only.

#### **How will my confidentiality be protected?**

All the information collected from the focus group is confidential. We will remove any references to personal information that might allow someone to guess your identity from the data before we analyze it; however, there is still a slight risk that you may be identifiable as the study sample size is small. When the research has been completed, a brief summary of the findings will be available to you if you wish. The results may also be presented at academic conferences or in publications, but your comments will not be identifiable. All data will be stored in a secure place, and security passwords will be required to access information stored on computers. Data will be destroyed after five years.

#### **How do I agree to participate?**

If you agree to participate, please indicate that you have read and understood this information by signing the accompanying consent form and returning it to A/Prof Julie Satur. We encourage your participation; however, please note that your participation is completely voluntary, and that there are no penalties if you choose not to participate. You are also free to withdraw your consent at any time, and to withdraw any unprocessed data previously supplied.

**Where can I get further information?**

If you have any questions about this study, or would like additional information to assist you, please feel free to contact:

A/Prof Julie Satur (Principal Supervisor) at: [juliegs@unimelb.edu.au](mailto:juliegs@unimelb.edu.au) or (03) 93411530

Prof Rodrigo Mariño (Supervisor) at: [rmarino@unimelb.edu.au](mailto:rmarino@unimelb.edu.au) or (03) 93411558

Ms Roisin McGrath (Student) at: [mcgrathr@student.unimelb.edu.au](mailto:mcgrathr@student.unimelb.edu.au) or 0408990646

This research project has been approved by the Human Research Ethics Committee of The University of Melbourne (ethics ID 1648458). If you have any concerns or complaints about the conduct of this research project, which you do not wish to discuss with the research team, you should contact the Manager, Human Research Ethics, Office for Research Ethics and Integrity, University of Melbourne, VIC 3010. Tel: +61 3 8344 2073 or Email: [humanethics-complaints@unimelb.edu.au](mailto:humanethics-complaints@unimelb.edu.au). All complaints will be treated confidentially. In any correspondence please provide the name of the research team or the name or ethics ID number of the research project.

## Appendix 20: Process Evaluation (BOH consent form)



### MELBOURNE DENTAL SCHOOL

Faculty of Medicine, Dentistry and Health Sciences, Parkville Campus

#### Consent form for BOH students participating in the research project “Evaluation of oral health training delivered to staff of Neami National”

Name of student: \_\_\_\_\_

Names of investigators: A/Prof Julie Satur (Supervisor), Prof Rodrigo Marino (Supervisor), Ms Roisin McGrath (PhD candidate)

1. I consent to participate in this project, the details of which have been explained to me, and I have been provided with a written plain language statement to keep.
2. I understand that after I sign and return this consent form it will be retained by the researchers.
3. I understand that my participation will involve participation in a focus group and I agree that the researchers may use the results as described in the plain language statement.
4. I acknowledge that:
  - (a) the possible effects of participating in the focus group have been explained to my satisfaction;
  - (b) I have been informed that I am free to withdraw from the project at any time without explanation or penalty, and to also withdraw any unprocessed data I have provided;
  - (c) the project is for the purpose of research;
  - (d) I have been informed that the confidentiality of the information I provide will be protected as much as possible under the law. I understand that because the number of participants in this study is small there is a slight risk that my information might be identifiable, despite these protections,
  - (e) I have been informed that, with my consent, the focus group will be audio recorded and transcribed and will be stored securely at The University of Melbourne and data will be destroyed after five years;
  - (f) my name will be referred to by a pseudonym in any publications arising from the research;
  - (g) I have been informed that a copy of the research findings will be forwarded to me, should I require this.

I consent to my verbal answers being audio recorded and transcribed

☐ Yes  
(Please tick) ☐ No

I wish to receive a copy of the summary project report on research findings  
(If yes, please supply an email address)

☐ Yes  
(Please tick) ☐ No

Email address: \_\_\_\_\_

Student signature: \_\_\_\_\_

Date: \_\_\_\_\_

## Appendix 21: Process Evaluation BOH Focus Group Guide

### **BOH student focus group guide**

‘Process evaluation of oral health training.’

#### **Resources required:**

- BOH student plain language statement and information
- BOH student consent forms
- Audio recording device (iphone), pens and paper for notetaking
- Tissue box (focus group to be held at Melbourne Dental School)

Prior to commencement of the session, the graduate student researcher will speak to the participants conversationally to create a relaxed environment. The session will be moderated by the RHD student, who is experienced in group session facilitation, with the support of the responsible researcher (A/Prof Julie Satur).

Prior to commencement of the interview, the RHD student will speak to the participants conversationally to create a relaxed environment. The RHD student and the participants are already acquainted, as they prepared for the face-to-face training sessions together in class (the RHD student convened the subject, Oral Health Promotion 2B: Applied Health Education for which BOH students were required to plan, deliver and evaluate an oral health education session).

#### **Introduction**

Once settled, the RHD student will introduce the researchers (Roisin McGrath will be the moderator and A/Prof Julie Satur will be the co-facilitator/note-taker), the topic and the relevance of this research to the participant i.e.

‘Hello everyone. Firstly, let me thank you all for agreeing to this interview – we really appreciate you giving up your time.’

‘As you know, my name is Roisin and I’m a PhD student at the University of Melbourne. I will be asking the questions today and Julie Satur will be doing some note taking.’

‘So, before we start I’ll just give a bit of background on why this focus group is being conducted. Late last year, we implemented oral health training for Neami staff in Victoria and New South Wales. The training involved different delivery modes, meaning all Neami sites in New South Wales were offered online training only, half of Neami sites in Victoria were offered face-to-face training only, and the remaining sites in Victoria were offered both online and face-to-face training.’

‘As a University of Melbourne Bachelor or Oral Health student, you were responsible for planning and delivering the face-to-face oral health training sessions. The information you provide today will be used to understand how you prepared for your oral health training

session, and to determine what could be done to improve future face-to-face training sessions delivered in other Neami sites.'

'Please feel free to share your point of view – there are no right or wrong answers. We are here to learn from your experiences, both positive and negative.'

'Now, I just want to check that you've had a chance to read the plain language statement and returned your consent form. Do you have any questions about this?'

'We're planning to record today's interview, so that we can capture all our discussions accurately. Your confidentiality and privacy will be kept completely safe. After the interview, I will be transcribing the audio recording into written format in which you will be unidentifiable as we will use a code or number instead of your name. The recording and documents will be kept in a secure location at the University of Melbourne, in line with the University's policy. The people who analyse the transcripts – or anyone else who reads the transcripts - will not see your name or the Neami site at which you work. I hope this is okay with you. Please feel free to let me know if you have any concerns.'

In order to get the conversation flowing, students will be asked to share the location of the Neami site they delivered training at and the number of Neami staff present. Hard copies of the Neami oral health resources will also be on the table, to prompt them to recall their session.

'Great – thanks for sharing everyone. So, I'll start the session by asking a few questions. Please don't be shy to speak up.'

'Do you have any questions before we begin?'

'Let's begin ...'

### **Topic and questions**

#### **Preparing for the training session**

1. How did you prepare for your oral health training?
2. What challenges did you experience in your preparation? How did you overcome these challenges?
3. What have you learned that will help you prepare for future oral health education sessions?
4. How could your class sessions have prepared you better for delivering the face-to-face training?
5. What suggestions do you have for other dental practitioners in planning oral health training sessions for mental health professionals?

#### **Session delivery**

6. What type of activities did you include in your training session? What worked well? What would you do differently?



7. How did you manage your time?
8. What activities could other dental practitioners use in delivering oral health training for mental health professionals?

### **Self-evaluation**

9. What skills did you use in planning and delivering the oral health training?
10. What did you find beneficial about participating in this project?
11. What did you find challenging about participating in this project?
12. What advice would you give to future BOH students about preparing for and delivering oral health education sessions?

### **Other**

13. Have you any other comments/feedback about the oral health project that we haven't covered?

### **Finishing the interview**

'Thank-you for your time today. We really appreciate this opportunity to understand your experiences planning for and delivering the oral health training and your suggestions for improvements. The process from here is that I will transcribe what we have spoken about today. We will maintain your privacy by removing your name in the transcripts and replacing them with a number or code. The transcripts will then be analysed by my supervisors and I. The transcripts will be censored of your name so that analysis of the information will not include confidential details about yourself. Themes and connections will be drawn out of them, so that we are able to make recommendations for improving the oral health training and for developing future staff training packages. We will be publishing our findings - in journal articles and reports etcetera – so that other mental health professionals, dental practitioners and researchers are able to read and follow on with further research if needed.'

'If you have any questions or concerns, please feel free to speak to us afterward, or to call us on the phone numbers we have given you on the plain language statement. We are more than happy to talk to you further about this project.'

## Appendix 22: Follow-up CRSW Plain Language Statement and Survey



### CRSWs oral health knowledge and oral health promotion practises

#### Information about the study and instructions for completing the online survey

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1. Would you like to continue or withdraw?

- ☐ Continue
- ☐ Withdraw

#### Staff details

---

2. Does your current role as a Community Rehabilitation Support Worker involve direct consumer support?

- ☐ Yes
- ☐ No

#### Staff details

---

3. Unique identifier code:

**Please create your unique identifier code** by writing the first 3 letters of your mother's maiden name (i.e. her surname when she was born) and the last 2 digits of the year you left high school. For example, if your mother's name was Georgina Jones before she was married and your last year of high school was 1997 your unique identifier code would be JON97.

4. In which state are you located?

- ☐ NSW
- ☐ VIC
- ☐ SA
- ☐ QLD
- ☐ WA

5. At which site in NSW are you located?



Ashfield  
Bankstown  
Broken Hill  
Campbelltown  
Carrington  
Darlinghurst  
Dubbo  
Hurstville  
Maitland  
Lake Macquaire Charlestown  
Pagewood  
Smithfield  
Way2Home  
Wollongong

6. At which site in VIC are you located?



- Abbotsford
- Barwon PARC
- Blackburn
- Broadmeadows
- Brunswick
- Craigieburn
- Croydon
- Fairfield
- Frankston
- Hawthorn YRR
- Heidelberg
- Kew
- Moorabbin YRR
- Noble Park YRR
- Northern PARC
- Regent
- Ringwood
- Seaford YRR
- Thomastown
- Yarraville

7. At which site in SA are you located?

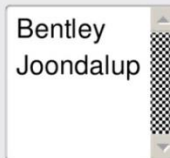


- Elizabeth
- Murray Bridge
- Pooraka
- Port Adelaide
- Prospect
- Highgate Park (Central Crisis Respite)
- Morphett Vale (Southern Crisis Respite)
- Parafield Gardens (Northern Crisis Respite)

8. At which site in QLD are you located?

A dropdown menu with a white background and a grey border. It contains three text options: 'Cairns', 'Darra', and 'Strathpine'. To the right of the text is a vertical scrollbar with a grey track and a white handle.

9. At which site in WA are you located?

A dropdown menu with a white background and a grey border. It contains two text options: 'Bentley' and 'Joondalup'. To the right of the text is a vertical scrollbar with a grey track and a white handle.

10. How long have you worked at Neami?

- ☐ Less than 1 year
- ☐ 1-2 years
- ☐ 2-3 years
- ☐ 3-4 years
- ☐ 5+ years

11. Have you participated in any oral health-related training/education in the last 12 months?

- ☐ Yes
- ☐ No

12. If yes, was this training/education provided through Neami?

- ☐ Yes
- ☐ No

---

**Section 1**

13. Are you aware of the Neami Oral Health Program?

- ☐ Yes
- ☐ No
- ☐ Don't know

14. Have you used the Neami oral health information resources?

- ☐ Yes
- ☐ No

---

**(untitled)**

15. If you have used the Neami oral health information resources, what is your opinion of them?

Please select the response that most closely reflects your opinion from '**strongly disagree**' to '**strongly agree**'.

|                           | Strongly disagree     | Disagree              | Neither agree nor disagree | Agree                 | Strongly agree        |
|---------------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| Useful                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Relevant                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Informative               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| User friendly             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Comprehensive             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Confusing                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Too much text (too wordy) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |

16. How important do you think each of the following is in preventing dental caries (tooth decay)?

Please select the response that most closely reflects your opinion from '**not at all important**' to '**very important**'.

|                                                  | Not at all<br>important | Somewhat<br>important | Important             | Very<br>important     | Do<br>not<br>know     |
|--------------------------------------------------|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Brushing teeth                                   | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Using dental floss                               | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Using an antibacterial<br>mouth rinse            | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Drinking fluoridated water                       | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Using fluoridated<br>toothpaste                  | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Cutting down on<br>frequency of sugary foods     | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Cutting down on<br>frequency of sugary<br>drinks | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Chewing sugar free gum<br>after eating           | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Regular visits to a dental<br>professional       | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |



17. How important do you think each of the following is in preventing periodontal disease (gum disease)?

Please select the response that most closely reflects your opinion from '**not at all important**' to '**very important**'.

|                                                  | Not at all<br>important | Somewhat<br>important | Important             | Very<br>important     | Do<br>not<br>know     |
|--------------------------------------------------|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Brushing teeth                                   | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Using dental floss                               | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Using an antibacterial<br>mouth rinse            | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Drinking fluoridated water                       | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Using fluoridated<br>toothpaste                  | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Cutting down on<br>frequency of sugary foods     | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Cutting down on<br>frequency of sugary<br>drinks | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Chewing sugar free gum<br>after eating           | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Regular visits to a dental<br>professional       | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

18. A number of behavioural risk factors are known to be associated with poor physical health and wellbeing. How important or not important is each of these risk factors in causing oral health problems?

Please select the response that most closely reflects your opinion from '**not at all important**' to '**very important**'.

|                                  | Not at all<br>important | Somewhat<br>important | Important             | Very<br>important     | Do<br>not<br>know     |
|----------------------------------|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Poor diet and nutrition          | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Smoking and tobacco<br>use       | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Excessive alcohol<br>consumption | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Lack of physical<br>activity     | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Excessive sun<br>exposure        | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Unprotected sexual<br>activity   | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Illicit drug use                 | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Violence                         | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Insufficient<br>vaccinations     | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

## 19. What are your beliefs about oral health?

Please select the response that most closely reflects your opinion.

|                                                                                                          | Yes                   | No                    | Do<br>not<br>know     |
|----------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|
| People living with serious mental illness experience more oral health issues than the general population | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Vitamin and mineral supplements can help prevent oral diseases                                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Bleeding gums are a sign of brushing teeth too hard                                                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| People with no natural teeth do not need to see an oral health professional regularly                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The bacteria that cause tooth decay can be transmitted from one person to another                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Medications can increase the risk of oral diseases                                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Increasing the amount of sugar consumed will increase the amount of tooth decay                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tooth loss is part of getting older                                                                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Teeth should be brushed with a small head, soft bristled toothbrush                                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Heredity (genetics) is a risk factor for gum disease                                                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Heredity (genetics) is a risk factor for tooth decay                                                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

20. What barriers prevent people living with mental illness from accessing dental services?

*Please select the five most important barriers (in your opinion).*

- ☐ Stigma
- ☐ Cost
- ☐ Location of dental clinics (transport issues)
- ☐ Fear of dental treatment
- ☐ Waiting time to get an appointment (wait lists)
- ☐ Waiting time in dental clinic reception area
- ☐ Attitudes of dental staff
- ☐ Language and communication barriers
- ☐ Lack of motivation
- ☐ Coping with illness
- ☐ Coping with anxiety
- ☐ Lack of knowledge about oral health
- ☐ Lack of knowledge about dental services
- ☐ Lack of appropriate dental services
- ☐ Lack of support to access dental services

21. Do you have any comments about this section?

**Section 2**

---

## 22. How would you rate your current oral health-related knowledge and confidence?

Please rate your response from 'poor' to 'excellent'.

|                                                                                      | Poor                  | Below<br>average      | Average               | Above<br>average      | Excellent             |
|--------------------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Your understanding of the risk factors associated with poor oral health              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your understanding of the links between mental health and oral health                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your understanding of the links between oral health and general health and wellbeing | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your confidence in discussing oral health with consumers                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your confidence in using the Neami oral health information resources                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your confidence in supporting consumers with their oral health needs                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your confidence in referring consumers to oral health services                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

23. What is your opinion on oral health support for people living with mental illness?

Please select the answer that most closely reflects your opinion from '**strongly disagree**' to '**strongly agree**'.

|                                                                                                                                 | Strongly disagree     | Disagree              | Neither agree nor disagree | Agree                 | Strongly agree        |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| Supporting consumers with their oral health needs should be part of Neami's work                                                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| People living with a mental illness should be encouraged to visit an oral health professional regularly                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Mental health support workers have a role to play in promoting oral health                                                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Including oral health support into Neami's routine work will leave less time to address consumers' mental health-related issues | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Oral health education should only be provided by an oral health professional                                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |

24. What are the barriers to oral health promotion within Neami National?

Please select the response that most closely reflects your opinion from '**strongly disagree**' to '**strongly agree**'.

|                                                         | Strongly disagree     | Disagree              | Neither agree nor disagree | Agree                 | Strongly agree        |
|---------------------------------------------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| Oral health is low on the Neami health agenda           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Not enough time when working with consumers             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Consumers lack of interest in oral health               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Staff have insufficient knowledge about oral health     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Staff have insufficient knowledge about dental services | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Staff have insufficient access to oral health resources | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Insufficient support from management                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Attitudes of oral health professionals                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| There are no barriers                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |

25. Do you practise oral health-related activities with consumers?

☐ Yes

☐ No

26. Do you have any comments about this section?

**Section 3**

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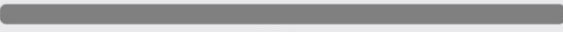
27. How many of the consumers that you work with do you practise the oral health-related activities listed below?

Please indicate your responses from '**none**' to '**all**' on the **sliding scales** for each item.

|                                                                                          | None                 | Half                 | All                  |
|------------------------------------------------------------------------------------------|----------------------|----------------------|----------------------|
| Discuss oral health with consumers                                                       | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Support consumers to improve their daily oral health care                                | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Use oral health information resources with consumers                                     | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Refer consumers to dental services or clinics                                            | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Contact the dental clinic to make appointments for consumers                             | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Support consumers to attend dental appointments (physically or via strategy development) | <input type="text"/> | <input type="text"/> | <input type="text"/> |

28. How many of the consumers that you support are at risk of or have poor oral health?

Please indicate your response from '**none**' to '**all**' on the **sliding scale**.

None  All  
Half

29. How can Neami support your learning and skills in relation to oral health?

Please select the response that most closely reflects your opinion from '**strongly disagree**' to '**strongly agree**'.

|                                                                                                           | Strongly disagree     | Disagree              | Neither agree nor disagree | Agree                 | Strongly agree        |
|-----------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| Provide staff education and training on oral health risks and diseases                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Provide staff education and training on using the Neami oral health information resources                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Provide staff education and training on how to refer consumers to oral health services                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Provide staff education and training on how to support consumers to access and attend dental appointments | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |

30. What is your preferred delivery method for workplace training and education sessions?

*Please select one response only.*

- ☐ Face-to-face (classroom style) sessions
- ☐ E-learning (online or computer-based) sessions
- ☐ A combination of both face-to-face and e-learning sessions

31. Are you interested in receiving any further information/training on how you can support consumers to manage their oral health needs?

- ☐ Yes
- ☐ No

32. If you answered 'yes', what would you like?

33. Do you have any other comments?

34. Do you currently hold the Health Promotion Site Champion portfolio?

- ☐ Yes
- ☐ No

(untitled)

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35. Have you participated in Neami oral health training over the past 12 months?

- ☐ Yes
- ☐ No

36. What feedback have you received from staff about oral health promotion?

- ☐ Face-to-face training (classroom style)
- ☐ e-Learning (online training)
- ☐ Both face-to-face training and e-learning

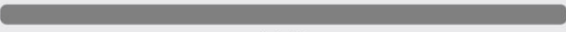
37. Over the past 6 months how much of the HSPC portfolio have you allocated to the Oral Health priority area?

*Please indicate your response from 'none' to 'all' on the **sliding scale**.*

None  All  
Half

38. How much of the HSPC portfolio do you think should be allocated to the Oral Health priority area?

Please indicate your response from '**none**' to '**all**' on the **sliding scale**.

None  All  
Half

39. HPSC challenges supporting oral health promotion

Please select the response that most closely reflects your opinion from '**strongly disagree**' to '**strongly agree**'.

|                                                                     | Strongly disagree     | Disagree              | Neither agree nor disagree | Agree                 | Strongly agree        |
|---------------------------------------------------------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| I have not had sufficient training in oral health promotion         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Not enough time to focus on oral health promotion                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Lack of staff interest in oral health promotion                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| I do not feel confident discussing oral health promotion with staff | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Other physical health priority areas take up more time              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Staff do not feel confident discussing oral health with consumers   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |

40. Can you describe what you have done over the past 6 months to support staff in promoting oral health?

41. What support would be useful to you and your team to improve oral health promotion?

42. What feedback have you received from staff about oral health promotion?

43. Do you have any other comments about the oral health project?

**Thank You!**

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Thank you for completing this survey. Your response is very important to us.