



## Oral health-related self-efficacy and fatalism in a regional South Australian Aboriginal population

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**Objectives:** To assess the psychometric properties, including face, content, criterion and known-groups validity and reliability, of scales to measure oral health-related self-efficacy and fatalism in a regional Aboriginal adult population in Australia. **Methods:** Four hundred Aboriginal adults (aged 18–82 years, 67% female) completed a self-report questionnaire including items pertaining to oral health-related self-efficacy and fatalism. Structural validity was determined in exploratory factor analysis (EFA) with principal components analysis for each scale. Criterion validity was assessed between the instruments and theoretically related variables. Known-groups validity was investigated by comparing the scores in different population groups according to age, sex, education and employment. Reliability of the scales was assessed through internal consistency. **Results:** The EFA confirmed a single factor structure for self-efficacy and fatalism scales, with Cronbach's alphas of 0.93 and 0.89 respectively. The two scales were not correlated. Oral health-related self-efficacy was associated with toothbrush ownership and brushing the previous day supporting criterion validity. Oral health-related fatalism was associated with previous extractions and perceived need for extractions also supporting criterion validity. Both measures were associated with social impact of oral health as measured by the OHIP-14, supporting their criterion validity. Mixed findings were observed in terms of known-groups validity. **Conclusions:** There was initial evidence that measures of oral health-related self-efficacy and fatalism displayed adequate psychometric properties in this Aboriginal community. These constructs could have implications for approaches for improving oral health among Aboriginal people.

**Keywords:** *Oral health, self-efficacy, Aboriginal Australians, Social Cognitive Theory*

Indigenous Australians include people who identify as being of Aboriginal or Torres Strait Islander descent, representing three percent of the Australian population in 2014 (Australian Institute of Health and Welfare, 2015). Collectively, Indigenous Australians, hereafter referred to as Aboriginal to recognise the original inhabitants of the land on which this research was conducted, demonstrate a younger age structure with higher proportions living in rural and remote areas than the non-Indigenous population. They are a diverse population, representing many different language and cultural groups. Complex historical and political factors, including the Stolen Generations, impact on the health of Aboriginal Australians today, with Aboriginal Australians experiencing higher rates of unemployment, inadequate housing and greater burden of chronic disease than non-Aboriginal Australians. Although traditionally Aboriginal Australians experienced low levels of oral disease, it is well-documented that Aboriginal adults now experience poorer oral health than non-Aboriginal Australians, including greater rates of edentulousness and toothache (Brennan and Carter, 1998).

Widely used in health behaviour research, the Social Cognitive Theory (SCT) identifies a core set of determinants that are associated with health behaviours, specifically perceived self-efficacy and fatalism (Bandura, 2004). The SCT describes the mechanisms through which these core determinants relate to outcome expectations and perceived facilitators and impediments, and how they act and are translated into health behaviour (Bandura, 2004).

Research focussed on self-efficacy is diverse in methodological and analytic approaches and uses a variety of instruments. However, meta-analyses have demonstrated that efficacy beliefs are consistently associated with an individual's level of motivation and performance (Bandura and Locke, 2003). Self-efficacy beliefs can predict differences between individuals as well as within an individual at different points in time (Bandura and Locke, 2003). In the general health realm, self-efficacy is an important predictor of self-care, health outcomes and quality of life for patients with chronic disease (Joeke et al., 2007; Syrjala et al., 2004).

There is evidence that self-efficacy may have an impact on both oral health behaviours and outcomes, although not all findings are consistent. In adults internationally, dental and oral-hygiene specific self-efficacy has been associated with both oral health behaviours and clinical oral health measures including plaque and gingival bleeding levels (Knecht et al., 1999; Woebler et al., 2015). In the United States, Finlayson and colleagues (2005; 2007a; 2007b) have focussed on the beliefs of mothers and the impact on oral health behaviours and outcomes in their children. Although the role of self-efficacy was less convincing in relation to health outcomes, they associated a mother's higher knowledge of oral hygiene with the child's better caries status and that a mother endorsing a fatalistic belief about children's oral health nearly tripled the child's odds of disease (Finlayson et al., 2005; 2007b). These findings are supported by Australian research

whereby paternal self-efficacy has been associated with both tooth brushing and dental visiting frequency (de Silva-Sanigorski *et al.*, 2013).

The literature relating to oral health-related self-efficacy and fatalism among disadvantaged groups in Australia is sparse. Understanding the factors that contribute to poorer oral health amongst Aboriginal adults may assist in identifying appropriate pathways for intervention. Understanding the role of oral health-related self-efficacy and fatalism in Aboriginal oral health may therefore provide evidence for more comprehensive and tailored oral health promotion strategies to address the oral health disparities that exist for this disadvantaged group.

The aim of this paper is to assess the validity of oral health-related self-efficacy and fatalism scales in a regional Aboriginal adult population in Australia.

## Methods

Data were drawn from the Indigenous Oral Health Literacy Project (IOHLP), a randomised control trial based in regional South Australia. Baseline data from the initial cross-sectional study were utilised for this analysis (Parker *et al.*, 2012).

Participants in the IOHLP were recruited from within Port Augusta, a regional centre in South Australia. Eligibility criteria included being Aboriginal or Torres Strait Islander, aged 18 years and above and planning to reside in Port Augusta or a nearby community for two years. Participants were recruited using a variety of methods previously used successfully with this community, including self-nomination, home visits, word of mouth, visits to community centres and referrals. Written and verbal information about the study was provided to each participant before gaining consent. In acknowledgement of their time commitment, participants received a \$20 supermarket gift voucher upon completion of the questionnaire.

Ethical approval was granted by the Aboriginal Health Council of South Australia and the Human Research Ethics Committee of the University of Adelaide. The Board of Management of the Pika Wiya Health Service (PWHS), the local community controlled Aboriginal health service,

also gave approval for the study. Comprised of representatives from the local Aboriginal community, the Board of Management is the peak body which governs the delivery of PWHS services and programs.

Two advisory groups were formed and consulted during the development and implementation of this study. Firstly, an expert advisory group consisting of researchers with extensive experience in developing and conducting surveys with disadvantaged groups in Australia and Internationally. This group had input into the study design and reviewed the format and content of the questionnaire. Secondly, an Aboriginal advisory group comprising seven Aboriginal community representatives. This group provided essential cultural input and guidance for researchers during the planning and promotion of the study, format and content of the questionnaire and recruitment methods.

The questionnaires, which took around 30 minutes to complete, were administered by Aboriginal project officers, being completed either as an interview or self-completed, or a combination of interview and self-complete as determined by the needs of participants. The project officers were provided with a scripted method of introducing and administering the questionnaire.

The focal measures of the study were developed based on the core components of Social Cognitive Theory (SCT) (Figure 1) whereby self-efficacy impacts health behaviours directly and through its impact on outcome expectations and perceptions of facilitators and impediments (Bandura, 2004). Items to assess oral health-related self-efficacy and fatalism were generated based on reviews of the SCT and oral health literature. Refinement of the items was informed by previous research with this community and other disadvantaged groups in South Australia and through consultation with the study's expert and Aboriginal advisory groups.

Oral health-related self-efficacy was measured using six items adapted from a self-efficacy scale developed by Finlayson and colleagues (2005). The six items asked participants to rate how confident they felt about their ability to brush their teeth at night when they were: (1) under a lot of stress; (2) depressed; (3) anxious; (4) feeling like they did not have the time; (5) tired and (6) worried about other things in their life. Responses were on a Likert

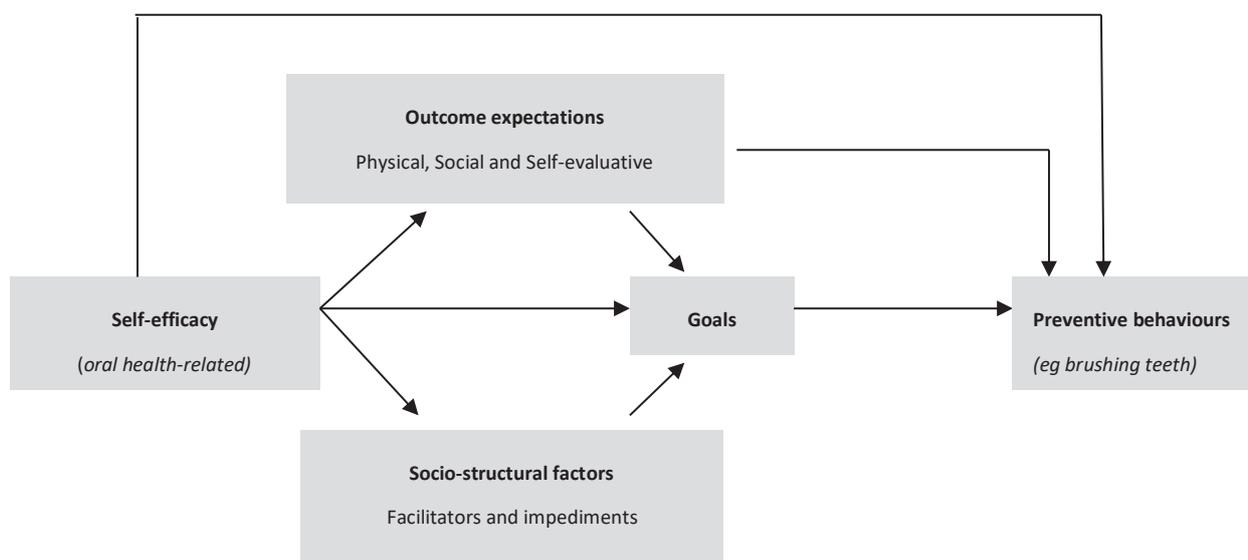


Figure 1. Self-efficacy impacts directly and indirectly on health behaviours (Bandura, 2004).

scale scored with 1= not at all confident, 2= hardly ever confident, 3= occasionally confident, 4= fairly confident, and =5 very confident, so that higher scores reflected greater self-efficacy. Based on feedback from expert and advisory groups an additional response option of “I never feel like this” was added and treated as a missing response.

Oral health-related fatalism was measured using a five-item scale, asking participants to indicate their level of agreement with the following statements, generated to reflect the range of oral health conditions prevalent in this community: most people will .....(1) eventually develop problems with their teeth; (2) need to have their teeth pulled out; (3) eventually get a toothache; (4) have bleeding gums; and (5) get wobbly teeth. Response options were on a Likert scale scored from 1 (strongly disagree) to 5 (strongly agree), so that high scores reflected highly fatalistic views. Based on feedback from expert and advisory groups an additional response option of “I don’t know” was added and treated as a missing response.

Demographic measures included age, sex, highest level of education and employment status. Items to assess the criterion validity of OH-SE included ownership of a toothbrush and brushing the previous day. Items to assess criterion validity of OH-F included (for dentate participants) having previous extractions by a dentist and perceiving a need for extractions. Items to further assess criterion validity for both scales included the social impact of oral health (OHIP-14) (Slade., 1997) and self-rated general and oral health.

Summary scores were calculated for each measure. Where participants had two or fewer missing items for self-efficacy a mean score of their responses for the remaining items within the scale were imputed. For fatalism if a participant had only one missing item, the mean score of their responses for the remaining items in the scale was imputed. Participants with more than the specified missing items were considered to have a missing score for that scale and excluded from further analysis pertaining to that scale. Chi-square analyses were used to determine if there were differences according to demographic characteristics of those with and without scale scores. Pair-wise exclusion was used to manage missing data. All analyses were conducted in IBM SPSS Statistics Package version 20.

To investigate the validity of the instruments, we evaluated the following types of validity:

1. *Face and content validity* were assessed through consultation with expert and Aboriginal advisory groups.

2. *Structural validity* was determined by exploratory factor analysis (EFA) with principal components analysis for each scale. The correlation between the OH-SE and OH-F continuous scale scores was assessed using Spearman’s Rho.
3. *Construct validity* in the form of Known-groups validity was investigated by comparing the scores according to sex, age and education. Known-groups validity compares scale scores across different groups (e.g., older vs younger people) and informs whether the instrument is able to differentiate between two groups that are known to be different regarding the construct (Davidson, 2014); in this case, individuals with higher levels of education or current employment having higher OH-SE and lower OH-F respectively.
4. *Criterion validity*, the extent to which the instruments were associated with theoretically associated outcomes (Taherdoost., 2016), including self-rated oral and general health, the social impact of oral health (OHIP-14) and oral-health related variables of toothbrush ownership and tooth brushing the previous day for OH-SE; previous extraction and perceived need for extraction for OH-F. Given the skewed distribution of scale scores, the Kruskal Wallis or Mann-Whitney U test was used to determine associations between the continuous outcome variables and categorical explanatory variables.

Reliability of the scales was assessed through internal consistency, as measured by Cronbach’s alpha with item-by-item analyses and item-total correlations for each scale.

## Results

A total of 400 Aboriginal adults completed the questionnaire, aged 18–82 years, with a mean age of 36 and a median age of 33 years. Around 67% were female. The highest educational attainment for 64% of participants was high school, with 12% having no schooling or primary school only. Around 22% of participants received their main source of income through paid employment. Four percent of participants were edentulous.

For the oral health-related self-efficacy items (Table 1), participants generally indicated that they felt confident about their ability to brush their teeth at night, with 33–44% of participants indicating they were either fairly

**Table 1.** Oral health-related self-efficacy (OH-SE) responses.

<i>How confident do you feel about your ability to brush your teeth at night when you are</i>	<i>Percent of valid responses</i>					
	<i>Very confident</i>	<i>Fairly confident</i>	<i>Occasionally confident</i>	<i>Hardly ever confident</i>	<i>Not at all confident</i>	<i>I never feel like this</i>
Under a lot of stress (n=397)	25.4	18.4	18.6	7.6	9.6	20.4
Depressed (n=394)	22.8	16.8	17.0	9.6	11.9	21.8
Anxious (n=399)	21.6	18.0	16.3	9.3	9.3	25.6
Feeling like you do not have time (too busy) (n=398)	16.3	17.3	23.1	10.3	12.1	20.9
Tired (n=399)	17.0	17.8	22.3	10.0	15.0	17.8
Worried about other things in your life (n=398)	15.8	17.6	20.9	8.3	14.1	23.4

or very confident for each item. For each item, 18–26% of participants selected “I never feel like this”, with the highest proportion (26%) selecting this response for the item asking about feeling anxious, and the least (18%) for the item related to tiredness. Exploratory factor analysis revealed the presence of one factor for self-efficacy, consisting of the 6 items with an Eigenvalue = 4.31, explaining 71.8% of variance (Table 3). Internal consistency was high (Cronbach’s alpha=0.926; n=256), with corrected item-total correlations ranging from 0.72 to 0.86. There was no improvement in Cronbach’s alpha with deletion of items, indicating that all 6 items should be retained in the scale. The mean item to item correlation was 0.68 (range from 0.52 to 0.76).

With more than two responses of “I never feel like this” treated as a missing response, nearly 25% of participants (98 participants) did not have an OH-SE score. There were differences between those with versus those

without an OH-SE score by age (Chi-square  $p < 0.05$ ), with the highest proportion not having a score being in the 25–34-year group (31.4%) and the lowest in the 50–82-year group (9.7%). There were no differences by sex, employment status or level of education between those who did and did not have an OH-SE score.

For oral health-related fatalism, participants generally agreed with each statement (Table 2), with between 70–85% either moderately or strongly agreeing. For each item, between 6 and 12 % of participants selected the response of “don’t know”. With more than one response of “I don’t know” treated as a missing response, nearly 14% of participants (54 participants) did not have an OH-F score. Exploratory factor analysis extracted one factor, consisting of the 5 items, with an Eigenvalue of 3.40, explaining 68.0% of the variance (Table 3). Internal consistency was high (Cronbach’s alpha 0.882; n=325), with corrected item-total correlations ranging from 0.61

**Table 2.** Oral health-related fatalism (OH-F) responses.

<i>How much do you agree with the following statements?</i>	<i>Percent of valid responses</i>					
	<i>Strongly agree</i>	<i>Moderately agree</i>	<i>Neither agree nor disagree</i>	<i>Moderately disagree</i>	<i>Strongly disagree</i>	<i>Don't know</i>
Most people develop problems with their teeth (n=396)	50.5	26.5	8.1	2.0	2.0	10.9
Most people will need to have their teeth pulled out (n=398)	44.5	25.5	13.8	2.8	2.0	11.6
Most people will eventually get a toothache (n=400)	63.5	21.3	7.0	1.0	1.0	6.3
Most people will have bleeding gums (n=400)	46.3	25.0	14.3	3.0	3.0	8.5
Most people will eventually get wobbly teeth (n=400)	46.3	23.8	14.8	2.3	1.8	11.3

**Table 3.** Exploratory factor analysis for self-efficacy and fatalism items.

<i>Oral health-related self-efficacy</i>	<i>EFA 1: self-efficacy</i>	<i>EFA 2: fatalism</i>
	<i>One factor</i>	<i>One factor</i>
How confident do you feel about your ability to brush your teeth at night when you are .....		
.....under a lot of stress	0.812	
.....depressed	0.851	
.....anxious	0.890	
.....feeling like you do not have the time (too busy)	0.868	
.....tired	0.836	
.....worried about other things in your life	0.826	
<i>Oral health-related fatalism</i>		
How much do you agree with the following statements?		
.....most people will eventually develop problems with their teeth		0.744
.....most people will need to have their teeth pulled out		0.812
.....most people will eventually get a toothache		0.853
.....most people will have bleeding gums		0.856
.....most people will get wobbly teeth		0.853
Eigan Value	4.31	3.40
Variance accounted for (percent)	71.8	68.0
Cronbach’s alpha for boxed items (n)	0.93 (256)	0.88 (325)

to 0.78. There was no improvement in Cronbach's alpha with deletion of items, confirming that all 5 items should be retained in the scale. The mean item to item correlation was 0.61 (range from 0.49 to 0.74). There were no differences between those with and without a fatalism score by age group, sex, level of education nor employment status (Chi-square  $p > 0.05$ ).

Oral health-related self-efficacy scale scores ranged from 6–30, with a mean of 20.0, median score of 20.0 and mode of 30. Fatalism scale scores ranged from 5–25 with a mean of 21.7, median score of 23 and mode of 25. Testing for normal distribution (Shapiro-wilk and Kolmogorov-Smirnov) confirmed that both the OH-SE and OH-F scales were not normally distributed, being highly negatively skewed. Self-efficacy and fatalism scores were not significantly correlated with each other.

Higher OH-F scores were associated with being in the higher age groups, lower levels of education and not being employed (Table 4). Self-efficacy scores were not associated with socio-demographic factors. Higher oral OH-SE was associated with owning a toothbrush, brushing the previous day, rating general and oral health as excellent, very good or good, and having no OHIP-14 items rated fairly often or very often (Table 5). Higher OH-F scores were associated with having previous extractions by a dentist, a perceived need for extractions and with having one or more OHIP-14 items rate fairly often or very often.

## Discussion

This study assessed the validity of scales adapted from those previously reported in the literature, to measure oral health-related self-efficacy and fatalism amongst Aboriginal adults in regional South Australia. The feasibility and acceptability of the instruments in the current form was supported by the willingness of participants to complete them. Face and content validity of the OH-SE

and OH-F scales were verified by expert and Aboriginal advisory groups. A single factor structure was confirmed for both scales with exploratory factor analysis and high internal reliability with Cronbach's alpha.

Participants generally had both high self-efficacy and high fatalism scores. The finding that overall scores for both OH-SE and OH-F were high is somewhat counter-intuitive, although it supports the concept that the scales are measuring different constructs. This was consistent with the findings of Finlayson and colleagues (2005), where mothers had high levels of self-efficacy, but nearly 80% held fatalistic beliefs. It is important to note that the self-efficacy items asked participants about how they feel as an individual, whereas the fatalism statements relate to others or "most" people. Given the high rates of oral disease for Aboriginal adults, highly fatalistic views could be considered realistic views. Consistent with this is that fatalism scores were not associated with the individual health behaviours of tooth brushing the previous day and tooth-brush ownership, whereas self-efficacy was associated with these health behaviours. In contrast to this finding, Finlayson and colleagues (2005) found that children of mothers with fatalistic beliefs brushed less frequently.

The relationship between self-efficacy and toothbrush ownership and tooth brushing the previous day is expected, considering the item statements relate specifically to tooth brushing, and confirms criterion validity. This is also consistent with literature linking self-efficacy beliefs with specific health behaviours (Kneck *et al.*, 1999; Syrjala *et al.*, 2004; Finlayson *et al.*, 2007a; Stewart *et al.*, 1996; Johnston-Brooks *et al.*, 2002). Self-efficacy is considered an important element of self-management of chronic disease. One self-management program for people with arthritis was successful in increasing efficacy beliefs (O'Leary *et al.*, 1988). Those with higher self-efficacy beliefs about their ability to exert control over their symptoms were less affected by the symptoms of their condition. The benefits

**Table 4.** Known-groups validity: Associations between OH-SE and OH-F and demographic characteristics.

Characteristic	OH-SE		OH-F	
	N	Mean (95%CI)	N	Mean (95%CI)
All	302	20.0 (0.4)	346	21.7 (0.2)
Age group				
18-24	74	20.7 (19.4–22.1)	91	21.2 (20.5–21.9)*
25-34	70	19.5 (18.0–21.0)	87	22.3 (20.4–22.0)
35-49	93	19.0 (17.5–20.4)	104	22.3 (21.6–23.0)
50-82	65	21.3 (19.5–23.1)	64	21.9 (21.0–22.8)
Sex				
male	91	20.2 (18.9–21.5)	117	22.0 (21.4–22.6)
female	211	20.0 (19.0–20.9)	229	21.5 (21.0–22.0)
Highest level of education				
no schooling, primary or high school	227	20.4 (19.5–21.2)	257	22.0 (21.6–22.4)*
trade, TAFE or university	71	19.1(17.6–20.7)	85	20.8 (19.9–21.7)
Employment status				
employed	69	20.7 (18.9–21.5)	75	20.6 (19.8–21.5)*
unemployed/other	227	19.8 (19.0–20.7)	263	22.0 (21.6–22.4)

\* $p < 0.05$  Kruskal-Wallis or Mann-Whitney U test (testing for distribution across groups).

**Table 5.** Criterion Validity: Associations between OH-SE and OH-F scales and oral-health, self-reported oral and general health, and social impact of oral disease.

<i>Characteristic</i>	<i>OH-SE</i>		<i>OH-F</i>	
	<i>N</i>	<i>Mean (95%CI)</i>	<i>N</i>	<i>Mean (95%CI)</i>
Ownership of a toothbrush				
Yes	279	20.3 (19.5–21.1)*	312	21.7 (21.3–22.1)
No	19	16.9 (14.0–19.8)	29	21.9 (20.9–22.7)
If yes, brushed the previous day				
Yes	210	21.3 (20.4–22.2)*	237	21.6 (21.1–22.1)
No	57	17.6 (15.9–19.3)	68	21.8 (20.9–22.7)
If own teeth remaining, had teeth extracted by a dentist previously				
Yes	22	20.0 (19.1–21.0)	260	21.9 (21.4–22.3)*
No	54	20.6 (19.2–22.1)	63	20.9 (19.9–21.8)
Perceived need for extractions				
Yes	155	19.3 (19.8–21.9)	174	22.2 (21.7–22.6)*
No or don't know	144	20.9 (19.8–21.9)	169	21.2 (20.6–21.8)
Self-rated oral health				
Excellent, very good or good	162	21.3 (20.2–22.4)*	186	21.6 (21.1–22.2)
Fair or poor	139	18.6 (17.5–19.7)	159	21.7 (21.2–22.3)
Self-rated general health				
Excellent, very good or good	223	20.6 (19.7–21.4)*	260	21.6 (21.2–22.0)
Fair or poor	78	18.5 (16.9–20.1)	85	21.9 (20.9–22.8)
OHIP-14				
No items rated fairly or very often	126	21.5 (20.4–22.7)*		21.3 (20.6–21.9)*
One or more items rated fairly or very often	176	19.0 (17.9–20.0)		22.0 (21.5–22.5)

\* $p < 0.05$  Mann-Whitney U Test.

were long-lasting. An important consideration for use in health promotion is that improvements in one health-specific self-efficacy may lead to improved self-efficacy in other areas of health (Syrjala *et al.*, 2004). These factors, together with our findings suggest that programs to improve oral and general health self-efficacy among this community may lead to improved and sustained oral health behaviours, which in turn may contribute to improved oral health or even general health outcomes.

Higher fatalism scores were associated with demographic factors. As expected, OH-F scores were associated with a history of previous extractions, perceived need for extractions and greater social impact of oral disease; all findings that support the validity of this OH-F instrument. This may reflect the poor state of health and social disadvantage experienced by Aboriginal Australians, including reduced life expectancy, higher rates of and earlier onset of chronic disease, high levels of psychological distress and discrimination (Australian Institute of Health and Welfare, 2015). There was no association between OH-F and self-ratings of general or oral health. This may also reflect the items within the OH-F scale being about “most people” and the self-ratings being about their perception of their own current health status. Conceptually, an individual could rate their own oral health and health quite independently of their perception of the inevitability of oral disease.

It is important to recognise the study's limitations. Firstly, it uses a convenience sample of Aboriginal adults and may not therefore be transferable to the wider Aboriginal population. Secondly, there were many participants without a scale score. The high proportion of participant's missing an OH-SE or OH-F score is a direct result of the inclusion of the “never feel like this” or “don't know” responses for each scale respectively. The scales on which the present study based the OH-SE and OH-F instrument did not provide this option (Finlayson *et al.*, 2005). The decision was made to include this option during our consultation, when people felt that the self-efficacy items assumed all people felt that way at some stage. This is supported by the variation in proportions of participants selecting the “never feel like this” option: 26% for feeling anxious and 18% for tiredness. Interestingly, the only demographic characteristic differing between those with and without scale scores (due to missing items) was the age category. Those in the second youngest age group were less likely to have a missing scale score, indicating this age groups was less likely to choose “I never feel like this” for two or more items. Possible reasons for this could be associated with literacy levels and social stigma around reporting feelings of and conditions of depression and anxiety, or perceptions of what may constitute a more socially desirable response.

Strategies to improve the oral health of Aboriginal Australians are needed. One powerful mechanism explaining the poorer health status of Aboriginal people is socioeconomic disadvantage. Addressing social inequalities is critical in order to enable improvements in health and oral health (Marmot, 2011), as is identifying the protective factors which have enabled Aboriginal Australian communities to survive significant and repeated adverse events (Zubrick *et al.*, 2010 ). Watt (2012) has written of the importance of developing and building people's ability to promote and protect their health through context-specific and supportive interventions as an important component of working towards reducing oral health inequalities. Although the SCT has traditionally focussed on an individual's perception of personal self-efficacy, Bandura (2004) has also written about the importance of social support and a sense of collective efficacy. Stating that people work together to improve the quality of their lives, he highlights the importance of a sense of collective efficacy in health promotion and disease prevention strategies (Bandura, 2004). This concept may be of relevance to Aboriginal health promotion in Australia and internationally, given the focus on strong interpersonal relationships and collective support that exist in Indigenous cultures. It is therefore possible that improving both individual and community-level efficacy beliefs may prove to be a fundamental component of addressing Aboriginal oral health disparities through culturally and community specific strategies.

In conclusion, measures of oral health-related self-efficacy and fatalism demonstrated community acceptability, acceptable face, content, criterion and known-groups validity, and internal reliability. Greater understanding of self-efficacy and fatalism may help to inform the development of more targeted and holistic health promotion programs, supporting improved self-efficacy and addressing fatalistic views of oral health as a core component of oral health and chronic disease self-management.

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