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Associations between discrimination and dental visiting behaviours in an Aboriginal Australian birth cohort

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Race-based discrimination is associated with a range of adverse health conditions among Indigenous Australians. Studies show links between race-based discrimination, and depression and anxiety as well as smoking, substance use, psychological distress and poor self-assessed health status.[1] The Australian Medical Association reported evidence of 'inherent discrimination' in the Australian health system, finding the medical attention received by Indigenous Australians is frequently 'culturally intolerant' and unwelcoming.[2]

There is limited information regarding the role of discrimination in access to dental services among Indigenous Australians. We explored whether (i) there were associations between dental service access and self-reported discrimination and (ii) if yes, whether associations between discrimination and access to dental services persisted after adjustment for other risk factors. Participants were Wave-3 members of the Aboriginal Birth Cohort study, a prospective longitudinal investigation of Indigenous Australians living in the Northern Territory's Top End. Participants completed a self-report dental questionnaire. The item pertaining to use of dental services was 'Have you seen a dentist before?', with response options of 'yes' and 'no'. Participants additionally completed a social and emotional well-being instrument. Based on items used in the National Aboriginal and Torres Strait Islander Health Survey, respondents were asked if they had ever been treated unfairly or discriminated against because they were Aboriginal. Response options were dichotomised into 'not really or little bit' and 'fair bit and lots of times'. Other risk factors included sex, age, household size, oral health impairment and dental fear. Explanatory variables, which were all significant at the $P<0.1$ level in bivariate analysis, were entered into a logistical regression model. Adjusted odds ratios were considered statistically significant when *p*-values derived from the Wald statistic were ≤ 0.05. Data were analysed using PASW version 18.

Of the 468 participants for whom vital status was obtained, 442 provided complete information in the self-report dental questionnaire, which was 95% of the total number of participants examined in Wave-3 and 69% of those recruited at birth (i.e. Wave-1) who were still alive. Data on self-reported discrimination were available for 336 (76%) of those individuals and all subsequent analyses were limited to this sample. There were no significant dental utilisation differences between those included and not included in the analysis. Eighteen participants (5.4%) reported having never visited a dentist before (Table 1) while 31 (9.2%) reported race-based discrimination. In bivariate analyses, the only significant association with having never visited a dentist before was self-reported discrimination. This

finding persisted after adjusting for other risk factors in multivariate modeling, with those reporting discrimination being 3.8 times more likely to have never visited a dentist before.

The results of this exploratory study highlight the importance of examining discrimination-related factors when determining the broad range of barriers associated with poor Indigenous dental service utilisation rates. The findings additionally support inclusion of discrimination awareness and anti-discrimination initiatives when developing interventions aimed at fostering improved uptake in dental service utilisation among Indigenous Australian groups.

The study has a number of limitations. The outcome of 'not visited' was quite uncommon at 5.4%, as was the discrimination variable at 9.2% of respondents. While this reduces the external validity of the study (i.e. its population representativeness), it does not limit the internal validity; small sample sizes are a problem because they make statistically significant findings much more unlikely. When significant differences do occur, as with our study, the findings are arguably more convincing as such an association must be strong to be significant in such a small sample. It is also important to note that a single item does not capture the full extent of discrimination or its impact on health and health service utilisation.

Although more sophisticated designs among larger cohorts are necessary to explore these findings further, it is notable that discrimination was the only significant risk factor and that this persisted after adjustment in multivariate modelling. International research suggests that experiencing race-based discrimination in healthcare settings leads to disengagement with, and avoidance of, healthcare in the future.[3] Participants' views in a qualitative study suggest that formation of a strong relationship between oral health service providers and Indigenous clients is paramount to the utilisation of, and satisfaction with, these services for Indigenous clients.[4]

In summary, the findings from this exploratory research suggest that race-based discrimination may play a role in the under-utilisation of dental services among Australian Aboriginal young adults. Further research with larger samples is required to more clearly elucidate the causal pathways between these outcomes.

References

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Table 1: Dental visiting behaviours of ABC study participants by dental-related factors.

	Number of participants (%)	Number not visited dentist before (%)	Unadjusted OR (95% CI)	Adjusted OR[c] (95% CI)
Total	336 (100.0)	18 (5.4)		
Socio-demographic				
Sex				
Male	156 (46.4)	7 (4.5)	1	1
Female	180 (53.6)	11 (6.1)	1.39 (0.52–3.67)	1.42 (0.50–4.05)
Age				
16-18 years	234 (69.6)	15 (6.4)	1	1
19-20 years	102 (30.4)	3 (2.9)	0.44 (0.13–1.56)	0.44 (0.12–1.60)
Household size				
Four or less people	70 (20.8)	1 (1.4)	1	1
Five or more people	247 (73.5)	14 (4.8)	4.78 (0.62–36.69)	4.39 (0.56–34.56)
Oral health impairment[b]				
No	226 (67.3)	15 (6.6)	1	1
Yes	110 (32.7)	3 (2.7)	2.54 (0.72–8.95)	2.49 (0.66–9.34)
Would you feel scared about going to the dentist?				
No	138 (41.1)	4 (2.9)	1	1
Little bit, fair bit, heaps	198 (58.9)	14 (7.1)	2.55 (0.82–7.92)	1.70 (0.52–5.61)
Have you been treated unfairly or discriminated against because you are Aboriginal?				
Not really or little bit	305 (90.8)	13 (4.3)	1	1
Fair bit or lots	31 (9.2)	5 (16.1)[a]	4.32 (1.43–13.06)[a]	3.79 (1.18–12.06)[a]

Notes:

a p<0.05

b 'Do you have any trouble with your teeth, gum or jaw right now?' OR 'Since the last Wet, have you stopped eating some foods because they hurt your teeth?' OR a response of 'Some or none good' to the item 'Do you think your teeth are looking ok?'

c Adjusting for all other covariates in the model