Ellershaw, Anne
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Oral health and access to dental care in Australia – comparisons by level of education

Australian Research Centre for Population Oral Health, The University of Adelaide, South Australia*

Introduction

It is well established that certain groups within the Australian population have poorer oral health and are disadvantaged in respect to access to regular preventive dental care. The purpose of this study was to investigate variations in oral health status by level of education, and determine whether people with lower education levels experience disadvantage in respect to access to dental services. For this study, indicators of oral health were self-reported dental health status, toothache experience, avoidance of foods due to problems with teeth or mouth and satisfaction with dental appearance. Indicators of access to dental services were time since last dental visit, usual reason for dental visit, dental treatment received, dental insurance and affordability of dental care.

Methodology

Data presented in this article were sourced from the National Dental Telephone Interview Survey 2002. This survey involved a random sample of 7312 residents aged five years and over from all States and Territories of Australia. Telephone numbers were obtained from the electronic white pages product Australia on Disc.[1] Records were stratified by State and region (metropolitan/rest of State) and a random sample of telephone numbers were selected from each stratum. A random digit was added to each selected telephone number to derive the final telephone number to be contacted, ensuring residents not listed in the electronic white pages were included in the survey.

Data were weighted to account for the different probabilities of selection inherent in the survey design, and to ensure the survey estimates reflected the estimated residential population age/sex distribution. Further information can be found in the National Dental Telephone Interview Survey 2002 Technical Report.

Participants were asked to report the highest level of schooling they had completed, and for those who completed further study, the highest qualification they had completed since leaving school. Participants were then classified according to the highest level of education they had attained. The information in this article has been restricted to four education levels. Group 1 consists of adults whose highest level of education was Year 10 or below (labelled Year 10 or below). Group 2 consists of adults who have completed up to Year 10 schooling and completed a trade certificate or apprenticeship (labelled Trade certificate/Apprenticeship). Group 3 consists of adults who have completed Year 11 or 12 schooling but have undertaken no further study (labelled Year 11 or 12). Group 4 consists of adults who have completed a university degree or higher (labelled Uni degree or higher). Data have also been restricted to dentate people (i.e., those with natural teeth remaining) aged 25–64 years to exclude adults who are still completing studies.

Results

Where attention is drawn to differences by educational level, the results were statistically significant at the 5 per cent level unless indicated otherwise.

Self-reported dental health status

Respondents were asked to rate their dental health using a six-point scale ranging from 'Excellent' to 'Very poor'. The percentage of dentate adults aged 25–64 years who rated their dental health 'Very poor', 'Poor' or 'Average' is presented in Fig 1.

Self-reported dental health status varied significantly with level of education. People with an education level of Year 10 or below (30 per cent) and those who had completed a trade certificate/apprenticeship (28 per cent) were significantly more likely to rate their dental health as 'Very poor', 'Poor' or 'Average' than university graduates (17 per cent).

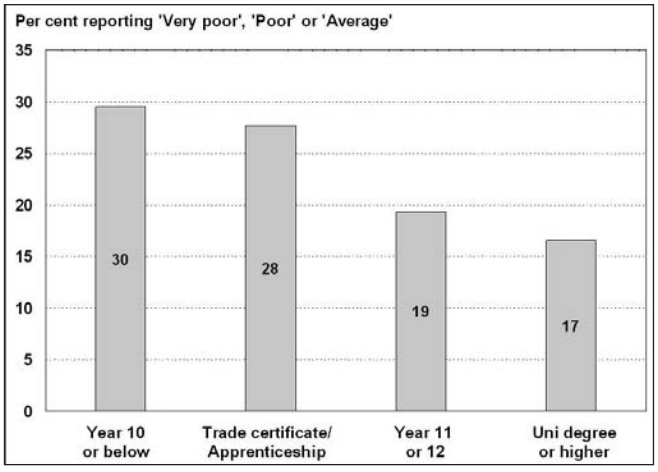

Fig 1. Self-reported dental health status by level of education, dentate adults aged 25–64 years.

*Prepared by Anne Ellershaw.

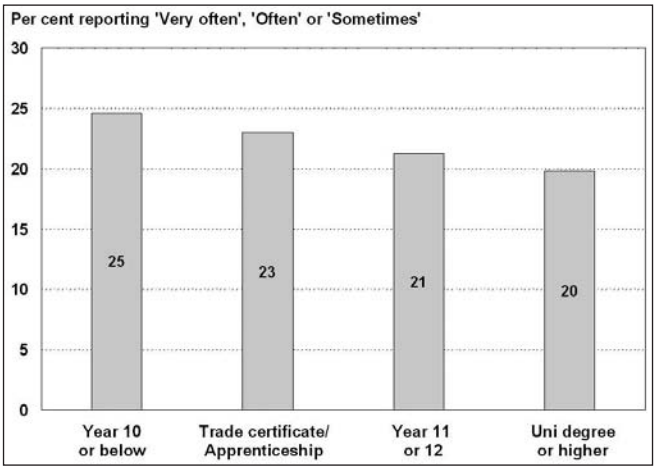

Fig 2. Uncomfortable about appearance of teeth/mouth by level of education, dentate adults aged 25–64.

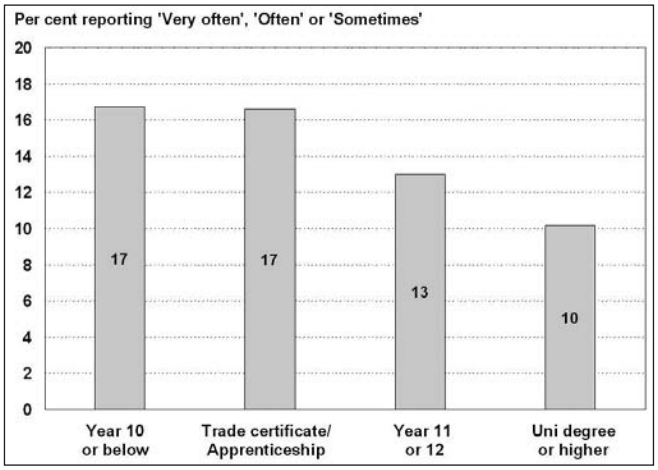

Fig 4. Avoided certain foods due to problems with teeth/mouth by level of education, dentate adults aged 25–64 years.

Uncomfortable about dental appearance

Level of education had little influence on whether a person reported they felt uncomfortable about their dental appearance (Fig 2). Between 20 to 25 per cent of people reported they had felt uncomfortable with the appearance of their teeth or mouth 'Very often', 'Often' or 'Sometimes' during the last 12 months irrespective of level of education.

Experienced toothache

The percentage of people who reported they had experienced toothache during the last 12 months did not vary significantly by education level (Fig 3). People with a trade certificate/apprenticeship were most likely to report toothache experience (16 per cent), but this was not significantly higher than that reported by university graduates (11 per cent).

Avoided certain foods

The percentage of people who reported they had avoided eating certain foods due to problems with their teeth or mouth during the last 12 months is presented in Fig 4. Those with lower educational qualifications were significantly more likely to report avoiding certain foods (17 per cent) than university graduates (10 per cent).

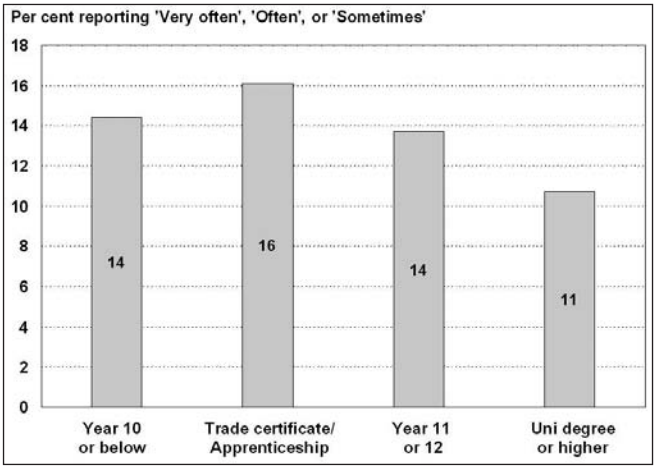

Fig 3. Experienced toothache during last 12 months by level of education, dentate adults aged 25–64 years.

Time since last dental visit

Regular visits to the dentist can help prevent and control dental disease. The time elapsed since participants made their last dental visit are presented in Fig 5. Dental visiting patterns varied significantly by education level.

People who had completed Year 10 or below (72 per cent) and those who had completed a trade certificate or apprenticeship (70 per cent) were significantly less likely to have visited a dentist in the last two years than people with a university degree (82 per cent). The trade certificate/apprenticeship group were the least frequent visitors with 17 per cent reporting they had not visited a dentist within the last five years.

Usual reason for dental visit

A person's reason for seeking dental care influences the type of care they receive. Those seeking care for a check-up benefit from early detection and receive preventive services while those who usually seek care for a problem may receive less complete treatment and fewer preventive services.

Problem-oriented visiting varies significantly by level of education (Fig 6). The lower the level of education the more likely a person is to usually visit the dentist for a problem. People who had completed Year 10 or below (65 per cent) or

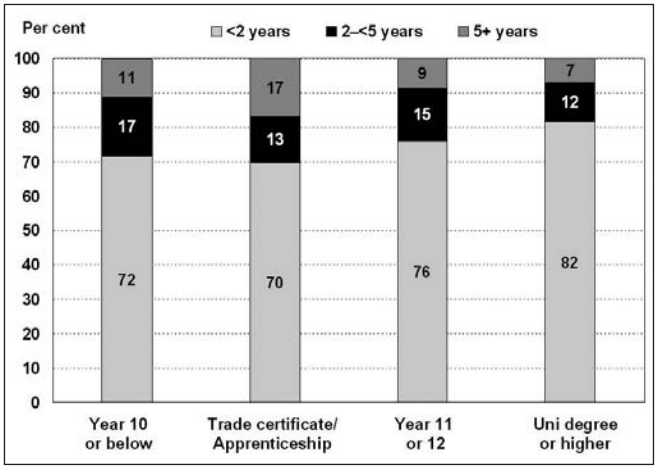

Fig 5. Time since last dental visit by level of education, dentate adults aged 25–64 years.

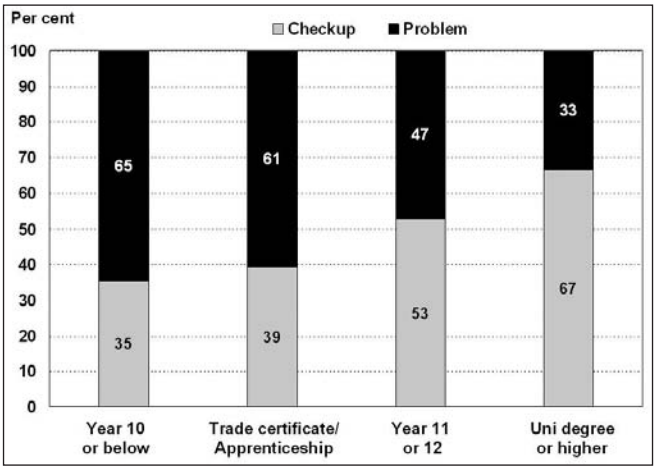

Fig 6. Usual reason for dental visit by level of education, dentate adults aged 25–64 years.

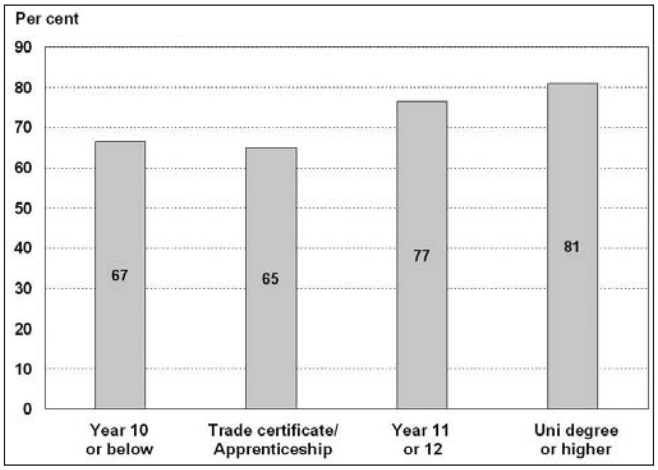

Fig 8. Had scale and clean by level of education, dentate adults aged 25–64 years who visited in the last year.

who had completed a trade certificate or apprenticeship (61 per cent) were almost twice as likely to usually visit the dentist for a problem as university graduates (33 per cent). Similarly, those that had completed Year 11 or 12 (47 per cent) were 1.4 times more likely to be problem-oriented visitors than university graduates. However, the Year 11 or 12 group were significantly less likely to usually visit for a problem than those with lower education levels.

Dental treatment received

Respondents who made a dental visit in the last year were asked about the treatment they received. Extraction of a tooth indicates that previous preventive and restorative treatment has been unsuccessful. Approximately 18 per cent of dentate adults aged 25–64 years, who visited a dentist in the last year, received an extraction.[2]

Extraction rates varied significantly across education level (Fig 7). People who had completed a trade certificate or apprenticeship (27 per cent) and those who had completed Year 10 or below (23 per cent) were significantly more likely to have received an extraction than people who had completed a university degree (9 per cent). There was no significant difference between extraction rates for people who had completed Year 11 or 12 (15 per cent) and those with a lower level of education.

Figure 8 shows an increase across education levels in the percentage of people who had received a scale and clean during the last 12 months. Of those who made a dental visit during this period, university graduates (81 per cent) were significantly more likely to have received a scale and clean than people who had completed a trade certificate/apprenticeship (65 per cent) or Year 10 or below (67 per cent). Over three-in-four (77 per cent) people who had completed Year 11 or 12 received a scale and clean, slightly higher than the national average (73 per cent).[2]

Dental insurance

Dental insurance is an important factor in influencing use of dental services. Those with dental insurance are more likely to have visited a dentist within the last two years and to have visited for a check-up rather than a problem.[2] The percentage of dentate adults who had private dental insurance is presented in Fig 9.

Dental insurance coverage increased significantly with level of education. University graduates were significantly more likely to have dental insurance (60 per cent) than those

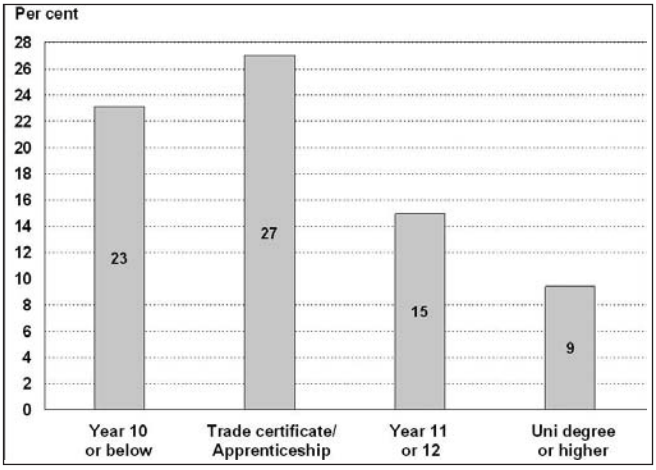

Fig 7. Had extraction by level of education, dentate adults aged 25–64 years who visited in the last year.

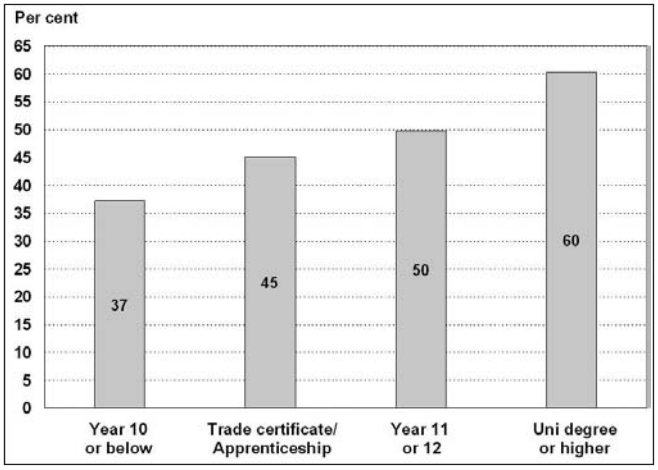

Fig 9. Dental insurance by level of education, dentate adults aged 25–64 years.

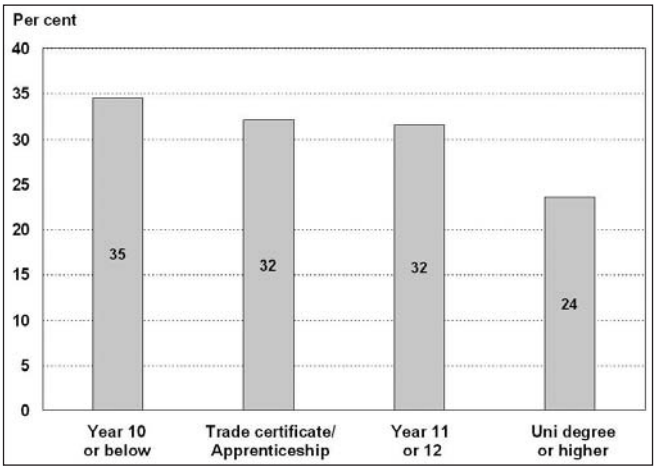

Fig 10. Avoided or delayed visiting due to cost by level of education, dentate adults aged 25–64 years.

with lower educational qualifications. Similarly, people that had completed Year 11 or 12 (50 per cent) had significantly higher dental insurance coverage than people who had completed Year 10 or below (37 per cent).

Affordability of dental care

Cost is often cited as a deterrent to accessing regular preventive dental care. Respondents were asked whether they had avoided or delayed visiting a dental professional during the last 12 months because of cost (Fig 10).

University graduates (24 per cent) were significantly less likely to have avoided or delayed visiting a dentist because of cost than people with a lower level of education. People who had completed Year 11 or 12 (32 per cent) were equally likely to report they had avoided or delayed a dental visit due to cost as those that had completed a trade certificate/apprenticeship (32 per cent) or Year 10 or below (35 per cent).

Summary

There was significant variation in two of the four oral health indicators by education level. People with an education level of Year 10 or below and those who had completed a trade certificate/apprenticeship were significantly more likely to rate their dental health as 'Very Poor', 'Poor' or 'Average' than people who had completed a university degree. There was little difference between university graduates and people who had completed Year 11 or 12. People with lower education levels (Year 10 or below or trade certificate/apprenticeship) were also significantly more likely to report they had avoided eating certain foods during the last 12 months due to problems with their teeth or mouth than university graduates.

The prevalence of toothache experience and the percentage of people reporting they had felt uncomfortable about their dental appearance during the last 12 months did not vary significantly by education level.

People with lower education levels experience disadvantage in respect to access to dental services with significant variation in all access indicators by education level. People who had completed Year 10 or below and those who had completed a trade certificate/apprenticeship were significantly less likely to have recently visited a dentist than university graduates. Problem-oriented dental visiting also varied significantly by education level. As education level increased the prevalence of people reporting they usually visit the dentist for a problem decreased significantly. University graduates were significantly less likely to have had an extraction during the last 12 months than people who had completed Year 10 or below or completed a trade certificate/apprenticeship.

Dental insurance coverage increased significantly with level of education. University graduates were significantly more likely to have dental insurance than those who had completed Year 11 or 12. Similarly, those with Year 11 or 12 schooling were significantly more likely to have dental insurance than those who had completed Year 10 or below. University graduates were also significantly less likely to report they had avoided or delayed visiting a dental professional during the last 12 months due to cost than people with a lower level of education.

References

1. Dependable Database Data Pty Ltd. Australia on Disc. November 2001 release.
2. Carter KD, Stewart JF. National Dental Telephone Interview Survey 2002. AIHW Cat No. DEN 128. Adelaide: AIHW Dental Statistics and Research Unit, The University of Adelaide, 2003.

Address for correspondence:
Ms Anne Ellershaw
Australian Research Centre for Population Oral Health
School of Dentistry
The University of Adelaide
Adelaide, South Australia 5005
Phone: + 61 8 8303 5438
Fax: + 61 8 8303 4858
Email: anne.ellershaw@adelaide.edu.au