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 and Research Unit  
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## Oral health status of middle-aged adults



THE UNIVERSITY  
 OF ADELAIDE  
 AUSTRALIA



**T**his report provides information on the oral health status of late middle-aged adults living in Adelaide in 2004–05. Data are presented on decayed, missing and filled teeth; overall caries experience and periodontal (gum) disease by dental behaviour; dental visiting pattern; sociodemographic data; and socioeconomic status from a study of 45–54-year-olds. The study shows that dental problems are generally associated with poorer self-care and with socioeconomic disadvantage.

### Summary

- Higher numbers of decayed teeth were seen for those who did not clean between their teeth (e.g. use floss, tape or toothpick), did not use a mouth rinse, brushed their teeth less than 8 times per week, had their last dental visit for relief of pain, had their last visit 12+ months ago, had household incomes less than \$80,000 per annum, were government concession cardholders (e.g. pensioner or unemployed), did not have a diploma or degree, and were male.
- Number of missing teeth was higher for those who did not clean between their teeth, brushed their teeth less than 8 times per week, had their last dental visit for relief of pain, had household incomes less than \$80,000 per annum, were government concession cardholders, and did not have a diploma or degree.
- Number of filled teeth was higher for those who had their last dental visit for a check-up, had their last visit less than 12 months ago, were not government concession cardholders, spoke English as their main language at home, and were born in Australia.
- The overall level of caries experience as measured by DMFT was higher for those who brushed their teeth less than 8 times per week, had household incomes less than \$80,000 per annum, were government concession cardholders, did not have a diploma or degree, and were born in Australia.

- Periodontitis was more prevalent among those who smoked daily or occasionally, brushed their teeth 0–7 times per week, last visited for relief of pain, had their last visit 12+ months ago, had a household income of less than \$80,000, were concession cardholders, spoke a language other than English as the main language at home, were born overseas, and were male.

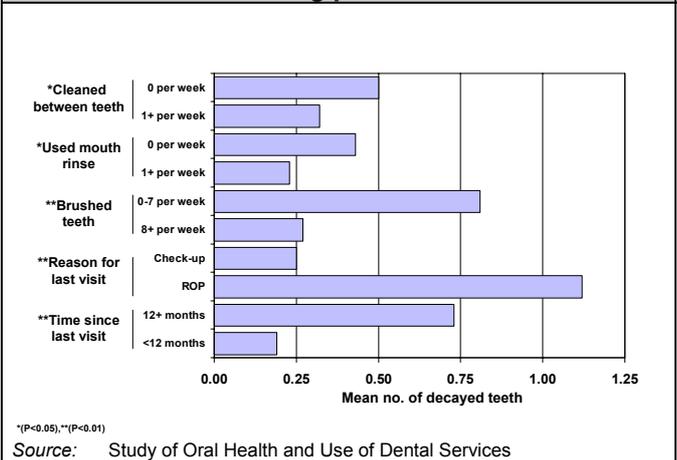
### Data collection

Findings presented in this publication are based on data collected on a random sample of persons from Adelaide, South Australia, in 2004–05. See the back of the report for details on methods and response.

### Decayed teeth

The number of decayed teeth is presented by dental behaviour and dental visiting pattern in Figure 1. Dental behaviour was related to numbers of decayed teeth, with more decay among persons who did not clean between their teeth (e.g. use floss, tape or toothpick), did not use a mouth rinse, and brushed their teeth less than 8 times per week.

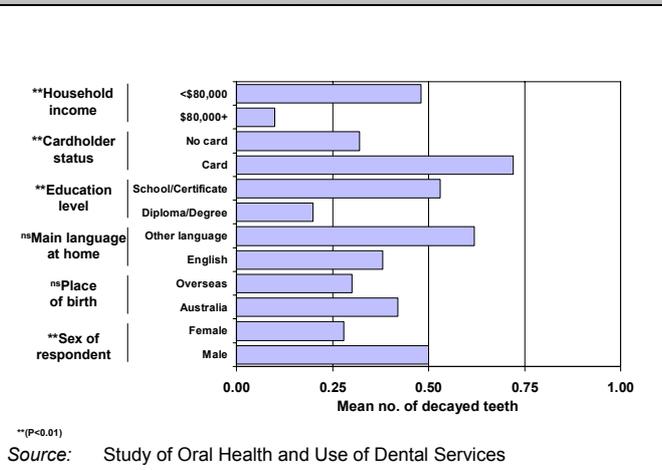
**Figure 1: Decayed teeth by dental behaviour and dental visiting pattern**



Decayed teeth were also associated with dental visiting pattern. Higher numbers of decayed teeth were seen for those who had their last dental visit for relief of pain, and had their last visit 12+ months ago.

The number of decayed teeth is presented by sociodemographic data and socioeconomic status in Figure 2. Higher numbers of decayed teeth were observed for those with household incomes less than \$80,000 per annum, government concession cardholders (e.g. pensioner or unemployed), persons who did not have a diploma or degree, and males.

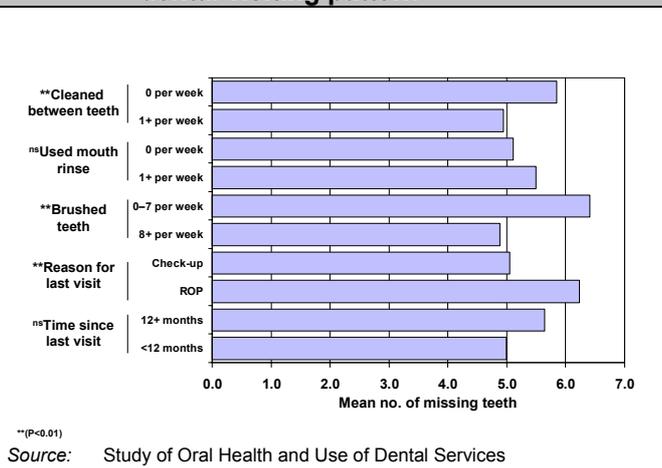
**Figure 2: Decayed teeth by sociodemographic data and socioeconomic status**



### Missing teeth

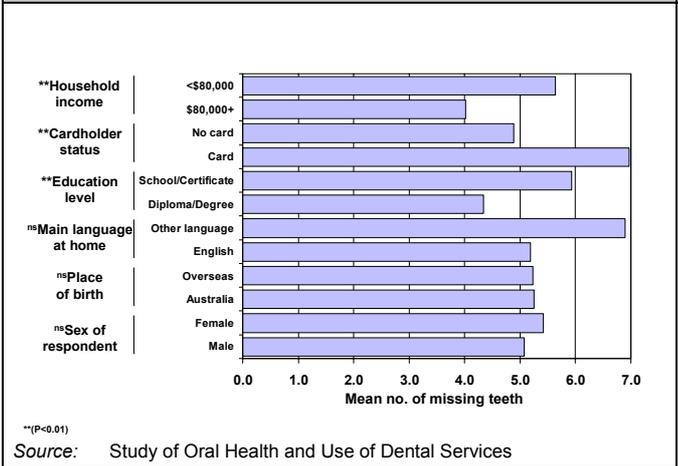
The number of missing teeth is presented by dental behaviour and dental visiting pattern in Figure 3. Numbers of missing teeth were higher for those who did not clean between their teeth, brushed their teeth less than 8 times per week, and had their last dental visit for relief of pain.

**Figure 3: Missing teeth by dental behaviour and dental visiting pattern**



The number of missing teeth is presented by sociodemographic data and socioeconomic status in Figure 4. Higher numbers of missing teeth were seen among those who had household incomes less than \$80,000 per annum, were government concession cardholders, and did not have a diploma or degree.

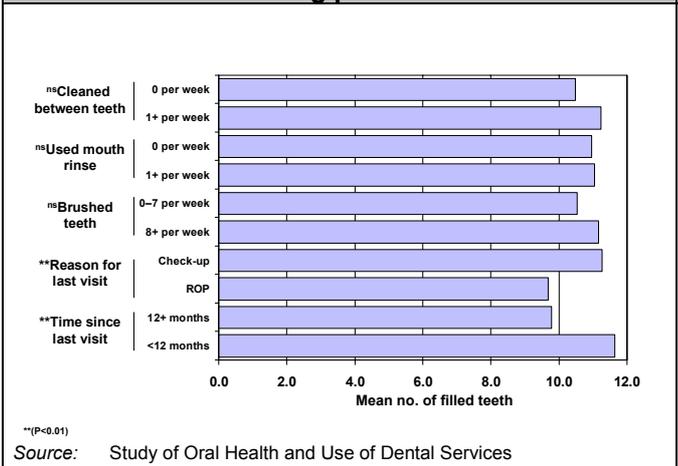
**Figure 4: Missing teeth by sociodemographic data and socioeconomic status**



### Filled teeth

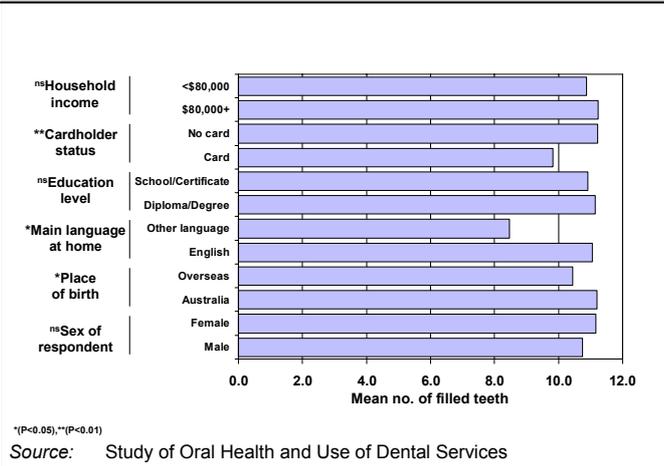
The number of filled teeth is presented by dental behaviour and dental visiting pattern in Figure 5. Numbers of filled teeth were higher for those who had their last dental visit for a check-up, and had their last visit less than 12 months ago.

**Figure 5: Filled teeth by dental behaviour and dental visiting pattern**



Numbers of filled teeth are presented by sociodemographic data and socioeconomic status in Figure 6. There were higher numbers of filled teeth for those who were not government concession cardholders, and who spoke English as their main language at home.

**Figure 6: Filled teeth by sociodemographic data and socioeconomic status**

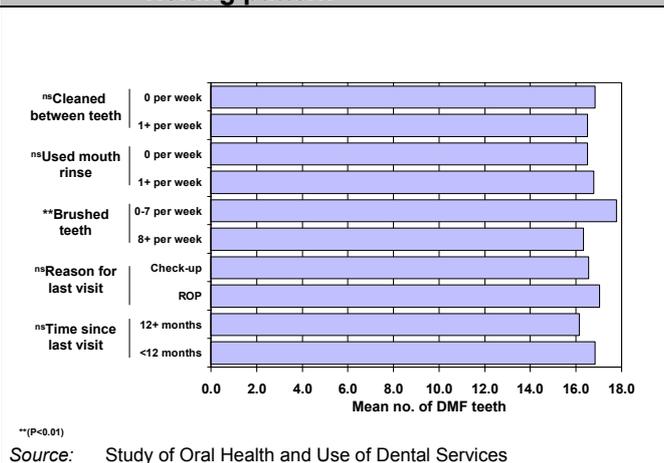


Having looked at the separate components of decayed, missing and filled teeth, the next section considers overall caries experience using the combined components of decayed, missing and filled teeth in the DMFT index.

### Caries experience

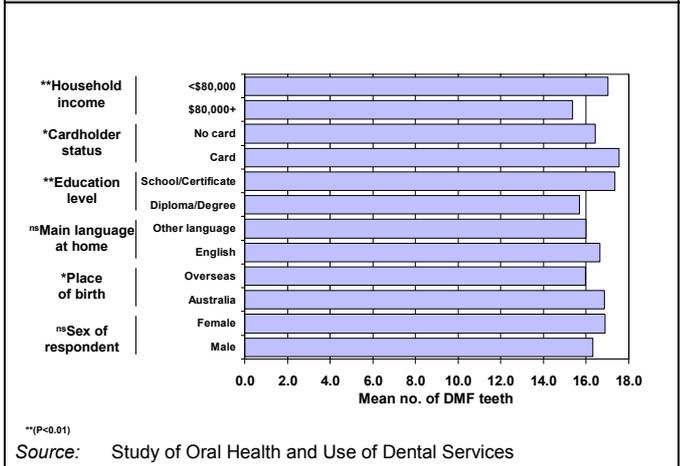
Overall caries experience as measured by the DMFT index is presented by dental behaviour and dental visiting pattern in Figure 7. The overall level of caries experience as measured by DMFT was higher for those who brushed their teeth less than 8 times per week.

**Figure 7: DMF by dental behaviour and dental visiting pattern**



The mean number of decayed, missing and filled teeth (DMFT) is presented by sociodemographic data and socioeconomic status in Figure 8. Overall caries experience was higher for those with household incomes less than \$80,000 per annum, government concession cardholders, those who did not have a diploma or degree, and those who were born in Australia.

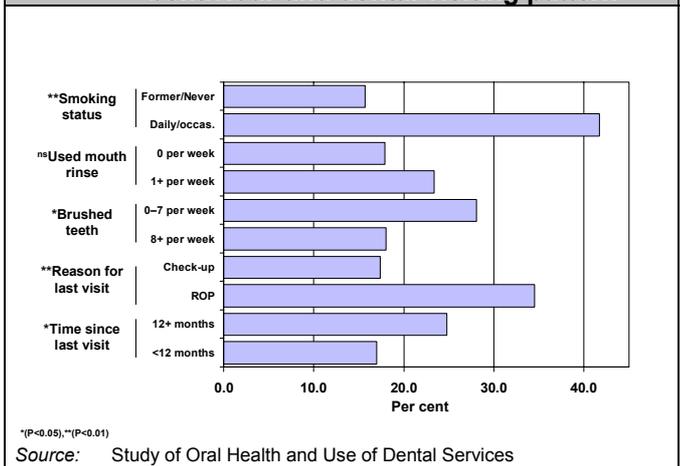
**Figure 8: DMF by sociodemographic data and socioeconomic status**



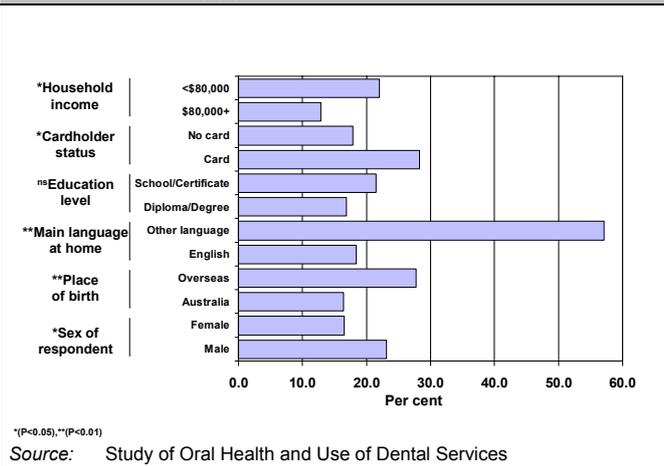
### Periodontal (gum) disease

This section looks at periodontal or gum disease, using a case definition for periodontitis of 2 or more sites with periodontal loss of attachment of 5+ mm and 1 or more sites with periodontal pocket depth of 4+ mm. The percentage of persons with periodontitis is presented by dental- or health-related behaviour and dental visiting pattern in Figure 9. Periodontitis was more prevalent among those who smoked daily or occasionally, brushed their teeth 0-7 times per week, last visited for relief of pain, and had their last dental visit 12+ months ago.

**Figure 9: Periodontitis by dental- or health-related behaviour and dental visiting pattern**



The percentage of persons with periodontitis is presented by sociodemographic data and socioeconomic status in Figure 10. Periodontitis was more prevalent among those who had a household income of less than \$80,000, were concession cardholders, spoke a language other than English as the main language at home, were born overseas, and were male.

**Figure 10: Periodontitis by sociodemographic data and socioeconomic status**

## Data collection methods and response

A random sample of 45–54-year-olds from Adelaide was surveyed by self-complete questionnaire in 2004–05 with up to four follow-up mailings to non-respondents (n = 879, response rate = 43.8%). Prior to the commencement of oral examinations, all dental examiners participated in training sessions where the same volunteer subjects were examined by each dentist in order to compare their results and calibrate their decisions. Oral examinations were performed on 709 persons (completion rate = 80.7%). Re-examinations were performed on 11 cases to assess reliability. Intraclass correlation coefficients (ICC) of reliability, which provide indicators of assessors' reliability, were excellent for DMFT (ICC = 0.84), missing teeth (ICC = 0.94) and filled teeth (ICC = 0.78); and good for decayed teeth (ICC = 0.59). Reliability was excellent for gingival recession (ICC = 0.79), pocket depth (ICC = 0.96) and loss of attachment (ICC = 0.95).

To assess representativeness of the study, the study sample is compared in Table 1 with population data on 45–54-year-olds from Adelaide from the 2002 National Dental Telephone Interview Survey. Study participants generally showed a close approximation to the population profile, with slightly fewer numbers of teeth, but little difference in denture wearing compared to the population. Study participants had a slightly lower percentage visiting in the last 12 months and fewer visits in the last 12 months, as well as a lower percentage that visited privately at the last visit, but there was little difference in the percentage receiving check-ups. There were small differences in the percentages of females, Australian-born, or of Indigenous status,

but study participants had a slightly higher percentage speaking English as the main language at home as well as a slightly higher percentage of cardholders, but there was little difference in household income.

**Table 1: Comparison of study with population<sup>(a)</sup>**

	Population	Study
<b>Oral health status</b>		
No. of teeth (mean)	26.9	25.4
Upper denture (%)	13.7	13.6
Lower denture (%)	5.8	6.4
<b>Dental visiting pattern</b>		
Last visit <12 months (%)	65.4	61.5
Check-up at last visit (%)	41.7	43.4
Visits in last year (mean)	1.8	1.5
Last visit private (%)	95.2	86.1
<b>Dental behaviour</b>		
Brushed 8+ times/week (%)	—	78.7
Mouth rinse 1+ times/week (%)	—	26.4
Cleaned between teeth (%)	—	32.1
<b>Sociodemographic data</b>		
Female (%)	51.2	52.0
Australian-born (%)	70.8	70.9
Indigenous (%)	1.3	0.4
English main language (%)	91.9	95.4
Education: diploma/degree (%)	—	42.3
<b>Socioeconomic status</b>		
Concession cardholder (%)	15.4	19.0
Household income \$80,000+ (%)	24.5	23.8

(a) National Dental Telephone Interview Survey, 2002

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*The AIHW Dental Statistics and Research Unit (DSRU) is a collaborating unit of the Australian Institute of Health and Welfare established in 1988 at The University of Adelaide, located in the Australian Research Centre for Population Oral Health (ARCPOH), School of Dentistry, The University of Adelaide. DSRU aims to improve the oral health of Australians through the collection, analysis and reporting of information on oral health and access to dental care, the practice of dentistry and the dental labour force in Australia.*

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