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New Zealanders' Opinions on Public Funding for Adult Dental Care

Ling M, Soon S, Thomson WM

Abstract

Background: Despite increased attention on public funding for adult dental care, little is known of the New Zealand public's opinions on the issue. This study used the data from the 2009 New Zealand Oral Health Survey to investigate the general public's opinions of public funding for adult dental care in New Zealand.
Methods: Information on the New Zealand public's opinions of public funding for adult dental care was collected as part of the 2009 national oral health survey. The two survey questions which were used were: (1) "How important is it to you that the government spends money on improving the oral health of adults in New Zealand" (Response options: very important, somewhat important, neutral, not very important, not important at all, don't know); and (2) "Are there some groups of adults in New Zealand who you think should be entitled to lower cost dental care, and if yes, who are they?". Data were analysed using survey weighting.
Results: 80% of the adult population felt that there were some groups in New Zealand who should be entitled to lower cost dental care. Approximately 6 out of 10 adults who felt that also felt that it was very important that the Government spent money on improving adult oral health. Among the latter, the only apparent difference was by ethnicity, where a higher proportion of Pacifika adults felt that there should be subsidised dental care for certain groups.
Conclusion: Most New Zealanders prefer Government involvement in subsidising dental care, particularly for certain 'in-need' groups. The findings reinforce the need for greater emphasis on improving access to dental care for adults.

Introduction

In dentistry, users of dental services can be categorized into routine attenders and episodic attenders (Gilbert et al., 2000). People who are routine users of dental care have better oral health, with research showing that, at any given age, routine attenders have better-than-average oral health, fewer teeth missing due to caries, and lower Decayed Surface (DS) and Decayed-Missing-Filled Surfaces (DMFS) scores (Thomson et al., 2010). Promoting regular dental visits is one of the key principles of preventive dentistry (Murray, 1996). Internationally, however, only about half of the Western adult population are routine attenders (Jamieson and Thomson, 2002), and the rates are lower among men and in particular social, ethnic, or age groups (Roberts-Thomson et al., 1995).

The cost of dental care has been identified as a key barrier to accessing oral health services in New Zealand (Ministry of Health, 2010), with adult oral care being funded largely through private household expenditure (Thomson, 2001). In the most recent New Zealand national oral health survey, 44.1% of adults had avoided dental care due to cost in the previous year, and 25.3% had forgone recommended routine dental treatment due to cost in the previous year; thus, the majority of New Zealand adults do not routinely use dental care (Ministry of Health, 2010).

Among the options for improving equity is greater Government involvement in the funding of adult dental care (Quiñonez et al., 2009). This issue gained considerably more salience after publication of New Zealand's third national oral health survey report (Ministry of Health, 2010), in which Chapter 10 highlighted the stark differences in oral health between adult Australians and New Zealanders. Despite the issue of dental care for adults having attracted considerable recent media attention and the opinions of many health professionals, the public's views have not been investigated. No studies (to date) have examined the New Zealand public's opinions on subsidised adult dental care. Hence, this study aimed to investigate the general public's opinions of publicly-funded/subsidised dental care for adults in New Zealand, using a nationally representative sample.

Methods

The 2009 New Zealand Oral Health Survey (NZOHS) was a cross-sectional survey carried out as a follow-up to the 2006/07 New Zealand Health Survey (NZHS) (Ministry of Health, 2010). It included the sampling frame and target population from the 2006/07 NZHS, specifically the households that consented to future contact for further health-related surveys, and was defined to include only permanent private dwellings (households). A small number of households—namely those in meshblocks with fewer than nine occupied dwellings (according to the

[1] Edwards B (2018) Political Roundup: Pulling teeth – the fight for free dental care. New Zealand Herald. Accessed URL 19th September 2019 https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12154278; Furley T (2019) Health experts call for dental health reform in NZ. Accessed URL 19/09/2019… https://www.rnz.co.nz/news/national/384590/health-experts-call-for-dental-health-reform-in-nz ; Jenner B (2019) Demand for public dental care on the rise in Auckland. Accessed URL 19/09/2019… https://www.rnz.co.nz/news/national/384562/demand-for-public-dental-care-on-the-rise-in-auckland

2001 New Zealand Census of Population and Dwellings) and those located off the main islands of New Zealand (North, South and Waiheke)—were excluded for practical reasons. As this was a small number and was accounted for in the final estimates via survey weights, any possible bias is likely to be small and insignificant. Areas with higher proportions of Māori, Pacific or Asian peoples were also given a slightly higher chance of selection. In addition, the selected areas were randomly allocated to the four seasons of the year to minimise seasonality bias.

The survey comprised a computer-assisted face-to-face interview (CAPI) and a dental examination. The interview was conducted in participants' homes by a team of interviewers from CBG Health Research Limited (CBG) at a time that suited the interviewees. Interviewers typed responses directly into a laptop computer and show cards with pre-determined response categories were used to assist the participant where appropriate. The sampling procedures and derivation of sample weights have been described previously (Benn et al., 2015). Participation in the 2009 NZOHS was voluntary, relying on the goodwill of participants, and consent was obtained without coercion or inducement. Overall, a total of 4,906 New Zealanders (adults and children) participated in this survey, for which the response rate was 84% of those contacted for the NZOHS. This takes into account the fact that the sample had been drawn from the earlier NZHS for which the response rate was 68% and the overall response rate for the current study was 49% (Ministry of Health, 2010).

Interview questions sought participants' socio-demographic and dental service-use information, including sex, age, ethnicity, deprivation, education and dental visiting category. Participants were able to select more than one ethnicity category, and prioritised ethnicity data were not used; instead, the total response for ethnicity was used. Neighbourhood deprivation was determined using the New Zealand Index of Deprivation 2006 (NZDep2006; Salmond et al., 2007) and each participant was assigned to a deprivation quintile from lowest deprivation to highest deprivation. Education level was based on the highest level of education attained (primary, secondary or university).

The survey questions used in this study were: (1) "How important is it to you that the government spends money on improving the oral health of adults in New Zealand" (Response options: very important,

Table 1. Opinions on lower-cost dental care and on Government spending on improving adult oral health, by sociodemographic and dental service-use characteristics (brackets contain 95% CI)

	Feel that there are some groups in NZ who should be entitled to lower-cost dental care	Feel it is very important that Government spends money on improving adult oral health
Sex		
Male	78.1 (74.4, 81.4)	49.9 (45.4, 54.4)[a]
Female	80.9 (78.2, 83.3)	58.5 (55.8, 61.2)
Age group		
18-24	78.5 (67.8, 86.4)	58.1 (48.3, 67.4)
25-34	78.1 (70.7, 84.1)	57.0 (48.4, 65.2)
35-44	78.0 (72.7, 82.5)	55.5 (49.3, 61.5)
45-54	86.1 (80.4, 90.4)	60.1 (52.2, 67.4)
55-64	86.2 (79.9, 90.8)	59.8 (51.1, 68.0)
65-74	77.2 (68.3, 84.2)	47.6 (37.9, 57.5)
75+	78.7 (75.4, 81.6)	54.3 (50.3, 58.3)
Ethnicity		
European/Other	80.4 (77.5, 82.9)	54.2 (50.7, 57.7)[a]
Māori	83.2 (79.3, 86.5)	59.6 (54.1, 64.8)
Pasifika	88.6 (81.1, 93.4)[a]	77.3 (67.6, 84.7)[a]
Education level		
Primary only	79.0 (74.3, 83.1)	56.5 (50.6, 62.2)
Secondary	79.7 (76.9, 82.2)	57.0 (54.2, 59.7)
University	82.1 (77.2, 86.2)	52.0 (46.9, 57.1)
Deprivation quintile		
Lowest	78.7 (72.5, 83.8)	47.9 (40.6, 55.3)[a]
Second	79.0 (72.7, 84.2)	52.5 (45.5, 59.4)
Third	80.9 (75.2, 85.6)	57.1 (49.8, 64.0)
Fourth	85.1 (79.1, 89.6)	61.8 (55.3, 67.9)
Highest	81.5 (75.6, 86.3)	70.0 (63.6, 75.6)
Dental visiting		
Episodic user	80.5 (77.7, 83.0)	57.3 (54.1, 60.5)

somewhat important, neutral, not very important, not important at all, don't know); and (2) "Are there some groups of adults in New Zealand who you think should be entitled to lower cost dental care, and if yes, who are they?" (Response options: Pregnant women, People on benefits and low income, Elderly, Disabled, Everyone, Other, Don't know; respondents could select more than one response option for this question).

The statistical programme Stata (version 15.1) for Windows (Stata Corp, College Station, TX, USA) was used in these secondary data analyses. We weighted the data, generating descriptive statistics and cross-tabulating the survey data to describe and examine the sociodemographic and dental service-use characteristics of the population who supported lower-cost dental care. Levels of statistical significance were set at $P<0.05$.

Results

Data on the public's opinions on lower-cost dental care and the perceived importance of Government spending are presented in Table 1 by socio-demographic and dental service-use characteristics. Overall, most (80%) felt that there were some groups in New Zealand who should be entitled to lower cost dental care, and more than half of the population felt that it was very important to have Government spending on adult oral health. A consistent gradient was observed among the three different ethnic groups. In both instances, Pasifika had the greatest proportion of adults in support of the two statements, while European/Other adults had the lowest proportion of adults in support.

A higher proportion of females than males felt that there should be some groups in New Zealand who should

Table 2. Specific groups who should be entitled to lower cost dental care[a], by sociodemographic and dental service-use characteristics (brackets contain 95% CI)

	Groups who should be entitled to lower-cost dental care					
	Poor health	Pregnant women	Low-income	Older people	Disabled	Everyone
Sex						
Male	29.9 (25.9, 34.2)[b]	20.7 (16.3, 25.9)	69.1 (63.4, 74.2)	53.0 (48.0, 57.9)	32.0 (27.2, 37.2)	26.6 (22.2, 31.5)
Female	36.7 (33.2, 40.4)	25.4 (22.9, 28.1)	65.9 (63.2, 68.5)	55.0 (52.0, 57.9)	34.5 (31.3, 37.9)	30.1 (27.2, 33.2)
Age group						
18-24	26.6 (17.4, 38.4)[b]	12.1 (5.8, 23.5)[b]	47.7 (35.1, 60.7)[b]	26.5 (17.1, 38.7)[b]	20.2 (11.3, 33.3)[b]	53.5 (40.0, 66.4)[b]
25-34	31.8 (24.4, 40.2)	26.2 (18.7, 35.4)	66.0 (56.6, 74.2)	58.4 (49.3, 67.1)	32.4 (24.3, 41.6)	34.7 (25.3, 45.4)
35-44	30.8 (25.1, 37.1)	20.1 (15.5, 25.6)	66.2 (59.5, 72.3)	54.3 (48.0, 60.6)	32.1 (25.4, 39.7)	29.7 (24.0, 36.1)
45-54	41.4 (34.1, 49.1)	25.4 (19.6, 32.4)	71.9 (65.5, 77.4)	59.6 (52.1, 66.6)	38.4 (31.0, 46.4)	27.5 (21.9, 33.9)
55-64	26.0 (20.1, 33.0)	18.9 (13.4, 25.9)	68.1 (59.8, 75.5)	52.7 (42.7, 62.5)	26.9 (20.2, 34.8)	19.7 (14.4, 26.3)
65-74	43.3 (35.6, 51.4)	29.7 (21.4, 39.6)	70.1 (60.6, 78.1)	57.0 (49.4, 64.3)	34.1 (25.4, 44.0)	19.6 (13.8, 27.0)
75+	37.3 (33.1, 41.8)	27.3 (23.9, 31.1)	68.7 (65.2, 72.0)	57.4 (53.8, 60.8)	37.5 (33.6, 41.7)	26.5 (23.1, 30.2)
Ethnicity						
European/Other	34.8 (31.3, 38.4)[b]	23.4 (20.3, 26.9)[b]	68.3 (64.1, 72.1)[b]	53.6 (49.7, 57.4)	32.5 (28.8, 36.4)	27.6 (24.4, 31.1)[b]
Māori	37.5 (32.2, 43.0)	26.0 (21.1, 31.5)	62.6 (58.0, 67.0)	52.4 (47.7, 57.1)	31.3 (26.5, 36.6)	35.3 (30.5, 40.4)
Pasifika	28.0 (20.1, 37.5)	22.1 (14.4, 32.4)	51.4 (40.4, 62.3)[b]	53.9 (43.9, 63.6)	33.6 (24.6, 44.0)	42.3 (31.7, 53.7)[b]
Education level						
Primary only	37.7 (31.8, 44.0)	25.2 (20.1, 31.0)	62.1 (56.2, 67.7)[b]	57.0 (51.3, 62.6)	33.6 (27.8, 39.9)	30.6 (24.7, 37.1)
Secondary	33.7 (30.5, 37.0)	23.2 (20.6, 26.0)	65.1 (61.6, 68.5)	53.9 (50.9, 56.9)	33.5 (30.3, 36.9)	29.7 (26.5, 33.2)
University	36.4 (30.6, 42.6)	26.0 (21.0, 31.8)	75.8 (71.2, 79.8)	54.1 (47.5, 60.6)	34.8 (28.7, 41.4)	26.0 (21.4, 31.1)
Deprivation quintile						
Lowest	33.0 (25.8, 41.1)	20.9 (14.6, 28.9)	73.1 (64.1, 80.5)	60.3 (52.1, 68.1)	34.3 (26.6, 43.0)	20.3 (14.9, 27.2)[b]
Second	31.6 (25.1, 38.8)	20.1 (14.7, 26.9)	60.1 (53.1, 66.7)	47.6 (40.0, 55.4)	29.1 (22.8, 36.4)	34.2 (26.7, 42.6)
Third	30.5 (23.8, 38.2)	26.0 (20.0, 33.2)	67.1 (58.3, 74.9)	51.9 (43.1, 60.6)	26.9 (19.6, 35.6)	30.8 (23.3, 39.4)
Fourth	34.8 (28.4, 41.8)	18.6 (14.6, 23.5)	65.0 (57.0, 72.2)	52.9 (44.7, 60.9)	32.3 (25.4, 40.1)	31.4 (24.6, 39.2)
Highest	37.1 (30.1, 44.8)	27.5 (21.0, 35.1)	63.7 (56.2, 70.7)	49.2 (42.1, 56.3)	36.2 (29.3, 43.8)	36.4 (30.0, 43.3)
Dental visiting						
Episodic user	34.5 (31.1, 38.0)	23.7 (21.1, 26.6)	63.0 (59.4, 66.4)[b]	53.5 (49.9, 57.1)	33.2 (30.0, 36.5)	33.1 (29.7, 36.6)[b]
No visit previous year	35.0 (31.2, 39.0)	24.0 (21.2, 27.1)	64.7 (60.9, 68.4)	55.5 (51.4, 59.4)	32.9 (29.4, 36.6)	29.9 (26.5, 33.5)
All combined	**34.7 (32.0, 37.6)**	**24.0 (21.8, 26.4)**	**66.8 (64.4, 69.2)**	**54.4 (51.8, 57.0)**	**33.8 (31.0, 36.7)**	**29.1 (26.6, 31.7)**

[a]Footnote: Limited to those who felt that there are groups in who should be entitled to low cost dental care

[b]$P<0.05$

be entitled to lower cost dental care and felt that it was very important that the Government spends money on improving adult oral health. There was also a consistent gradient by deprivation level, whereby the proportion in support of the statement *'it is very important that the Government spends money on improving adult oral health'* was highest among the highest deprivation quintile and lowest among the lowest deprivation quintile. Those in the lowest deprivation quintile had the lowest proportion of adults in support of the two key statements. Overall, of those who felt that there are some groups in New Zealand who should be entitled to lower-cost dental care, about 6 in 10 also felt that it is very important that the Government invest in improving adult oral health.

Data on the public's opinions on which specific groups in New Zealand should be entitled to lower cost dental care are presented in Table 2 by sociodemographic and dental service-use characteristics. More females than males felt that those in poor health should be so entitled, but there were no other sex differences. Those in the youngest age group (18 to 24 years old) had the lowest proportion who felt that older people should be entitled to lower cost dental care, and consistently had the lowest support for 'in need' groups being entitled to lower cost dental care, but they also had the higher proportion supporting lower cost care for everyone. It can be noted that a greater proportion of females than males supported each 'in-need' group being entitled to lower cost dental care, with the exception of the low-income group. There was no clear gradient by age group or deprivation quintile in support for certain 'in-need' groups being entitled to lower cost dental care. It can also be seen that those in the highest deprivation quintile had the greatest proportion in support of certain groups being entitled to lower cost dental care, except in the case of older people and those on low incomes.

Discussion

This study investigated the New Zealand general public's opinions on publicly funded dental care for adults by using recent national survey data. Generally, most New Zealanders (78-89%), irrespective of their sociodemographic and dental service-use characteristics, felt that there are some adult groups in New Zealand who should be entitled to lower-cost dental care. However, a lower proportion supported Government involvement.

It is important to first consider the study's weaknesses and strengths. Considering the former, the NZOHS data were collected a decade ago, in 2009. Accordingly, these estimates of the New Zealand population's opinions may not necessarily represent those which currently prevail. This study was a secondary analysis; investigating the public's opinions on provision of State-subsidised adult oral health care was not the primary goal of the NZOHS. Thus, additional data and contextual information relating to such provision—such as mode of delivery, potential opportunity costs and changes in Government taxation policies—were not gathered but would have been useful. Consequently, these estimates may not be entirely accurate in assessing their overall perceived importance. The study's key strength is that, to date, it is the first to examine the New Zealand public's opinions on subsidised adult oral dental care at a population level using a broad data-set, and the findings are generalisable to the entire population. Moreover, the NZOHS 2009 is recognized as having the most accurate data (of all of the New Zealand national surveys of adults) to date, with a representative sample of 4906 participants and a sampling approach that accounted for potential sampling biases.

That a greater proportion of Pasifika adults were shown to support subsidised dental care for some groups in New Zealand (and also felt that it is important the Government spend money on improving the oral health of adults in New Zealand) is consistent with NZOHS findings that cost was a major barrier to dental service-use and attendance for Pasifika adults. This was to be expected, given that Pasifika (on average) are of lower socio-economic status and have poorer oral health than most New Zealanders (Ministry of Health, 2010). Somewhat surprisingly, though, a similar high proportion supporting Government involvement in subsidising dental care for adults was not observed among Māori, who also have poorer overall oral health (Ministry of Health, 2010). We are unable to account for this difference, but perhaps further investigation using qualitative or kaupapa Māori research approaches would be useful.

The observed deprivation-level gradients in opinions on which groups should be entitled to low cost dental care were also consistent with what is known about inequalities in dental utilisation (Reda et al, 2018; Ministry of Health, 2010), whereby the more deprived population groups experience poorer oral health and its impacts, and are less likely to visit the dentist, with cost being a major factor. The majority support for marked and consistent support of subsidised dental care for some groups and the perceived importance of Government spending likely stems from the high costs associated with dental care, with 44.1% of adults reporting they had avoided dental care in the previous 12 months due to cost (Ministry of Health, 2010). This observation is important because it reflects the need for greater emphasis on support for low-income individuals and their oral health. An anomalous finding was the lower-than-expected proportion of people in the highest deprivation level supporting subsidised dental care for low-income groups. This might be partly explained by lower social cohesion in more deprived areas (Eckhard, 2018).

The data reported here show a clear public mandate for Government intervention to increase access to care for particular adult groups in New Zealand. Policy-makers will need to be cognisant of this mandate while managing public and private expectations in a fiscally responsible manner.

More research/analysis should be conducted to explore in more detail the need and opinions on range and mode of delivery for Government-subsidised dental care for adults. A key player in the system is the dental profession, and little is known of New Zealand dentists' opinions on State involvement in dental care, or the extent to which they would be prepared to participate in any expansion of Government involvement in care for adults.

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Author details

Ling M BDS

Soon S BDS

Thomson WM BSc BDS MA MComDent PhD (corresponding author: murray.thomson@otago.ac.nz) Department of Oral Sciences, Sir John Walsh Research Institute, School of Dentistry, The University of Otago, New Zealand.