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Public Dental Service Utilisation in South Australia

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Abstract

In Australia, adults from low socioeconomic backgrounds are eligible to receive public-funded dental care. However, the severe rationing of public oral health resources has reduced the capacity of the public dental services to deliver timely and appropriate dental care. As a result, eligible adults are more likely to receive care for emergency dental problems which lacks the opportunity for more comprehensive and preventive dental care. Differential access to oral health care and differences in care for those receiving services contributes to a disproportionately higher burden of oral diseases and disorders in some segments of the population, in particular financially disadvantaged Australians and other minority groups in Australia. Inequalities in both oral health and in access to oral health services experienced by adult public dental patients are considered to be a major public health issue in Australia (National Health Strategy, 1992).

This thesis examines factors influencing the use of public-funded dental services in South Australia, particularly the use of emergency dental services among adults eligible for public-funded dental care in order to address the variance in use of services among adults eligible for public-funded dental care.

Aims: The aims of this research were to 1) investigate factors associated with the utilisation of public dental services by adults for emergency and general dental care, 2) examine longitudinal patterns of dental service use among adults eligible for public-funded dental care, and 3) measure and understand the factors which encourage and hinder dental service utilisation through examining the dental beliefs, values and attitudes of adults using public dental services and to predict dental visiting intentions and dental visiting behaviour.

Methods: For efficiency and practicability, this research drew on an existing and established sample of public dental patients recruited for the 'Relative Needs Index' study in 1999 (Spencer et al., 2002). The sample from this parent study and associated data acted as a baseline for this research.

There were three components to this research. Initial analyses for the first stage of this research were descriptive and involved describing the socio-demographic characteristics, oral health status and service characteristics of patients receiving public-funded

emergency and general dental care at baseline. In the second stage of this research, participants from the parent study were followed for up to 3½ years so as to examine longitudinal patterns of dental service use. Information pertaining to dental visits and treatment received at those visits was extracted from the EXACT management information system (MIS) in the South Australian Dental Service. Longitudinal analyses were used to establish a pattern of care seeking among the baseline sample and to subsequently identify groups of different attender types (i.e., emergency attender, general attender or emergency and general attender). Each participant in the parent study was also asked to complete a questionnaire assessing dental beliefs, values and attitudes – this formed the third stage of this research. The questionnaire was developed using the methods of the Theory of Planned Behaviour (TPB) and specifically measured intentions, attitudes, subjective norms and perceptions of behavioural control in relation to visiting the dentist. Patient clinical records were accessed via the EXACT MIS in order to determine whether or not the patient visited the dentist after returning the questionnaire. This avoided reliance on self-reported behaviour which can be subject to reporting bias. Overall, questionnaire respondents were followed for an average of 1.17 years to establish whether or not they visited the dentist after returning the questionnaire. This measure of actual dental attendance behaviour corresponded to the nature of the first course of care received post-questionnaire and was used as the dependent variable in the behaviour prediction model.

Results: ***Stage 1:*** Data collected as part of the parent study were used to describe socio-demographic characteristics, oral health status and service characteristics of patients receiving public-funded emergency dental care (n=427) and general dental care (n=471). Emergency and General dental care samples were reasonably homogenous with respect to socio-demographic characteristics with only educational attainment varying significantly between samples (Chi-square; P<0.01). Self-reported dental visiting behaviours (i.e., usual reason for visiting the dentist, time since last dental visit, place of last dental visit and frequency of dental visits) varied significantly (Chi-square; P<0.01). Oral health status data revealed that the emergency dental care sample had significantly more decayed teeth and hence unmet need than the general dental care sample, and also significantly more missing teeth than the general dental care sample (ANOVA; P<0.05). Types of services received also varied between emergency dental care and general dental care samples, with emergency patients receiving significantly more oral surgery services per course of

care, but significantly less diagnostic, endodontic, restorative and general services (ANOVA; $P<0.05$).

Stage 2: Data were extracted for 413 (96.7%) and 431 (91.5%) emergency dental care patients and general dental care patients at baseline respectively. There were statistically significant differences between emergency and general baseline samples with regards to the time taken to return for treatment after baseline, the number and type of courses of care received after baseline and the average time between courses of care. Some 70.7% and 51.3% of the emergency and general baseline sample respectively returned for subsequent treatment post-baseline. Of those who returned, 72.6% of the emergency baseline sample returned within the first 12 months compared to 40.3% of the general baseline sample. The majority of the emergency baseline sample (52.4%) and general baseline sample (63.8%) who returned for a visit only presented for emergency courses of care. Across the total sample followed, the attendance behaviour (i.e., emergency attender, general attender or both) for 69.4% and 48.7% of the emergency and general baseline samples respectively could be ascertained. The remaining 30.6% of the emergency sample and 51.3% of the general sample appeared to not have returned for dental care and so were left unclassified.

Stage 3: The sample was comprised of 517 people (adjusted response rate=67.4%) aged 54.9 years (± 16.3 years) who completed questionnaires assessing their dental visiting intentions, attitudes, subjective norms and perceptions of behavioural control (self-efficacy and perceived control measures). A confirmatory factor analysis demonstrated that the constructs of the TPB achieved discriminant validity. Furthermore, the measures of attitude, subjective norm and perceived behavioural control were significantly related to their belief-based measures, supporting the concurrent validity of the measures of TPB. A linear regression model demonstrated that attitudes, subjective norms, self-efficacy and perceived control were significant predictors of dental visiting intention. Perceived control and external control factors, which included barriers to dental care such as cost and waiting lists, were found to be significant predictors of dental visiting behaviour, particularly emergency dental attendance.

Conclusions: ***Stage 1:*** Dental visiting patterns and service provision patterns vary according to the nature of a dental visit.

Stage 2: Findings from component 2 of this research provide new information on dental attendance patterns and cycles of courses of care, especially emergency courses of care,

among adults accessing dental care within the public dental system, and highlight access problems to public dental care.

Stage 3: Adults using public dental services have strong positive attitudes, subjective norms and self-efficacy beliefs towards dental visiting. However, people perceive a lack of control over visiting the dentist, so efforts should be directed at eliminating the structural barriers that currently exist. Reducing external barriers to dental care will improve access to dental care for many of these adults and ultimately improve the oral health among financially disadvantaged South Australians. This study assessing dental beliefs, values and attitudes provides new information on dental attendance patterns and beliefs influencing the use of public dental services among adults eligible for public-funded dental care.