

Original Article

## Reasons for seeking dental care among adults at an academic dental centre and the associated factors

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**Abstract** One of the roles expected of dental personnel is to promote dental seeking behaviour to the public. It is to ensure that adults maintain an optimum number of teeth for overall health and quality of life by enabling them to eat, speak and socialise without pain, discomfort or embarrassment. The objective of this study was to determine the reasons for seeking dental care and the factors that influence this decision among adult patients. This was a retrospective study of clinical records among patients of 18 years old and above who attended Universiti Sains Islam Malaysia (USIM) Dental Polyclinic, an academic dental centre, for the first time from January 2015 to December 2016. Socio-demographic data on age, gender and occupation as well as the reason for the visit were retrieved from the clinical records. Analysis of data was conducted using SPSS software version 21.0 and the  $p$ -value was set at  $p < 0.05$ . A total of 344 patient clinical records were retrieved. The most common reasons for the visit was dental check-up (18.6%), followed by scaling (15.7%) and toothache (14.2%). The reasons for the visit was further categorised into curative (63%) and preventive dental care (37%). A significant association was found between the reason of seeking dental care with age ( $p < 0.001$ ) and gender ( $p = 0.030$ ). This study indicated a tendency for young adults and female patients seeking preventive dental care. The findings of this study would provide the input in designing the preventive oral health programmes and activities.

**Keywords:** Dental care; prevention; reason for care; socio-demographic; utilisation.

### Introduction

One of the roles of dental personnel is to promote dental health seeking behaviour of the public particularly through utilisation of health services. Accessibility is one of the factors that influences oral health care utilisation. It is most often measured by the proportion of the population who visited the dentist in the past year (Harford *et al.*, 2011). This varies between countries in which Denmark recorded 64% of the population who visited the dentist as compared to Spain at 34.3% in 2007 and 2009 respectively (Guiney *et al.*, 2011). In the United States, about 50% of the population visited the dentist in the last year (Cohen *et al.*, 2011). The most common reasons for utilising dental services were presence of symptoms especially toothache (Ekanayake *et al.*, 2001; Gambhir *et al.*, 2013) and need for either curative or preventive care (Al-Shammari *et al.*, 2007). In Malaysia, the main procedure to treat the complaints of

pain was extraction, which is a curative procedure (Jaafar and Abdul Razak, 1988). The choice of procedure of treatment remains unchanged even after thirty years. This is evidenced in the report by the Ministry of Health Malaysia (2013) of which, the curative procedure formed 75% of all procedures in the oral health services.

The reasons for utilisation of dental care is influenced by a number of factors (Fox, 2010). These factors are associated with behavioural actions such as effect in socialising; cultural background such as oral health beliefs; and socioeconomic status such as income, education level and occupation (Cohen *et al.*, 2011). Teusner *et al.* (2015) indicated that socioeconomic status had an impact on the pattern of dental visit among individuals. High income individuals from urban areas were found to show a tendency to seek preventive dental care. Individuals with low income and from rural areas were more concerned with curative dental care (Harford *et al.*, 2011).

The high-income individuals, either insured or uninsured, have better access to oral health care services. In contrast, patients in lower socioeconomic status reported to have poor oral health status because of limited access to appropriate dental care (Molarius *et al.*, 2014). Bommireddy *et al.* (2014) found that the majority of people with lower socioeconomic status were from the rural areas. They seek one-off curative treatment because they cannot afford to pay for more complex dental treatment. Other socio-demographic factors such as age and gender also have an impact on utilisation of dental services (Vujicic and Nasseh, 2014). Consideration of these aspects of utilisation are essential in designing the programme to improve oral health outcomes. The objective of this study was to determine the reasons for seeking dental care and the factors that influence this decision among adult patients.

## Materials and methods

This was a retrospective study of clinical records of patients aged 18 years old and above who attended USIM Dental Polyclinic for the first time from January 2015 to December 2016. Socio-demographic data on age, sex, ethnic group, occupation and reason for the visit were retrieved from the clinical records. The age of the patient was taken from the date of examination and were grouped according to World Health Organization (WHO) classification (Ahmad *et al.*, 2001). The ethnic group was determined according to the principal groups in Peninsular Malaysia. The reason for the visit was based on the patient's chief complaint.

This study adopted the Malaysian Standard Classification of Occupation (MASCO) in categorising a patient's occupation (Ministry of Human Resources Malaysia, 2010) as presented in Table 1. This classification did not include students, retirees and housewives. Therefore, they are categorised as others.

The reasons for seeking dental care were generally categorised into preventive and curative types of dental care (Murakami *et al.*, 2014; Thukral, 2015). The curative dental care was further sub-categorised into operative care and relief of pain and

discomfort. The reasons for seeking dental care were tabulated according to the type of care as presented in Table 2.

The data were analysed using IBM SPSS version 21.0. Descriptive data analysis was performed for frequency and percentage as well as mean and standard deviation. A chi-square test was performed to test the association between reasons of seeking dental care and socio-demographic status of patients. The significant  $p$ -value was set at  $p < 0.05$ .

This study obtained approval from Research Ethical Committee of the Faculty of Dentistry, USIM [Ref. No.: USIM/FPg-MEC/2016/No. (25)]. The authors have taken the necessary steps to ensure anonymity of the patients as well as the confidentiality and safety of clinical records.

## Results

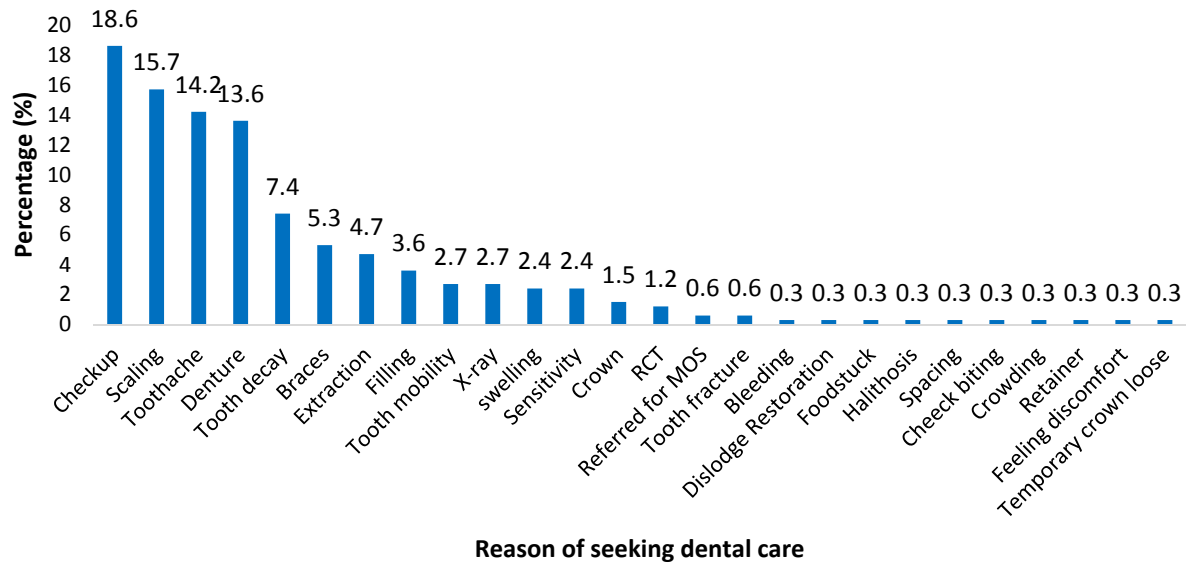
A total of 344 records with complete information were retrieved. The age ranged from 18 to 77 years old. The mean age was 39.8 years old (SD=15.16). The proportion of the reasons for seeking dental care is presented in Fig. 1. The most common reasons for seeking dental care were for dental check-up (18.6%), scaling (15.7%), toothache (14.2%) and request for denture (13.6%).

Table 2 shows that most of the patients (62.7%) came to USIM Dental Polyclinic for curative care and only 37.3% came for preventive care. When the reasons for curative care were further examined, it was found that one-third (36.5%) of the patients came for relief of pain and discomfort whilst the other two thirds (63.5%) came for operative care as shown in Fig. 2.

The association between sociodemographic characteristics and the reasons for seeking dental care among adult patients attending USIM Dental Polyclinic is presented in Table 3. A chi-square test showed a significant association between type of care with age ( $\chi^2=46.998$ ,  $df=18$   $p < 0.001$ ) and gender ( $\chi^2=7.009$ ,  $df=2$   $p=0.030$ ). There was no significant difference in reasons for seeking dental care in relation to ethnicity ( $p=0.216$ ) and occupational status ( $p=0.263$ ).

**Table 1** The Malaysian Standard Classification of Occupation (MASCO) 2008

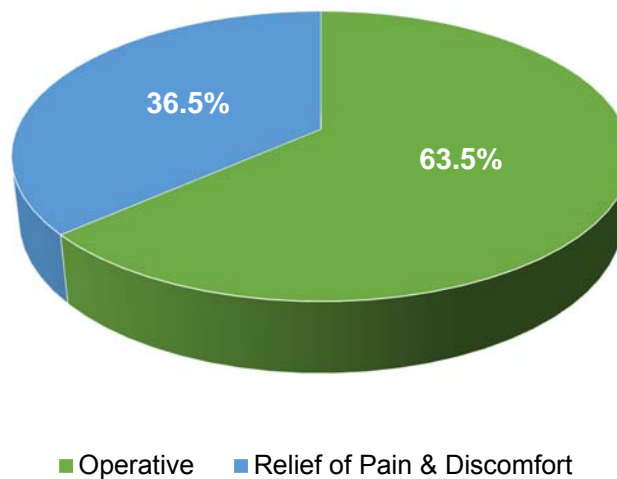
Skill Level	Educational Level	Major Group of Occupation
First	Primary education	Elementary Occupations
Second	Secondary or post-secondary education; Malaysian Skills Certificate(SKM) Level1-3	<ul style="list-style-type: none"> <li>• Clerical Support Workers</li> <li>• Service &amp; Sales Workers</li> <li>• Skilled Agricultural, Forestry &amp; Fishery Workers</li> <li>• Craft &amp; Related Trade Workers</li> <li>• Plant &amp; Machine-operators &amp; Assemblers</li> </ul>
Third	Tertiary education leading to an award not equivalent to a first University Level; Malaysian Skills Certificate(SKM) Level 4, or Malaysian Skills Diploma (DKM) Level 4	Technicians and Associate Professionals
Fourth	Tertiary education leading to a University or postgraduate university degree; Malaysia Skills Advanced Diploma (DLKM) Level 5-8	Professionals



**Fig. 1** Percentage of responses on reasons for seeking dental care.

**Table 2** Reasons for seeking dental care listed according to type of care

Type of Care	Detailed Type of Care	Reason for seeking care	Percentage
Preventive	-	<ul style="list-style-type: none"> <li>• Check up</li> <li>• Scaling</li> <li>• X-ray</li> <li>• Retainer</li> </ul>	37.3%
Curative	Relief of pain and discomfort	<ul style="list-style-type: none"> <li>• Toothache</li> <li>• Swelling</li> <li>• Bleeding</li> <li>• Food stuck</li> <li>• Halitosis</li> <li>• Cheek biting</li> <li>• Feeling of discomfort</li> <li>• Loose crown</li> <li>• Tooth mobility</li> <li>• Tooth sensitive</li> </ul>	23.4%
	Operative Dental Care	<ul style="list-style-type: none"> <li>• Denture</li> <li>• Tooth decay</li> <li>• Braces</li> <li>• Extraction</li> <li>• Filling</li> <li>• Crown</li> <li>• Root canal treatment</li> <li>• Minor oral surgery</li> <li>• Tooth fracture</li> <li>• Dislodge restoration</li> <li>• Spacing</li> <li>• Crowding</li> </ul>	39.3%



**Fig. 2** Reasons for seeking dental care for sub-category of curative care.

**Table 3** The association between sociodemographic characteristics and reasons for seeking dental care using chi-square test

Variables	Reason of seeking dental care			p-value
	Preventive Frequency (%)	Operative Frequency (%)	Relief of pain and discomfort Frequency (%)	
Age (years)				
≤ 19	12 (54.4)	8 (36.4)	2 (9.1)	<0.001
20 – 24	16 (36.4)	19 (43.2)	9 (20.5)	
25 – 29	20 (45.5)	15 (34.1)	9 (20.5)	
30 – 34	22 (47.8)	12 (26.1)	12 (26.1)	
35 – 39	15 (57.5)	4 (15.4)	7 (26.9)	
40 – 44	11 (39.3)	7 (25.0)	10 (35.7)	
45 – 49	11 (42.3)	9 (34.6)	6 (23.1)	
50 – 54	7 (25.9)	11 (40.7)	9 (33.3)	
55 – 59	5 (15.2)	23 (69.7)	5 (15.2)	
≥ 60	6 (14.3)	27 (64.3)	9 (21.4)	
Gender				
Male	42 (29.0)	65 (44.8)	38 (26.2)	0.030
Female	83 (43.0)	70 (36.3)	40 (20.7)	
Ethnicity				
Malay	93 (38.8)	98 (40.8)	49 (20.4)	0.216
Non-Malay	23 (29.1)	34 (43.0)	22 (27.8)	
Occupation status (based on skill level)				
First	1 (33.3)	2 (66.7)	0 (0.0)	0.263
Second	25 (41.7)	20 (33.3)	15 (25.0)	
Third	11 (44.0)	8 (32.0)	6 (24.0)	
Fourth	18 (30.0)	21 (35.0)	21 (35.0)	
Manager	5 (62.5)	1 (12.5)	2 (25.0)	
Others (Not working)	40 (37.4)	48 (44.9)	19 (17.8)	

## Discussion

This retrospective study identified several reasons associated with seeking dental care as well as the factors that influence utilisation of dental services. The findings indicated that most of the patients seeking dental care at this academic dental centre were for curative dental care which consisted of operative dental care and procedures for relief of pain and discomfort. Operative dental care are those clinical procedures that are used to restore the teeth and the supporting structures for optimal functions and aesthetics. There were about similar proportions of patients who visited the clinic for operative care (39.3%) and preventive care (37.3%). Dental check-up and scaling as preventive procedures were found to be the two most common reasons for the visit to the dental clinic. This is in contrast with other

studies conducted among urban (Varenne *et al.*, 2005) and rural (Bommireddy *et al.*, 2014) population which found that relief of pain and discomfort were the most common reasons for seeking dental care. It was considered as a major motivating factor to visit the dental clinic (Taiwo *et al.*, 2014).

The reasons for dental care, either for curative or preventive care were also influenced by the dental clinics which provided a range of dental procedures (Pucca *et al.*, 2010). Patients expected to be able to get access to a wide range of specialised preventive and curative care and not merely for relief of pain and discomfort. USIM Dental Polyclinic as a government-linked academic dental centre fulfilled these expectations through the provision of a wide range of specialised dental care with affordable fees. The location of the Polyclinic in a working-class area within the Kuala

Lumpur city centre provided better accessibility of dental health services for those in the middle 40% of the socioeconomic group.

Dental health enhancing behaviour, as in maintenance of dental health, was evident among urban population as compared to rural population. It was indicated by Petersen *et al.* (2000) that patients from the urban areas were more inclined to visit the dentist for curative and preventive dental care rather than for relief of pain and discomfort. This is consistent with the findings of this study.

This study showed a statistical association between age and reasons for seeking dental care. Murakami *et al.* (2014) on the other hand, found no association between age and reasons for seeking care but the study was limited to adults between the ages of 25 to 50 years old. When specific age groups were examined, Lo *et al.* (2001) found that young adults in the 35 to 44 years old visited the dentist mainly for dental check-up whilst the elderly in the 65 to 75 years old tend to visit the dentist for extraction of teeth and construction of prosthesis. There was also a high proportion of adults who visited the dental clinics for check-up especially among those in the 25 to 44 years old age group (Harford *et al.*, 2011).

This study found an association between reasons for seeking dental care and gender. Reisine (1987) found that gender was the most influential variable. It was found that utilisation of dental services was greater among female than male (Ekanayake *et al.*, 2001). Female patients were more likely to seek preventive care whilst male patients were more likely to seek operative care. This finding was consistent with the study performed at University Malaya Dental Clinic which showed higher percentage among female patients seeking preventive treatment as compared to male (Razak and Jaafar, 1987; Jaafar and Abdul Razak, 1988). Female patients were found to be more concerned with their appearance. They wanted to look pretty and elegant, in addition, to a beautiful smile with nice teeth (Murakami *et al.*, 2014). This requires good oral hygiene habits and subsequently influence the visit to the dentist for preventive dental care (Stock *et al.*, 2001; Al-Shammari *et al.*, 2007).

A limitation to this study is the constraint in determining the type of classification for occupation that were relevant to those who utilised dental care at this academic dental centre. There are a number of classifications for occupation. Famuyiwa (1998) classified occupation based on social strata of civil servants, executives, unskilled workers and semi-skilled workers. In this classification, there seemed to be no distinctive hierarchy between these social strata groups. Students were not included in this classification. A simple classification of occupation used by Olusile *et al.* (2014) was based on skills level (none, student, unskilled worker, skilled worker and very skilled worker). There was ambiguity in the terms “none” and “unskilled”. This study adopted the MASCO, developed by the Ministry of Human Resources Malaysia (2010) that focused principally on skill levels. Relevant educational levels and corresponding occupation were linked to each skill level. This classification also did not include students as well as pensioners and housewives. These three “occupational groups” which were considered as others comprised of 31% of those involved in this study. The pensioners and housewives may have tertiary education but were not in official employment. Putting them under the category of “others” may be one of the reasons that led to the findings of this study that there was no difference in occupation and reasons for dental care.

## Conclusion

USIM Dental Polyclinic is an academic dental centre located in an urban working-class area that provides a wide range of specialised dental services at affordable fee. The two most common reasons for visiting this Polyclinic were dental check-up and scaling. Both these procedures were considered as preventive care. When the reasons for visiting the Polyclinic were taken in totality, operative dental care showed the highest percentage, followed by preventive dental care. Age and gender were two factors that influence the health enhancing behaviour of seeking dental care. There was no indication of the relationship in reasons for seeking dental care and occupational

characteristics. This study on the pattern of utilisation of dental services based on reasons for the visit to the dentist and demographic factors provides the guiding principles in designing and implementing the preventive oral health programme and activities. Considering that many adults are still curative oriented, it is recommended that a preventive oral health programme be developed for adults with emphasise on timely assessment of their oral health and appropriate intervention.

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## Conflict of interest

The authors declare that they have no conflict of interest.

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