

OBSTACLES TO UTILIZATION OF DENTAL SERVICES IN KARACHI, PAKISTAN

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ABSTRACT

Objective: To determine the different views of the people, regarding dental health, based on gender and level of education.

Study Design: Cross sectional study.

Place and Duration of Study: OPD of Fatima Jinnah Dental College and Hospital, Karachi, from Jan to Jun 2018.

Methodology: A total of 500 patients were seen in the Diagnosis Department of the hospital. A structured questionnaire was devised to obtain adequate information from the participants. The study was focused on young and middle aged individuals to acquire an analogous output of the society. Ages between 20-35 and 36-60 were preferred.

Results: Out of 500 responses, 265 participants belonged to the younger age group of 20-35 years (53%). In this, 29.2% of the patients stated that when they experience any dental problem or pain they prefer going to a medical practitioner as compared to a dentist (16.4%). A high percentage (42.8%) believed in self-medication and occasionally practice home remedies for such problems. In 19.2% said that they feared the dental treatment hence were not willing to visit the dentist, owing to unpleasant dental experiences previously (16.6%) and many facing difficulties in reaching the dental facility (16.4%) or having to travel far away for treatment (13.8%).

Conclusion: Routine dental checkups have been limited by many different elements, the most common ones being dental fear, expenses of overall treatment, socioeconomic factors and the constant feeling of not 'needing' dental care. Self-medication and home remedies for dental problems have also been highly reported along with the practice of visiting a medical practitioner for dental issues.

Keywords: Awareness, Barriers, Dental anxiety, Oral health, Public sector.

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INTRODUCTION

According to World Health Organization (WHO) "health" has been defined as a state of complete physical, mental and social well-being and not just the absence of any disease or infirmity. The state of one's oral health and status is a direct determinant of the overall health of a person and various studies have shown links of chronic oral infections being indicative of systemic diseases such as diabetes, cardiovascular and respiratory diseases¹. Due to the advances in research and technology, developed countries have counteracted the increased incidence of oral diseases and have provided adequate oral health care services to majority of its populations; however developing countries are still burdened by the elevated occurrence of oral infections and diseases.

Tooth decay, formally known as Dental Caries, is an infectious disease which is highly prevalent in adolescents and middle aged individuals². An increased intake of sweets and sugar-based products paired with inadequate oral hygiene practices are attributed to the high frequency of reported cases of dental caries³. The rate of progression of tooth decay is directly

proportional to the accumulation of plaque, which directly depends on the frequency of brushing and maintaining periodontal health⁴. A careless attitude towards this problem can eventually lead to tooth loss.

Dietary counseling, acceptable oral hygiene methods and precautionary visits to the dentist can reduce such incidents⁵. Daily intake of fluoridated water has also been shown to have an inhibitory effect on the progression of caries⁶. The incidence of dental caries has been documented as being higher in rural settlements as compared to urban settlements, owing to the lack of basic education and public awareness regarding oral health measures³. However, in recent years, an increase in prevalence of caries has been observed in urban settlements, associated with the changes in dietary habits of the population⁷. Due to the increased exposure of various cultural trends worldwide, there has been an influx of fast food joints in urban areas, leading to the consumption of a relatively 'soft' diet as compared to previous times where people incorporated hard and fibrous foods into their daily meals. This has led to majorities consuming foods which tend to stick to their teeth eventually leading to increased plaque accumulation.

Andersen⁸ has stated three theories permitting one to avail health care services; predisposing factors,

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enabling factors and the need to use these services. The predisposing factors reflect the individual's personality such as the generalized attitude towards one's health, social status and demographic condition. The second theory describes the conditions in which health care services are provided to the family and whether or not they opt to avail these facilities. Dental apprehension, inclination to safeguard the natural state of teeth and familial tendencies to dental problems are three components described by Schuurs *et al*⁹, which have resulted in absences in visiting the dentists.

Dental visits during childhood reinforce the concepts of proper tooth brushing and also create a more positive attitude of the patient towards the dentist¹⁰.

Karachi is one of the most densely populated cities of Pakistan where the majority comprises of people belonging to low or middle social classes. This leads to crucial decision making when dental treatment and the overall expenditure are being considered. The high costs of private dental practitioners and unavailability of convenient health care centers, add on to the resistance faced while utilizing health care measures. The aim of this study was to focus on the hurdles which prevent effective use of dental services in Karachi and concentrate on correcting such issues in order to benefit the society and also to compare the different views of the people based on gender, age, level of education and socioeconomic status.

METHODOLOGY

A cross sectional study was carried out in the OPD of Fatima Jinnah Dental College and Hospital, Karachi, from January to March 2018. A total of 500 patients were seen in the Diagnosis Department of the hospital where they came for their initial assessment. Non probability consecutive sampling technique was used to collect data. After detailed history and examination the patients were asked to fill a questionnaire in the presence of the investigator to provide any additional information inquired by the patients. The form was provided in both English and Urdu for the patient's ease. Patients who were visiting the hospital for the first time and those above the age of 20 years were included in this study. Patients who had previously been treated or were recalled for follow up were not included in this study. Patients who were unwilling to participate were also excluded from this study.

A structured questionnaire was devised to obtain adequate information from the participants. The study was focused on young and middle aged individuals to acquire an analogous output of the society. Ages

between 20-35 and 36-60 were included. Socioeconomic status was judged on three different categories, namely, 1) level of education, which was subdivided into illiterate, literate, primary education, secondary education, matriculation, intermediate, graduation and post-graduation, 2) Occupation, which included categories of housewife/homemaker, student, unemployed, self-employed, private employment and government employment and 3) Initial assessment of oral hygiene such as the number of decayed, missing and restored teeth were calculated along with the absence or presence of dental plaque.

A total of 500 patients with 95% confidence and power of test β 80% calculated by WHO calculator were taken and results were evaluated statistically by using chi-square test taking p -value equal to or <0.05 as significant. By taking prevalence of lack of time=40.4%, Margin of error $d=5\%$, the calculated sample size was 370 patients with the help of WHO software for sample size calculation taking 95% confidence level. However, our study has a sample size of 500 to give better evaluation of the results. Data entered and analyzed using SPSS-21. Guidance was taken from the results of previous studies and used for critical analysis of the data¹². The p -value of ≤ 0.05 was considered significant.

RESULTS

Out of 500 responses, 62.4% were female whereas 37.6% were male and 53% participants belonged to the younger age group of 20-35 years. For analysis, the simple counts of "YES" and "NO" responses were made and the percentages were calculated for every question. According to our results, 23% of the participants stated that they were literate (could read and write) whereas 15% were graduates and 17% had completed post-graduation. A high percentage of women (49.8%) stated that they were housewives and 15% of the total responses stated that they were currently unemployed. A higher percentage of people working in the private sector were also noted (10.6%) as shown in table-I.

Almost 47% of the patients had dental plaque indicating poor oral hygiene with an alarming high rate of decayed teeth (26%) (table-I). Although these results were seen during oral examination 39.6% people responded that they had moderate oral hygiene and only 18% stated that they had bad/poor oral health (table-II). A high percentage (44.8%) of the patients accepted that they were unsure if they needed dental care (table-II). When asked, the patients stated

that when they experience any dental problem or pain they prefer going to a medical practitioner (29.2%) as compared to a dentist (16.4%). A high percentage (42.8%) believed in self-medication and occasionally practice home remedies for such problems (table-III). Tooth brushing was practiced once daily by 38.6%, 23.8% stated they brushed twice daily and 30.8% stated that they don't brush their teeth at all. Flossing (15.2%) and mouth wash rinses (10.2%) were only practiced by a minority of the participants (table-II).

Table-I: Demographic outline.

Variable	n (%)
Gender	
Male	188 (37.6)
Female	312 (62.4)
Age	
20-35 years	265 (53)
36-60 years	235 (47)
Marital Status	
Single	205 (41)
Married	295 (59)
Level of Education	
Illiterate	60 (12)
Literate	115 (23)
Primary education	45 (9)
Secondary education	55 (11)
Matriculation	30 (6)
Intermediate	35 (7)
Graduation	75 (15)
Post-graduation	85 (17)
Occupation	
Housewife	249 (49.8)
Student	45 (9)
Unemployed	75 (15)
Private sector	53 (10.6)
Self employed	31 (6.2)
Government employment	47 (9.4)

It was observed that females (32.7%) visited the dentist more than the male (16.5%) population within the span of 6 months whereas almost 30.8% females visited the dentist on a yearly basis and only 23.9% of men reportedly visited the dentist every year (table-IV). Approximately 19.2% said that they feared the dental treatment hence were not willing to visit the dentist, owing to unpleasant dental experiences previously (14.6%) and many facing difficulties in reaching the dental facility (16.4%) or having to travel far away for treatment (13%). Fifteen percent of the patients stated that they found the treatment expensive whereas 12% did not feel the need for regular dental checkups (table-V).

Table-II: Initial assessment.

Intra-Oral Examination	
Variable	n (%)
Dental plaque	235 (47)
Decayed teeth	130 (26)
Missing teeth	70 (14)
Restored teeth	65 (13)
How good is your oral health?	
Excellent	70 (14)
Good	142 (28.4)
Moderate	198 (39.6)
Poor	80 (18)
Do you need dental care?	
Yes	136 (27.2)
No	140 (28)
Maybe	224 (44.8)
Oral Hygiene Habits	
Variable	n (%)
Tooth Brushing	
Once	193 (38.6)
Twice	119 (23.8)
More than twice	34 (6.8)
None	154 (30.8)
Flossing	
Once	135 (27)
Twice	76 (15.2)
None	289 (57.8)
Mouthwash Rinses	
Once	84 (16.8)
Twice	51 (10.2)
None	365 (73)
Table-III: What do you do when you have a dental problem?	
Variable	n (%)
Visit a medical practitioner	146 (29.2)
Visit a dentist	82 (16.4)
Homeopathic treatment	58 (11.6)
Self medication	214 (42.8)

DISCUSSION

Good oral health is essential for maintaining overall health of the human body¹¹⁻¹³. Although utilization of oral health services is dependent on many factors such as socioeconomic status, surroundings and financial constraints¹⁴, the most important factor is the personal attitude towards dental health and dentistry in general¹⁵. This attitude is directly dependent on one's level of education and their awareness regarding the morbidity of the diseases¹⁶⁻¹⁹.

Our study revealed that 12% of the sample size stated that they were illiterate, and although a high percentage of patients had dental plaque (47%) and tooth decay (26%), approximately 28% stated they did not feel the 'need' for any dental care and 12% stated

that the reason for not visiting a dentist was because they did not require any dental treatment. The generalized attitude towards oral care has created all the difference on the supply and demand chain of providing oral health care services in developing countries. Lack of awareness and dental anxiety has been the

Table-IV: How often do you visit a dentist?

Variable	No. of Entries		Total Entries	%	p-value
	Male	Female			
First visit	44	50	94	18.8	0.90
Monthly (<6 months)	19	48	67	13.4	0.78
Every 6 months	31	132	163	32.6	0.21
Yearly	15	66	81	16.2	0.15
Only when needed	79	16	95	19.0	0.3

Table-V: What are your reasons for not visiting the dentist?

Variable	No. of Entries		%	p-value
	Male	Female		
Fear of treatment	42	54	19.2	0.045
It is expensive	40	55	19.0	0.035
Lack of time	38	31	13.8	0.03
No dental facility nearby	21	48	13.8	0.2
Lack of transport to dental facility	33	49	16.4	0.009
Bad experiences previously	40	43	16.6	0.3
I feel i don't need dental treatment	28	32	12.0	0.2

major cause of reluctance for people to reach out and get help for their oral hygiene. Although emphasis on one's dental hygiene has been laid out through all forms of social media and advertisements, it has failed to reach masses and eradicating minor oral diseases has also been a challenge for many countries where the urban populations lack basic knowledge of this underlying issue.

Dental care utilization can be defined as the percentage of population which access dental care services over a specified period of time²⁰. Barriers to utilization of these services can be categorized into different varieties such as those depending solely on the patient and those depending on the surroundings of the patient. Careless attitude towards oral hygiene, lack of awareness, fear of treatment are problems seen in patients through all age groups and educational backgrounds. However, the socioeconomic status of a patient is a dictating factor in using such facilities. Lack of

widespread dental services and treatment costs add on to the reasons for creating difficulties for majority of populations where dental hygiene is considered.

In our study it was observed that majority of the patients who visited the dental OPD were females (62.4%) and it was also recorded that the female population was more keen on visiting the dentist whether it be on a yearly (16.2%) or 6-monthly basis (32.6%). One major reason for this result is the overall maintenance of one's appearance seen in females which tend to be more conscious than men about their teeth and oral health. It has also been noted by previous studies that women tend to face more dental problems during puberty, pregnancy and while undergoing menopause²¹. This leads to a larger fraction of women visiting the dentist and availing dental care services, whereas men tend to delay any treatment or procedure until it causes pain or creates difficulty in their everyday routine. Previous studies by²²⁻²⁵ have similar findings about a higher percentage of female population visiting the dentist more regularly when compared to men.

The major reason for a low percentage of men visiting the dentists accounts for the long working hours which clash with the timings of public dental facilities. Private clinics tend to be preferred by the working class, however due to high cost of treatment many avoid visiting the dentist. Men being the bread earner of the whole family prioritize their work over dental health and as shown in our study, most of the females who visited the facility were housewives and hence were more responsible and concerned for their overall health.

It was observed in our study that majority of the people lacked basic knowledge of how to take care of their oral health due to lack of awareness, this coupled with the fact that they did not find any oral diseases life threatening, leads to an increased practice of self-medication for any dental problem. The level of literacy rate, according to our study, was 23%, where only 9% had received primary education. The insufficiency of oral hygiene practices can be attributed to this as well. The trend of using over the counter medication to relieve oneself of pain or infection has caused reduced visits to the dentists for a proper checkup. In our study, 48.2% of the participants stated that they preferred using non prescribed medicines along with a series of home remedies to help with dental pain or discomfort. 29.2% of the participants also stated that they found it easier to visit a medical practitioner for a checkup regarding any dental issue as compared to a dentist.

This displays the lack of availability of public dental facilities which are not as widespread as medical facilities.

A lot of factors contribute to the growing apprehension towards dental treatment. It majorly attributes to the pain of the procedure along with fear of needles for anesthesia or drilling via dental hand piece. The trauma of losing one's teeth or the idea of altering the natural state of one's mouth leads to increased anxiety and concern amongst patients. Longer waiting times for appointments which are not unusual for hospital settings, along with longer commutes to the facility add onto overall agitation²⁶. In 19.2% of the total responses stated that fear of dental treatment was the major reason for not visiting the dentist along with concerns about the overall expenditure (19%) and added costs of transport to the dental facilities (16.4%).

The main limitation of this study is that a specified area has been taken into consideration, and since most of the patients arrived from nearby areas, this study alone cannot truly represent the vast population of Karachi. Increasing the sample size for this study can counteract this problem, as it would help evaluate the issues on a larger scale.

CONCLUSION

Oral health in a community can be directly determined by the percentage of people availing dental services provided to the masses. This study helps evaluate the major reasons for not availing these resources indicating a need for reinforcing the basic principles of oral health care and motivate majorities to focus on their overall health in order to have a more social and productive lifestyle. Routine dental checkups have been limited by many different elements, the most common ones being dental fear, expenses of overall treatment, socioeconomic factors and the constant feeling of not 'needing' dental care. Self-medication and home remedies for dental problems have also been highly reported along with the practice of visiting a medical practitioner for dental issues. The results support the idea that in order to encourage people to seek dental treatment, awareness regarding oral health measures need to be emphasized.

CONFLICT OF INTEREST

This study has no conflict of interest to be declared by any author.

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