

Oral Hygiene Practices and Reasons for Delaying Dental Treatment Among Patients Attending A Public-Sector Tertiary-Care Dental Hospital

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Abstract

Background: Good oral hygiene and regular dental visits are recommended to prevent and manage oral health problems. Lack of utilization of dental services and barriers in seeking regular dental care can lead to delaying in treatment of dental diseases, leading tooth loss.

Objective: To determine the oral hygiene practices and reasons for late seeking of dental treatment among the patients visiting public tertiary care hospital.

Study design, settings and duration: A Cross sectional study was conducted at oral and Maxillofacial Surgery Department, PMC Dental Institute, Faisalabad Medical University/Allied Hospital, Faisalabad from August 2019 to October 2019.

Methodology: The questions were divided into three sections; demographic detail, regarding oral hygiene practices and reasons for delay in dental treatment.

Results: Out of 400 participants 376 (94%) questionnaire were collected and analyzed. Male to female ratio was 1:2 whereas, mean age of the participants ranged from 16-80 year, 115 participants (32.4%) had metric level education, whereas 122 (32.4%) participants had monthly income <10,000. Most of the participants practiced good oral hygiene measures by once or twice/day brushing with toothbrush or miswak. Perception of giving less priority to dental was the most common reason. Other reasons were lack of time, high treatment cost and non-availability of hygienically good dental facilities especially in government setups.

Conclusion: The study concluded that a good percentage of population was aware of oral hygiene measures and was practicing them in their routine life. However, lack of priority to dental care was the main reason for delay in seeking dental care. Mostly females, patients with low socioeconomic conditions and less education were ignoring dental care unless develop any dental problem.

Key words: Oral hygiene practices, dental treatment, delayed treatment, tertiary care hospital.

Introduction

Diseases of oral cavity are one of the main public health concern due to their high prevalence effect on the community's quality of life.¹ The joint efforts are required from the dentist and the patients to keep a healthy oral profile.² One of the essential factors that determine the oral health of a community is the prospect of its people towards caring for their dentition.^{2,3} The provision of preventive dental care for adults depends on each patient's initiatives in utilizing dental care. To improve oral health outcomes, an adequate knowledge of the way individual uses

health services and the factors predictive of this behavior is essential.

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Received: 09 January 2020, **Accepted:** 06 August 2020,

Published: 04 September 2020

Authors Contribution

KJZ conceptualized the project. SA performed the data collection. NS did the literature search and MK did the statistical analysis. Drafting, revision & writing of manuscript was done by RA & SM.

Routine visits to dentist are very essential to keep adequate oral health and for prevention of oral diseases.⁴ The American Dental Association (ADA) and other organizations recommended that adults should get preventive dental visits tailored by their dentists to accommodate for their current oral health status and health history.⁵⁻⁷

In majority of developing countries dental health facilities are limited and teeth are extracted or often left untreated.⁸ Generally utilization of dental services are considered non-compulsory as compared to other hospital services as these are not considered as life threatening.^{8,9}

The Federation Dentaire Internationale (FDI) classified the main reasons which hinders in seeking of dental care are categorized as follow: (a) Patients reasons like; anxiety, fear, lack of desired need, lack of access and financial issues (b) dental profession reasons include; inappropriate training, lack of resources, insufficient sensitivity to patient's attitudes and needs (c) society based reasons include; not enough public support of attitudes towards health, limited oral health care provisions and insufficient research support.^{3,10}

Socioeconomic differences in the use of dental care still exist in many countries.^{7,10} Awareness of dental diseases is more in upper socioeconomic status than in lower socioeconomic status.¹¹ Now a day many patients also show their concern about the sterility of dental equipment's and instruments used during clinical procedure.¹²

The current study was conducted with an objective determined the oral hygiene practices and also to find out the reasons for late seeking of dental care among the patients visiting the public tertiary dental care dental hospital of Pakistan. Majority of the people presented in public dental hospitals present with end stage dental.

Methodology

This was a questionnaire based cross sectional study¹ conducted on out-patients undergoing extractions in the department of Oral & Maxillofacial Surgery, Allied Hospital/ Faisalabad Medical University for a period of two months from September 2019 to October 2019. The study was approved by ethical committee of Faisalabad Medical University, Faisalabad. Written informed consent was obtained from the patients to participate in study. Instructions were advised and basis of the study was described to all the participants. A self administrated questionnaire in Urdu and English language was used for data collection.

This cross sectional study was conducted by using convenient sampling on 400 study participants. The patients who were available at the day of specific study and were willing to take part were included in the study and those who were not willing to take part were excluded from the study.

After literature search and preliminary discussion with panel of experts a questionnaire was developed consisting of 17 open and closed ended questions aimed at assessing oral hygiene practices and reasons for delaying of dental treatment among patients. These questions were divided into three different sections; Section A: Demographic Detail (age, gender, educational status, monthly income); Section B: Oral hygiene practice questions (frequency of tooth brushing, cleaning aid, tooth brush changing, last dental visits, treatment received in last dental visit) Section C: Questions regarding reasons for delay in dental treatment (lack of time, fear and anxiety, ignorance, cost, non-availability, lack of time, sterilization issues, previous bad dental experience).

The survey took an average only 15 to 20 minutes to complete. Data were collected by using a hard copy of questionnaire and secrecy of data was maintained.

In order to eliminate the intra-observer error, the data collection process was closely supervised by the same observer who reviewed and completed the data collection questionnaires. The collected data were entered and analyzed using SPSS version 21. Data were expressed in frequencies and percentages. p value < 0.05 was considered as statistically significant.^{3,5,9}

Results

A total of 400 questionnaires were distributed among the patients (study participants). Out of these 400 questionnaires, 376 questionnaires were completed and used in the analysis with the overall response rate of 94%. The mean age of the study participants was 31.6 years (age range: 16-80 years). Among 376 participants 128 (34.0%) were males and 248 (66.0%) were females with an overall ratio of male to female was around (1:2). In view of their educational background, 115 patients (32.4%) were having education only up to metric level. Regarding monthly income of participants 122 (32.4%) had monthly income of $< 10,000$. The detailed socio-demographic characteristics of study population are presented in Table-1.

Most of the study participants, that is 181(48.1%) clean their teeth once a day. Three

Table 1: Distribution of the study population according to the sociodemographic profiles. (n=376)

Profiles	Frequency (n)	Percentage (%)
<i>Gender</i>		
Male	128	34.0
Female	248	66.0
<i>Age group(years)</i>		
<20	89	23.7
20-40	213	56.6
40-60	64	17.0
≥60	10	2.7
<i>Education</i>		
Illiterate	96	25.3
≤matric	116	30.9
Inter	105	27.9
Graduation	60	16.0
<i>Monthly income</i>		
<10,000	122	32.4
10,000-20,000	82	21.8
≥20,000	172	45.7

Table 2: Oral hygiene practices and dental visit history.

Variables	Frequency (n)	Percentage (%)
<i>Frequency of tooth cleaning</i>		
once daily	181	48.1
twice daily	145	38.6
Occasionally	40	10.6
never	10	2.7
<i>Cleaning aid</i>		
tooth brush +tooth paste	327	87.0
tooth brush +tooth powder	12	3.2
miswak	28	7.4
others	9	2.4
<i>Tooth brush changing</i>		
once in month	65	17.3
once in 3- month	126	33.5
once in 6-month	91	24.2
once in year	36	9.6
never notice	58	15.4
<i>Last dental visit</i>		
<6 month before	107	28.5
6-12 month before	40	10.6
1-2 year before	81	21.5
>5 year before	58	15.4
No visit	90	23.9
<i>Treatment received in last visit</i>		
Medication	45	12
Tooth extraction	59	15.7
RCT or filling	101	26.9
Others	81	21.5
Don't receive any treatment	90	23.9

Hundred twenty seven (87.0%) participants used both a toothbrush and toothpaste for cleaning their teeth, while 28 (7.4%) use miswak only. About 126 (33.5%) subjects change their brush in every 3 months. Of the respondents only 107 (28.5%) visited the dentist with in the previous 6 months, whereas 81(21.5%) visited between 1-2 years and 90 (23.9%) had never visited the

dentist before. The most common reported treatment in last dental visits were restorative treatment which was done in 101 (26.9%) participants (Table-2).

Table 3: Reasons for late seeking of dental treatment.

Reasons for Late Seeking	Frequency (n)	Percentage (%)
Lack of time	76	20.2
Fear or anxiety about dental treatment	32	8.5
Not needed unless pain	103	27.4
Dental treatment is expensive	54	14.4
No nearby availability of dental facility	39	10.4
The long waiting when you visit the government hospitals	25	6.6
Sterilization issues in government hospitals	37	9.8
Previous dental experience was not good	10	2.7

Table 4: The frequency of dental visits according to monthly income.

Variables	Monthly Income						Total (N=376)		p value
	Less than 10,000		10,000 - 20,000		>20,000		N	%	
Frequency of dental visits	N	%	N	%	N	%	N	%	
Only in problem	84	32.6	50	19.4	123	47.8	257	68.3	0.32
Once in 6-month	4	13.8	17	89.4	8	27.6	29	7.7	
Once in year	6	50	3	25	3	25	12	3.1	
Never notice	32	41.0	12	15.4	34	43.6	78	20.7	

p value ≤ 0.05 is statistically significant.

Regarding answering the question on reasons of late seeking of dental care 103 (27.4%) participants stated that there was no need of dental treatment unless there was any kind of pain whereas 76 (20.2%) participants reported that lack of time was the second most common reason for late seeking of dental care. The third and fourth common reasons were cost of dental treatment reported in 54 (14.4%) participants and non-availability of dental facility by 39 (10.4%) of participants. Sterilization issues in government hospitals was reported by 37(9.8%) of the participants. The detailed reasons for late dental treatment are presented in (Table-3). The relationship of dental visits with income was also determined which is presented in (Table-4).

Discussion

Epidemiological studies have shown that the general opinion of population regarding oral hygiene still remains as a neglected and unrealized social problem¹. Less than half of the adults visits the dentists in one or two years.^{12,13}

The majority of participants in present study were female 66.0%. This female supremacy was also reported by other studies 64.2% and 58%.^{7,11} The reason for this might be the neglected self-care and especially oral care in our female population.^{4,11} It might also be due to dependency, lack of awareness and strenuous approach to oral care facilities.⁷ In our society females are more home bound, dependent on males for traveling and neglect their dental health.^{4,12,13}

Regarding educational background of study participant's majority of them 30.9% had under matric level education and only 16% of participants were graduated. This was in contrast with the report of other study¹⁴ which reported that majority of patients 53% were graduated. However, it is in agreement with the reports that also reported majority of study participants had received secondary certificate level education.^{8,13,14} This may suggest geographical variations in the pattern of presentation among patients.

Worldwide tooth brushing is the basic method to maintain oral health, although 87% of study population in this study use toothbrush with tooth paste and only 38.6% participants clean their teeth twice daily which is in contrast to studies conducted in the west where 90% of the population brush their teeth twice daily.^{4,11,15} According to American Dental Association (ADA) tooth brush should be replace after 3-4 months more often if the bristles are visibly matted or frayed but in present study only 33.5% subjects change their brush once in 3 months.¹⁵

The time since last dental visit represents the concern of people about oral health and not visiting the dentists ever or in last 5 years shows people lack of motivation about dental treatment.⁶ In present study 23.4 % people never visited the dentist before which means they delay visiting the dentist until they have severe dental problem. This is in contrast to the study that reported 79% of patients visit their dentist regularly every 6 months.² Regarding the question of routine dental visits 68.3% participants only visits the dentist only in problem. Although routine dental visit once in 6-month is recommended but only a small number of populations followed it and increase in monthly income does not increases the dental visits.^{7,13}

In our study the most common reason 27.4% of late seeking of dental care is "Not needed unless pain" which is same reason chosen by the 28.7% population in the other study.⁵ In third world countries like India the same reason was considered as the most common factor in delaying the dental treatment 62.5%.¹ These results suggest there should be oral health awareness programs in society in order to raise the awareness of population about oral health maintenance.

while the second most common reason of late dental treatment was lack of time chosen by 20.2% study subjects which was also the high ranked reason in 47.4% population in the study of Taibah university KSA.⁶ But in USA only 0.7% population avoid the dental visits due to lack of time.¹¹ Daily routine of people also effects dental treatment like visit to dentist may leads the loss of wages for the people who paid on daily basis.^{3,9}

In the present study cost of dental treatment was the third most reason for late dental treatment affecting 14.4% of study participants. Despite the minimal rates of dental treatment in government hospitals of Pakistan still the dental treatment is considered an expensive treatment.^{4,9} The other common cited reason was no nearby availability of dental facility marked by 10.4% of study participants. Especially it is most prominent reason for the people who live in rural or distance areas and who don't have nearby dental facilities.¹⁴ Although the government had set up the rural health center for dental treatment also but these centers has limited facilities than the tertiary hospitals.^{8,14}

Sterilization issues in government hospitals was reported by 9.8% of study subjects. Whereas 6.6% people also reported long waiting time in government hospitals as one of the reasons of their delay dental treatment where number of patients is more than available dental facilities in hospitals.^{1,3,5,15}

This study provides important information about the oral hygiene practices and late seeking of dental care at government tertiary care hospitals. Based on this information we can better guide and counsel the patients to maintaining good oral health by oral hygiene practices and normal regular check-ups along with earliest possible consultation with the dentist in case of any dental problem.

However, the major limitation of the study is due to its shorter scale since literacy rate, life style and availability of dental facilities vary in different areas of Pakistan. Therefore, we cannot generalize the findings of this study to all

Pakistani population. However, this study may provide an initial step in understanding important variables and will pave the road for further future studies.

The conclusion of this study is that although a good percentage of participants practice oral hygiene measures but they need more guidance and counseling about the oral health and early seeking of dental treatment in case of any dental problems.

Conflict of interest: None declared.

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