

## UTILIZATION OF DENTAL SERVICES BY THE FEMALE POPULATION IN RURAL AREAS; A CROSS-SECTIONAL STUDY

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### **ABSTRACT**

#### **OBJECTIVES**

*This study aimed to gain an insight into all those factors that facilitate and prevent patients from seeking dental treatments on time.*

#### **METHODOLOGY**

*A structured closed-ended questionnaire was filled with detailed information obtained from 215 female patients who visited the dental out-patient department with different dental ailments and was analyzed using SPSS Version 22. Also, the post-stratification chi-square test was applied to check the significance of all the comparative statistics. P-value <0.05 or = to 0.05 was considered significant.*

#### **RESULTS**

*A total of 215 females of age ranged from 20 to 60 years, with the largest group of respondents aged between 20 to 25 years (42%), 40 and above (38%). The most common reasons for not seeking dental treatments were, fear of pain (51%), the disease was not severe (46.9%), Fear of infectious disease (37.8%), high dental costs (28.6%), non-availability of female dentists (26.5%), economic issues (21.4%), lengthy appointments (20.4%), cost of transportation (15.3%).*

#### **CONCLUSION**

*Our results concluded that only a small portion of females visited a dentist when the symptoms first appeared. There was a misconception that dental disease could be cured with over-the-counter medications also enough services, professional staff and a hygienic environment are not provided at the hospital and private treatments are charged more, which prevents them from visiting Dental health facilities. Hence dental awareness programs are required to be implemented and Government is required to fulfil these unmet basic facilities.*

**KEYWORDS:** Dental Care, Awareness, Factors, Government, Rural

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### **INTRODUCTION**

Our body system is directly connected to the external environment through the oral cavity; thus, it acts as a reservoir for different oral and systemic diseases.<sup>1</sup> Prevention of different oral diseases is possible only through healthy oral hygiene practices and seeking timely professional dental

care. Availing of timely dental services does not only depends on their availability but also on their proper utilization. Almost all over the world developed countries did overcome the gap between the availability and utilization of dental services, but unfortunately in developing countries, the gap still exists, and resultantly timely dental services are not provided, eventually resulting in severe dental diseases and tooth loss.<sup>2</sup> Dentistry and medical professionals should collaborate to increase patient access and coordination of services. Oral and dental health issues are a serious public health concern, particularly in developing nations, where the illness burden is higher than in

developed countries. Unfortunately, these concerns are usually ignored. As a result, both oral and overall health is compromised. It may be difficult for a patient to access health care because of their beliefs and other predictors such as the cost, location, waiting time, and the clinic's reputation; however, other factors such as the personality traits and skill sets of the dental staff may influence their decision to seek treatment from a particular clinic or hospitals.<sup>3</sup> Various research has suggested that there are a variety of reasons why people may not seek dental care when they need it, such as previous dental experiences, which influence individual perceptions of dental treatments, particularly painful and intrusive ones during infancy.<sup>4,5</sup> Long wait times are also a prominent reason why the majority of patients avoid dental treatments. Dentists' lack of empathetic conduct may have contributed to unfavorable reactions because they were perceived as impersonal, uncaring, indifferent, or cold.<sup>6</sup> According to a survey done in the United States, the following reasons were given: expense (40.2 percent), lack of time (14.1 percent), and "no apparent purpose to go to the dentist (32.7 percent).<sup>7</sup> Comparable research done in Australia found similar causes, such as a lack of time and money.<sup>8</sup> Another study on Australian people found that they postponed dental procedures because the cost increased from 27.1 per cent in 1994 to 34.3 per cent in 2008.<sup>9</sup> Twenty-six per cent of individuals indicated the sort of therapy they had previously chosen had been influenced by the cost.<sup>10</sup> A survey reported the feel of the needle, and the sound of a drill, as the most frightening objects.<sup>11,12</sup> Another study in developing nations, such as India, found that the most common reasons for skipping dental appointments were lack of time, dental disorders are not particularly serious, and no need to attend the dentist until there is pain. A study in Pakistan reported the most common reasons are lack of time and financial concerns.<sup>13</sup> A small number of studies have been conducted in government settings where the majority of services are provided free of charge or at a very low cost, but people are still denied timely dental treatment, such as a recent study conducted in Lahore where one of the options for dental care service provision is a tertiary care hospital where the majority of services are provided free of charge or at a nominal cost, but there are still barriers in seeking regular dental treatment. Furthermore, the bulk of my study variables and their impacts were based on research done on children in various nations, and there is still a discussion about the link between dental care

consumption and associated issues. As a result, more research into the elements involved is required.

## METHODOLOGY

A cross-sectional study was conducted at an Out-Patient Department (OPD) of the dental department in city hospital Lakki Marwat through a non-probability convenient sampling technique. For Data collection, females were interviewed while visiting the OPD of Lakki City hospital through a convenient sampling method. A total of 215 questionnaires were completed. A structured closed-ended questionnaire was extracted from already published studies and includes a total of 17 questions. Everyone was asked a series of questions. Oral hygiene status was also monitored. Data analysis was done by using SPSS version 22. Results were summarized using descriptive statistics in the form of tables and charts. The major reasons for delayed visits were stratified for the most repeated factors by the patient. Post-stratification chi-square test was applied to see the significance of all comparative statistics. A P-value less than 0.05 ( $\leq 0.05$ ) was taken as significant.

## RESULTS

Among all females who visited a dental OPD total of 215 participated in a study, Age ranged from 20 to 60 years, with the largest group of respondents aged between 20 to 25 years (42%), 40 and above (38%). Most participants were illiterate (34.4%), with 21.4% having completed primary education and only 18% with high school education. Upon general observation 38.6% of females reported cosmetic dental problems, followed by females with dental pain i.e.32% and 29% with oral mucosal lesions, also when respondents were asked about their qualifications it was found that mostly illiterate females were diagnosed with these problems.

Table 1: General Observation and Demographics

General Observations	What is the patient's qualification?							Total
	Illiterate	Primary School	High School	Secondary School	College	Bachelor	Master & above	
Does the patient have any dental pain or sensitivity?	64 86.5%	31 68.9%	27 67.5%	10 76.9%	10 100.0%	13 81.3%	13 81.3%	168
Do patient gums bleed?	41 55.4%	19 42.2%	17 42.5%	7 53.8%	7 70.0%	3 18.8%	8 50.0%	102
Is she satisfied with here smile?	49 66.2%	37 82.2%	32 80.0%	11 84.6%	9 90.0%	15 93.8%	12 75.0%	165

Table 2: Factors Affecting Utilization of Dental Services.

		Does the patient have any television at home?	
		Yes (f%)	No (f%)
When was the last dental visit today?	Less than 6 months	21.2%	18.2%
	6-12 months	24.4%	9.1%
	More than 12 months	44.0%	59.1%
	Didn't visit a dentist before	10.4%	13.6%
Factors Affecting Utilization of Dental Services	The dental disease was not severe	43.7%	22.7%
	No availability of a dentist.	8.9%	4.5%
	Non-availability of a female dentist.	20.5%	18.2%
	Economic issue	13.7%	0.0%
	Inconvenience	13.7%	0.0%
	High dental cost	30.5%	0.0%
	Fear of pain	40.0%	13.6%
	No dentist nearby	12.6%	0.0%
	Fear of infectious disease	34.7%	18.2%
	No reliable dentist	15.8%	9.1%
	Difficulty of registration	2.1%	0.0%
	Lengthy appointments	18.9%	36.4%
	Cost of transportation	18.4%	0.0%
	Other reason	15.3%	18.2%

Table 3: Common Reasons for Delayed Last Dental Visit

Reasons For Delayed Dental Visits	Last Dental Visit From Today				Chi-Square Value	P-Value
	< 6 months	6-12 months	> 12 months	Didn't Visit a Dentist B		
Dental disease was not severe	25.7%	42.6%	46.9%	56.5%	11.930	0.008
unavailability of a female dentist.	20.0%	14.9%	26.5%	13.0%	04.863	0.182
Economic issue	2.9%	4.3%	21.4%	8.7%	15.367	0.002
High dental cost	45.7%	21.3%	28.6%	17.4%	03.954	0.267
Fear of pain	17.1%	44.7%	51.0%	8.7%	27.777	0.001
Fear of infectious disease	20.0%	40.4%	37.8%	30.4%	08.040	0.040
Lengthy appointments	37.1%	19.1%	20.4%	8.7%	4.052	0.256
Cost of transportation	48.6%	4.3%	15.3%	4.3%	23.080	0.001

## DISCUSSION

This study was carried out to find out the reasons that prevent the general population from timely utilization of dental care services. The focus of this research was the government. Sector hospital where despite the nominal cost, the timely patient presentation was low and factors that did effects patients visits to a different dental health facility. Hence there was an extreme need to explore the reasons behind such a large proportion of people presenting late. The study population consists of females belonging to different socioeconomic statuses but most of them were illiterate and some

have very limited education like studies conducted in Nigeria and India.<sup>13,14</sup> Most of the females had made their previous dental visits delayed ultimately, they do report to the OPD with serious dental issues like extreme pain, swelling, severe dental caries, extreme dental plaque, and other esthetic problems. The most reported reasons recorded for delayed dental visits were, Dental disease was not severe which was consistent with findings in a study conducted in India and China.<sup>15,16</sup> Non-availability of a female dentist just like findings published in the primary dental journal.<sup>17</sup> Economic issues, High dental costs, and Lengthy appointments were also contributing

factors similar to findings published in Victoria, Saudi Arabia, and Lahore.<sup>2,12,18,19</sup> Fear of pain, fear of infectious disease and Cost of transportation are inconsistent.<sup>20,21,22</sup> Our study also concluded that mostly uneducated and less educated females were found with more severe dental issues and more delayed dental visits which is, in contrast, to a study conducted in Saudi Arabia where Less educated patients as compared to those with bachelor's and masters were more regular and satisfied with their routine dental appointments.<sup>23</sup> This demonstrates that all these issues are common in developing countries, especially in rural areas. Non-serious behavior toward the dental problem is because people do avoid professional dental treatment even when symptoms emerge, preferring instead to seek advice from family, friends, local pharmacies, and quacks. The issue arises from the widespread availability of over-the-counter drugs, which are frequently abused and are common in all developing countries, like Pakistan where low literacy rate and lack of dental education do play a major role, where people do not believe it is necessary to see a dentist when a problem first appeared.<sup>24</sup> However, studies undertaken in developed countries opposed our findings.<sup>25,26,27</sup> This can be attributed to the fact that they have suitable protocols in place to prevent the nonprescribed use of medications. They do have a high literacy rate and a thorough knowledge of the importance of dental health maintenance. Treatment costs have also been mentioned as a key cause of people not getting dental treatment on time. in other studies.<sup>14</sup> This, however, contradicts our findings because our study was conducted in a government setting where the cost of dental treatment is very low or even free but even though most of the patients did mention the cost of delaying their previous dental visits because according to them privates dental treatments costs high and government hospitals in Lakki Marwat do provide patients with very limited treatment facilities and most commonly provided one is tooth extraction. Also, the environment is extremely unhygienic, there is no system for autoclaving and other facilities for an aseptic environment to prevent patients from nosocomial infections. Also, patients do complain about spreading COVID nowadays, as there were no precautionary measures to provide prevention against such infections. Females reported more conveyance and home concerns, which is consistent with research undertaken in India.<sup>21</sup> Most of the respondents did complain about the unavailability of the nearby dentist, and they do have to travel. Also, some

families do not allow their females to be treated by a male dentist and there is no female doctor available in Lakki city hospital. Females are more afraid of dentists as compared to males according to research done in Karachi, Pakistan. Also, females are found to be more expressive and could not suppress their feelings and fear, which is consistent with our findings as a high proportion of females did avoid timely dental visits as they do have a fear of pain.<sup>28</sup> This research gives us valuable information that can be used by public health officials and health care providers to improve accessibility, availability, acceptability and awareness of oral health care amongst females belonging to rural areas of Pakistan.

## CONCLUSION

More than half of the study group did attend the dentist late (more than 12 months) when the symptoms initially appeared, resulting in irreversible tooth damage that results in tooth extraction. The biggest predictors of nonattendance behavior were fear of pain, the disease was not severe, Fear of infectious disease, high dental costs, non-availability of a female dentist, economic issues, lengthy appointments, and cost of transportation

## LIMITATIONS

Although a satisfactory response was achieved in the study convenience sampling potentially jeopardizes the generalizability of the findings. The open-ended questionnaire, on the other hand, can let patients explain more in detail their experiences. As a result, it is advised that open-ended questions be used in future research to assess patient responses.

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