

BARRIERS TO THE ACCESS OF ORAL HEALTH CARE FACILITIES AMONG UNDERGRADUATE STUDENTS IN PESHAWAR

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DOI: <https://doi.org/10.5281/zenodo.15307731>

Keywords

Oral health, Dental services utilization, Accessibility to oral health care services, Barriers to the oral health care services.

Article History

Received on 15 November 2024

Accepted on 15 December 2024

Published on 31 January 2025

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Abstract

The aim of this study was to identify the barriers faced by undergraduate students in accessing dental care services. A descriptive cross-sectional study design was employed, utilizing non-probability convenience sampling techniques. Data were collected through a self-administered questionnaire. The Statistical Package for Social Sciences (SPSS) was used to compute descriptive statistics.

A total of 385 participants were included in the study, comprising both male and female undergraduate students—203 (52.7%) males and 182 (47.3%) females. Among the identified barriers to accessing dental care services, the most frequently reported was the fear of high treatment costs, as indicated by 114 participants (29.6%). This was followed by fear of pain associated with dental procedures, reported by 99 participants (25.7%). Issues related to scheduling appointments were cited by 37 participants (9.6%). The least reported barrier was family influence or advice to avoid dental clinics and instead rely on home remedies, which was mentioned by only one participant (0.3%).

It was concluded that fear of expensive treatment was the most frequent barrier of all, followed by fear of pain of dental procedure, appointment related issues and time shortages, respectively.

INTRODUCTION

The availability of Dental treatment and prompt access to oral health care facilities and treatment might improve quality of life [1]. A Cross sectional study was conducted at Khyber College of dentistry in Peshawar Pakistan, it was concluded that lack of dental health education, awareness and public health initiative led to Oral disease [2]. Routine dental check-up and treatment of dental health issues enhance the standard of living. In Spain, children get

free dental care up to age of 16 through the public health system except orthodontic services [3]. In India, oral health care is the basic component of health care, yet Dental service is only provided at the primary health care level in some states. Currently, no insurance covers dental treatment for patient [4]. Access to dental care varies around the globe, with limited access in low income nations and better Access in developed nations. In Australia, 57.6% of

dentate adults reported visiting a dentist. Analysis of Australian dental care access patterns revealed higher utilization among older adults, individuals with higher incomes, and women. Furthermore, over half (53%) of Australians reported seeking routine dental examinations, rather than seeking care for urgent needs or pain [5]. The Saudi health information survey revealed that 11.5% of Arabian adult over the age of 15 saw a dentist for routine dental check-up while 48.3% when they had dental issues [6]. According to local research, only 10.5% of adult Pakistanis have visited a dentist for a routine dental check-up. The dentist-to-population ratio in Pakistan is 1:1,305,811, while in urban areas of India it is 1:10,000, but in rural areas it is 1:150,000. Therefore, it is crucial that adults have oral health awareness, as well as affordable and timely access to oral health care facilities [4].

The barrier in oral health services may be external and internal. External barriers to dental care include high costs, limited insurance coverage, and uneven distribution of dentists, inadequate safety nets, and ambiguity of oral health system. Internal barriers to oral health care include little oral health awareness dental anxiety and wrong myth about preventive care. Transportation, childcare, work commitments, scheduling difficulties, and mobility issues further complicate access to care [7].

Barriers may be primary that is financial and secondary non-financial. The subdivision of secondary barrier is modifiable that is Dental anxiety which can be overcomes and the non-modifiable that is age and sex which cannot be changed [8].

In the UK, elderly individuals who require assistance with daily living face challenges in accessing dental services. In Denmark older patients with low income and less active lifestyle also avoid or rarely use Dental services [9]. A Cross sectional study of 427 people were conducted in February 2011 in Udaipur India, of which 248 were male and 179 were females. It was revealed from the study that male visited Dental clinics more frequently ($P > 0.05$) whereas females were more afraid of dentist ($P < 0.001$). Also it was indicated that young people visited Dental clinics more as compared to old age people in a single year. According to this research male thought seeking dental Care is important. The distance they had to travel to get oral service was not that

important but the cost of dental services have an impact on their Dental appointment [10].

A 2017 study conducted in the USA and Europe investigated barriers to accessing oral health services in older patients. The study found there isn't a single factor but a combination of factors such as low income, lack of dental insurance, education level, oral health awareness, and overall health status, collectively creating strong barriers to accessing dental services for older individuals [8].

A 2018 study in the Saudi Arabian city of Abha examined the factors affecting persons' access to dental treatment. There were 499 adult volunteers in the study (229 females and 270 men). Over half (57.9%) of the participants reported utilizing dental services, with emergency services being the most common reason for dental visits. The study identified cost and lack of time as primary barriers to accessing dental care [11].

A Cross sectional study was conducted in 2016 to determine the self-reported barrier to dental care in Hyderabad, India. The study included 1,017 participants, with 574 males and 443 females. This study showed that lack of Dental Insurance, growing old, schedule difficulties, working more days per week were the self-reported barriers to access oral health services [12].

A study was conducted in 2019 and 2020 in Lahore to find out the barrier of adults to access oral health care. A total of 400 participants were taken, 200 male and 200 female. It was concluded that 259(64.75%) cited the high cost of oral care as the main barrier. This was by followed Accessibility to dental clinics presented a challenge for 27.75%, while 20.25% expressed Dental phobia [13].

The main objective of this study is to determine the barriers to undergraduates accessing the dental care services.

METHODOLOGY

This research employed a descriptive cross-sectional study design using non-probability convenience sampling techniques. The study was conducted at Islamia College University Peshawar (ICUP) and the Institute of Paramedical Sciences (IPMS). A total of 385 Pakistani undergraduate students participated in the study, including 203 males and 182 females. Only those students who were willing to take part in

the survey were included; individuals who declined to participate were excluded from the study. Ethical approval was obtained from the Institutional Ethical Review Committee prior to data collection. Furthermore, permission to carry out the research, along with a comprehensive discussion of all relevant ethical considerations, was obtained from the directors or heads of departments at the respective institutions. Verbal informed consent was secured from each participant. Data were collected using a structured, self-administered questionnaire. The collected data were analyzed using the Statistical Package for Social Sciences (SPSS) version 25.0, and the findings were presented using bar graphs and charts.

RESULT

A total of 385 participants were included in this study, comprising 203 males (52.7%) and 182 females (47.3%). All participants were between 18 and 25 years of age. Of the total, 367 individuals (95.3%) were unmarried, while 18 (4.7%) were married. In terms of residence, 210 participants (54.5%) lived in rural areas, whereas 175 (45.5%) resided in urban areas.

Regarding educational background, 223 participants (57.9%) were medical students, while 162 (42.1%) were from non-medical fields. The study also examined the utilization of dental services, frequency of routine dental check-ups, reasons for dental visits, and various barriers to accessing oral health care. With respect to monthly income, 231 participants (60%) reported earning more than 40,000, 39 (10.1%) reported earning exactly 40,000, and 115 (29.9%) had a monthly income below 40,000. Additionally, 252 participants (65.5%) reported using dental services, whereas 133 (34.5%) had not utilized such services.

Visits to Dental clinics:

Table-1 presents the frequency of dental clinic visits among participants in recent years. In the past year, 94 participants (24.4%) reported visiting a dental clinic, while 89 (23.1%) had visited within the past 1 to 2 years. Additionally, 39 participants (10.1%) visited within the past 2 to 5 years, and 34 (8.8%) reported their last visit as being more than 5 years ago. Notably, 129 participants (33.5%) had never visited a dental clinic routine dental check-ups

Table-1 Visit to a Dental Clinic Last time

		Frequency	Percent	Valid Percent	Cumulative Percent
Visits	less than 1 year	94	24.4	24.4	24.4
	1 to 2 years	89	23.1	23.1	47.5
	2 to 5 years	39	10.1	10.1	57.7
	Greater than 5 years	34	8.8	8.8	66.5
	Never visited	129	33.5	33.5	100.0
	Total	385	100.0	100.0	

Routine Dental Check-Ups:

Table-2 indicates that the majority of participants, 331 (86%), did not undergo routine dental check-

ups, whereas only 54 participants (14%) reported regularly visiting dental professionals for routine check-ups

Table-2: Routine Check-ups

		Frequency	Percent	Valid Percent	Cumulative Percent
Routine Check-ups	Yes	54	14.0	14.0	14.0
	No	331	86.0	86.0	100.0
	Total	385	100.0	100.0	

Preferred health care hospital:

Figure-1 illustrates the primary reasons for visiting dental clinics among the participants. The majority,

142 students (36.9%), reported seeking emergency treatment as their main reason for visiting, while 114 students (29.6%) visited for routine check-ups. Notably, 129 students (33.5%) had never visited a dental clinic.

Regarding hospital preferences, 129 participants (33.5%) did not express a preference for any specific healthcare facility. In comparison, 103 participants (26.8%) preferred private dental clinics, 82 (21.3%) favored private dental hospitals, and 71 (18.4%) choose government hospitals.

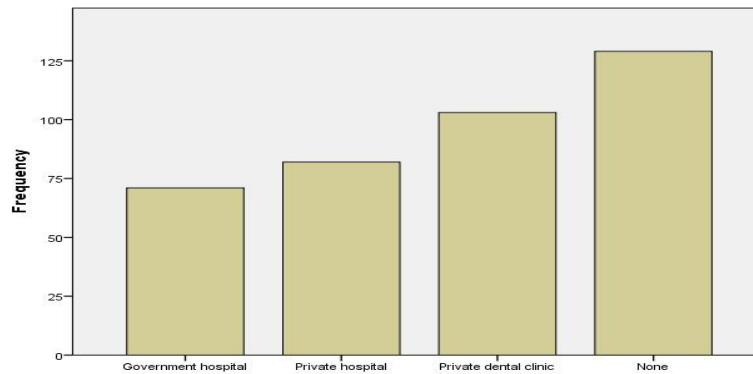


Figure-1: Preferred Healthcare Hospitals

Barriers to oral health care facilities:

This section illustrates the various barriers to accessing oral health care facilities among the surveyed students. Among the total of 385 participants, 114 students reported fear of expensive treatment as a major barrier, while 99 cited dental phobia. Furthermore, 37 students experienced difficulties in scheduling appointments, and 12 reported challenges in physically accessing dental

facilities. In addition, 32 students mentioned a lack of time as an obstacle, whereas 11 admitted to avoiding treatment without specifying a clear reason. Moreover, 22 participants identified a lack of awareness as a limiting factor. Notably, one student pointed to family pressure or a preference for home remedies as a barrier. Meanwhile, 26 students did not report any specific barrier, and 31 indicated various other factors.

Table-3: Barriers to the oral health care facilities

Barriers		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fear of expensive treatment	114	29.6	29.6	29.6
	Fear of pain of dental procedure	99	25.7	25.7	55.3
	Appointed related issues	37	9.6	9.6	64.9
	Difficulty in accessing dental facilities/clinics	12	3.1	3.1	68.1
	Time shortage	32	8.3	8.3	76.4
	Avoid treatment	11	2.9	2.9	79.2
	Lack of awareness	22	5.7	5.7	84.9
	Family pressure/advice to avoid visiting clinics and rely on home remedies	1	.3	.3	85.2
	Prefer not to mention	26	6.8	6.8	91.9
	Others	31	8.1	8.1	100.0
	Total	385	100.0	100.0	

DISCUSSION

This study identified several key factors that play a role in barriers to accessing oral health care, measured using last dental checkup, dental insurance,

monthly income, dental phobia, preferred hospital, expensive treatment and appointment schedule difficulties etc.

According to this study the frequency of participants visiting dental clinics in recent years. In last 12 months 94(24.4%) participants visited dental clinic which resemble the previous study conducted in 2015 in Nellore where 36% participants visited dental clinics in last 12 months. The slight difference is mainly due to lack of oral health awareness, low income and dental phobia [14].

This study indicates that 142(36.9%) participants visited dental clinics for emergency treatment and 114(29.6%) visited dental clinic for routine checkup. This study shows disagreement with the previous study performed in Abha Saudi Arabia where over 57.5% people visited dental clinic for emergency treatment because of high cost and schedule difficulties [11].

This study reveals that the main barriers in accessing oral health services is high cost 29.6% followed by dental phobia 25.7% and scheduled difficulties 9.6% . this statement can relates with the previous study performed in Lahore in 2019 and 2020 which cites the main barriers to oral health services is high cost 64.75% followed by appointment scheduled difficulties and dental phobia that is 27.75% and 20.25% respectively [13].

According to this study only 8.1% participants utilized Government insurance for dental services while 58.4% utilized self-funded for their dental services. This result shows strong agreement with the study conducted in 2016 at Hyderabad city in India which showed that lack of dental insurance, scheduled difficulties were self-reported barriers in receiving regular dental care [12].

According to our findings it is revealed that the main barriers in accessing oral health services is high cost ,dental phobia, scheduled difficulties, difficulties in accessing dental facilities and lack of dental awareness. This result shows a strong correlation with the external barriers that is high cost of dental services and internal barriers in accessing oral health services that is dental phobia, scheduled difficulties, and lack of oral health awareness [7].

CONCLUSION

According to our study findings it was revealed that high cost of dental treatment was the most common barriers in accessing oral health services, followed by dental phobia, appointment scheduled issues and

time shortage respectively. The least frequent barrier in accessing oral health was family pressure or advice to avoid visit clinics and rely on home remedies. The study found that most participants visited dental professionals in emergency conditions, with a preference of private dental clinic and they were self-funded in dental treatment.

RECOMMENDATION

Based on the findings of this study, several recommendations can be made to improve access to dental care services among undergraduate students. Firstly, dental institutions and healthcare policymakers should focus on making dental services more affordable for students, as the fear of high treatment costs emerged as the most significant barrier. Initiatives such as subsidized student dental plans, discounts, could be introduced to alleviate financial concerns. Secondly, awareness and education campaigns should be launched to address the fear of pain associated with dental procedures. These could include informational sessions, workshops, or the use of multimedia tools to educate students on pain management techniques and the advances in pain-free dentistry. Additionally, improving appointment scheduling systems to offer more flexible and convenient time slots can help overcome scheduling barriers.

Researchers are advised to assess the level of oral health knowledge and understanding among different population and how this impact their informed decisions about their oral health.it is also recommended that to analyze dental policies and regulations on access to oral care. This will minimize barriers in access to oral health.

These combined efforts can help reduce the psychological and logistical barriers faced by students and promote better oral health outcomes.

Funding: The publication charges for this article are borne from the Khyber Medical University publication fund. (Reference No: DIR/ORIC/Ref/25/00107).

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