Knowledge, attitudes and practices regarding quackery in dentistry at Ayub Dental Hospital, Abbottabad

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Abstract

Objective: To assess knowledge, attitudes and practices of people regarding dental quackery.

Method: The descriptive, knowledge-attitude-practice study was conducted from June 2 to August 1, 2022, at the Dentistry Department of Ayub Medical Complex, Abbottabad, Pakistan, and comprised adult subjects of either gender belonging to lower or middle socioeconomic class and visiting the dental outpatient clinic. Data was collected using a predesigned questionnaire. The subjects' knowledge, attitude and practice about dental quackery was assessed. Data was analysed using SPSS 21.

Results: Of the 261 subjects. 135(51.7%) were males and 126(48.3%) were females. The overall mean age was 29.15+/-10.15 years. Of the total, 243(93.1%) participants had satisfactory socioeconomic status and 18(6.9%) had unsatisfactory status. There were 97(37.2%) subjects having good knowledge, 217(83.1%) with good attitude, and 53(67.1%) showing good practices towards dental quackery. Low socioeconomic status, low awareness, and easy accessibility were the main reasons for people visiting dental quacks. Increasing the number of public hospitals was suggested as the main solution by 119(45.6%) subjects.

Conclusion: The level of knowledge, attitude and practice regarding dental quackery was good. Low socioeconomic status and lack of awareness were the two important reasons for quackery.

Key Words: Dentistry, Frauds, Healthcare, Malpractice, Quackery.

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Introduction

Despite the advancement in science and technology, developing countries are still struggling to provide people with standard dental treatment. Majority of the dentists practice in cities, while remote areas often remain deprived of professional dental care[1]. This forces the people to seek care from unqualified dental practitioners who often indulge in malpractices and are therefore harmful to society. Also, due to high professional charges, people avoid visiting the dentists, and opt for unqualified practitioners who charge much lower fees[2]. According to the Random House dictionary, a quack is "a fraudulent or ignorant pretender to medical skill" or "a person who pretends, professionally or publicly, to have skill, knowledge, or qualification he or she does not possess; a charlatan"[3]. The goal of the quack is to make money. They do this without any formal dental education and they practice unethically and use unscientific techniques[2]. As the saying goes, a robber demands one's money or life, but a quack demands one's money and life![4]

Dental quackery causes physical, psychological, emotional and financial harm to the patients because of the treatment and the fact that due to this, access to proper treatment remains denied[5]. Unlicensed dental practitioners often do treatments at the roadside with poor sterilisation and often with unconventional instruments, like screwdrivers and pliers. They also use self-cure acrylic for denture work[2]. Recently, teeth whitening and bogus braces are also being offered to improve dental aesthetics[6]. All this results in damage to teeth and their surrounding structures. Wrong or missed diagnoses also lead to undue suffering for the patients[7]. Self-acrylic is carcinogenic and lack of asepsis in the procedure as well as reusing contaminated needles cause transmissible diseases,[1] like Hepatitis B, Hepatitis C and human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS)[8]. It is particularly dangerous for medically compromised patients, like those with diabetes mellitus[9]. Quacks claim to offer quick and painless remedies that make them attractive to the patients[1]. They treat carious teeth[10] as well as mobile teeth with self-cure acrylic, and fix dentures permanently with suction discs[2]. They learn some dental procedures working with some dentist or from their family before

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becoming 'professionals' themselves[3]. They often learn from the internet, such as from tutorial videos on YouTube[11]. In high-income countries (HICs), as opposed to low- and middle-income countries (LMICs), dental quackery is largely controlled, although dubious methods of dentistry and health fraud in the form of a promotion and distribution of unverified dental products are sometimes detected[12].

Street dentistry is a significant problem in South-East Asia, especially India and Pakistan[8]. There are about 40,000 dental quacks operating in Pakistan[13]. In Malaysia, from 2015 to 2017, 46 complaints were filed for quackery malpractice, resulting in fines and governmental action. These complaints are related to orthodontics (29.6%), operative dentistry (28.6%), oral surgery (26.5%) and prosthodontics (15.3%)[8]. Fake braces are worn especially by teenagers for fashion or to display wealth. These are also in vogue in China, Indonesia and Thailand[8]. In Pakistan, the majority of patients visiting dental quacks were reportedly older, had low awareness and were uneducated. The barriers related to dental consultation are high costs, low awareness and knowledge, long waiting times, long appointment dates often with repeated appointments, less time at the clinic and low number of public dental hospitals[14].

In Nigeria, frequency of dental extraction performed by quacks was 46.4%. Death caused by dental extraction complications was 11% and, among them, 96.2% had their procedure done by quacks[15]. In India, about 64% of people in a study faced problems with dentures and 74.2% were not even aware of any qualified dental practitioner[16]. Another study in India reported that 42% subjects visited dental quacks, with age and level of education being significant markers[17]. In Karachi, there are around 4,000 quacks who are putting patient's lives in danger[18].

To the best of our knowledge, no study has been conducted in Pakistan assessing the knowledge, attitude and practice (KAP) regarding dental quackery in Abbottabad. The current study was planned to fill the gap by assessing KAP levels of people regarding dental quackery.

Subjects and Methods

The descriptive, KAP study was conducted from June 2 to August 1, 2022, at the Dentistry Department of Ayub Medical Complex, Abbottabad, Pakistan. After approval from the institutional ethics review committee, the sample size was calculated using the World Health Organisation (WHO) calculator[19] with 95% confidence level, 0.06 absolute precision and assumed prevalence 42.1%[16] of people visiting dental quacks. The sample was raised using non-probability convenience sampling technique. Those included were adult subjects of either gender belonging to lower or middle socioeconomic class and visiting the dental outpatient department (OPD). Those aged <18 years, and those belonging to upper socioeconomic class were excluded.

After taking informed written consent from the subjects, data was collected using a predesigned questionnaire adapted from literature[16], which explored demographic variables and KAP levels of the participants. Questionnaire was made available in both English and Urdu for easy understanding by the subjects. A similar questionnaire was used by Parlani et al.,[16] in India. This questionnaire was passed through multiple revisions and then pilot testing was done amongst intended participants. It was also checked by an expert of Community Dentistry ensuring its content validity. The results obtained during pilot testing and actual data collection were consistent ensuring reliability of the questionnaire. KAP scoring was done using a criterion adapted from literature[20]. Responses ranged 0-5. Cut-off values 3-5 indicated good knowledge and 0-2 showed poor knowledge. Cut-off value 2-3 indicated good attitude and 0-1 indicated poor attitude. Score of 1 indicated good practice and 0 indicated poor practice.

Data analysis was done using SPSS 21. Frequencies and percentages were calculated for the categorical variables, and mean and standard deviation values were calculated for age.

Results

Of the 261 subjects. 135(51.7%) were males and 126(48.3%) were females. The overall mean age was 29.15+/-10.15 years. Of the total, 243(93.1%) participants had satisfactory socioeconomic status, 18(6.9%) had unsatisfactory status, 130(49.8%) were married, 131(50.2%) were unmarried, 250(95.8%) were literate and 11(4.1%) were illiterate.

There were 97(37.2%) subjects having good knowledge and 164(62.5%) with poor knowledge (Table 1). There were 217(83.1%) participants with good attitude and 44(16.9%) with poor attitude. Increasing the number of public hospitals was suggested as the main solution by 119(45.6%) subjects (Table 2).

There were 182(69.7%) people who had never visited a dental quack. Among the remaining, 79(30.3%) subjects, 53(67.1%) showed good practices and 26(32.9%) showed poor practice (Table 3) with regard to dental quackery.

Table 1: Questions about knowledge related to quackery in dentistry.

S.NO	Question Statement	Option A	Option B	Option C	Option D	Option E	Option F	Scoring
1	Do you know about any qualified dental practitioner?	Yes166 (63.6%)	No95 (36.4%)					Yes=1167(64%) No=094(36%)
2	If you are wearing any denture, do you know it had been made scientifically?	Yes39 (14.9%)	No76 (29.1%)	Not wearing any denture146 (55.9%)				Yes=138(14.6%) No=083(31.8%) Option C=N/A*
3	Do you know what is quack (unqualified dental practitioners) and quackery?	Yes98 (37.5%)	No163 (62.5%)					Yes=1100(38.3%) No=0161(61.7%)
4	Are you aware that you had been to a quack ever?	Yes48 (18.4%)	No213 (81.6%)					Yes=146(17.6%) No=0215(82.4%)
5	Do you know about the different specialties in dentistry?	Yes109 (41.8%)	No152 (58.2%)					Yes=1107(41%) No=0154(59%)
6	According to you what is the main cause of people visiting quacks?	Economical138 (52.9%)	Accessibility.21 (8%)	Comfort.38 (14.6%)	Single appointment.12 (4.6%)	Referral from other person.11 (4.2%)	Lack of awareness.41 (15.7%)	N/A*

*: Not Applicable

Scoring: Good Knowledge: 3-5 = 97 (37.2%), Poor Knowledge: 1-2 = 164 (62.8%)

Table-2: Questions about attitude regarding quackery in dentistry.

S.No	Question Statement	A	B	C	D	E	F	Scoring
1	What steps should be taken to discourage the practice of quacks?	Increasing public dental hospitals. 119 (45.6%)	Increasing number of dentists. 26 (10%)	Decreasing fee of dentist.41 (15.7%)	Dental awareness programs. 75 (28.7%)			N/A*
2	What do you think, that practice of unqualified dental practitioner should be?	Punished 182(69.7%)	Discouraged/Abolished44(16.9%)	Encouraged 35(13.4%)				Punished=2 184(70.5%) Discouraged=1 42(16.1%) Encouraged=0 35(13.4%)
3	Do you think unqualified dental practitioners should be trusted?	No.223 (85.4%)	Yes.38 (14.6%)					No=1 226(86.6%) Yes=0 35(13.4%)
4	If yes, then why?	Economical 12 (4.6%)	Experience 9 (3.4%)	Accessibility 7 (2.7%)	Comfort 8 (3.1%)	Single appointment 0 (0%)	Referral from other person 2 (8%)	N/A

*: Not Applicable

Scoring: Good Attitude: 2-3 = 217 (83.1%), Poor Attitude: 0-1 = 44 (16.9%)

Table-3: Questions about practice regarding quackery in dentistry.

S.No	Question Statement	A	B	C	D	E	F	Scoring
1	Have you ever been to a quack (unqualified dental practitioner) and how was your experience?	Not Satisfied. 53 (20.3%)	Satisfied. 26 (10%)	Never been to a quack. 182 (69.7%)				Not Satisfied=153(20.3 %) Satisfied=026 (10%) Never been to a quack= N/A
2	If you are wearing a denture made by an unqualified dental practitioner, what problems are you facing now?	Pain with denture. 17 (6.5%)	Loose denture. 14 (5.4%)	Halitosis. 4 (1.5%)	Poor esthetics. 7 (2.7%)	Bleeding from gums. 2 (0.8%)	Not wearing any denture. 217 (83.1%)	N/A

*: Not Applicable

Scoring: Good Practice: 1 = 53 (67.1%), Poor Practice: 0 = 26 (32.9%) {Note: These frequencies have been divided by 53 + 26 =79}

Discussion

The current study was conducted to assess the knowledge, attitude and practice of people towards quackery in dentistry. The KAP values indicate low literacy and lack of awareness. This is in line with a study,[16] according to which, unawareness, low socioeconomic status and lack of access to dental care are the main reasons due to which people visit quacks.

Most participants in the current study were of the view that increasing the number of public dental hospitals could help in discouragement of quackery. Keeping in mind the low socioeconomic status of the people, dental insurance programmes should be initiated by the government which will help in improving accessibility of the people to qualified dental practitioners[16].

According to a study, dentist-to-population ratio in Pakistan is 1:1,305,811, whereas the World Health Organisation (WHO) recommends that the ratio for developing countries should be 1:75,000[18].

According to 14.6% participants of the study, unqualified dental practitioners or quackery should be encouraged with referral from other person being the main reason for this. In such circumstances, educating the people about quackery and quacks would play a great role.

Strict rules should be made and implemented in society against quacks. A majority of participants of the research (69.7%) were in favour of punishing the quacks who are putting people's lives in danger. Dentists are using social media for spreading awareness about the practices of unlicensed dental practitioners in order to counter the hazardous consequences of quackery[11].

In Pakistan, there are multiple malpractices that dental quacks indulge in[13]. There are numerous reasons which lead to the higher prevalence of dental quackery. These include illiteracy, lack of proper healthcare system, no knowledge and awareness of oral problems in the community[3], low socioeconomic status of the patients, the affordability power of patients as well as high costs of treatment, quick pain relief for poor patients[2], unavailability of dentists in rural areas with low dentist-patient ratio[21], and no government policy for providing quality dental services at affordable prices. Even some people belonging to higher socioeconomic status who can afford good treatment resort to visiting the quacks for saving money[2]. A study in Pakistan showed that there are numerous misconceptions about proper oral healthcare in the community, and, therefore, instead of obtaining evidence-based care from dentists, people go to dental quacks who reinforce their confused beliefs[22].

The current study has some limitations as it was an observational study which could not produce strong evidence. Also, the sampling technique used was non-probability convenience sampling, which means the results are not generalisable. Finally, most of the participants visited quacks for prosthodontic reasons, and, as such, better results could not be obtained about other forms of dental quackery.

Despite the limitations, however, the study has underlined the need for further studies to explore the menace of dental quackery in society.

Conclusion

The level of knowledge, attitude and practice regarding dental quackery in the study population was good. Low socioeconomic status and lack of awareness were the two

important reasons for quackery.

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