Assessment of oral health related knowledge, attitude, and self-reported practices of families residing in Peshawar, Pakistan

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ABSTRACT

Background: Oral health is an integral component of one's general health and overall wellbeing. Oral diseases are a common occurrence across the globe and require community based preventive improve oral health at population level. Knowledge, attitude and practice (KAP) survey is an important pre-requisite before launching community based oral health promotion programs.

Objective: The aim of the present study was to assess oral health knowledge, attitude and practice of families residing in Peshawar, Pakistan.

Methodology: It was a cross sectional study, conducted on 200 participants residing in a suburban locality of District Peshawar. Data was collected using a modified structured questionnaire and analyzed using SPSS software.

Results: Oral health related knowledge of the participants about specific dental problem was not satisfactory. Regular dental checkup is uncommon and dental pain is the main reason for visiting dentist (65%). Dental fear and anxiety is also common (61%). About 98% of participants reported to brush their teeth and tooth paste and brush is the most common tool for cleansing teeth (73%).

Conclusion: Oral health knowledge about dental disease and oral care seeking behavior of the population is not satisfactory thereby requiring awareness campaigns to improve oral hygiene and health.

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INTRODUCTION

Oral health is defined as complete absence of pain, discomfort or diseases associated with oral cavity and related structures such as teeth, tongue, jaws and oral soft and hard tissues.[1] Good oral health is essential for one's general health, wellbeing and quality of life. Diseases of the oral cavity not only adversely affect the aesthetic appearance, limit physical function and may play a role in systemic diseases such as diabetes mellitus. Despite recent advances in oral health research, oral diseases are still a major public health issue across the globe. According to the recent Global Burden of Diseases study 2016, oral diseases affect nearly half of the world population (3.58 billion people). Among these, dental caries and periodontal diseases are the commonest problems and most important causes of tooth loss in adults.[2] Although there is continuous decline in the incidence of oral diseases in developed and high income countries, they are still common in low and middle income countries including Pakistan.[3,4] Furthermore, treatment and management of oral diseases is costly and most of the time, beyond the budget of healthcare systems in low and middle income countries.

Keeping in view high prevalence of oral diseases and to maintain good oral health, community based preventive approaches have been emphasized by WHO.[5] Oral health education is an integral component of all these approaches and also believed to be cost effective method for promoting oral health. However, before launching oral health education programs and community based preventive approaches, it is essential to assess knowledge and attitude of people towards oral health.[6] Knowledge is the measure of an individual ability to understand causes, symptoms and preventive measure for a particular oral disease such as caries. There is considerable evidence suggesting that people possessing sufficient knowledge about a particular oral disease are more likely to demonstrate better oral care practices and have good oral hygiene and health.[7,8] In contrast, people with limited knowledge about oral diseases have poor oral health status and twice more chances to have dental caries[6] and poor oral health related quality of life.[9] Unfortunately, oral health knowledge of the population is generally low thereby making it extremely difficult for

This article may be cited as: Qadir SA, Shahzad M, Yousafzai YM. Assessment of oral health related knowledge, attitude, and self-reported practices of families residing in Peshawar, PakistanAdv Basic Med Sci. 2019;3(1): 54-58

healthcare professionals to effectively diagnose, treat or prevent oral diseases.

Peshawar is capital of Khyber Pakhtunkhawa province of Pakistan. The city offers an excellent opportunity to assess oral health problem of a multi-ethnic population with varying socioeconomic and education backgrounds. Till date, limited data is available on oral health knowledge, attitude and practices of general population of Peshawar and only few studies have been conducted so far. These studies were mostly conducted on patients visiting dental hospitals[10,11] or school going children[12] and the results are not consistent. Therefore, the aim of the present study was to assess oral health knowledge, attitude and practice of families residing in Peshawar. The ultimate goal is to facilitate healthcare authorities to implement population specific oral health education programs to promote oral health.

METHODOLOGY

The study was performed under the principles outlined in the Helsinki declaration of 1975 and was approved by the Khyber Medical University Ethical Review Committee (Letter no. KMU/EC/2017/15).

Households in a suburban locality of district Peshawar were approached and household elder were contacted and aims and objectives of the study were explained. Written informed consent was obtained from all the participants aged 18 years and above. For participants below 18 years of age, assent forms were provided, and consent was obtained from parents. A total of 200 participants were included in this study. Those who were mentally or physically challenged were excluded from the study. After obtaining informed consents, a self-administered close-ended structured questionnaire was provided to the participants. The questionnaire was designed by the research team and was not scientifically validated. The questionnaire was translated into Urdu language (Pakistan national language) by experts and explained in Pashto (Local language of Peshawar). Interviewers were trained on the questionnaire and its translation. The questionnaire included 21 questions divided in four sections (demographics, knowledge, attitude and practices).

Data analysis procedure

Completed questionnaires were coded, compiled, and entered in Excel 2016 (Microsoft) and exported to Statistical Package of Social Sciences version 23.0 (SPSS) for analysis. Descriptive statistics included computation of percentages used to calculate the frequencies of oral hygiene knowledge, attitude, and practices.

RESULTS

A total of 200 subjects consented to participate in this study. Response rate was 100%. The study participants include adults and children of both sexes. Socio demographic characteristics of all the participants are summarized in Table 1.

Oral hygiene knowledge and awareness

Distribution of the study population on basis of knowledge regarding oral hygiene and oral health is presented in Table 2. It was observed population have adequate knowledge about oral health and hygiene. An overwhelming majority of the participants think that naswar/gutka or paan use is bad for the oral health and one should regularly visit dentist. However, their knowledge about a particular oral problem such as gum bleeding was not satisfactory.

Regarding attitude, 61% of the participants are afraid of going to the dentist. Of all the participants, only 8% said that they regularly visit dentist. Majority (55%) said that they visit dentist only when they experience dental pain while 19.5% have said that they never visited dentist. Only 27.5% of the respondents have visited their dentist in the last 6 months and the main reason was dental pain (65%).

Response of the study participants regarding oral hygiene practices indicate that 98% percent of the participants brush their teeth regularly (Table 4). Of these, 71% respondents do brush in the morning time and only 16% before going to bed. Tooth brush with tooth paste was the main cleaning agent used by 83% of the respondents followed by Dandasa (walnut tree bark commonly used as herbal teeth whitening agents in rural areas of Pakistan) used by 10% of the participants. More than 90% of the participants brush teeth for more than a minute.

DISCUSSION

Knowledge, attitude and practice (KAP) survey is an essential tool in public health and policy research for the last 4 decades. It has been extensively used in oral health policy and program planning in many countries. In the past, a number of KAP surveys on oral health have been conducted in different cities of Pakistan.[10-15] However, majority of these studies were institution based (education institutes, hospitals etc) and focused on a particular segment of

Table 1 - Socio-demographic background of the participants

Variable	N	Percentage
Gender		
Male	99	49.5
Female	101	50.5
Age groups		
≤ 16 years	72	36.0
> 16 years	128	64.0
Education background		
Educated	182	91.0
Un-educated	14	7.0
Religious education only	4	2.0
Occupation		
Government employees	25	12.5
Self-employed (business man)	41	20.5
Unemployed	134	67.0
Family structure		
Nuclear	105	52.5
Joint	95	47.5

Table 2 - Oral hygiene knowledge and awareness of the study participants

Questions	Percentage
What does gum bleeding mean?	
Healthy gums	2
Inflamed gums	39.5
Gum recession	20.5
I don't know	38%
Do you think gum bleeding can be prevented by	
Using tooth brushing and dental floss?	39
Using soft food	11.5
Using vitamin C	24.5
I don't know	25
Do you think that dental problem can affect your general health	
Yes	79.5
No	10
I don't know	10.5
Do you think immediate replacement of missing teeth by artificial teeth is necessary?	
Yes	60
No	21
I don't know	19
Do you think that regular visit to the dentist is necessary?	
Yes	79
No	10
I don't know	10.5
Do you think that Naswar/gutka/paan chewing and smoking is bad habit?	
Yes	83
No	12
I don't know	5
Do you think that regular visit to dentist can treat or prevent oral diseases?	
Yes	51
No	31
I don't know	14
Do you think that treatment of tooth–ache is important as any other organ of the body?	
Yes	75
No	12
I don't know	13

Table 3 - Attitude of the participants toward oral health

Questions	Percentage
Are you afraid of going, dentist?	
Yes	61
No	34
Don't Know	5
How often do you visit your dentist?	
Regularly (after every 6-8 months)	8
Occasionally	16
Only when I have dental pain	55
I never visited dentist	19.5
When did you last visit your dentist?	
Last 6 months	27.5
Last one year	21.5
More than year	12
The reason for your last visit to the dentist?	
Dental pain	65
Family or friend advice	20
Dentist advice	9
Other	5

Table 4 - Oral hygiene practice of the participants

Questions	Percentage
Do you brush your teeth?	
Yes	98
No	2
When do you brush your teeth?	
Morning	71
Before going to bed	16
Afternoon (lunch time)	3
Other time	10
What you use for cleansing your teeth?	
Tooth brush and tooth paste	73
Dandasa	10
Dental floss	2.5
Other (miswak etc)	14.5
For how long, you brush your teeth?	
Less than one minute	10
One minute	28.5
Two minute	38.5
More than two minute	38.5

population for example school going children or patients visiting hospitals. Our study, to the best of our knowledge, is the first of its kind in Khyber Pakhtunkhawa that measure KAP of general population including children and adults of both genders.

This cross sectional study was conducted to assess oral hygiene knowledge, attitude and practices of families residing in district Peshawar. The area selected for the study has a good mix of both urban and rural communities, family structure and socioeconomic background. We have found that the participants generally have a good understanding of oral health and hygiene but lack knowledge about specific dental problem such as periodontitis (gum bleeding). These findings are in consensus with another study from Peshawar.[12] Since knowledge is the basis of changes in attitudes and practices, it is suggested that oral health promotion programs should primarily focus on improving knowledge of the general population about common dental problems (caries, periodontitis) and how to prevent it.

The current study also reveals that attitude toward seeking dental care lags far behind knowledge and majority of the participants were afraid of visiting dentist. Dental fear and anxiety is an important limiting factor in seeking dental care, leading to poor oral health. Dental fear is a widespread problem in many countries of the world[16] including Pakistan.[17,18] The problem is partly due to unpleasant past experience with dentist and require thorough psychological counseling of the patient before initiating any dental treatment. Dental pain is the sole reason for visiting dentist in 65% of the participants necessitating targeted oral health messages to create awareness about the role of dentists in prevention and oral care.

As expected, an overwhelming majority of the participants (98%) reported brushing their teeth regularly. Tooth paste and brush was the most common product used for cleansing teeth. Similar findings have also been reported in other studies from Pakistan[11,12] as well as abroad.[19-21] Interestingly, 10% of the participants reported using Dandasa as teeth cleansing agent. Dandasa is a peel product from walnut tree that has been used traditionally as teeth whitening agent in Pashtun dominant areas of Pakistan especially Khyber Pakhtunkhawa. With introduction of tooth paste and brush, the use of Dandasa has been declined drastically. However, it is still been used in rural areas and since our study population also include participants with rural background, its use has been reported in our study too.

CONCLUSION

The study showed that knowledge about specific dental problems and the role of dentist is not satisfactory. Although the study participants demonstrate some level of knowledge regarding oral hygiene, their practices of oral hygiene scored low. Therefore, it is necessary to re-evaluate the oral hygiene awareness methods and adopt awareness programs that translate to good oral hygiene practices.

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