ABSTRACT

Aims: To assess the awareness, attitude and behavior of Pakistani population in relation to oral health status and accept dental treatment among Darul Sehat Hospital patients living in Karachi, Pakistan. Material and methods: A cross sectional study conducted from July 2010 to December 2010 involving 7686 adult volunteers attending Out Patient Department (OPD) in dental block at Darul Sehet Hospital. A total of 8125 subjects consulted in the Out Patient Department and 7686 (94.5%) fulfilled the inclusion criteria and participated in the study. To access the oral health knowledge, attitude and behaviour we analysed the reasons of attending OPD, work load in different department, patients accepting or refusing the treatment plan or going for the alternative treatment plan. Results: Results have shown that most of the patients came at dental OPD in pain without swelling (N= 3,620) (x² = 225.6, df= 11, p<0.001) but they did not prefer the conservative approach (Root Canal treatment). Most of the patient preferred extractions (N= 1,091) (x² = 4334.71, df=12, p<0.001) which indicates the lack of knowledge or may be cost effectiveness. Conclusion: It emerges that oral health related awareness, attitude and behavior of Pakistani population are in need of improvement.

Key words: Oral Health; Awareness; Behavior; Attitude

Introduction

Good oral hygiene, including healthy teeth and gums, is an important part of our general health. Oral health is now recognized as equally important in relation to general health. The attitude of an individual towards oral health depends upon his own experience, lifestyle, beliefs, cultural values, financial status, time and influence of the surroundings. The American Dental Association recommends that, to avoid oral diseases, individual should brush and floss at least once a day and visit a dentist regularly. Therefore awareness and knowledge is very crucial in order to avoid many diseases and complications. Oral diseases continue to be prevalent health problem. In particular, oral diseases create a significant and costly burden to the developed and developing countries. As for the behavior, it has been noticed that mostly patients arrive with poor to average oral hygiene. This difference can be exhibited as the attitudes of population towards dentistry are class related. Middle income people are found to be more dentally conscious than the lower income people. Thus socioeconomic status plays an important role in taking decisions about receiving the type of dental treatment. Lack of awareness and less education comes hand in hand with low socioeconomic status in this part of the world. The main reason cited for the patient’s consultation with the dentist is dental pain. The frequent reason behind dental pain is either untreated dental caries or periodontal diseases. In particular, dental caries and gum disease create a significant and costly burden. Poor oral health is directly related to social economic status as it is highly prevalent in low-income populations. The population of Pakistan has been estimated to be around 145.5 millions followed by 18,000,000 of Karachi population occupying an area of 3,528 km². Karachi is the largest city and largest port of Pakistan it is also the world's second most populated city. The purpose of this study is to assess the awareness, attitude and behavior of Pakistani population in relation to their approach towards dental treatment among Darul Sehat Hospital patients living in Karachi, Pakistan, verifying the existence of an association with socioeconomic status and lack of education. With a good education background the concept of oral health and its maintenance is easily understood by the people. It has been noticed that the higher the socioeconomic status, the greater the use of dental services. The opposite has been observed in lower the socioeconomic status. The present study was conducted to assess the awareness, attitude and behavior of Pakistani population in relation to oral health status and accept dental treatment among Darul Sehat Hospital patients living in Karachi, Pakistan.

Material and Methods

The study reviewed and approved by the Research and Ethical Committee of Liaquat College of Medicine and Dentistry and Darul Sehet Hospital. All Subjects were selected equally from the pool of treated and maintained patients in the outpatient Department of Liaquat College of Medicine and Dentistry and Darul Sehet Hospital. A cross-sectional study was conducted among Darul Sehat Hospital outpatient from July 2010 to December 2010, in which 7686 (94.5%) patients participated out of which 4172 were females and 3512 were males. This exercise comprised of patients < 18 years old and above arriving in dental OPD as outpatients with the reasons causing them to visit along with the treatment strategies. Research forms were formulated for recording the above findings and were filled by research candidates. They comprised of personal bio data such as name, age, gender, residence, presenting complaint, history of presenting complaint, examination, reference and treatment done. Out of which emphasis was done on age, gender, presenting complaint, reference, and type of treatment. The following data helps figuring out patient’s knowledge, awareness and attitude regarding the treatment they
went for. The idea behind studying each patient’s information was to gain the knowledge about their awareness, approach and attitude towards dental diseases and treatment. The data was analyzed and the results were compared. The analysis of data was conducted using IBM SPSS statistic 19 program. The analysis was to verify that knowledge and awareness about oral health is important in order to bring about a positive response in oral status.

**Results**

The total numbers of subjects arrived as outpatient in the dental OPD was 7686 (94.6%), out of which 3,514 (45.7%) were males and 4,172 (54.3%) were females. The results show the distribution of both male and female patient is not significant (Table 1).

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>3,514</td>
<td>45.7</td>
</tr>
<tr>
<td>Female</td>
<td>4,172</td>
<td>54.3</td>
</tr>
<tr>
<td>Total</td>
<td>7,686</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 1: Distribution of Gender who attended the Dental OPD (Mean = 1.54, Sd = 0.49, SE= 0.006)

The following pie chart shows the different age group patients arrived in dental OPD, mostly were 41 years and above (n= 1974, 54.7 %) and the least number of patients were of age group between 36-41 years old (n=799, 10.4 %) (Graph 1).

The following table shows the trend among the patients who received different dental departments, the statistical analysis shows that most patients were referred to Operative dentistry which was about 32.79% where as the least number of patients were referred to orthodontic department being 1.68%. There was 31.2% of the total burden of patients belonged to oral surgery, 30.5% on Periodontology while only 3.78% on Prosthodontics.

The following table shows the proportion of patients opt for treatment or no treatment in their respective dental OPDs. Out of total number of patients came to the OPD’s, 65.5% received treatment and 34.46% left without any treatment. Most number of patients was treated in the Periodontology department (80.2%) the least number of patients was treated in the orthodontics department (6.2%), 47.29% in the operative dentistry, and 74.33% in the oral surgery department (Table 2).

<table>
<thead>
<tr>
<th></th>
<th>Treatment</th>
<th>No Treatment</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Surgery</td>
<td>1,784</td>
<td>616</td>
<td>2,400</td>
</tr>
<tr>
<td>Operative Dentistry</td>
<td>1,204</td>
<td>1,315</td>
<td>2,519</td>
</tr>
<tr>
<td>Periodontology</td>
<td>1,892</td>
<td>455</td>
<td>2,347</td>
</tr>
<tr>
<td>Orthodontics</td>
<td>8</td>
<td>121</td>
<td>129</td>
</tr>
<tr>
<td>Prosthodontics</td>
<td>149</td>
<td>142</td>
<td>291</td>
</tr>
<tr>
<td>Total</td>
<td>5,037</td>
<td>2,649</td>
<td>7,686</td>
</tr>
</tbody>
</table>

Table 2: Distribution of patient receiving or refusing dental treatment in different department (x2 = 12,851.77, df= 48, p<0.001)

The table below shows the trend among the patients who received different treatments with the complaint of pain without swelling, from which 39.58% left without any treatment, 69.98% of patients came to oral surgery and had extraction done, 22.99% came to operative for RCT while 17.46 % received restorative treatment (Table 3).

<table>
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Table 2: Distribution of patient receiving or refusing dental treatment in different department (x2 = 12,851.77, df= 48, p<0.001)

The following graph shows, distribution of subjects regarding their reason for dental visit, the most common reason noted for the dental visit were pain without swelling which comprises of about 47.14% with the higher proportion of females. Least common reason for visits was removable prosthesis which was 1.09% (Graph 2).

The patients can receive all type of surgical procedure in local anesthesia such as removal of cyst and different type of extractions such as simple or surgical extractions in oral surgery department. The patients work load in oral surgery department shows that the < 18 years of age patient did not want to extract their teeth (46.3%) as compared to > 41 year of age patients (66.8%).

Periodontology department offers all type of scaling and root planning under local anesthesia (if required). According to the data younger patients comprehend better the dental

**Graph 1:** Distribution of different age group patients visited dental OPD. (Mean = 3.57, Sd = 0.021, SE= 1.88)

**Graph 2:** Bar chart demonstrating primary reasons of male and female visit to dentist. (x2 = 225.6, df= 11, p<0.001)
treatment plan suggested by the dentist as compare to older patients. Prosthodontics department offers all type of fixed and removable partial dentures (acrylic & cast) and complete dentures for replacement of natural teeth. Almost 50 % of patient replaced missing teeth and others refused it. The workload of this department is also very low as compare to above mentioned department.

Due to lack of knowledge and affordability on the patient's part, the workload in orthodontic department is much less compared to other departments. Patients did not prefer esthetic treatment due to many reasons one of which was financial issue. According to our data patients of orthodontic department mostly refused the treatment plan (93.79%) and left without any treatment done.

Discussion

Liaquat College of Medicine and Dentistry and Darul Sehat hospital is situated in south Karachi at a central location which covers rural and urban population of gulshan town, the hospital has a well established dental program for more than 10 years with well equipped dental OPD’s. This research was conducted to assess and analyze the knowledge and behavior of population with regards to oral health and dental treatment. The most common reason cited for their dental visit was dental pain. Pain is defined by the International Association for the Study of Pain (IASP) as "a disagreeable sensory and emotional experience of subjective nature". The etiology of dental pain is more likely to be dental caries and periodontal disease. Untreated dental caries is one of the most hazardous situations leading to excruciating dental pain, which is directly related to low socioeconomic status. People tend to visit dentist only when the pain is unbearable and home remedies tend to fail. Routine dental treatment has been the missing element, most obvious reason behind is lack of oral health promotion and affordability. The oral health knowledge of the general population was poor. Usually people with limited income and less education are the ones with the poorest oral health knowledge. Electronic and print media will be the appropriate way to disseminate oral health awareness to the Pakistani population via mass media. Dental caries, periodontal disease and other oral disease, burden people in Pakistan excessively. These are aggravated by poverty, poor living conditions, ignorance concerning health education and lack of government funding. This is a time to realize that oral health is very important in general health. For maintaining healthy lives oral health should be an important thing to be focused by government and local authorities. Pakistan is one of the developing countries, where are social, political, economic, behavioural and environmental barriers to health. Therefore it is a big challenge for oral health professionals to minimize the burden of oral diseases (particularly dental caries and periodontal diseases) in Pakistan. Dental professionals and government of Pakistan should work in collaboration to improve the status of knowledge and awareness towards oral health and dental treatment to save the nation’s smile.

Conclusion

In conclusion the present study results showed that population of Pakistan have lack of awareness and lack of positive attitude towards dental treatment. The study reveals an important fact that dental pain without swelling is the most common reason for visiting a dental clinic. Due to lack of knowledge, awareness, education and low socioeconomic status, most of the population preferred extractions rather than saving the tooth.

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Oral health awareness, behavior and attitude of Pakistani population

Reference


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