Attitude Towards Own Oral Health and Hygiene: A Survey of Medical and Dental Students of Karachi, Pakistan

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ABSTRACT:

OBJECTIVE: The aim of the study was to compare the attitude of medical and dental undergraduate students of various medical and dental institutes, towards their own oral hygiene and habits.

METHODOLOGY: This was a questionnaire based analytical cross sectional study conducted in various dental and medical institutes of Karachi. The questionnaires were circulated amongst the selected medical and dental institutes of the city. A total of 1100 undergraduate students filled and returned the questionnaire. Data analysis was done on SPSS Version 14.0 using Chi Square test of associations. A p value of less than 0.05 was considered statically significant.

RESULT: The study shows that medical students (n=663, 60.3%) were more concerned about oral hygiene than dental students (n=437, 39.7%) (\(p=0.001\)). Among them females (n=815, 74.1%) were more conscious about oral hygiene than males (n=285, 25.9%) (\(p=0.001\)). Clinical students (n=347, 31.5%) were more aware about their hygiene than pre-clinical students (n=753, 68.5%) (\(p=0.001\)).

CONCLUSIONS: Within the limitations of this study medical students, female gender and students in clinical rotations had better attitude towards own oral health and hygiene.

KEYWORDS: Oral health, oral hygiene, attitude, dental students.


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INTRODUCTION

The main aim of oral hygiene practices is to prevent diseases of oral hard and soft tissues. Tooth brushing, use of fluoridated toothpaste and flossing play a major role in prevention of oral health related disorders\(^1,5\).

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Oral diseases are clearly related to behavior, and during past two decades the prevalence of dental caries and periodontal disease has decreased with improvements in oral hygiene and a decrease in the consumption of sugar products\(^1\). Irrespective of this improvement it is important to know about the attitudes of oral care providers of the future. While the improvements in the oral health status may also reflected in the attitudes of dental students towards oral hygiene. On the contrary, studies show a lack of positive attitude of dental students. A study reported a higher frequency of brushing and dental visits of dental students when compared to dental hygiene students\(^2\). A similar study from China reported an improvement in the oral health related attitude of dental students from first to final year, while contrasting results were reported for medical students\(^3\).

A study from Nigeria reported overall unsatisfactory oral hygiene of dental students\(^7\). While a study from Japan suggested that majority of study participants started smoking after joining the university\(^8\).
Another study also reported poor attitudes of dental, medical and paramedical students. This seems to be an alarming situation since the health care providers of the future seems oblivious of the importance of a healthy mouth. Since a similar local study could not be found in the literature, therefore the aim of this study was to compare the oral health attitude amongst medical and dental students of various medical and dental institutes of Karachi.

**METHODOLOGY**

A cross-sectional questionnaire based study was conducted at various dental and medical institutes of Karachi over a period of 6 months (April – September 2009). The study was reviewed and approved by the Ethical Committee of Karachi Medical and Dental College (KMDC). All the undergraduates were included in the study, while Post-graduates, house officers, senior house officers were excluded. Informed consent was taken from each student before questionnaire distribution. The questionnaire was circulated amongst 1100 students of public and private sector medical and dental institutes of the city enlisted in Table 1. The questionnaire was self-administered consisting of 15 questions related to oral health attitude were distributed. It is filled by total 1100 students of respective institutes. Students were requested to fill the questionnaire without any discussion with other classmates. They took an average of 5 minutes to complete the questionnaire. The data collected was analyzed with statistical package for social science (SPSS) version 14 using Chi Square test of associations. A p value of less than 0.05 was considered statically significant.

**RESULTS**

Table 2 displays the basic information about our study respondents.

Table 3 gives details of oral hygiene practices. It revels that medical students are more frequent with tooth brushing (92.7%) than dental students (87%), while dental students have more accurate brushing technique (64%) than medical students (25%) (\(p = 0.001\)). Other adjuncts like mouthwash, miswak or dandasa were more frequently practiced by dental students (49%) for better oral health maintaining than medical students (27%) (\(p = 0.001\)).
Table 2. Statistics of patients.

<table>
<thead>
<tr>
<th>Category</th>
<th>No of Student</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Students selected</td>
<td>1100</td>
<td>100%</td>
</tr>
<tr>
<td>Medical &amp; Dental Students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Students</td>
<td>663</td>
<td>60.3%</td>
</tr>
<tr>
<td>Dental Students</td>
<td>437</td>
<td>39.7%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>285</td>
<td>25.9%</td>
</tr>
<tr>
<td>Females</td>
<td>815</td>
<td>74.1%</td>
</tr>
<tr>
<td>Pre-Clinical &amp; Clinical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-Clinical</td>
<td>753</td>
<td>68.5%</td>
</tr>
<tr>
<td>Clinical</td>
<td>347</td>
<td>31.5%</td>
</tr>
</tbody>
</table>

Medical students are less aware of dental visit (57%) and have more complained of bleeding gums (20%) than dental students (68% and 14% respectively). The result also reveals that females are more frequent with brushing (91%) and aware of dental visits (64.2%) than males (90.4% and 53% respectively) ($p = 0.001$). Fig. (1) presents graphically oral health attitude variables.

Pre-Clinical students brush (92%) their teeth more regularly than clinical students (88.1%), while the clinical students had better knowledge of correct brushing technique (62%) and were more likely to utilize other adjuncts (44%) ($p = 0.001$). Dental visits were seen more frequent in clinical students (75%) as compared to pre-clinical students. Similarly clinical students reported higher frequency of smoking (9.9%) habit while pre-clinical students had less smoking habits (4.3%) ($p = 0.001$). The pre-clinical students had more frequent bleeding gums (20.5%) and tooth sensitivity (15.8%) while they are less frequent with pan (3.3%) and betel nut chewing (9.4%) in comparison with the clinical students (5.1% and 9.5% respectively) ($p = 0.001$). Significantly more clinical students (14.3%) complained of bad breath than pre-clinical students (7.3%) ($p = 0.001$).

**DISCUSSION**

According to a WHO report, the disease pattern is ever changing and it may be related to an individual’s lifestyle and attitudes. 6. These attitudes become engraved in one’s personality at an early age. Regardless, the health professional students are expected to have a reasonable self -hygiene and a more favorable attitude towards personal well being as compared to other 10.

This study revealed a higher percentage of students (92% of medical and 87% of dental students) brushed as compared to a similar study conducted in Islamabad which reported only 72.6% dental students brushed their teeth 1. Kaira et al. in a study on nursing student reported 70% of the respondents brushed their teeth 19.1,20. Mumtaz et al. in a study of oral health knowledge and attitude among dental and pharmacy students revealed 46% use of mouthwash which is similar to our results 1,11.

Under the influence of knowledge and attitude of oral health, the present study showed about 3.7% dental students were found to be indulged in smoking which was 2.5 times less than medical students. This was much lesser than national statistic of 34%21, and as well as current statistic of smoking amongst dentist in Pakistan which was 20.1%22. At students level of awareness about 4.7% of students have been reported in utilization of half packet of cigarettes as they know smoking has hazardous impact on general body health 1,12. Females were found to be more aware of correct brushing technique (40.2%) in our study. These results are similar to a study from Nigeria Okeigbemen et al., who revealed about 33% of females reported using the correct way of brushing in comparison to males (21%) 7. In term of visits to dentists females (64.2%) reported more interest as they may be motivated by a higher demand for better aesthetics. The clinical students reported more interest to learn the correct way of brushing (62%) than pre-clinical students (40.2%), and about 11% of clinical students brush their teeth before going to bed while 5% of pre-clinical students reported this habit. These results are similar to a recent report 7.

It is clear from the study that medical students in particular should be given more knowledge of oral health behavior and pre-clinical students should have to be guided so that they can know correct oral health behavior and attitude. Measures should be taken so that students may have better insight about oral health. Steps should be taken to minimize the use of tobacco and betel nuts among students because they are the source of motivation of oral health to their patients, friends and family. Other studies have also shown that there is in general much work to do in improving dental health knowledge even amongst dental hygiene students, dental students, and other university students 14,18.
Table 3. Evaluation of different variables on the basis of medical & dental, gender and pre-clinical & clinical students.

<table>
<thead>
<tr>
<th></th>
<th>Medical and Dental Students</th>
<th>Gender</th>
<th>Pre-Clinical and Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dental students (39.7%)</td>
<td>60.27%</td>
<td>Male students (25.9%)</td>
</tr>
<tr>
<td>Brushing</td>
<td>87%</td>
<td>92.7%</td>
<td>90.4%</td>
</tr>
<tr>
<td>Wooden twigs (miswak,</td>
<td>10%</td>
<td>5.7%</td>
<td>7.1%</td>
</tr>
<tr>
<td>dandasa)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental visits</td>
<td>68%</td>
<td>57%</td>
<td>53%</td>
</tr>
<tr>
<td>Change in Brushing habits</td>
<td>64%</td>
<td>25%</td>
<td>39%</td>
</tr>
<tr>
<td>Adjunctive</td>
<td>49%</td>
<td>27%</td>
<td>27%</td>
</tr>
<tr>
<td>Mouth wash</td>
<td>51%</td>
<td>41%</td>
<td>40%</td>
</tr>
<tr>
<td>Bleeding gums</td>
<td>14%</td>
<td>20%</td>
<td>18.2%</td>
</tr>
<tr>
<td>Bad breathe</td>
<td>14%</td>
<td>6.3%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>11%</td>
<td>16.5%</td>
<td>17.8%</td>
</tr>
<tr>
<td>Cosmetic problem</td>
<td>11%</td>
<td>6.4%</td>
<td>9.5%</td>
</tr>
<tr>
<td>Smoking</td>
<td>3.7%</td>
<td>9.6%</td>
<td>16.2%</td>
</tr>
<tr>
<td>Pan</td>
<td>3.6%</td>
<td>4%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Betel nut</td>
<td>9%</td>
<td>11%</td>
<td>16.2%</td>
</tr>
</tbody>
</table>

Fig. (1). Presents graphically oral health attitude variables.
CONCLUSIONS

Within the limitations of this study Medical students (5.7%) more aware of oral hygiene as compared to dental students \((p=0.001)\). In relation of hygiene females had better dental health than males and they visit 11.2% more frequently to visit dentist as compared to males. In summary, clinical students have more knowledge than pre-clinical students regarding dental hygiene. Medical students, female gender and students in clinical rotations had better attitude towards own oral health and hygiene.

AUTHORS’ CONTRIBUTION

Dr. Muhammad Salman Rashid gives the main research proposal and intervention to this research.
Dr. Irfan Ali helped out in manuscript writing.
Dr. Zia Ur Rahman Khan took part in methodology.
Dr. Sharjeel Bashir wrote discussion and conclusion and reviewed the article.
Dr. Syed Mahmood Haider reviewed the article.
Dr. Nabeel Hafeez helped in data collection.
Dr. Muhammad Aqeel Aslam helped in data collection and data entry.
Dr. Abdul Hadi Bashir helped in data collection, data entry and statistical analysis.

DISCLOSURE

Declared none.

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- Dow University of Medical & Health Sciences
- Hamdard University

REFERENCES