Knowledge, attitude and perception of orthodontic treatment among dental students

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Abstract

Introduction: Malocclusion is known to contribute overall health status, as well as affecting individual’s psychosocial health.

Aim: To establish knowledge, attitude and perception of orthodontics treatment among dental students of one of the dental college of M.P.

Material & Method: A descriptive cross study was carried out among 300 undergraduate dental students of people dental academy Bhopal M.P. India. Each classroom of the participants were visited. Self-administered questionnaire were distributed to a 300 students. The scores were calculated, and statistical analysis were done. Categorical variables were evaluated using a Chi-square test with the level of significance of P < 0.001.

Results: About 85% of the students were aware of their dental esthetics. About 85% of females were satisfied with the attractiveness of their teeth when compared to 70% males. House surgeons had more positive attitude compared to the 1st year students.

Conclusion: The dental students had good knowledge about the orthodontic treatment and had a positive attitude toward it. Females had very good knowledge, satisfaction and positive attitude compared to the males regarding dental esthetics and treatment. House surgeons were much more aware, very much satisfied and had a more positive attitude than 1st year students.

Keywords: Dental Malocclusion; Self-Concept; Dental Students

1. Introduction

Measuring and recording the prevalence of malocclusion and treatment need in a population was useful for the planning of orthodontic services. Without a satisfactory estimate of the need and demand for treatment, it was difficult to develop and organize meaningful orthodontic services (Tulloch JF & Jones M 1984). Orthodontic treatment was often carried out to improve the patient's dental appearance. The main factors influencing the decision for treatment were esthetic improvement and psychological aspect. In addition, knowledge about the attitude of patients to malocclusion was becoming increasingly important in orthodontics (Helm S & Solow B 1985), (Espeland LV & Stenvik A1991).

The orthodontist routinely evaluates his patients and prescribes treatment plans in order to satisfy the often stated goals of good dental function, stability of teeth and jaw position, and dental esthetics. While the first two considerations have been researched and are continually discussed in all the specialties of dentistry, the last aspect dental esthetics has escaped research attention (Tang EL & So LL1995). The lack of research material in this area is not due to a lack of interest in the subject but to the difficulty of measuring exactly what “Dental esthetics” actually means. Esthetics is judgmental commodity, and the assumed variability in individual judgments (beauty is in the eye of the beholder) makes it difficult to make generalized statements (Cochrane SM & Hunt NP 1997), (McGorray SP & Yurkiewicz L 1999).

The aim of this study was to assess the self-evaluation and satisfaction of dental appearance among dental students. The objectives of this study were to assess the knowledge and attitude toward orthodontic treatment and comparing between different class groups and sexes.

2. Material & method

The study participants were 300 dental students of Peoples dental academy Bhopal, Madhya Pradesh. The study group comprised 100 males and 200 females of I, II, III, IV B.D.S. Students and House surgeons, aged between 18 and 26 years [Table 1].

Table 1: Distribution of Students According to Year and Sex

<table>
<thead>
<tr>
<th>STUDENTS</th>
<th>SEX</th>
<th>MALE</th>
<th>FEMALE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1ST YEARS</td>
<td>27</td>
<td>24</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>2ND YEARS</td>
<td>14</td>
<td>38</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>3RD YEARS</td>
<td>12</td>
<td>43</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>4TH YEARS</td>
<td>18</td>
<td>46</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>INTERN</td>
<td>29</td>
<td>49</td>
<td>78</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td></td>
</tr>
</tbody>
</table>

The data for this study were collected visiting to the class-rooms of subjects and were requested to complete a structured questionnaire. The questions were prepared as follows: Seven questions on awareness about their dentition, four questions on their self-satisfaction and six questions about their attitude toward orthodontic treatment. Each question had three possible answers, ranging from the positive response to a negative response, and these answers were given scores ranging 0-2, the highest score to the best and the lowest to the worst. The test items assessed the subject's ability to recognize the presence or absence of malocclusion, knowledge to perceive the impact of malocclusion and attitude about orthodontic treatment.

Statistical analysis of the data set were performed by grouping the answers to each of the questions into three categories: A negative response, an average response, and a positive or favorable
response. Categorical variables were evaluated with a Chi-square test. Statistical significance was set at \( P < 0.05 \).

### 3. Results

Seventy percent of the students were aware of their dental esthetics, 20% were not aware and 10% did not have knowledge about esthetics at all [Table 2]. About 98% of females had very good knowledge about dental esthetics compared to 95% of males. However, the differences are statistically not significant.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Yes</th>
<th>No</th>
<th>Do Not Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you think healthy and well arranged teeth are important for your appearance?</td>
<td>95</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Are you satisfied with your dental esthetics?</td>
<td>65</td>
<td>30</td>
<td>5</td>
</tr>
<tr>
<td>How do you feel about the appearance of your teeth?</td>
<td>70</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Do you have any trouble while speaking, chewing, facial muscle pain caused by teeth arrangement?</td>
<td>8</td>
<td>90</td>
<td>2</td>
</tr>
<tr>
<td>Do you think you should have orthodontic treatment?</td>
<td>30</td>
<td>62</td>
<td>8</td>
</tr>
<tr>
<td>Would you agree readily to orthodontic treatment if a dentist or parent suggested it?</td>
<td>65</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>Do you think your smile could be better if teeth were better aligned?</td>
<td>50</td>
<td>16</td>
<td>36</td>
</tr>
</tbody>
</table>

Self-satisfaction with the attractiveness of their teeth indicated a fairly objective evaluation of their own dental malocclusion situation. About 10% of the subjects were satisfied with the attractiveness of their teeth, 90% of the subjects reported negative feeling toward their teeth [Table 3].

### 4. Discussion

The importance of patients' perceptions regarding orthodontic treatment cannot be underestimated as it is the patients who receive treatment and need to gain satisfaction from improved esthetics and function. (Birkel and K&Wirth PJ 2000).

It had been hypothesized that increased experience with and availability of orthodontic service should be translated into differences in esthetics rating and perception of treatment need (Mandall NA &McCord JP 2000). Similar results have been obtained in our present study where 75% of the dental students who were having knowledge about orthodontic treatment were aware of dental esthetics.

The decision making process that a person undertakes when judging his/her own dental esthetic satisfaction may be broken down into several steps. First, knowing about the awareness and their own dentition, second their self-satisfaction, and finally their attitude toward orthodontic treatment. We may postulate that females had very good knowledge about dental esthetics compared to the males. Regarding self-satisfaction about their teeth, the study indicates that the subjects did make fairly accurate self-evaluation of their own malocclusions (Crooked Teeth). The unsatisfied subjects with their dental esthetics had a positive attitude toward orthodontic treatment. The satisfied subjects with their dental esthetics were aware of the attractiveness of their teeth. This is also highly statistically significant.

The sixth difference is probably due to the fact that the standards for acceptable facial form are more clearly delineated for females. Thus, deviations are in dental form that adversely influence facial...
outline are more important to females than males. Similar results were obtained by Goel (Shue-Te Yeh M, & Vlaskalnic V 2000). The subjects who had malocclusion and did not report to the orthodontic clinic seems to believe that, teeth did not affect their aesthetic value and this appeared to be more of an ignorance that teeth does significantly affect facial appearance, and lack of knowledge was the main factor that kept away from treatment. Kerosuo et al. study concluded that access to free of cost orthodontic treatment was likely to affect the treatment rate. Whereas, it did not seem to influence the self-perceived need for treatment (Bentele MJ & Beck FM 2002).

Similar study conducted by Helm et al. suggested that certain malocclusions especially conspicuous occlusally and space anomalies may adversely affect body image and self-concept not only at adolescence but also in adulthood (Goel S 2002). It is in the strongest association with study conducted by Birkeland et al. That both children and parents rate pleasant esthetics as an important factor for psycho-social well-being (Hunt O 2002).

In accordance to Bentele et al., Index of Orthodontic Treatment Need is a promising teaching aid for improving educational outcomes for orthodontic referral when sufficiently prepared to dental students to diagnose malocclusion and make appropriate referrals of potential orthodontic patients. (Kerosuo H & Kerosuo E 2002).

The limitation of this study, is that the dental students may not represent the general population of the society. Further cross-sectional studies are required to include more numbers of participants of different age groups.

5. Conclusion

A questionnaire study evaluated the awareness about teeth, level of self-satisfaction, attitude toward orthodontic treatment and the overall perception of dental appearance among a group of dental students.

From the study done it was found that the subjects had:

- Good knowledge about the orthodontic treatment and positive attitude toward orthodontic treatment.
- The teeth affect the way their face looks, dental attractiveness the most influencing variable to perceive orthodontic treatment.
- Females had very good knowledge, satisfaction and positive attitude compared to the males regarding dental esthetics and treatment.
- House surgeons were much more aware, very much satisfied and had a more positive attitude than 1st year students.

Acknowledgement

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Conflict of interest

No conflict of interest involved so ever.

Source of finding

Nil.

References


