

A Survey on Awareness, Attitude and Perception Towards Dental Malocclusion and Orthodontic Treatment Among Under Graduate Dental Students

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ABSTRACT

Background: Malocclusion is known to contribute overall health status and affecting psychosocial health of the individual. So as a dental student it is important to have appropriate knowledge/awareness about the dental malocclusion and orthodontic treatment. The aim of this study was to evaluate awareness, attitude, and perception towards dental malocclusion and orthodontic treatment among under graduate dental students.

Materials and Methods: Descriptive, cross-sectional survey, was conducted on 331 undergraduate dental students through a web-based questionnaire with 15 questions addressing various aspects of dental malocclusion and orthodontic treatment. The questionnaire includes for assessment of student knowledge, attitude, and perception towards malocclusion and orthodontic treatment. All the questionnaire was predesigned and validated, self-administered, structured questionnaire was used for data collection.

Results: Total of 331 under graduate dental students participated in the present survey. Out of which 82% were females and 18% were males. About 85.5% of the participants were aware about malalignment of teeth. About 58.9% of the respondents expressed willingness to undergo orthodontic treatment even if treatment duration is longer. About 53.8% of the survey participants were willing to continue the orthodontic treatment despite of experiencing pain and ulcerations.

Conclusion: The dental students had good knowledge about the orthodontic treatment and had a positive attitude and perception towards it. Majority of under graduate dental students had very good knowledge, satisfaction and positive attitude regarding mal- alignment of teeth and orthodontic treatment.

Keywords: Orthodontics, malocclusion, awareness.

INTRODUCTION

Malocclusion is defined as imperfect position of teeth when jaws are closed. Individuals with malocclusion usually have feeling of humiliation. It has significant impact on physical, social and psychological wellbeing of a patient in the society.¹ Various factors such as oral habits, anomalies in number, shape, size and

developmental position of teeth can cause malocclusion which can affects on periodontal health, dental caries and temporo -mandibular joint problems. Therefore, it is necessary to know reason and problems caused due to malocclusion.²⁻³ In the past three decades, a major reorientation of orthodontic treatment thinking has occurred among

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adult patients, the reasons may be due to changed lifestyle, patient awareness, social media and multidisciplinary dental therapy that have allowed better management of the more complicated patient population, thereby greatly improving the quality of care and treatment prognosis. There are many reasons why adult orthodontic therapy should be encouraged, including the improvement of function and occlusion, and improvement of aesthetics as well as the psychological aspects.⁴A desire and need for orthodontic treatment have existed for many decades. The principal goal of orthodontic treatment is to improve oral health, function and aesthetic. This will help the overall wellbeing of an individual and to improve the patient's dental appearance.⁵The knowledge about dental malocclusion is becoming increasingly important in orthodontics. In this background, the objectives of the present study to assess awareness, attitude and perception of orthodontic treatment among under graduate dental students.

MATERIALS AND METHODS

Descriptive, cross-sectional survey, was conducted on 331 under graduate dental students through a web-based questionnaire with 15 questions addressing various aspects of dental malocclusion and orthodontic treatment. For evaluation of awareness, attitude and perception, set of 5 questions for each were included. The Study was carried out using google form. Google forms" an excellent tool for collecting the online data, with or without knowing the identity of the participant was used. The questionnaire included assessment of dental student about awareness, attitude, and perception towards malocclusion and orthodontic treatment. All the questionnaire were predesigned and validated, self-administered, structured questionnaire was used for data collection. The statistical analysis was done on google survey. The ethical clearance for the study was obtained from the Institutional Ethics Committee, MIDSR Dental College and Hospital, Latur ().

Statistical analysis:

Statistical analyses were performed using the SPSS software (IBM SPSS statistics for windows, version 23.0. IBM Armonk, NY, USA). Descriptive statistics were used to summarize the data. Chi square test

was performed to associate the assessment of awareness towards malocclusion and orthodontic treatment. The statistical significance was fixed at 0.05.

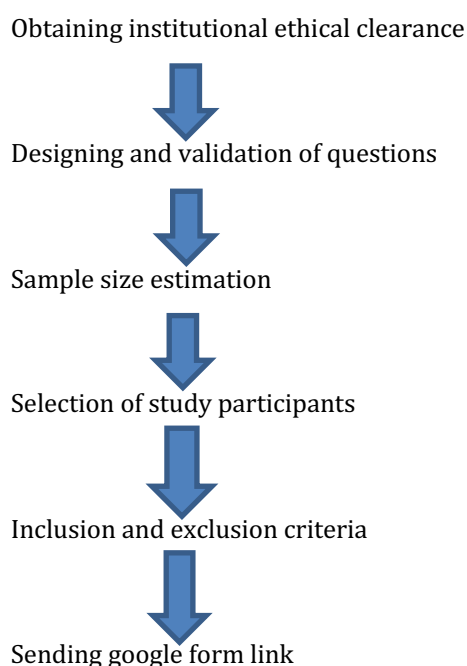
Inclusion criteria: 1) Dental students, 2) No history of orthodontic treatment, 3) Willing to participate in the survey.

Exclusion criteria: Incomplete questionnaires were excluded from the study.

Data collection:

The data for this study was collected through google forms and participants were requested to complete a structured questionnaire. The questions were prepared as follows: five questions on awareness about malocclusion, five questions on students' attitude towards dental malocclusion and five questions about their perception towards orthodontic treatment. The aim and objective of the study protocol was mentioned in the description and the google form link was sent to under graduate dental students' mobile numbers. The study protocol was explained to the participants and all the participants were requested to fill the questionnaire that had a total of fifteen questions. The research protocol is diagrammatically depicted in Figure 1.

Fig. 1- Research protocol flow chart




Data collection and statistical analysis

RESULTS

The study participants were 331 dental students of MIDS dental college, Latur. The study group comprised 60 (18%) males and 271 (82%) females of I, II, III, IV and interns of B.D.S. Students, aged between 18- 22 years (fig.2a and 2b)

Table 1. Showing awareness of undergraduate dental students about malocclusion and orthodontic treatment. Out of 331 students 85.8% students know the term mal-alignment/ dental malocclusion/ crooked teeth (fig.3). Habits such as thumb sucking, tongue thrusting and mouth breathing causes malocclusion or mal-alignment of teeth, about 78.6% students were aware of it (fig.4). About 23.3% students said that they avoid smiling or cover their mouth because they feel unpleasant about appearance of teeth (fig.5). About 79.5% were fully aware that mal- aligned teeth causes' difficulty in chewing and maintenance of good oral hygiene (fig.6). However 96.7% are fully aware that well aligned teeth improves smile and increases overall appearance and personality of an individual (fig.7).

Table 2. Showing attitude of undergraduate dental students towards malocclusion of teeth and orthodontic treatment. Out of all the responses 69.2% students had an attitude that their teeth are well aligned and properly arranged (fig.8). About 89.7% had a positive attitude that if an orthodontist or general dentist advised them for orthodontic treatment they willing to undergoing orthodontic treatment (fig.9). About 74.3% students had a positive attitude to undergo extraction if required for correction of malocclusion (fig.10). Out of all the respondents only 44.7% had a positive attitude that orthodontic treatment can be done at any age (fig.11). However out of all the respondents 27.2% said that have teased people for their appearance of mal-aligned teeth (fig.12).

Table 3. Showing perception of undergraduate dental students on malocclusion and orthodontic treatment. Majority of dental students (58.9%) have motivated or convinced one or more of their relatives or friends to undergo orthodontic treatment (fig.13). About 53.2% students had a perception that wearing braces does not make a

person look bad (fig.14). about 78.9% of students believe that orthodontic treatment is expensive and about 92.7% believe that orthodontic treatment takes longer duration of time (fig.15&16). About 53.3% students willing to continue orthodontic treatment with slight pain or some discomfort during the treatment and 39.3% students disagree to receive orthodontic treatment with any discomfort (fig.17).

Table 1: **Awareness of dental malocclusion.**

Q. No.	Survey questions	Response
1	Do you know the term, malalignment/ dental malocclusion / crooked teeth?	Yes-85.8% No-14.2%
2	Do you know, habits like thumb sucking/ tongue thrusting/ mouth breathing can cause malalignment / malocclusion of teeth?	Yes -78.6% No-10.6% Don't know- 11.2%
3	Do you try to avoid smiling / cover your mouth because of the appearance of your teeth?	Yes -23.3% No-76.7%
4	Do you think mal-aligned teeth can affect chewing ability/ oral hygiene?	Yes- 79.5% No-3% Don't know- 17.5%
5	Do you think, well arranged teeth increase appearance, better smile and confidence?	Yes-96.7% No-0.9% Don't know- 2.4%

Table 2: **Attitude towards orthodontic treatment.**

Q. No.	Survey questions	Response
1	Your teeth are well aligned	Yes -69.2%

	/ properly arranged?	No -30.8%
2	Would you agree readily for taking orthodontic treatment if a dentist or orthodontist suggest for it?	Yes -89.7% No-10.3%
3	If some teeth have to be removed in the course of your treatment of malalignment teeth, will you agree for the treatment?	Yes- 74.3% No-25.7%
4	What do you think, orthodontic treatment can be taken any age?	Yes- 44.7% No-55.3%
5	Have you ever commented / teased on the appearance of your teeth?	Yes -27.2% No-72.8%

Table 3: Perception towards orthodontic treatment.

Q. No.	Survey questions	Response
1	Have you convinced/ motivated by your relatives/friends to take orthodontic treatment?	Yes-58.9% No-41.1%
2	Do you think "wearing braces do not look good"?	Yes- 46.8% No-53.2%
3	Do you think, Orthodontic treatment is expensive?	Yes- 78.2% No-21.8%
4	What do you think, Orthodontic treatment takes longer duration?	Yes- 92.7% No-7.3%
5	If you experience slight pain or some discomfort during the treatment for mal-alignment, will you still continue with the treatment?	Yes- 53.8% No-6.9% May be- 39.3%

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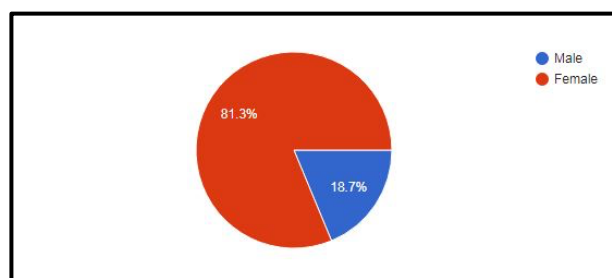


Fig 2a: Gender distribution.

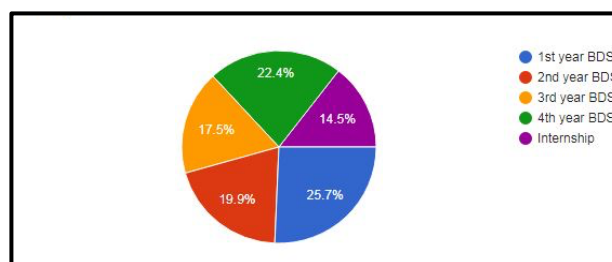


Fig 2b: Academic year distribution.

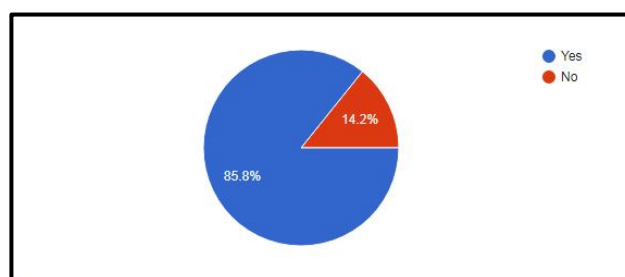


Fig 3: Count of "Do you know the term, malalignment/ dental malocclusion/ crooked teeth?"

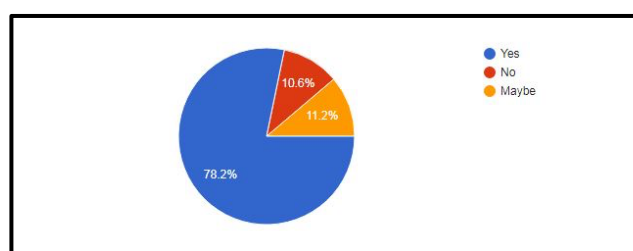


Fig 4: Count of "Do you know, habits like thumb sucking/ tongue thrusting/ mouth breathing can cause malalignment/ malocclusion of teeth?"

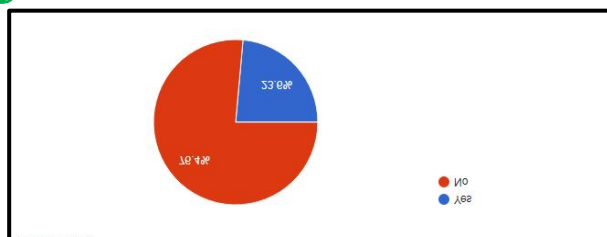


Fig.5- Count of "Do you try to avoid smiling/cover your mouth because of the appearance of your teeth?"

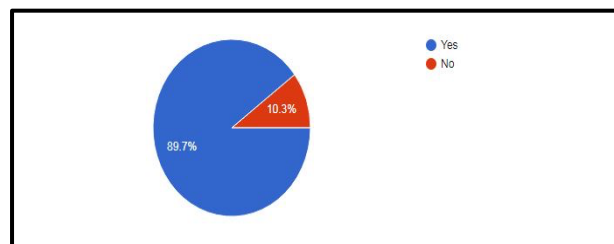


Fig. 9- Count of "Would you agree readily for taking orthodontic treatment if a dentist or orthodontist suggested for it?"

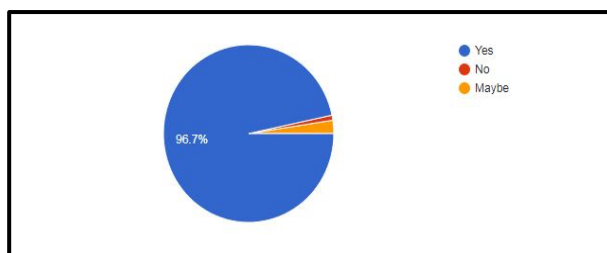


Fig. 6- Count of "Do you think, well arranged teeth increases appearance, better smile and confidence?"

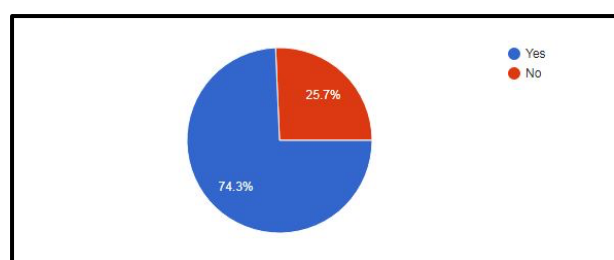


Fig.10- Count of "If some teeth have to be removed in the course of your treatment of malalignment teeth, will you agree for the treatment?"

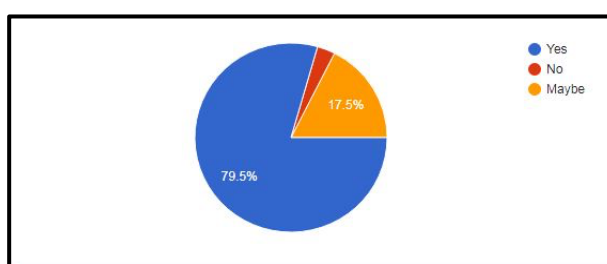


Fig. 7: Count of "Do you think mal-aligned teeth can effect chewing ability/ Oral hygiene?"

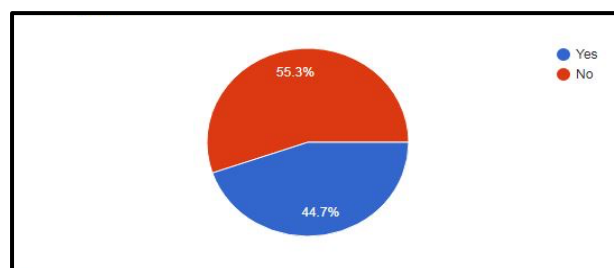


Fig 11: Count of "What do you think, orthodontic treatment can be taken at any age?"

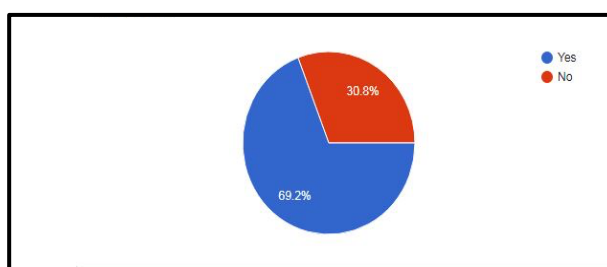


Fig 8: Count of "Your teeth are well aligned/ properly arranged?"

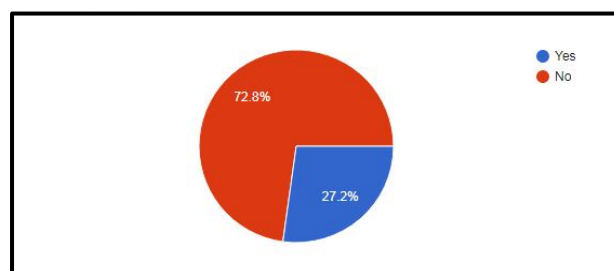


Fig 12: Count of "Have you ever commented/ teased on the appearance of your teeth?"

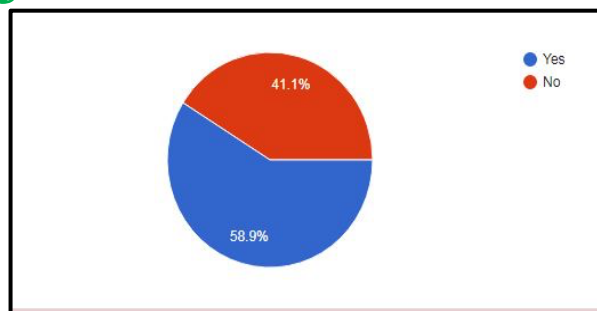


Fig 13- Count of "Have you convinced/ motivated your relatives/ friends to take orthodontic treatment?"

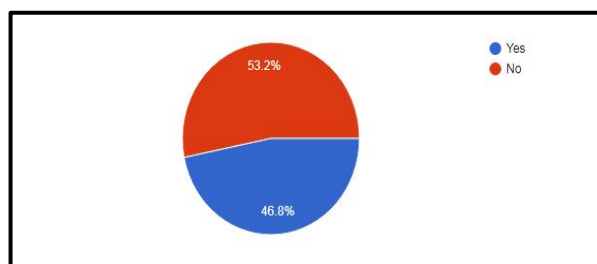


Fig 14- Count of "Do you think wearing braces do not look good?"

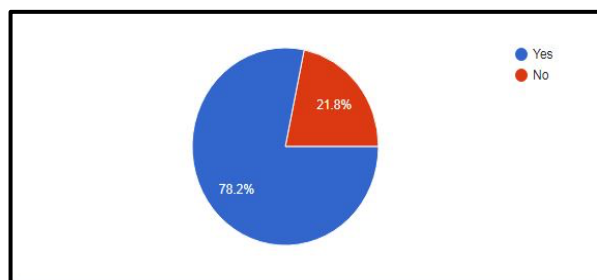


Fig 15- Count of "Do you think, orthodontic treatment is expensive?"

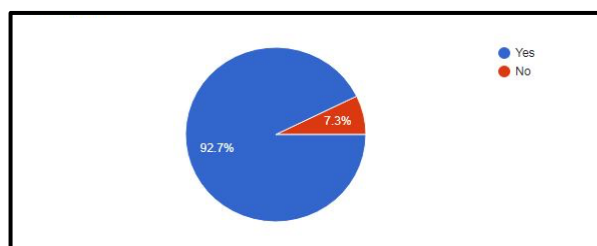


Fig 16- Count of "Do you think orthodontic treatment takes longer duration?"

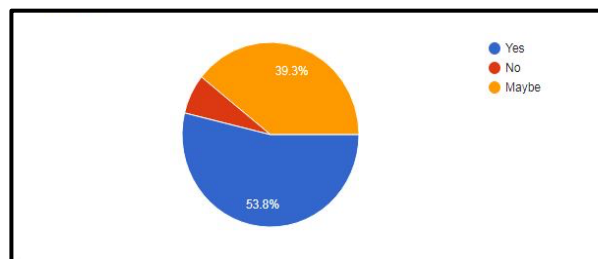


Fig 17: Count of "If you experience slight pain or some discomfort during orthodontic treatment, will you still continue with the treatment?"

DISCUSSION

The motives for seeking orthodontic treatment are numerous and varied. A person's own desire for improving dental appearance is the main determinant factor, and the most commonly perceived impacts of dental aesthetics included appearance, self-consciousness about their smile, self-confidence, self-esteem, and so on. The present research is the first to study the association between psychosocial impact of dental aesthetics and the desire for orthodontic treatment among young adults and it was more advisable to analyse the psychosocial factors in adults, who have a more stable self-concept compared with adolescents.¹ 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 of dentition, second their perception, and finally their attitude toward orthodontic treatment. We may postulate that females had very good knowledge about dental esthetics compared to the males.²

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.⁷ 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.⁸ Similar results have been obtained in our present study where 85.5% of the dental students who were having knowledge about orthodontic treatment were aware of dental esthetics. 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. 69.2% of the students

had positive attitude towards dental malocclusion. 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. Fifty eight percent of students have motivated friends and relatives to undergo orthodontic treatment. Seeking dental aesthetics treatment and appreciating one's own smile indicated greater influence of dental appearance on people's lives. When undergoing an aesthetic procedure and a troublesome feature is modified or eliminated, the patient perception of the feature also changes, and his or her expectation is fulfilled by the treatment.³

Seventy eight percent student were aware that mal-alignment of teeth can affect oral function so for improving oral hygiene, smile and to correct dental irregularities they visited orthodontist. 44.7% respondents advised orthodontic treatment should be carried out during any age.

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.
- Females had very good knowledge, satisfaction and positive attitude compared to the males regarding dental esthetics and treatment.

- Students from final year and interns were much more aware, very much satisfied and had a more positive attitude than 1st year students.

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