

Original Research

The views and attitude towards Orthodontic care

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ABSTRACT:

Background: Malocclusion, though not life-threatening, is an important public health issue, which has a large impact on the individual, causing discomfort, social and functional limitations. **Aim:** The study aims to assess the awareness towards malocclusion and orthodontic treatment among adolescent school going students **Methodology:** A total of 500 students (250 male and 250 female school Students) of age group between 15 - 18 years were included in the study. A pre-structured self-administered questionnaire consisting of 12 questions were given to the school students to assess their knowledge and attitude towards malocclusion and Orthodontic treatment. **Results:** The data was tabulated and computed in percentage using SPSS version 21.0 software. The data obtained from adolescent student population suggests that there is significant difference between the awareness of malocclusion and orthodontic treatment in males and females. **Conclusion:** The results suggest that there is a fair amount of awareness towards orthodontic treatment among Adolescent School Students, but specific misconceptions and barrier exist. The Female students showed a more positive awareness towards Orthodontic treatment when compared to male patients. **Clinical significance:** The survey helped to assess the knowledge and awareness towards malocclusion and orthodontic treatment among adolescent school students

Keywords: Awareness, Adolescents, Etiology, Malocclusion, Orthodontic Treatment.

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INTRODUCTION

Malocclusion is a incorrect relation between the teeth of the two jaws when they approach each other. The concept of oral health related quality of life corresponds to the impact of oral health or disease of an individual on the daily functioning, well-being or the overall quality of life.[1] Malocclusion occur as a result of hereditary, genetic, or environmental which could lead to psychosocial issues, problems with oral function and greater liability to trauma and dental disease problems in the affected person.[2]

Exterior appearance plays a vital role in social interactions and psychological well-being. Facial attraction is judged with the appearance of mouth and

Smile. Thus, mal-alignment affects social interactions and psychological well-being.[3][4]

The remuneration of orthodontic treatment is prevention of tissue injuries, enhancement in aesthetics and physical function. The need for orthodontic treatment is influenced by the desire to look attractive, self-esteem and self -perception of dental appearance. [5]

So the present study was conducted to assess the knowledge and attitude of school going Indian adolescent students towards malocclusion and Orthodontic care.

MATERIAL AND METHODS

A total of 500 Adolescent School Student (250 male and 250 female) of age group between 15- 18 years

from Calicut District of Kerala (India) were included in the study. Permission was attained from the institutional authorities, and students who were willing to participate from classes 9 to 12 were selected for the study. All the students involved in the study belong to the same institution.

Inclusion criteria

Students in the age group of 15–18 years

Exclusion criteria

Students not fitting in the desired age group

A pre-structured self-administered questionnaire consisting of 12 questions was given to the students to assess their knowledge and attitude towards orthodontic treatment. The questionnaire was formulated which comprised of three parts:

First segment of survey included 3 questions related to the demographic details of participants, such as name, age and gender. Second segment of survey comprise of 6 closed-ended questions concerning malocclusion and its effects. Third segment comprised 6 closed-ended questions concerning orthodontic treatment, the questionnaire was prepared based on other studies. [6][7]. A self-administered organized survey was created and tried among a convenience sample of 12 volunteer students from the regular schools whose reactions were rejected from the results of the survey. subsequently, the students were interviewed to gain feedback on the overall acceptability of the questionnaire in terms as far as length and language clearness, as per their criticism the inquiries were remedied. Cronbach's alpha was utilized to quantify unwavering quality and gave a score of 0.828, which established good reliability.

Statistical Analysis

The study data was collected and organized into Microsoft Excel spreadsheets (Microsoft Inc., USA), and the data was tabulated and computed in percentage using SPSS version 21.0 software. Chi-Square test was performed to calculate the frequency and percentage of awareness towards malocclusion and orthodontic treatment among male and female adolescent students.

RESULTS

The view and attitude among adolescent Students towards malocclusion and orthodontic treatment were calculated and expressed in percentage

The view and attitude towards malocclusion and its effects (Table 1) (Graph 1)

A overall of 375(75%) of Adolescent Students have heard of the term Malalignment of teeth, and 233(46%) of the Students think Malalignment is caused due to Genetic/Hereditary reason, 324(64.8%) Students think this Malalignment is due to external habits (Thumb

sucking/Tongue thrusting, lip biting). In regard to the effects of malocclusion 221 (44.2%) of the Students think improper alignment of teeth would affect mastication (Chewing problem), 215(43%) believe that mal alignment would lead to Mouth breathing. 417(83.4%) think proper orthodontic treatment would improve your facial appearance.

The view and attitude towards orthodontic treatment (Table 2)

Among the Adolescent Students 265(53%) are aware that few teeth may have to be removed for proper positioning of irregular teeth and 131 (26.2%) students were aware that the improper teeth can be corrected even after 40 yrs of age. 419 (83.8%) think orthodontic procedures are expensive, 447(89.4%) think orthodontic treatment is a stressful procedure.

Only a few students have undergone orthodontic treatment 60 (12 %), and 183 (36.6%) students were not willing to undergo orthodontic procedure if it take more than 2 years

Percentage of Gender based Awareness among Adolescent students

A total of 181(72.4%) out of 250 male, 194(77.6%) out of 250 female Adolescent Students have heard of the term Malalignment of teeth, 110 (44%) of male, 123 (49.2%) of female students consider Malalignment to be caused due to Genetic/Hereditary reason, and 110 (44%) male, 180 (72%) of female students consider Malalignment is caused due external habits (Thumb sucking/Tongue thrusting, lip biting).

In view to the effects of malocclusion 90 (36%) male, 131 (52.4%) of female adolescent Students think improper alignment of teeth would influence mastication (Chewing problem), 97(38.8%) male, 118(47.2%) female believe that mal-alignment would lead to Mouth breathing.

Among 206(82.4%) out of 250 male and 211(84.4%) out of 250 female Adolescent Students think appropriate orthodontic treatment would improve your facial appearance. 120(48%) male and 145(58%) female were aware that few teeth may have to be removed for proper positioning of irregular teeth. And only 60 (24%) male, 71 (28.4%) female students were aware that the improper teeth can be corrected even after 40 yrs of age. In view to expense towards orthodontic procedures 215(86%) out of 250 male and 204(81.6%) out of 250 of female students think orthodontic procedures are expensive, 211(84.4%) male, 236(94%) female think orthodontic treatment is a stressful procedure. Only a few students have undergone orthodontic treatment 21 (8.4 %) male and 39 (15.6 %) females. In regard to duration 167 (66.8%) male, 150 (60%) female students were not willing to undergo orthodontic procedure if it takes more than 2 years.

Graph 1- Bar Diagram of the attitude, knowledge among Adolescent students towards malocclusion and its effects

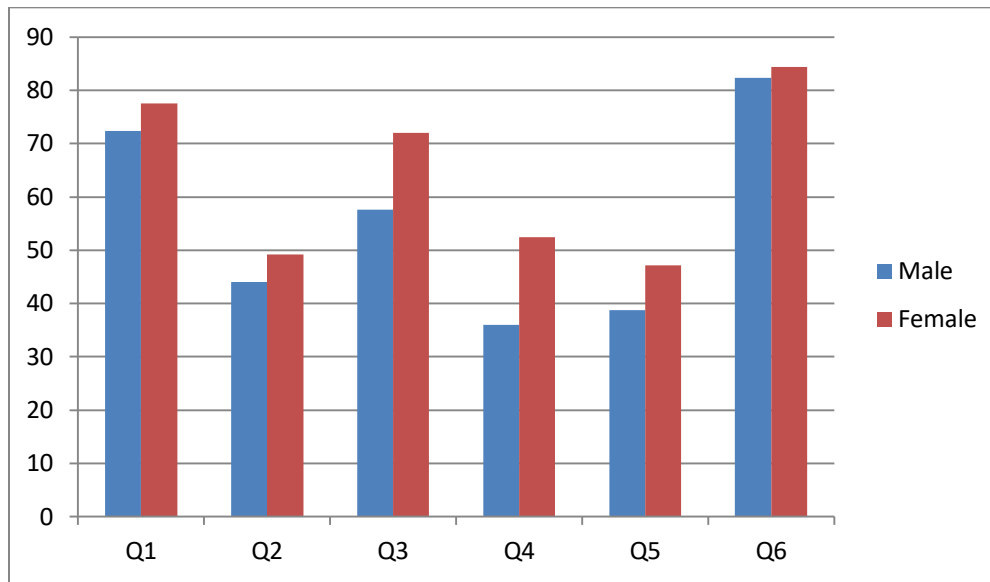


Table 1- The percentage of Awareness about malocclusion and its effects

		Male (250)		Female (250)		Overall (500)	
		Yes	%	Yes	%	Yes	%
1	Have you heard of the term Malalignment of teeth?	181	72.4	194	77.6	375	75
2	Do you think this Malalignment is caused due to Genetic/Hereditary reason ?	110	44	123	49.2	233	46
3	Do you think this Malalignment is due to external habits (Thumb sucking/Tongue thrusting,lip biting) ?	144	57.6	180	72	324	64.8
4	Do you think improper alignment of teeth would affect mastication (Chewing problem) ?	90	36	131	52.4	221	44.2
5	Do you think improper alignment of teeth could lead to alteration in breathing (Mouth breathing habit)?	97	38.8	118	47.2	215	43
6	Do you know that taking proper orthodontic treatment would improve your facial appearance?	206	82.4	211	84.4	417	83.4

Note: Data are represented frequency and percentage. Used Chi-Square test. *p-value <0.05 is statistically significant.

Table 2- The percentage of Awareness about Orthodontic Treatment

		Male (250)		Female (250)		Overall (500)	
		Yes	%	Yes	%	Yes	%
1	Have you undergone orthodontic treatment?	21	8.4	39	15.6	60	12
2	Would you be willing to undergo orthodontic procedure if it take more than 2 years?	83	33.2	100	40	183	36.6
3	Are you aware that few teeth may have to be removed for proper positioning of irregular teeth?	120	48	145	58	265	53
4	Do you think orthodontic treatment is a stressful procedure?	211	84.4	236	94	447	89.4
5	Do you think orthodontic procedures are expensive?	215	86	204	81.6	419	83.8
6	Are you aware that the improper teeth can be corrected even after 40 yrs of age?	60	24	71	28.4	131	26.2

Note: Data are represented frequency and percentage. Used Chi-Square test. *p-value <0.05 is statistically significant.

DISCUSSION

Most kids look for treatment of malocclusion for esthetic rather than therapeutic reasons. Discrimination is common in schools nowadays, numerous population-based studies have recommended that children with certain malocclusions are more likely to be the victims of bullying, such as teasing, name-calling, and physical bullying.[8] The oral-facial region plays a vital role in interpersonal relationships, cause it is considered as primary source of vocal, physical and emotional communication. [9][10]. The need for orthodontic treatment mainly depends on the positive or negative approach of the patients [11]. So the present study was conducted to assess the knowledge and attitude of school going Indian adolescent students towards malocclusion and Orthodontic care.

The lack of awareness among patients, their socio-economic status and literacy rate are the reasons behind patients not undergoing orthodontic treatment. In the present survey, female students had a better percentage of awareness and attitude towards the etiology of malocclusion and orthodontic care when compared to male students. This was in agreement with other studies.[12][13] This could attributed to the fact that female more concerned towards their appearance.

The result of the study revealed that 83.8% students think that orthodontic treatment was expensive, whereas 16.2% disagreed. Similar result was found in the study done by Zakirulla et al in which 88.5% agreed that the

orthodontic treatment is expensive. In a study done Awaisi, Z.H suggested that socioeconomic factor is the most crucial factor in uptake on orthodontic treatment, he also suggested that only a small percentage of patients in low socioeconomic undergo orthodontic treatment.[14] Sharma et al also suggested that financial restraint is vital obstacle for the patients to go through orthodontic treatment.[15] Around 36.6% of students responded that they will be willing to undergo orthodontic treatment if it's more than 2 years. Similar result was found in the study done by Zakirulla et al where 47% of female students and 58% of male students responded that orthodontic treatment duration was long. This could be attributed to the fact that the students were not aware of the time consuming nature of the treatment.

The study revealed that there was a positive awareness among high school students towards malocclusion and orthodontic treatment. Siddegowda et al, Friedman et al suggested that High school students revealed a elevated level of awareness concerning orthodontic treatment when compared to middle school students and also stated that awareness towards orthodontics improved depending upon the age of the participant and its influence towards undergoing treatment.[16][17]

The limitation of the study is that it was performed in a restricted group of school students future studies need to take place among large sample size. Also, all selected students belonged to a single institution. The incidence

of malocclusion among the participants was not assessed.

CONCLUSION

Improving psychosocial status and facial esthetics have been identified as important motivating factors behind the decision to commence orthodontic treatment. The Majority of the adolescent students were aware that orthodontic treatment would improve the facial aesthetics. The study revealed that the students had a moderate level of awareness towards malocclusion and Orthodontic treatment. The students were much concerned about the cost and duration of orthodontic treatment and more than half of the adolescent students lack awareness towards the etiology and effect of malocclusion.

REFERENCES

1. Sischo L, Broder HL. Oral health-related quality of life: What, why, how, and future implications. *J Dent Res* 2011;90:1264-70
2. Proffit WR, Fields HW. *Contemporary Orthodontics*. 3rd Edition, St. Louis: Mosby Year Book 2000 pp 2–22.
3. Marques LS, Ramos-Jorge ML, Paiva SM, Pordeus IA. Malocclusion: esthetic impact and quality of life among Brazilian schoolchildren. *Am J Orthod Dentofacial Orthop*.2006;129:424–427.
4. O'Brien K, Wright JL, Conboy F, Macfarlane T, Mandall N. The child perception questionnaire is valid for malocclusions in the United Kingdom. *Am J Orthod Dentofacial Orthop*.2006;129:536–540.
5. Mandeep KB, Nirola A; Malocclusion Pattern In Orthodontic Patients. *Indian Journal of Dental Sciences* 2012; 4: 4, 20-22.
6. Muqtadir, Q.S.M., Thilagrani, P.R, Ashok, K.D., Jaiprakash, M. and Anil, A. (2015) Awareness towards Orthodontic Treatment in Central Indian School Children. *Scholars Journal of Dental Sciences* , 2, 45-48.
7. Evan. A. Clement Awareness of malocclusion and Behaviour towards Orthodontic Treatment among Nursing Students *IOSR Journal of Research & Method in Education (IOSR-JRME)* e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 10, Issue 3 Ser. V (May - June 2020), PP 17-20
8. E. Nandakumar, R. Vignesh, Dhanraj Ganapathy Malocclusion and its influence in the quality of life – A review, *Drug Invention Today* | Vol 12 • Issue 9 • 2019
9. Feu D, de Oliveira BH, de Oliveira Almeida MA, Kiyak HA, Miguel JA. Oral health related quality of life and orthodontic treatment seeking. *Am J Orthod Dentofacial Orthop*. 2010;138:152-9.
10. Anastasi G, Spennato A. Impact of Orthodontic Treatment on Oral Health-Related Quality of Life and other psychological variables. *Webmed Central Orthodontics* 2014;5(1):WMC004496.
11. Bos, A., Hoogstraten J. and Prah-Andersen., B. (2005) Attitudes towards Orthodontic Treatment: A Comparison of Treated and Untreated Subjects. *European Journal of Orthodontics*, 27, 148-154. <https://doi.org/10.1093/ejo/cjh071>
12. Zakirulla M, Almubarak H, Fageeh SN, Alghothimi AA, Alqahtani SK, Alqahtani FM, Alshahrani FT. Awareness and behaviour related to orthodontic treatment among school children in Aseer region, Kingdom of Saudi Arabia. *Open Journal of Stomatology*. 2019 Apr 26;9(04):87.
13. Polychronopoulou, A. and Kawamura, M. (2005) Oral Self-Care Behaviours: Comparing Greek and Japanese Dental Students. *European Journal of Dental Education*,9, 164-170. <https://doi.org/10.1111/j.1600-0579.2005.00387>.
14. Awaisi, Z.H., Asad. S. and Mahmood, A. (2012) Social Barriers towards Orthodontic Treatment Need. *Pakistan Oral and Dental Journal* , 32, 88-91.
15. Sharma, J.N. (2009) Epidemiology of Malocclusions and Assessment of Orthodontic Treatment Need for the Population of Eastern Nepal. *World Journal of Orthodontics* , 10, 311-316.
16. Siddegowda, R. (2015) An Epidemiological Survey on the Awareness towards Orthodontic Treatment among Middle School and High School Children of Karnataka State. *Journal of Cell Science and Therapy*, 6, 213. <https://doi.org/10.4172/2157-7013.1000213>
17. Friedman, L.A., Mackler, I.G., Hoggard, G.J. and French, C.I. (1976) A Comparison of Perceived and Actual Dental Needs of a Select Group of Children in Texas. *Community Dentistry and Oral Epidemiology* , 4, 89-93. <https://doi.org/10.1111/j.1600-0528.1976.tb02104.x>