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Assessment of Knowledge, Attitude, Practice and Psychological Impacts of Orthodontic Treatment among Teenagers-A Cross Sectional Survey.

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ABSTRACT
INTRODUCTION: *Bullying or peer victimization among school children has been defined as a specific form of aggressive behavior and can be described as a situation when a student is exposed repeatedly and overtime, to negative actions. The aim of the present study was to analyze the level of self-esteem in adolescents of the public school system as well as to verify the possible associations of orthodontic treatment need and bullying.*
MATERIALS AND METHODS: *A cross sectional survey was conducted among teenage adults over a period of one month time. A total of one month time period was taken to distribute among the study age group and the response rates were 520 at the end of the study. The responses were subjected to statistical analysis with respect to age and gender and inherently statistics were made for checking the association between the variables.*
RESULTS:*The results on an overall basis state that though adequate knowledge, attitude and practice exists towards undergoing Orthodontic treatment prevails the psychological impact and the benefits of undergoing the treatment are considered high but still there exists a lacuna among the teenagers for undergoing Orthodontic treatment.*
CONCLUSION:*Overall a good perception on orthodontic treatment with respect to knowledge, attitude and practice among teenagers. Though they have a good response pertaining to the above factors the impact on psychological variations were satisfactory because from the study it was significant that dental anomaly was a key factor among the teenagers for their low self-esteem and self-confidence*
KEYWORDS: *BULLYING, TEENAGERS,PSYCHOLOGICAL IMPACT, ORTHODONTICS.*

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I. INTRODUCTION

Peer victimisation, often known as bullying, occurs when a student is frequently exposed to bad behaviour on the part of one or more classmates. Bullying has been defined as a specific type of aggressive behaviour among schoolchildren. In this context, negative behaviour refers to an imbalance of power between the attacker and victim, which may manifest as either direct or indirect forms of violence harming the victim[1]. Physical and verbal threats, kicking, hitting, and name-calling are examples of direct forms of aggressiveness. The exclusion of peers from social groups, gossiping, and spreading rumours are examples of indirect forms, which work on an emotional and social level. Within the literature, the term "bullying" appears to be interchangeable with "teasing."

Cross-sectional studies have looked into peer victimisation in schools in the UK. According to statistics, 26% of 8 to 9-year-olds experience bullying occasionally or more frequently, and 10% experience it frequently. Bullying affects 15% of 11–12-year-olds occasionally or more frequently, and 2% experience it frequently[2]. In a similar vein, Whitney and Smith found that 10% of 8 to 11-year-olds experience bullying at least once a week and 27% experience it occasionally. 10% of adolescents between the ages of 11 and 16 who

are bullied occasionally and 4% who are bullied at least once per week. It is evident that bullying by classmates is prevalent among schoolchildren. Both forms of aggression are directed at male and female victims of bullying.There have been reports of the negative dental and social implications of malocclusion as well as the frequency of child teasing[3].

Dental and social effects of malocclusion have been reported and the prevalence of teasing in children has been reported in both normal and Orthodontic samples. The frequency of teasing related to dental features has been reported at 7%within a sample of 531 school children aged between 9 and 13 years. Incontrast, in adolescent groups awaiting Orthodontic treatment, the prevalence of teasing related to dental appearance has been reported to 15%. Specific dental characteristics reported to elicit negative responses and cause patients to seek treatment include increased overjet, crowding and a deep overbite[4].

It has been reported that children aged between 14 and 15 years have a lower self-perception in the presence of poor dental aesthetics of their anterior teeth. Incontrast, a 20-year longitudinal follow-up of patients with an untreated malocclusion revealed no negative association between malocclusion and social or psychological well-being.

It has been suggested that self-esteem may influence the effect on an Individual's OHRQOL is significant in children with low self-esteem. However, the converse is detected in children with high self-esteem, who report a higher-than-averageOHRQOL. Additionally, therelationship between self-esteem, OHRQOLand malocclusion could be affected by other factors[5].

It seems a relationship exists between Bullying and malocclusion however a preciseassociation between the factors and self-evaluation regarding to the condition was still a questioning factor.

According to the definition of bullying, it is "a specific sort of hostile behaviour" in which a student "is repeatedly subjected over time to unpleasant actions on the part of one or more pupils." Negative behaviours that affect the victim can be categorised as direct or indirect kinds of hostility. According to reports, the concept of bullying varies depending on the child's age, between teachers and teenagers, and because different cultural terms are used to translate bullying. According to Smith and colleagues, eight-year-olds are less likely than their older peers to distinguish between direct and indirect kinds of hostile behaviour.However, with increasing age this difference seems to reduce as the child develops more sophisticated definitions of bullying including recognition of indirectforms. Both teachers and adolescent pupils tend to restrict their definition of bullying to direct forms only[6].

In society, facial attractiveness plays a special function. A person's psychosocial status may be impacted and may suffer social disadvantage as a result of a deviation from normal dentofacial aesthetics. A person with poor dentofacial aesthetics is typically expected to have low self-esteem and receive adverse reactions from society. This response is unpredictable, though[2].

According to Macgregor, people with severe facial deformities experience empathy and compassion, whereas others with milder disfigurements are subjected to scorn and taunting, which causes higher psychological anguish in those people. What's more, background facial attractiveness seems to have more of an impact than a person's oral health. Shaw and his coworkers also mentioned that physical characteristics like height and weight can be the object of teasing.The face is an important communication tool, often portraying an individual's emotions and level of self-image.Modern society is driven by the need to conform to ideals; perceived dentofacial aesthetics can influence both opinions formed of an individual by peers and adults and the perception of an individual's personality.Interestingly, negative biases regarding profile can be inferred at age 10-11 years[3]. Individuals with normal incisor alignment are regarded as more desirable as friends, attractive, intelligent, of higher social class and less aggressive in comparison with individuals with a malocclusion. Individuals with high levels of facial attractiveness also elicit a more favorable response from society compared to those with low levels. In addition, the importance of having good dentofacial appearance is recognized as important in making friends, career progression and dating[6].

The level of self-esteem is closely tied to aesthetic attractiveness standards. Malocclusion, which is the abnormality in the development of dental arches that causes cosmetic and/or functional issues, is regarded as a divergence from society's aesthetic pattern rather than an illness in and of itself. Unpleasant dental aesthetics can stigmatise a person, hinder professional success, promote unfavourable stereotypes, and even erode self-esteemAlthough many studies have reported the problem of bullying in schoolchildren, no national study has researched the association of this phenomenon using self-esteem and malocclusion variables. Hence, due to less reporting of scientific evidence pertaining to incidence of Bullying with Orthodontic evidence, the study aims to measure the knowledge, Attitude, Psychological impacts and Practice of Orthodontic treatment among teenagers.

II. MATERIALS AND METHODS

A cross sectional survey was conducted among teenage adults over a period of one month time. The study was designed to test the psychological impact and assessment on knowledge, Attitude and practice towards Orthodontic treatment needs among the sensitive population.

The ethical approval was obtained from KIDS(Karpagavinayaga institute of Dental sciences Institutional Ethical Committee).

The participants were recruited from different areas through online mode who were requested and explained about the study and willingness was obtained through online consent. The study was conducted for a month period, initially days was given for years respondents to complete the survey after which based on the inclusion and exclusion criteria, they were realloted.

Inclusion criteria:

1. Participants who were willing to participate in the survey.
2. Participants who belong to the age group 13-19years.
3. Participants who were available on the day of distribution of questionnaire through online mode.
4. Patients who aren't under Orthodontic treatment.

Exclusion criteria:

1.Patients whowere notwilling toparticipate in the survey.
2.Patients who were undergoing Orthodontic treatment.
3.Patients who were above the age of 20 years.
4.Patients who were not present on the day of distribution of questionnaire through online mode.

Sample size and questionnaire:

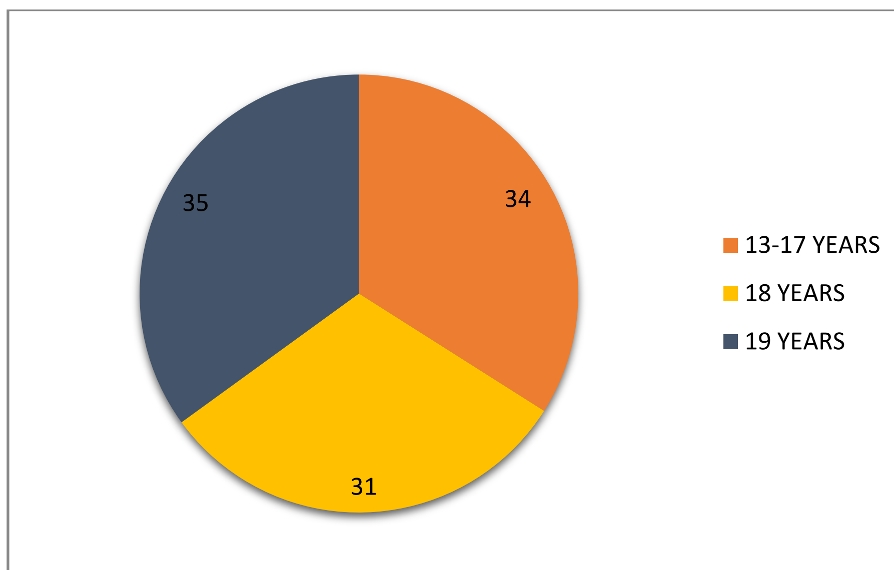
The sample participants were included based on the criteria with respective to age and other relevant factors (Snow- ball sampling method was practiced).
The age group of participants were 13-19 years old who were connected through online mode by constructing a self-administered 18 set questionnaire which was framed and designed with respective to knowledge, Attitude, practice and psychological assessmentpertaining to Orthodontic treatment needs.
The 18 set questionnaires consist of knowledge -4, Attitude-3, psychological assessment-7, practice-4.
Since the questionnaire was newly framed it was pilot tested among 15 members to check the inter-examiner and intra-examiner validity.
The results of the pilot study showed strong agreement for reliability and validity with Cronbach alpha 0.91.

Data collection:

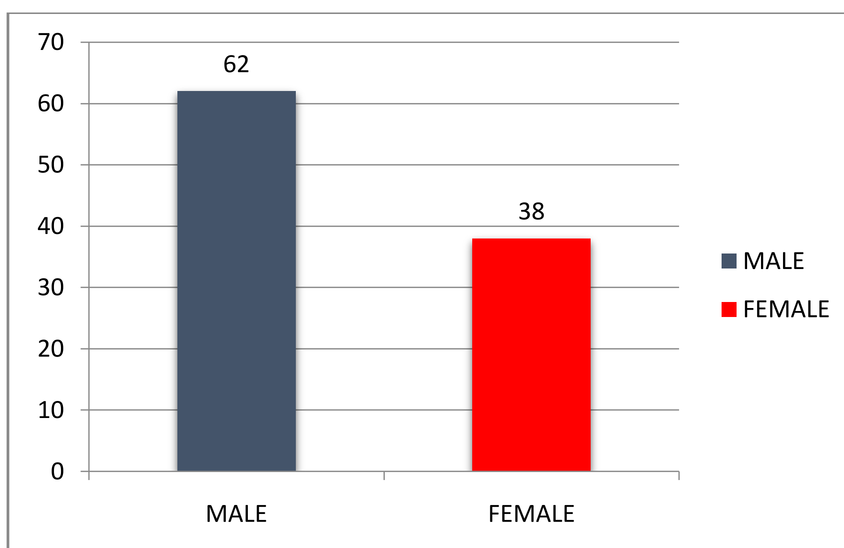
The tested 18 set questionnaire was converted into online survey in English language which was distributed for the study participants through e-mail and WhatsApp through known contacts with relevant to the study age groups.
Initially, the study was explained with short description through online platform after which the acceptance of the participants wasobtained. A week period was given for them to respond for the questionnaire, if there were any delay in obtaining the response the remainder message was provided so that another week time was given for the participants.
A total of one month time period was taken to distribute among the study age group and the response rates were 520 at the end of the study. The responses were subjected to statistical analysis in which descriptive statistics were calculated with respect to age and gender and inherently statistics were made for checking the association between the variables.The statistical analysis was performed using SPSS software (INC 23.0 Chicago, USA).

III. RESULTS

The results of the study shows that totally 520 responses were reported from the online survey in which 31%of them belong to 18 years of age 35%of them belongs to 19 years of age 34%of them belong to 13-19years of age.Pertaining to gender wise distribution 62% were females 38% were males.



GRAPH1: AGE WISE DISTRIBUTION OF STUDY PARTICIPANTS



GRAPH 2: GENDER WISE DISTROBUTION OF STUDY PARTICIPANTS

From the results, it was inferred that more than 80%of study participants have responded problem in esthetics and 15% of them responded for lack of confidence,5% of them responded as difficulty in speaking and feel of insecurity. The resultsof the study inferred that the first thoughtwhen theysaw a person with braces has maximum responded feeling pity and weird but still few people have responded in positive approach for cultivating a high self -esteem and for a bright future.

Table 1infersthat knowledge towards presence of Dental anomaly was known only to 33.1%of the participants and knowledge towards irregular dental arrangement and the problems faced by the person were identified for lowering self-confidence by 36.9%, difficulty in brushing 24.1%, decreased in self -esteem by 18.3%, improper speech and chewing by 17.3%.

TABLE 1: KNOWLEDGE BASED DISTRIBUTION OF STUDY POPULATION ON DENTAL ANOMALIES

QUESTION	PERCENTAGE	NUMBERS
KNOWLEDGE ON DENTAL ANOMALY	33.1%	172
SELF CONFIDENCE LEVEL	36.9%	192
DIFFICULTY IN BREATHING	24.1%	125
SELF ESTEEM	18.3%	95

IMPROPER SPEECH AND DIFFICLUTY	17.3%	90

Table 2infers Attitude towards dental anomaly in which dental anomaly is a reason for not socializing is responded with positive, attitude among 38.3%of participants and attitude towards bullying a person with irregular dental arrangement among 13%and when it was asked whether after Orthodontic treatment whether there will be a change in socializing attitude was responded strongly by 89.1%of the people.

TABLE 2:ATTITUTDE OF STUDY PARTICIPANTS ON BULLYING AND ORTHODONTICS TREATMENT NEEDS

QUESTION	PERCENTAGE	NUMBERS
ATTITUDE TOWARDS NOT SOCILAIZING IN PUBLIC	38.3%%	199
TOWARDS BULLYING PERSONS	13%	68
ATTTUDE TOWARDS ORTHODONTIC TREATMENT IN INCREASING SELF ESTEEM	89.1%	464

Table 3 infers practice towards correcting a dental anomaly which the idea of undergoing treatment in future was responded positively by 43.3% and recommending others on realizing the benefits of Orthodontic treatment by 88.6%, the participants also responded with a very high positive response towards recommending for Orthodontictreatment by knowing the benefits out of it responded 96%.

TABLE 3: PRACTICE OF STUDY PARTICIPANTS ON BULLYING AND ORTHODONTICS TREATMENT NEEDS

QUESTION	PERCENTAGE	NUMBERS
IDEA OF UNDERGOING ORTHODONTIC TREATMENT	43.3%	225
BENEFITS OF ORTHODONTIC TREATMENT	88.6%	461
HIGH POSITIVE RESPONSE TOWARDS RECOMMENDING FOR ORTHODONTIC TREATMENT	96%	499

Table 4 infers the psychological impact on Orthodontic treatment was evaluated to be after undergoing Orthodontic treatment there was an increase in self-confidence was responded by 96.5% and feeling pity for the reason why they are bullied by others due to irregular teeth arrangement was notice by 78.9% of the study population.

TABLE 4: PSYCHOLOGICAL IMPACT OF STUDY PARTICIPANTS ON BULLYING AND ORTHODONTICS TREATMENT NEEDS

QUESTION	PERCENTAGE	NUMBERS
PSYCHOLOGICAL IMPACT ON INCREASE IN SELF CONFIDENCE LEVEL	96.5%	502
FEELING LOW ESTEEM FOR BULLYING PEOPLE WITH DENTAL ANOMALY	78.9%	410

The psychological impact shows a drastic increase in behavior, self-confidence, self-esteem in a linear way with a positive attitude towards undergoing Orthodontic treatment. Hence the study results on anoverall basis state that though adequate knowledge, attitude and practice exists towards undergoing Orthodontic treatment prevails the psychological impact and the benefits of undergoing the treatment are considered high but still there exists a lacuna among the teenagers for undergoing Orthodontic treatment.

IV. DISCUSSION

This cross-sectional study involving an adolescent group referred for orthodontic assessment has found that the prevalence of peer victimization in orthodontic patients with an untreated malocclusion aged between 13-19 years. From previous studies it shows that both an increased overjet (>4 mm) and overbite were significantly associated with being bullied. Both features are commonly found in a Class II Division 1 incisor relationship, which was also significantly associated with being bullied[7].

The incidence reported in this study is comparable tonon-orthodontic patients within the teenage group. In non-orthodontic patients, the prevalence of bullying in orthodonticpatients reduces with increasing age. It signifies that there is an association between ageand being bullied in dental anomlaies people who were aware of the terms and concepts. It is well established that youngerchildren are more vulnerable to bullying by older peers.In a previous study done Gerber et al says that there was no correlation was detected between being

bullied andsocial-demographic variables including gender, source ofreferral and ethnicity[8]. But in this study, it shows that the peer group of teenagers are bullied because of the malocclusion due to which the self-esteem and confidence level gets reduced in disrupting their self-confidence.Regarding gender, the findings ofthis study are consistent with previous research done.

It may be that factors other than a malocclusion have a greater influence on whether a child is bullied, e.g., age of the child, social and physical competence. Another consideration is that the aesthetic component of IOTN although validated among professionals, correlates poorly with lay opinion as to what constitutes a need for treatment.

The relationship between self-esteem, OHRQoL and malocclusion is complex. It has been reported that there is no apparent association between self-esteem and the presence or absence of treatment for a malocclusion in a longitudinal cohort study. However, a relationship can exist on an individual basis which was significant in this study.Agou et al. suggested that the relationship between self-esteem, OHRQoL and malocclusion could be affected by other factors[9].

The findings of this study report a negative impact on a bullied individual's self-esteem. This is consistent with the previously described traits or personalities of victims of bullying. Victims are portrayed as anxious, insecure, cautious, sensitive, quiet and withdrawn. Within social interactions, victims often take up a submissive role and show a lack of assertiveness. The presence of poor dentofacial aesthetics could further influence the physical appearance domain resulting in low self-esteem[10].

The presence of a malocclusion has been reported to have a negative impact on a child's OHRQoL. It has previously been reported that malocclusion has a significant impact on both emotional and social domains, suggesting that the presence of a malocclusion primarily has a psycho-social effect. It is not surprising that bullying affects a child both emotionally and socially as comments regarding dental appearance have been reported to be more hurtful and upsetting in comparison to other physical features. It is unclear whether higher levels of oral symptoms and functional limitations are directly related to the malocclusion or amplified by low levels of self-esteem or peer victimization[10].

The Harter's Self Perception profile for Children measures competence in five domains, but also the individual's global 'self-worth.' This is important as it is commonly recognized that self-esteem cannot be gauged from a single domain alone and should be considered as multi-dimensional concept. In addition, an individual may feel that a particular domain has a greater effect on their self-esteem compared with other domains. This may be particularly relevant in individuals who are bullied due to the presence of a malocclusion[11]. This questionnaire has been reported to have good validity and reliability. The study was limited to a very closed peer group population in a small circle through which it reported a well-established knowledge attitude and interest in practicing the treatment for Orthodontic needs was good but still the social impact on psychological assessment was not satisfactory and there exists a layover in which the lower self esteem and confidence level persisted among them which was a key factor for their absence to overcome the same.

V. CONCLUSION

The study concludes there exists a good perception on orthodontic treatment with respect to knowledge, attitude and practice among teenagers. Though they have a good response pertaining to the above factors the impact on psychological variations were satisfactory because from the study it was significant that dental anomaly was a key factor among the teenagers for their low self-esteem and self-confidence. But as said earlier the attitude towards undergoing orthodontic treatment was positive among them in improving their self-confidence and self-esteem.

Thus, it infers that the teenage age group is a sensitive population to whom appropriate measures have to be taken for improving their oral health and quality of life.

REFERENCES

[1]. Seehra J, Newton JT, DiBiase AT. Bullying in schoolchildren–its relationship to dental appearance and psychosocial implications: an update for GDPs. British dental journal. 2011 May;210(9):411-5.
[2]. Gatto RC, Garbin AJ, Corrente JE, Garbin CA. Self-esteem level of Brazilian teenagers victims of bullying and its relation with the need of orthodontic treatment. RGO-RevistaGaúcha de Odontologia. 2017 Jan;65:30-6.
[3]. Seehra J, Fleming PS, Newton T, DiBiase AT. Bullying in orthodontic patients and its relationship to malocclusion, self-esteem and oral health-related quality of life. Journal of orthodontics. 2011 Dec;38(4):247-56.
[4]. DiBiase AT, Sandler PJ. Malocclusion, orthodontics and bullying. Dental update. 2001 Nov 2;28(9):464-6.
[5]. Albino JE, Lawrence SD, Tedesco LA. Psychological and social effects of orthodontic treatment. Journal of behavioral medicine. 1994 Feb;17(1):81-98.
[6]. van der Wal MF, de Wit CA, Hirasing RA. Psychosocial health among young victims and offenders of direct and indirect bullying. Pediatrics 2003; 111: 1312–17.
[7]. Pearce J. What can be done about bullying? In Elliot M (ed.). Bullying: a practical guide to coping for schools. London: Pearson Education, 2002, 74–75.
[8]. Boulton MJ, Underwood K. Bully/victim problems among middle school children. Br J Educ Psychol 1992; 62: 73–87. 5. Whitney I, Smith PK. A survey of the nature and extent of bullying in junior/middle and secondary schools. Educ Res 1993; 35: 3–25.

[9]. O'Brien C, Benson PE, Marshman Z. Evaluation of a quality of life measure for children with malocclusion. J Orthod 2007; 34: 185–93.
[10]. Johal A, Cheung MY, Marcenes W. The impact of two different malocclusion traits on quality of life. Br Dent J 2007; 19: E6.
[11]. Bernabe´ E, de Oliveira CM, Sheiham A. Condition-specific sociodental impacts attributed to different anterior occlusal traits in Brazilian adolescents. Eur J Oral 2007; 115: 473–78.

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