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Awareness Regarding Various Oral Habits, Their Effect on Development of Malocclusion & Intervention by the Habit Breaking Appliances among the Parents of Children Between the Age 5-12 Years, in Kheda District, Gujarat

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KEYWORDS

Adverse oral habits, Dental awareness, Habit breaking appliances, Malocclusion, Orthodontic awareness, Oral health

ABSTRACT:

Background: Growing children require appropriate guidance for healthy growth and maintenance of their teeth. Oral health of growing children is affected by parental knowledge and awareness regarding various harmful oral habits, preventive regular dental visit, care of primary teeth and apprehension for any irregularities in the dental arch etc. Malocclusion is one of the most common oral pathologies ranked third in world public dental disease priorities, next to dental caries and periodontal disease. Hence, habit breaking appliances that can be used along with fixed orthodontic appliances will be of great advantage.

Aim: To assess the level of awareness in parents regarding the effects of deleterious oral habits on the development of malocclusion and knowledge regarding intervention through habit breaking appliances.

Material And Methods: A cross-sectional questionnaire-based study was conducted among the parents of children between age group 5-12 years who visited Department of orthodontics and dentofacial orthopedics. Parents of patients who visited the department of orthodontics were given the questionnaire based on their language preference. It was a closed ended questionnaire with 11 questions based on yes /no format and it was mandatory to answer all questions.

Results: 100 completely answered questionnaire were submitted during the stipulated timeline. 61% of parents were aware about the presence of deleterious oral habits in their children, out of which 40% of parents were aware about the thumb sucking habit, 23% were aware regarding the tongue thrusting habit, 35% were aware regarding mouth breathing habit, 32 % were aware regarding bruxism and 44% of parents were aware regarding the nail-biting habit.

Conclusion: As per our study only 21% of parents were aware regarding the development of malocclusion. More extensive awareness programs should be conducted to educate parents regarding the ill effects of oral habits and the use of habit breaking appliances.

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Introduction

The state of being aware of something is called awareness.[1] Oral health education starts from footprints of awareness. Knowledge and awareness are essential prerequisites for changes in behavior related to health and disease anticipation.[2] Growing children require appropriate guidance for healthy growth and maintenance of their teeth. Oral health of growing children is affected by parental knowledge and awareness regarding various harmful oral habits, preventive regulardental visit, care of primary teeth and apprehension for any irregularities in the dental arch etc.[3, 4]

Malocclusion is defined as "an appreciable deviation from ideal occlusion." Malocclusion is one of the most common oral pathologies ranked third in world public dental disease priorities, next to dental caries and periodontal disease.[5] The most common causes for the development of malocclusion are genetic, environmental, systemic causes, and harmful oral habits. Hence, oral habits, the primary cause of dento-facial deformities in children, require immediate attention for prevention. The correlation between oral habits and adverse dental and facial development is an association rather than a cause-and-effect relationship.[6]

A habit is defined as an automatic repetitive action as a result of complex natural process involving muscle contraction. Habits of sufficient frequency, duration, and intensity may be associated with dento-alveolar or skeletal deformations such as increased over-jet, reduced overbite, posterior cross-bite, or long facial height. The duration of force is more important than its magnitude; the resting pressure from the lips, cheeks, and tongue significantly impacts tooth position, as these forces are maintained most of the time.[7] Oral Habits among children are considered as one of the major reasons for development of malocclusion. Deleterious habits include Thumb sucking, Tongue thrusting, Oral breathing, Nail biting, Bruxism, Lip sucking etc.

Parents play an important role in developing healthy oral habits in children. Parents can provide proper preventive measures to children only if they have a good knowledge of dental diseases and their prevention. The line of treatment for these habits includes elimination of etiology, retraining exercises, and use of mechanical restraining appliances.[8] Hence, habit breaking appliances that can be used along with fixed orthodontic appliances can be of greatest advantage.

This questionnaire study was formulated to investigate the awareness regarding various oral habits, their effect on development of malocclusion & intervention by the habit breaking appliances among the parents of children between the age group of 5-12 years, in population of Kheda district, Gujarat.

Methodology

This cross-sectional questionnaire-based study was carried out among the parents of children between age group 5-12 years who visited Department of orthodontics and dentofacial orthopedics. The approval of the institutional review board (IRB) was taken. Consent was taken from all the parents who willingly participated in the study. Questionnaire was prepared in English & Gujarati (vernacular language).

Data Collection: The Power of sample was decided by statistician and 100 forms were obtained. Parents of patients who visited the department of orthodontics were given the questionnaire based on their language preference. The Parent's consent was taken before participation in the study. The distributed questionnaire had 11 questions based on yes /no format and it was mandatory to answer all questions.

Study Design

A self-designed close-ended offline questionnaire.

Study Duration

The data was collected between1st October 2022 to 31st October 2022. A total of 100 filled questionnaires were collected to assess the data.

Selection Criteria

Parents of children between 5-12 years of age from Kheda district who willingly gave written consent to participate in the survey.

Exclusion Criteria:

- Incomplete forms were excluded from the study.
- Questionnaires submitted after the timeline.

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- Both Parents as well as children suffering from any craniofacial deformities & congenital abnormalities were excluded from the study.

Statistical Analysis

SPSS (Statistical Package for Social Sciences) version 25.0 was used to perform statistical analyses.

Results

The total 100 completely answered questionnaire were submitted during the stipulated timeline. 61% of parents were aware about the presence of deleterious oral habits in their children , Out of which 40% of parents were aware about the thumb sucking habit , 23% were aware regarding the tongue thrusting habit , 35% were aware regarding mouth breathing habit, 32 % were aware regarding bruxism and 44% of parentswere aware regarding the nail-biting habit .

The oral habits existed in only 24% of children. Out of which the most prevailing habit was Thumb sucking (11 %) followed by mouth breathing (9%) and nail biting (8%).

Only 21% of parents were aware regarding the development of malocclusion dueto the persistence of these habits . 36% of parents were aware that psychological stress in child can lead to the development of thumb sucking habit.34% of parents were aware about the Habit breaking appliance . 33% of parents believed that these appliances could help in discontinuation of deleterious oral habits .

74% of parents had taken measures to halt these habits in their children. Only 23% of parents visited a dentist in concern regarding the habit intervention.49% of parents were aware that these habits can lead to speech disturbance in their children if not corrected.67% of parents were willing to treat their child with a habit breaking appliance if any deleterious habit persisted in them .

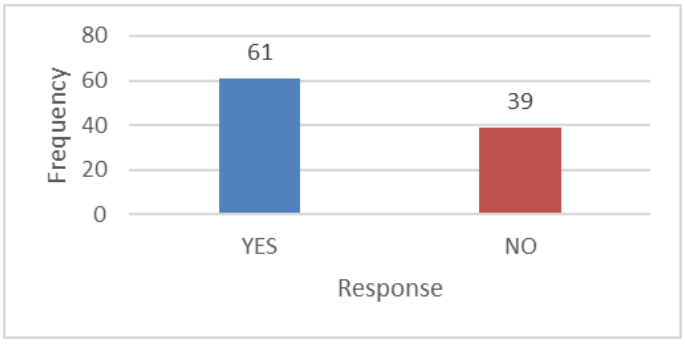

Figure 1 : Bar Graph Denoting Awareness Among Parents Regarding Deletarious Oral Habits

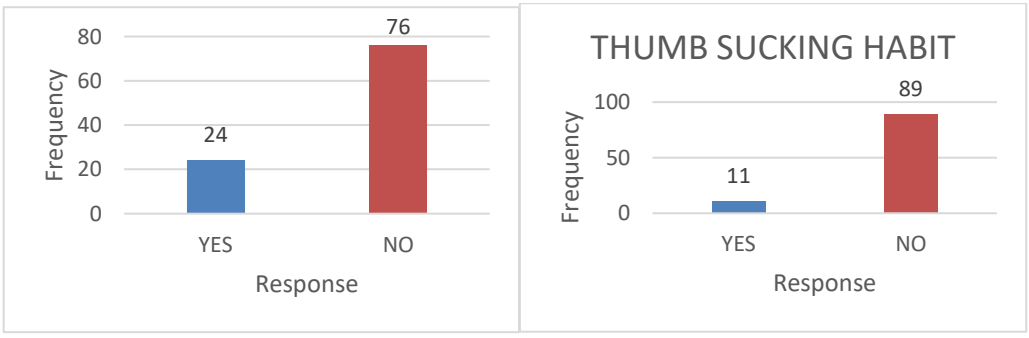

Figure 2 : bar grapf denoting prensense of deletarious oral habits among children 24% and thumb sucking being the most commom ones.

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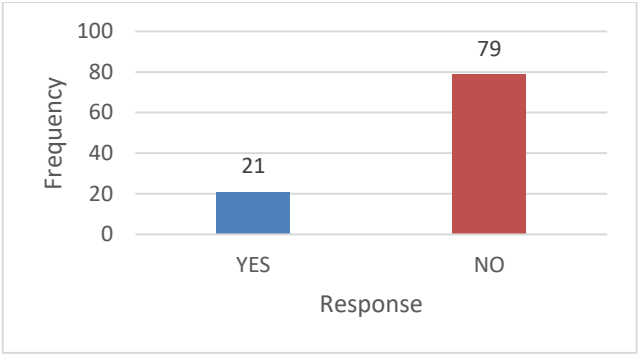

Figure 3: bar graph denoting the awareness reagrding the formation of malocclusion if the deletarious oral habits prevails.

Discussion

This survey was conducted to assess the level of awareness among the parents regarding the harmful oral habits and their attitude towards the maintenance of oral health. Parents play a major role in changing adverse habits of children since it affects the general health of children. Changing the habits in the correct age may prevent major problems at their adult age. From our study it was depicted that majority of parents were aware regarding the Thumb sucking habit & nail-biting habit, whereas least number of parents were aware regarding the tongue thrusting habit. Only 21% of parents were aware regarding the development of malocclusiondue to the persistence of oral habits.

Kharbanda et al (2003)[9] conducted a study on 5554 children aged 5-13 years old with the objectives of recording the prevalence of oral habits among North Indian children according to sex. These children were selected from the schools of Delhi the results showed that the prevalence of oral habits in Delhi school going children was 25.5%. Tongue thrust was the commonest habit (18.1%) followed by mouth breathing (6.6%). Thumb sucking was relatively less common habit and seen in only 0.7% of children. There were no significant differences between boys and girls for the prevalence of oral habits. However, for the specific habit types there was a sex difference. Thumb sucking was more common in girls (1.0%) when compared with boys (0.4%) and this difference was statistically significant ($P < 0.001$). There was a reverse trend for the mouth breathing, which was more common ($P < 0.001$) in boys (7.8%) than girls (5.3%). There were no differences for tongue thrust habit between boys (17.5%) and girls (18.6%).

Garde et al (2013)[10] conducted a study to assess the prevalence of habits among the children between the age group of 6-12 years of age and concluded that Bruxism was found with highest frequency. Mostly the habits were more among female children and also significant differences were observed according to age groups.

Sharma et al (2015)[11] conducted a study to know the prevalence of oral habits in children between the age of 11-13 years in Jaipur city The result showed that 18% children had a habit of tongue thrusting, 17% mouth breathing and 3% nail biting. Sex-wise prevalence showed 18% females had oral habits and 20% of male hadoral habit.

Vishnu et al (2020)[12] conducted a survey on parents of children with adverse oral habits and the results concluded that 92% of parents were aware of thumb sucking habit, 75% were aware of mouth breathing habit, 66% were not aware of tongue thrusting, and 71% aware of bruxism. 73% of parents were aware that oral adverse habits can lead to malocclusion. 83% of parents felt that habit breaking *a*ppliance can prevent malocclusion. 71% of the parents did not know that habit breaking appliance should not be used for more than 6 months. 46% of males and 27% of females were aware that adverse oral habits can lead to malocclusion.

As per our study only 24% of children had the habits in which the thumb sucking habit was more commonly present followed by mouth breathing and nail biting. Very few parents among the population of Kheda district are aware regarding the prevalence of habits in their child hence various awareness programs must be arranged to spread knowledge and awareness among

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the population.

Conclusion

As prevention is always better then cure the deleterious oral habits should be intervened as soon as possible before its deteriorating effects leads to the development of malocclusion. As per our study only 21% of parents were aware regarding the development of malocclusion due to persistence of these habits more awareness programs must be undertaken to educate parents regarding the ill effects of oral habits and the use of habit breaking appliances in Kheda district.

Conflict of Interest

None

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