KNOWLEDGE AND AWARENESS ON HABITS AND HABIT BREAKING APPLIANCES AMONG PARENTS: A QUESTIONNAIRE BASED SURVEY

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ABSTRACT

Background: Oral adverse habits are one of the key etiologic variables which will lead to malformation in dentofacial structures. Oral habits can be regarded as normal or harmful. Parafunctional behaviours have been identified as a primary etiological component in dental malocclusion development. The most prevalent oral behaviours are thumb sucking and tongue thrusting.

Aim: The study's goal was to measure parents' knowledge and awareness of habit and habit-breaking appliances.

Methods and Materials: In December 2020, a questionnaire-based study of parents was undertaken. This study included 123 parents who brought their children with bad oral habits to be treated. The questionnaire asked ten questions on the habit and its consequences. The data was entered into MS Excel and statistical analysis was performed using SPSS software, including a Chi-square test.

Results: 89% participants were made aware about the thumb sucking habit while 11% were not aware. 79% of the study participants knew about the mouth breathing habit while 21% didn’t knew about the habit. It was found that 68% of the participants knew about bruxism while 32 percent didn’t knew about it. 76 % participants knew that adverse oral habits can lead to malocclusion while 24 % didn’t knew about this fact. Further it was found that majority of the patients (64%) were not aware of the fact that these oral habits can be treated with habit breaking appliances. When there was question from the participants if habit breaking appliances can prevent malocclusion then 63 percent participants said that they were not aware to this fact while 37 % participants said that they were not aware to this fact. 68 percent of the participants were not aware of the fact that habit breaking appliance should be used for 6 months to prevent malocclusion while 32% participants were aware about it.

Conclusion: Within the study's limits, it was discovered that the majority of parents were unaware that habit breaking appliances could be used to prevent malocclusion and that the majority of them were unaware that habit breaking appliances could also be used to cure bad oral habits. More parent education sessions might be
held to raise their understanding of bad oral habits, their long-term implications, and how to use habit-breaking appliances.

**Key words:** Adverse oral habits, Awareness, Habit breaking appliance, Malocclusion.

### I. INTRODUCTION

In the infantile period, repetitive actions are prevalent, and the majority of them begin and end spontaneously.\(^1\) Parafunctional behaviours are a major etiological factor in the development of dental malocclusion. The most common oral behaviours are thumb sucking and tongue thrusting.\(^2,3\) Thumb sucking, tongue pushing, lip or cheek biting, and other detrimental oral behaviours have a negative impact on the development of the maxillofacial complex, resulting in anterior open bites and posterior crossbite in youngsters. Oral habit is a habitual action that is carried out on a regular basis. Habits are one of the most important causative variables in the development of dentofacial malformations.\(^4,5\)

Oral habits can be regarded as healthy or unhealthy. Nasal breathing, chewing, and swallowing are considered physiological and functional habits because they aid in the construction of appropriate occlusion, which promotes the development of a harmonious face with no abnormalities.\(^6\) However, oral behaviours such as digital suction, oral breathing, the use of pacifiers and bottles, as well as lower lip interposition/suction, tongue suction, onychophagy, and mandibular propulsion are all regarded harmful.\(^7,8\) When these habits are maintained, they can lead to malocclusions and phonetic abnormalities by affecting the growth and development of the jaw muscles and bones.\(^9,10\)

Oral health is considered to be an important component of overall health. Children with extracted anterior teeth and the behaviour of thumb sucking require care for aesthetics, function, and space preservation, as well as a habit-breaking appliance.\(^11\) The elimination of the cause, retraining activities, and the use of mechanical restraining gadgets are all options for treating these behaviours.\(^12\) Tongue thrust, also known as infantile swallowing, is a swallowing motion in which the tongue glides forward to approach the lower lip.\(^13\) Tongue crib tools have been shown to be particularly efficient in breaking the habit of tongue thrusting.\(^14\) Due to biting forces in the anterior region, the entire appliance dips superiorly a few weeks after it is fixed and impinges on or submerges under the mucosa.

Children look up to their parents as role models. They have the potential to help children develop healthy dental habits.\(^15,16\) Only if parents have a thorough understanding of dental disorders and how to prevent them will they be able to provide effective preventative measures to their children.\(^17\) Because primary teeth will be replaced by permanent teeth, most parents overlook their children's dental problems.\(^18\) They are also unclear of the causes of early childhood caries and how to treat them.

Because parents and guardians are unaware of the preventative care and treatments available for maintaining their children's oral hygiene, their children's health is jeopardised. As a result, good dental health is critical, which is attained through proper oral hygiene.\(^19\)

As a result, habit-breaking equipment that can be used in conjunction with fixed orthodontic appliances will be quite beneficial. We planned to do research on assessing parents' knowledge and awareness of habit and habit-breaking appliances as a result of this motivation.

### II. MATERIALS AND METHODS

This research was conducted by a questionnaire survey. The study included parents of children who visited the Department of Orthodontics and Pediatric’s outpatient clinic. Parents who agreed to participate in the survey gave their informed consent. The study comprised all parents who came to the Department of Orthodontics and Pediatric’s in December 2020 with their children who needed dental treatment and who were willing to participate in the survey. Children who need emergency dental care and parents who refused to participate in the survey were omitted from the study.

The survey instrument was a pretested, closed-ended questionnaire with the following elements. A standardised closed-ended questionnaire with ten questions about oral habits and how to manage them was created. Content validity and logical reasoning were used to validate the questionnaire. The Institutional Ethical Committee granted ethical approval. The data was loaded into an MS Excel sheet and statistical analysis was performed using SPSS version 20. The Chi square test was completed. The significance level was chosen at $p \leq 0.05$. 

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III. RESULTS

The total number of responses obtained were 123. Among the respondents, 46% were females and 54% were males. The mean age of the respondents was 36 years. When the participants were inquired if they knew thumb sucking habit then 89% participants were aware about the thumb sucking habit while 11% were not aware. (Table 1, Graph 1).

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>89</td>
</tr>
<tr>
<td>No</td>
<td>11</td>
</tr>
</tbody>
</table>

Graph 1: The distribution of responses given when asked if they knew about thumb sucking habit

79% of the study participants knew about the mouth breathing habit while 21% didn’t knew about the habit. (Table 2, Graph 2).

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>79</td>
</tr>
<tr>
<td>No</td>
<td>21</td>
</tr>
</tbody>
</table>
It was found that 68% of the participants knew about bruxism while 32 percent didn’t know it (Table 3, Graph 3).

When the participants were inquired if they knew that adverse oral habits can lead to malocclusion then it was found that 76% participants knew that adverse oral habits can lead to malocclusion while 24% didn’t know about this fact. (Table 4, Graph 4).
Further it was found that majority of the patients (64%) were not aware of the fact that these oral habits can be treated with habit breaking appliances. (Table 5, Graph 5).

Table 5 : The distribution of responses given when asked if they knew that these oral habits can be treated with habit breaking appliances.

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>36</td>
</tr>
<tr>
<td>No</td>
<td>64</td>
</tr>
</tbody>
</table>
When there was question from the participants if habit breaking appliances can prevent malocclusion, then 63 percent participants said that they were not aware to this fact while 37 % participants said that they were not aware to this fact. (Table 6, Graph 6).

Table 6: The distribution of responses given when asked if they were aware that habit breaking appliance can prevent malocclusion

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>37</td>
</tr>
<tr>
<td>No</td>
<td>63</td>
</tr>
</tbody>
</table>

68 percent of the participants were not aware of the fact that habit breaking appliance should be used for 6 months to prevent malocclusion while 32% participants were aware about it (Table 7, Graph 7).

Table 7: The distribution of responses given when asked if they knew that habit breaking appliance should be used for 6 months to prevent malocclusion

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>32</td>
</tr>
</tbody>
</table>
IV. DISCUSSION

In our research, we discovered that while most parents were aware of harmful oral habits such as thumb sucking, mouth breathing, and bruxism, they were unaware of tongue thrusting tendencies. The majority of the parents were aware that bad dental habits induce malocclusion, but they were unaware that bad oral habits can be treated with habit breaking equipment and they were also unaware that malocclusion may be prevented using habit breaking appliances. The majority of parents were unaware that the habit-breaking device should be used for at least 6 months. Only a small percentage of people believe that stress or feelings of uncertainty might lead to bad dental habits. They also did not believe that psychological counselling might help them break their bad habits. Most guys were aware that bad oral habits can lead to malocclusion and that using habit-breaking tools can help prevent malocclusion.

The majority of the parents in our survey were aware of their children's dental health. Mahesh et al. revealed that parents were well aware of the importance of children's oral hygiene, just as we found in our study. Approximately 53% of parents considered it was critical to treat primary teeth, whereas 30% thought it would depend on the circumstances. According to Gurunathan et al., disregarding oral health was found to be more prevalent in urban populations. According to Ng et al., the treatment of primary teeth was deemed particularly poor in some cultures, and cavities and missing gaps in the primary dentition were not given much weight.

In our study 89% participants were aware about the thumb sucking habit while 11% were not aware. 79% of the study participants knew about the mouth breathing habit while 21% didn’t knew about the habit. It was found that 68% of the participants knew about bruxism while 32 percent didn’t knew about it. 76 % participants knew that adverse oral habits can lead to malocclusion while 24 % didn’t knew about this fact. Further it was found that majority of the patients ( 64% ) were not aware of the fact that these oral habits can be treated with habit breaking appliances. When there was question from the participants if habit breaking appliances can prevent malocclusion then 63 percent participants said that they were not aware to this fact while 37 % participants said that they were not aware to this fact. 68 percent of the participants were not aware of the fact that habit breaking appliance should be used for 6 months to prevent malocclusion while 32% participants were aware about it.

Because it affects children's overall health, parents play a critical role in correcting their children's bad habits. Changing habits at the appropriate age can help them avoid severe issues later in life. About 36% of parents are aware of the importance of frequent dental checkups and oral cavity inspections. In public, the number of parents who were watching their children for signs of mental illness was much lower. Only 37% of parents intervened in their children's dysfunctional behaviours such bruxism, tongue thrusting, and thumb sucking. This would result in malocclusion, necessitating orthodontic treatment for their offspring in the future. In public, the number of

![Graph 7: Distribution of responses given when asked if they knew that habit breaking appliance should be used for 6 months to prevent malocclusion](image-url)
parents who were watching their children for signs of mental illness was much lower. Only 37% of parents intervened in their children's dysfunctional behaviours such as bruxism, tongue thrusting, and thumb sucking. This would result in malocclusion, necessitating orthodontic treatment for their children later. According to studies, tongue pushing, thumb sucking, and associated proclination of teeth with open and cross bites were all present at a prevalence rate of 33.65%.

The current study had the advantage of having a high level of internal validity and being able to generalise the findings to our study population. Because of the limited sample size and unincentric population, the current study's external validity was minimal. However, the study's future scope would include obtaining responses from a larger sample size and people of various races in order to generate more applicable results.

V. CONCLUSION

Within the study's limits, it was discovered that the majority of parents were unaware that habit breaking appliances could be used to prevent malocclusion and that the majority of them were unaware that habit breaking appliances could also be used to cure bad oral habits. More parent education sessions might be held to raise their understanding of bad oral habits, their long-term implications, and how to use habit-breaking appliances.

REFERENCES