

# Audio-Visual Aid: An Effective Means to improve Parental Awareness toward Habits and Malocclusion Prevention in Children

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## ABSTRACT

**Introduction:** Malocclusion is a very prevalent disorder of children. These disorders are frequently the result of deleterious oral habits. These disorders and their etiology are very difficult to explain to the parent, but the advent of audio-visual aids has solved this dilemma for the clinician. They allow the clinician to make the parents understand problems and also to compare with normal individuals.

**Aim:** The aim of the present study was to evaluate the awareness of parent toward malocclusion and the efficiency of audio-visual aid in improving parent awareness and compliance toward treatment.

**Materials and methods:** A sample size of 100 was estimated which were selected randomly from patients coming to the Department of Pedodontics and Preventive Dentistry, IDS Bareilly. An audio-visual aid was prepared describing the oral habits and their associated malocclusions. A self-prepared questionnaire was presented to the parent before and after the audio-visual aid was shown to them. Their awareness and change in attitude was recorded.

**Results:** There was statistically significant ( $p \leq 0.001$ ) improvement in the knowledge and attitude toward treatment after audio-visual aids were used.

**Conclusion:** Audio-visual aid is effective in improving awareness toward malocclusion caused due to oral habits.

**Keywords:** Audio-visual aid, Awareness, Oral habits, Malocclusion.

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## INTRODUCTION

Oral habits are learned patterns of muscle contraction and have a very complex nature. Prolonged habits can have deleterious effects on occlusion. The extent of these effects varies from case to case, depending on a wide range of variables including the actual habit employed, the duration and intensity of the habit, and the inherent dental and skeletal relationship. Oral habits if persists beyond the preschool age have been implicated as an important etiological factor associated with the development of malocclusion.<sup>1</sup>

Malocclusion is a very prevalent oral disease of children. The correction of it is often lengthy and expensive.<sup>2</sup> There disorder is frequently the result of deleterious oral habits. These habits are a common behavior disorder in childhood which often serves as an outlet for emotional distress or boredom.<sup>3</sup> As there is leap in technology, the focus in dentistry is shifting to prevention of disease rather than treatment and repair of damage, and the public's role has changed from passive recipient to participant in prevention. Helping individuals to preserve their oral health is an important goal which cannot be achieved without public information, education and motivation. Better information generally motivates people to take charge of their health and treatment.<sup>4</sup>

Bishop et al<sup>5</sup> recommended that patients who have a good knowledge of their disease or procedure have a better outcome than those who do not. Ley et al<sup>6</sup> stated that providing patients with greater information generally causes increased compliance with treatment recommendations. The importance of information and its effect on cooperation were also identified by Brattstrom et al. Nanda and Kierl also found that successful orthodontic treatment depended not only on the knowledge and skills of the clinician, but also on the cooperation of the patient and parents.<sup>7</sup>

Although an orthodontist may suggest that a child needs orthodontic treatment, the parents' awareness that the child has an orthodontic problem will play a part in whether the child receives treatment. However, perceptions

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of orthodontic treatment need are multifactorial and are influenced by elements other than indices of normative orthodontic treatment needs.<sup>8</sup>

A wide variety of oral habits in infants and young child has been the center of much controversy for many years. Parents, pediatricians, psychologist, speech pathologists and Pedodontists have discussed and argued the significance of these habits, each from the view point of expertise and responsibility. Early diagnosis of abnormal habits may allow both dentists and parents to discourage these habits to avoid negative consequence.<sup>9</sup>

Hence, this study was conducted to evaluate the awareness of parents toward malocclusion and the effect of the efficiency of an audio visual aid in improving awareness and compliance toward treatment.

## METHODOLOGY

### Sample

The study was conducted on 100 children aged between 7 and 9 years that were selected by using random cluster sampling from the patients visiting the department of Pedodontics and preventive dentistry, Institute of Dental Sciences, Bareilly. The inclusion criteria were presence of deleterious oral habits and no previous use of an orthodontic appliance. Patients who were undergoing orthodontic treatment were excluded because they were likely to receive different information that might have influenced the results. Informed consent was asked from parents for enrolling their children in the study.

### Data Collection

A video was made explaining in details about oral habits and its effects to dentition. A self-made questionnaire was

prepared to collect the information pertaining to the study and to assess parents' awareness and knowledge toward malocclusion resulting from oral habits. The questions were divided into three major domains:

- Knowledge about habits present in children
- Knowledge about habit leading to malocclusion
- To evaluate attitude of parents toward correction of habit and malocclusion after audio-visual display.

There were 12 questions with a closed response format that allowed subject to choose from a fixed number of alternatives. It was designed both in Hindi and English. The questionnaire was distributed to parents before and immediately after the audio-visual aid. The questionnaire was scored to record a mean score for each of the three sections and a total score. The reliability of the questionnaire was measured by pretesting it on a group of 20 people before it was used for the final research.

## RESULTS

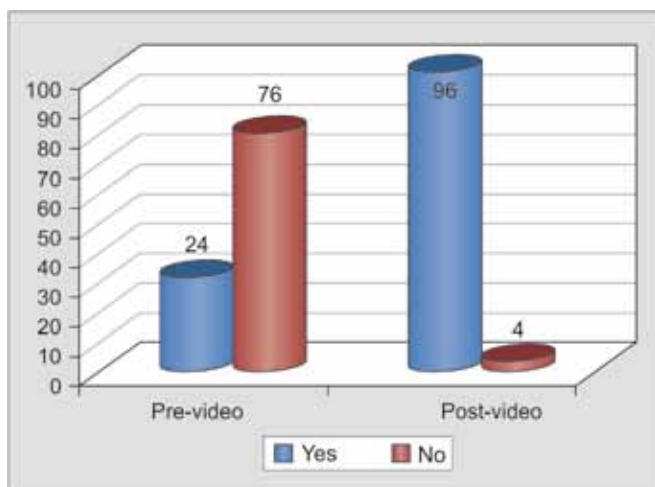
The awareness percentage for each group of questions was compared before and after audio visual aid was shown. All data were analyzed by Mann-Whitney test.

The awareness percentage of knowledge about habits present in children before audio-visual aid was 24% which increased to 96% (Graph 1).

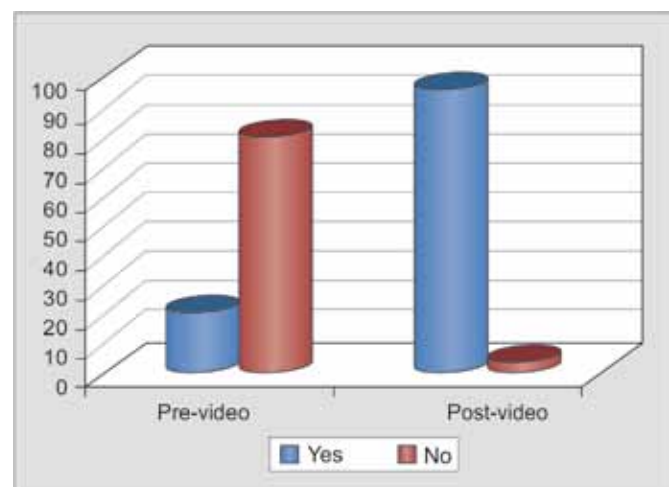
The awareness percentage of knowledge about habit leading to malocclusion before audio-visual aid was 20% which increased to 96 % (Graph 2).

The awareness percentage of the change in attitude of parents toward correction of habit and malocclusion after audio-visual display was from 46 to 88% (Graph 3).

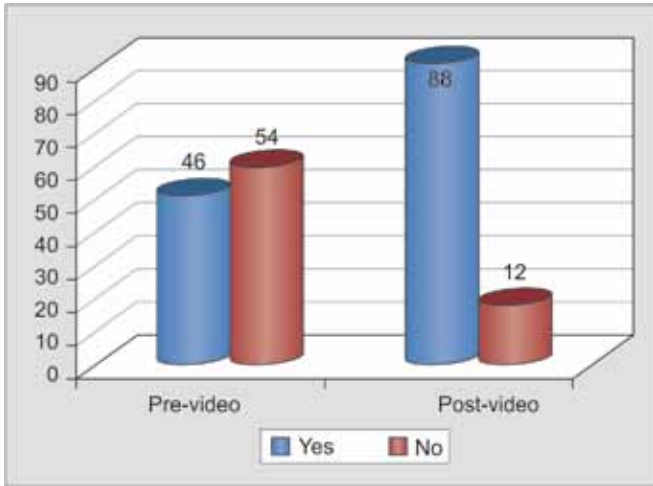
The change in awareness was statistically highly significant ( $p < 0.001$ ) showing that video was significantly effective in raising awareness (Table 1 and Graph 4).



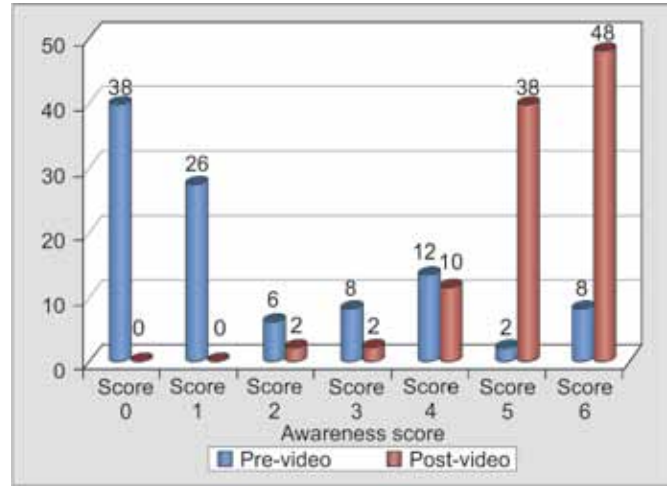
**Graph 1:** Knowledge about habit present in children



**Graph 2:** Knowledge about habit leading to malocclusion



**Graph 3:** Attitude of parent toward correction of habit and malocclusion



**Graph 4:** Awareness score pre- and post-video

**Table 1:** Awareness scores

Awareness score	Pre-video	Post-video
0	38	0
1	26	0
2	6	2
3	8	2
4	12	10
5	2	38
6	8	48
Total	100	100
Range	0-6	2-6
Mean ± SD	1.68 ± 1.93	5.28 ± 0.88

**DISCUSSION**

In India dental awareness among various strata of society is still a farfetched dream. Hence, we have done audio-visual study regarding awareness toward malocclusion due to oral habits in Rohillkhand region of Uttar Pradesh, which is first of its kind.

The age range of students chosen for this study was 7 to 9 years. As this is the age at which the first orthodontist appointment is recommended. However, only one-third of parents knew the appropriate age for first examination of their children for malocclusion. In Pietilä and Pietilä’s<sup>10</sup> study most parents thought 7 to 8 years was the best age for starting orthodontic treatment. In our study, only the parents’ opinions were asked, because we believed that 7 to 9 years old children were too young to assess their awareness of this issue.

Variations in educational level of the participants might also have an effect on parents’ answers.<sup>11,12</sup> Thus, our questionnaire used simple language and was designed to be easy to understand for participants of different socioeconomic levels. The actual reading ability of some individuals is even lower than the level of education completed.

We found that in the random sample of parents which we undertook for the study 24.9% parents were unaware of oral habits. It is in tandem with a study done by Danaei et al<sup>4</sup> 25.4% but our study is in contrast with the study conducted by Hirst showed that 70% of parents knew about oral habits.<sup>13</sup>

Our study showed that only 20% of parents were aware about oral habits causing malocclusion. This finding is in conjunct with study done by S Momeni Danaei et al,<sup>4</sup> While a study done by Mugonzibwa et al showed that 85% parents knew that oral habit causes malocclusion.<sup>14</sup>

Similar to the result obtained in our study regarding the effectiveness of audio-visual aid past studies done by Lisa H Alsada et al,<sup>15</sup> Sadeq Ali Saad et al,<sup>16</sup> Prabhakar et al<sup>17</sup> and Mamta Habbal et al<sup>18</sup> has also shown that audio-visual aid promises to be an effective tool in increasing awareness and knowledge.

**CONCLUSION**

In India, as TV Cinemas have reached nearly every part of our country, the biggest drawback is that they mainly focuses on entertainment and political issues.

We need strong political will from government to implement such programs in national channels. To summarize the scenario, there is paucity of surveys generating a need to conduct more such survey. For communication to be effective, the message must be understood and remembered future research should focus on methods of improving communication with lay people and patients.

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