

## ORIGINAL RESEARCH

# Prevalence of deleterious oral habits in school going children

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## Abstract

**Background:** This study was conducted to assess the Prevalence of deleterious oral habits in school going children.

**Material and methods:** The research encompassed a sample size of 100 children between the ages of 11 and 13, who attended various government and private schools. These students were assessed for any harmful behaviours within the premises of their respective schools. The statistical analysis employed the Chi-square test.

**Results:** It was observed that tongue thrusting and mouth breathing were the most common deleterious oral habits among the children. The prevalence of oral habits differed by sex, with 67% of females and 50% of males exhibiting such habits. Significant disparities were observed between males and females in relation to the behaviour of nail biting.

**Conclusion:** The prevalence of oral habits among children aged 11 to 13 years was assessed, with tongue thrusting being the most common habit seen. This behavior showed minimal association with gender.

**Keywords:** oral habits, children, prevalence

**Keywords:** cholelithiasis, gallstones, subclinical hypothyroidism, thyroid-stimulating hormone.

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## Introduction

Various oral habits such as thumb sucking, finger biting, or finger sucking, tongue thrusting, lip biting, or lip sucking, bruxism, mouth breathing can produce destructive effects on the dentoalveolar structures. Trident of factors, like duration of the habit per day, degree, and intensity of habit, are responsible for any habit to produce detrimental and lasting effects. A habit is a repetitive action that is being done automatically.<sup>1</sup> The mouth is the primary and permanent location for expression of emotions and is a source of relief in passion and anxiety in both children and adults, stimulation of this region with tongue, finger, nail or cigarette can be a palliative action.<sup>2</sup> Dental changes due to thumb sucking or finger sucking do not need any treatment if the habit is stopped before the age of 5 years, and as soon as giving up the habit, dental changes will be corrected spontaneously.<sup>3,4</sup>

According to many researchers finger sucking and nail biting are the most frequent ones present during childhood. Digit sucking is more common among young children while nail biting in older children. This finding may be attributed to the fact that digit sucking is closely related to the child's psychoemotional maturity and considered as normal phenomenon in the first 2 years with a reported prevalence of 20 to 30%. From the age of 4 to 7 years, finger sucking has been reported to have prevalence between 5 and 17% in different populations. Other oral habits, such as lip biting, tongue thrusting, lip sucking, bruxism are sometimes observed in children but to a lesser extent. Their lower prevalence rates could be due to difficulty to notice such oral habits.<sup>5</sup> Hence, this study was conducted to assess the Prevalence of deleterious oral habits in school going children.

## Material and methods

The research encompassed a sample size of 100 children, aged between 11 and 13 years, who were enrolled in several government and private schools located in the city of Jaipur. Among a sample of 100 children, it was observed that 60 were males and 40 were females. The examination of children was conducted while they were seated on an upright chair, utilizing torch light, a mouth mirror, and a straight probe. The prevalence rates of several oral habits were

estimated in the study. The statistical software utilized for data analysis in this study was SPSS version 15.0. A chi-square test was used to examine the relative occurrence of oral habits amongst individuals of various genders. A p-value of less than 0.05 was considered statistically significant. Significant disparities were observed between males and females in relation to the behaviour of nail biting. It was observed that tongue thrusting and mouth breathing

## Results

**Table 1: Sex-wise prevalence of oral habit**

Type of habit	Males	Females
Thumb sucking	01	02
Tongue thrusting	25	30
Mouth breathing	21	27
Bruxism	00	00
Nail biting	00	00
Lip biting	03	08

It was observed that tongue thrusting and mouth breathing were the most common deleterious oral habits among the children.

**Table 2: Age-wise prevalence of oral habits**

Age	Number of subjects
11 years	50
12 years	30
13 years	20

The prevalence of oral habits differed by sex, with 67% of females and 50% of males exhibiting such habits. Significant disparities were observed between males and females in relation to the behaviour of nail biting.

## Discussion

Habits are acquired automatism, represented by an altered pattern of muscle contraction with complex characteristics, which proceed unconsciously and on a regular basis.<sup>6</sup> Repetitive behavior of habits is common in infantile period and most of them are started and stopped spontaneously. One of the most common and earliest repetitive behaviors seen in infantile period is digit sucking.<sup>7</sup> The reflex of sucking appears in intrauterine life, around 29 weeks, and disappears during normal growth between the ages 1 and 3 years. The development of habits is considered as a part of the normal sequence of maturation process in children but can have the potential to become a problem or harmful one, under the circumstances of physical, mental, and socioeconomic stress.<sup>8</sup>

An oral habit in infancy and early childhood is normal, and it is considered abnormal over 3 years of age. Oral habits could be functional or parafunctional. Functional habits result from repeating a normal function, such as nasal breathing, chewing, phonoarticulation, and swallowing, while the parafunctional habits are acquired by practicing a nonfunctional or unnecessary action, such as thumb or lip sucking, bruxism, mouth breathing, and tongue thrusting.<sup>9,10</sup> The persistence of deleterious parafunctional oral habits have little effect on child health, but play a significant role in altering the position of the teeth, the inter-arch relationship,

interfering with the normal growth of the jaws, and the function of the orofacial musculature.<sup>11,12</sup> Hence, this study was conducted to evaluate the Prevalence of deleterious oral habits in school going children. In this study, the prevalence of oral habits differed by sex, with 67% of females and 50% of males exhibiting such habits. Significant disparities were observed between males and females in relation to the behaviour of nail biting. It was observed that tongue thrusting and mouth breathing were the most common deleterious oral habits among the children. An epidemiological study was conducted by Shetty SR et al<sup>13</sup> upon 4,590 school children to find the prevalence of oral habits in Mangalore in relation to their age and sex and to find the correlation, if any, between the habits and the malocclusion status. We noted that 29.7% of the population had habits of which 3.1% had digit sucking, 4.6% mouth breathing, 3.02% tongue thrusting, 6.2% bruxism, 6% lip/cheek biting, 12.7% nail biting, 9.8% pencil biting and 0.09% masochistic habits respectively. Digit sucking, pencil biting and tongue thrust were highly prevalent among Group 1 (3-6 years) children. Mouth breathing and bruxism were significant in Group 2 (7-12 years) cases whereas lip/cheek biting and nail biting were more common in Group 3 (13-16 years) cases. Digit sucking, tongue thrust, mouth breathing and bruxism were more prevalent among the boys whereas lip/cheek biting, nail biting and pencil biting were more prevalent among the girls. 28.95% of the

children in Group 2 and 3 with habits had malocclusion. There was a significant correlation between class I type 2, class II div 1 and tongue thrust and mouth breathing whereas children with digit sucking showed a high correlation with class I type 2 malocclusion. S Dhull K et al<sup>14</sup> assessed the prevalence of deleterious oral habits among 3- to 5-year-old preschool children in Bhubaneswar, Odisha, India. This cross-sectional study was conducted among preschool children, in the age group of 3 to 5 years in the city of Bhubaneswar, Odisha, India. To carry out this study, six private schools, two from each of the three electoral constituency, were selected using cluster sampling technique. A total of 500 students, studying in LKG and UKG and their respective mothers/caregivers were selected for the study as per the inclusion/exclusion criteria. Prevalence of different oral habits in children was calculated from the data obtained. Using Statistical Package for the Social Sciences (SPSS), version 17.0 software, Chi-square test was applied to compare the differences present between boys and girls and their significant values ( $p < 0.05$ ). The result of this study showed a high prevalence of oral habits (36%) among preschool children in Bhubaneswar, Odisha, India. Lip biting was found to be the most prevalent habit (13.4%), followed closely by thumb sucking (12.8%), bruxism (12.8%), and mouth breathing (11%). The study revealed a great dearth of a well-established dental education program for preschool children as well as their parents, caretakers, teachers, and pediatricians in order to provide an effective and timely care to the children.

### Conclusion

The prevalence of oral habits among children aged 11 to 13 years was assessed, with tongue thrusting being the most common habit seen. This behaviour showed minimal association with gender.

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