

**PREVALENCE OF ORAL HABITS IN GOVERNMENT SCHOOL
CHILDREN OF POONDI BLOCK, THIRUVALLUR**

Preetha P, Pranita Y, Dr. Indra Priyadarshini.V, Dr Ganesh R, Dr Jeymarthan

1. Professor, Head of the Department, Department of the Public Health Dentistry,
Priyadarshini Dental College and Hospital, Pandur, Thiruvallur, Tamil Nadu, India

Address of correspondence:

DR. V. Indra Priyadarshini,
Professor, Head of the Department,
Department of the Public Health Dentistry,
Priyadarshini Dental College and Hospital,
Pandur, Thiruvallur, Tamil Nadu, India

Email id: indra.v.priya@gmail.com

PREETHA P

Priyadarshini Dental College and Hospital,
Pandur, Thiruvallur, Tamil Nadu, India

Telephone number: 8056059184

Email id: preetha.jikku@yahoo.in

Address of authors:

1. PREETHA P

Priyadarshini Dental College and Hospital,
Pandur, Thiruvallur, Tamil Nadu, India

Telephone number: 8056059184

Email id: preetha.jikku@yahoo.in

2. PRANITA Y

Priyadarshini Dental College and Hospital,

Pandur, Thiruvallur, Tamil Nadu, India

Telephone number: 9566207061

Email id: pranitayeddula@gmail.com

3. Dr. V. Indra Priyadarshini,

Professor, Head of the Department,

Department of the Public Health Dentistry,

Priyadarshini Dental College and Hospital,

Pandur, Thiruvallur, Tamil Nadu, India

Email id: indra.v.priya@gmail.com

4. Dr R Ganesh

Associate Professor

Department of the Public Health Dentistry,

Priyadarshini Dental College and Hospital,

Pandur, Thiruvallur, Tamil Nadu, India

Email id: drganesh.mds@gmail.com

5. Dr Jeymarthan

Senior Lecturer

Department of the Public Health Dentistry,

Priyadarshini Dental College and Hospital,

Pandur, Thiruvallur, Tamil Nadu, India

Email id: dr.jphd@yahoo.com

ABSTRACT

INTRODUCTION: Oral habits are repetitive behaviour in the oral cavity that result in the loss of tooth structure.^[1] They pose a common problem to the Paediatricians and the children affecting their quality of life.^[1] Oral habits include mouth breathing, digit sucking, lip sucking, tongue thrusting, lip biting, nail biting, bruxism etc. Their effect is dependent on the nature, onset and duration of habits.^[1]

AIM: This study is done to know the prevalence of deleterious oral habits in 6-10 year old government school going children in Poondi block, Thiruvallur.

MATERIALS AND METHOD: A total of 500 students aged 6-10 years were screened from the list of Government schools randomly selected for the study. Out of the 500 students, 224 were males and 276 were females. Examination of oral cavity was done using mouth mirror, explorer and torch light by making the students to sit upright in chair.

RESULT: Out of the study population, 60% (300 children) showed the presence of at least one of the oral habits. Among the oral habits the highest prevalence rate was registered for tongue thrusting (24.8%).

CONCLUSION: There is a need for educating the children and the parents about the deleterious effects produced by indulging in such habits so that preventive and interceptive procedures can be planned meticulously to prevent any damage caused by such habits to the structures of the orofacial region.

KEYWORDS

Oral habits, mouth breathing, tongue thrusting, nail biting, digit sucking.

CONTRIBUTORS

1. Dr Indra Priyadarshini, MDS
2. Preetha P, CRI
3. Pranita Y, CRI

DEPARTMENT AND INSTITUTION

Department of Public Health Dentistry

Priyadarshini Dental College And Hospital,
Thiruvallur, Tamil Nadu

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INTRODUCTION:

Oral habits in children may be a part of normal development but certain habits may temporarily or permanently be harmful to dental occlusion and supporting structures.^[1] Habits are thus acquired as a result of repetition initially by conscious effort, later unconsciously.^[1] Digit sucking, lip biting, nail biting, mouth breathing, tongue thrusting, bruxism etc. are considered as common habits seen in children.^[1] These habits of sufficient frequency, duration and intensity beyond the preschool age can be an important etiological factor in development of malocclusion.^[1] The present study was

conducted with an aim to find out the prevalence of different oral habits and their deleterious effects in Government school children of age 6-10 years in Poondi Block, Tiruvallur.

MATERIALS AND METHODS:

Study population

It was a cross sectional prevalence study conducted at various Government schools in Poondi block, Tiruvallur from August 2018 to October 2018 by the Department of Public Health Dentistry, Priyadarshini Dental College, Tiruvallur, Tamil Nadu. Patients with the age of 6-10 years were selected and the study was conducted after obtaining written informed consent from the patients. Ethical clearance was obtained from the Institutional Review Board [IRB].

Pilot study

A pilot study was conducted among 50 students in one of the Government schools of Poondi block, Tiruvallur.

Sample size

The sample size was decided based on the prevalence rate obtained from the pilot study using the formula.

Formula

n= required sample size

t= confidence level at 95% (standard value of 1.96)

p= estimated prevalence

m= margin of error at 5% (standard value of 0.05)

Required sample size based on prevalence from pilot study was 490. It was decided to include 500 study subjects.

Sample size

Simple random sampling methodology was followed from the list of Government schools in Poondi block, Tiruvallur. All the subjects who satisfied the criteria under the age group of 6-10 years were included from the list of Government schools randomly selected. The number of schools to be examined were increased until the required sample size of 500 was reached.

Inclusion criteria

1. School children of age 6-10 years.
2. Children present on the day of examination.

Exclusion criteria

1. Refusal of the consent by Head of the institution.
2. Children refusing to participate in the survey.
3. Children with current or previous use of orthodontic appliance.

Data collection

Patients screened for the study at Government schools were given assurance on the confidentiality of their personal information.

The study was conducted by arranging routine dental checkup camps in school. Permission was obtained from the Educational Department of Tiruvallur District. A written consent was obtained from the Head of the Institution of respective government schools

A thorough examination was done by two examiners who were calibrated by an experienced examiner. Examination of oral cavity was done using mouth mirror, explorer and torch light by making the students to sit upright in chair. In case of habits like mouth breathing, mirror test was performed, whereas for digit sucking fingers were examined for redness, cleanliness, short finger nail, and fibrous callus. For tongue thrusting, swallowing pattern was observed. An intraoral examination for observing proclined upper anteriors, narrow arched palate, posterior crossbite was done.

STATISTICS

The data collected was analyzed and tested for significance using statistical software packages, SPSS (Statistical Package for Social Service) version 17.0 software. Analysis was done using Chi-square test to test the association between various age groups, gender and prevalence of oral habits.

RESULTS

Data was analyzed using SPSS 17.0 version. The counts and percentages were reported from the information which has been received during the survey.

The demographic details followed by the prevalence of oral habits are discussed below.

Demographic characteristics

A total of 500 students aged 6-10 years were screened from the 5 selected Government schools. Out of the 500 students, 224 were males and 276 were females.[Table 01] .The sample was categorized age wise as 6-8 years (266 students) and 9-10 years (234 students).[Table 02]

GENDER	FREQUENCY	PERCENT
MALE	224	44.8
FEMALE	276	55.2
TOTAL	500	100.0

Table 01: Frequency distribution depending upon gender

AGE CATEGOR Y	FREQUENC Y	PERCEN T
6-8 YEARS	266	53.2
9-10 YEARS	234	46.8
TOTAL	500	100.0

Table 02: Frequency distribution upon age groups

Out of the study population, 60% (300children) showed the presence of at least one of the oral habits. [Table 03]

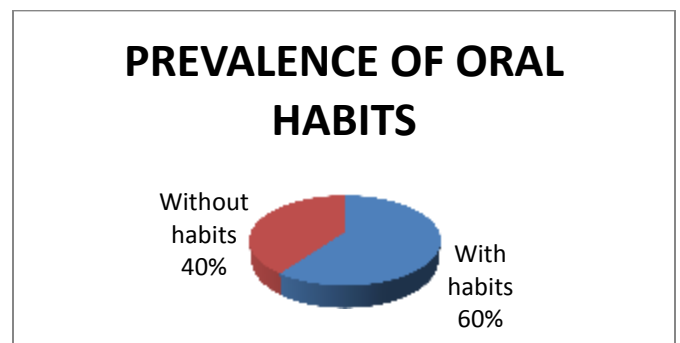


Table 03: Prevalence of oral habits in study population

Individual oral habit

I. Individual prevalence of oral habits

Tongue thrusting showed the highest prevalence of 24.8%, followed by nail biting which was 21%. The prevalence of mouth breathing was 11%, digit sucking 13.6%, lip sucking 10.2%, lip biting 4.2%. Bruxism had the least prevalence of 0.8%. [Table 04]

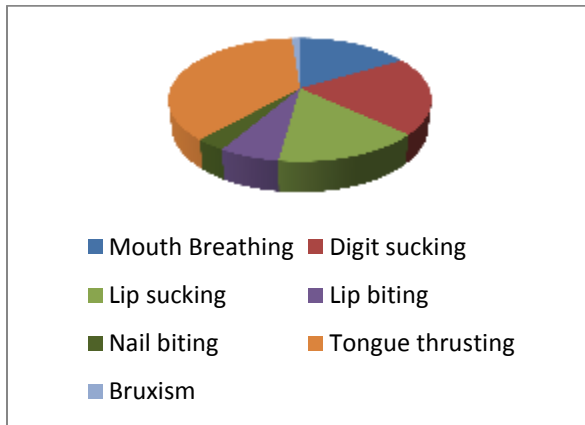


Table 04: Prevalence of individual oral habits in study population

II. Prevalence of oral habits according to gender

Females showed higher prevalence in oral habits. The association was however not statistically significant with a p value >0.05.

HABITS	PREVALENCE IN MALES	PREVALENCE IN FEMALES
MOUTH BREATHING	5.0%	6.0%
DIGIT SUCKING	5.2%	8.4%

LIP SUCKING	3.4%	6.8%
LIP BITING	1.8%	2.4%
NAIL BITING	9.8%	11.2%
TONGUE THRUSTING	11.0%	13.8%
BRUXISM	0.4%	0.4%

Table 05: Prevalence of oral habits according to gender

III. Prevalence of oral habits according to age groups

HABITS	PREVALENCE IN 6-8 YEARS	PREVALENCE IN 9-10 YEARS
MOUTH BREATHING	5.6%	5.4%
DIGIT SUCKING	6.8%	6.8%
LIP SUCKING	5.0%	5.2%
LIP BITING	2.2%	2.0%
NAIL BITING	10.2%	10.8%
TONGUE THRUSTING	13.4%	11.4%
BRUXISM	0.6%	0.2%

Table 06: Prevalence of oral habits according to age groups

- Oral habits like lip sucking and nail biting show a greater prevalence in age group of 9-10 years however the association is statistically insignificant with a p value >0.05.
- Oral habits like mouth breathing, lip biting, tongue thrusting and bruxism show a greater prevalence in age group of 6-8 years. This association

is statistically insignificant with a p value >0.05

DISCUSSION

Oral habits may be a part of normal development, a symptom with a deep rooted psychological basis or may be the result of abnormal facial growth.^[1] A wide array of oral habits like mouth breathing, digit sucking, thumb sucking, lip biting, nail biting, tongue thrusting and bruxism have been studied in 6-10 year old children studying in Government school.

The findings of this study showed that 300 children (60%) showed presence of oral habits.[Table 03] The results of this study is in accordance with results of Grade et al (61%) who did a study on prevalence of oral habits in children.^[2] In contrast, studies done by Motta LJ et al showed a higher prevalence of 87.4% and Basra et al showed a lower prevalence rate of 23.2%.^[3,4]

When the total prevalence of oral habits in boys and girls were compared, the prevalence was found to be greater in females (56.3%).[Table 05] This was in accordance with study done by Kharbanda et.al and Barsa et.al and can be attributed to the hormonal changes in females.^[4,5]

Children at age of 10 showed highest prevalence (29.6%) of at least one oral habit.[Table 06] Children in this age group are in a transient stage of adolescence and face emotional disturbances such as fear, anxiety which can be predisposing factors for oral habits.^[6] A study done by Jajoo S et al showed a decrease in the prevalence of oral habits with increasing age.^[7] This study

shows no such association between oral habits and age groups.[Table 06]

Tongue thrusting was found to be the highest prevalent oral habit (24.8%) among the study population with a greater prevalence in female (13.8%) than in males (11.0%).[Table 04,05] This result is in accordance with results of Bhayya DP et al and Kharbanda et al.^[5,8] Study done by Jajoo S et al showed a higher prevalence rate of 58.8%.^[7] Tongue thrusting was found to be the most prevalent habit in 6-8 years age group (13.4%). [Table 06]

In this study nail biting was found to be the second most prevalent oral habit (21%) with a higher prevalence in females (11.2%) than males (9.8%) however study done by Grade et al showed a lower prevalence rate of 5.8%. [Table 04,05]^[2]

The findings of this study show digit sucking to be the third common oral habit (13.6%) with a higher prevalence rate in females (8.4%) than males (5.2%).[Table 04,05] However digit sucking was found to be the second most common oral habit after tongue thrusting in studies done by Jajoo et al (31.9%) and Shetty et al (18%).^[7,9] Gildsaya et al demonstrated that digit sucking was more common and persistent habit in girls than boys.^[10]

The prevalence of mouth breathing in this study is 11% with greater prevalence in females (6.0%) of age 6-8 years.[Table 04,05] Shetty et al showed 4.6% prevalence of mouth breathing in children of Mangalore.^[9] Kharbanda et al reported

prevalence of mouth breathing to be 7% in school going children of Delhi.^[5]

The prevalence of other habits like lip sucking (10.2%), lip biting (4.2%) and bruxism (0.8%) showed no clinical significance between gender and age groups.[Table 04]

The limitation of the study was that the study population was taken only from Government schools and the private schools weren't included. Being a preliminary study, the prevalence rate is calculated for a smaller sample size. Further study can be done using a larger sample population

CONCLUSION

The prevalence of oral habits in 6-10 years Government school going children in Poondi, Tiruvallur was 60%.[Table03] This prevalence study is a sample representative of the entire Government school population of Poondi block, Tiruvallur in the age group 6-10 years. Among the oral habits the highest prevalence rate was registered for tongue thrusting (24.8%).[Table 04] These findings warrant the need for educating the children and the parents about the deleterious effects produced by indulging in such habits so that preventive and interceptive procedures can be planned meticulously to prevent any damage caused by such habits to the structures of the orofacial region.^[11]

CONFLICT OF INTEREST: Nil

SOURCE OF SUPPORT: Nil

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