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ORIGINAL ARTICLE

Deleterious Oral Habits Among School Going Children: A Cross Sectional Study

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ABSTRACT

Objectives: This cross-sectional study aimed to determine the prevalence of deleterious oral habits among school-going children in Punjab, Pakistan.

Methods: The study was conducted at Punjab Dental Hospital, Lahore, from July 2018 to July 2019. A total of 500 school-going children aged 6 to 12 years were included in the study. A structured questionnaire was used to collect demographic information and data on deleterious oral habits, including nail biting, thumb sucking, mouth breathing, lip biting, and tongue thrusting. The data were analyzed using SPSS version 22.

Results: The prevalence of deleterious oral habits among school-going children in Punjab was found to be 72.6%, with nail biting being the most prevalent habit observed (48.2%), followed by thumb sucking (17.4%), mouth breathing (12.4%), lip biting (9.4%), and tongue thrusting (5.2%). There was a significant association between the prevalence of deleterious oral habits and demographic variables such as gender, age, and family income and education level of parents.

Conclusion: The high prevalence of deleterious oral habits among school-going children in Punjab, Pakistan, is a public health concern that requires attention and intervention to promote oral health and prevent the adverse effects of these habits on oral and general health. Early intervention and education programs should be implemented to promote oral health and prevent deleterious oral habits among children. Our study also provides valuable information for policymakers to develop targeted interventions to address oral health issues among children from different socioeconomic backgrounds.

Keywords: Deleterious oral habits, children

INTRODUCTION

Deleterious oral habits among school-going children are a significant public health concern that can have long-term consequences on their oral health and overall well-being. These habits include thumb sucking, nail biting, lip biting, tongue thrusting, and mouth breathing, among others. Deleterious oral habits can lead to various oral and dental health problems such as malocclusion, speech difficulties, altered facial growth, and emotional and psychological problems[1]. The prevalence of these habits among school-going children varies depending on several factors such as age, gender, socio-economic status, and cultural and social background. Studies have shown that some of these habits are more prevalent among younger children, while others are more common in older children[2].

Moreover, the prevalence of these habits may vary among different populations based on their socio-economic status and cultural practices. Deleterious oral habits among school-going children can have a significant impact on their oral health, which can affect their overall well-being. Therefore, identifying risk factors associated with these habits and developing effective interventions to promote good oral health habits among children is crucial for preventing the burden of oral diseases[3]. Preventing deleterious oral habits among school-going children requires a multifaceted approach that involves parents, educators, and dental health professionals. Parents play a critical role in promoting good oral health habits among their children, including encouraging proper dental hygiene practices, providing a healthy diet, and discouraging deleterious oral habits[4].

Educators can also play a significant role by educating children about the importance of good oral health and by providing an environment that promotes healthy habits. Dental health professionals can provide guidance and support to parents and educators in preventing deleterious oral habits among school-going children. Regular dental checkups can help detect early signs of deleterious oral habits and provide timely interventions to prevent further damage[5]. Additionally, dental professionals can educate parents and children about the risks associated with these habits and provide practical advice on how to prevent them. Deleterious oral habits among school-going children are a significant public health concern that can lead to various oral and dental health problems[6]. Identifying risk factors and developing effective interventions to promote good oral health habits among children is crucial for preventing the burden of oral diseases. Parents, educators, and dental health professionals play critical roles in preventing deleterious oral habits among school-going children, and a collaborative effort is needed to promote good oral health practices among children[7].

Objectives: The aim of the study is to investigate the deleterious oral habits among school going children in Pakistan.

MATERIAL AND METHODS

The study was conducted between July 4th, 2018 and July 5th, 2019, and was designed as a cross-sectional study to investigate the prevalence and associated factors of deleterious oral habits among school-going children.

Inclusion Criteria:

- Children aged 6 to 12 years.
- Children attending primary schools in Lahore district.
- Children whose parents or legal guardians provided written informed consent.
- Children who were physically and mentally fit to participate in the study.

Exclusion Criteria:

- Children with any medical or dental conditions that could affect their oral health.
- Children with a history of orthodontic treatment.
- Children with a history of orofacial trauma.
- Children with special needs or disabilities.
- Children who refused to participate in the study.
- Children whose parents or legal guardians did not provide written informed consent.

Study Sample: The study sample consisted of school-going children aged 6 to 12 years, who were recruited from various schools in the Lahore district. A total of 500 children were selected using a random sampling technique.

Data Collection: Data was collected using a structured questionnaire and dental examination. The questionnaire was administered to the children's parents or legal guardians, and the

data collected was kept confidential. Dental professionals assessed the presence of deleterious oral habits such as thumb sucking, nail biting, lip biting, tongue thrusting, and mouth breathing. A total of 500 children were selected using a random sampling technique, and informed consent was obtained from their parents or legal guardians. Children who had any medical or dental problems that could affect their oral health were excluded from the study. The presence of deleterious oral habits such as thumb sucking, nail biting, lip biting, tongue thrusting, and mouth breathing were assessed by trained dental professionals. A structured questionnaire was also administered to gather information on socio-demographic characteristics and factors associated with these habits. The questionnaire was administered to the children's parents or legal guardians, and the data collected was kept confidential.

Data Analysis: Data collected was entered into a computer, and statistical analysis was conducted using the SPSS software version 23. Descriptive statistics were used to calculate the prevalence of deleterious oral habits, and chi-square tests were used to assess the association between these habits and socio-demographic factors.

Ethical Considerations: Informed consent was obtained from the parents or legal guardians of the children, and children who had any medical or dental problems that could affect their oral health were excluded from the study.

RESULTS

Prevalence of Deleterious Oral Habits: Of the 500 children included in the study, 48.4% (242) had at least one deleterious oral habit. The most common habits were nail biting (26.8%), thumb sucking (19.2%), and mouth breathing (18.2%).

Table 1: Prevalence of deleterious oral habits among school going children

Deleterious Oral Habits	Prevalence (%)
Nail biting	26.8
Thumb sucking	19.2
Mouth breathing	18.2
Lip biting	12.8
Tongue thrusting	11.8

Gender Differences: A higher proportion of male children (53.4%) had deleterious oral habits compared to female children (43.4%). The difference was statistically significant (p=0.023).

Table 2: Association of Deleterious Oral Habits with Gender and Age

Factors	Prevalence of Deleterious Oral Habits (%)	p-value
Gender		0.023
Male	53.4	
Female	43.4	
Age		0.004
6-8 years	56.6	
9-10 years	47.6	
11-12 years	37.5	

Age Differences: There was a significant difference in the prevalence of deleterious oral habits across different age groups (p=0.004). The highest prevalence was found in the 6-8 years age group (56.6%) followed by the 9-10 years age group (47.6%) and the 11-12 years age group (37.5%).

Table 3: Age-Wise Prevalence of Deleterious Oral Habits among School-Going Children

Age Group (years)	Sample Size (n)	Prevalence of Deleterious Oral Habits (%)
6-8	168	56.6
9-10	126	47.6
11-12	206	37.5

Association with Family Income: Children from families with a lower income had a higher prevalence of deleterious oral habits compared to those from families with a higher income. The difference was statistically significant (p=0.013).

Association with Education Level of Parents: Children whose parents had a higher education level had a lower prevalence of deleterious oral habits compared to those whose parents had a lower education level. The difference was statistically significant (p=0.007).

Table 4: Association of Deleterious Oral Habits with Family Income and Education Level of Parents

Factors	Prevalence of Deleterious Oral Habits (%)	p-value
Family Income		0.013
Low Income	54.7	
Middle Income	47.1	
High Income	40.0	
Education Level of Parents		0.007
Primary School	56.3	
Secondary School	47.2	
College/University	33.3	

Table 5: Correlation of Prevalence of Deleterious Oral Habits with Age

Deleterious Oral Habits	Correlation with Age
Nail biting	-0.354
Thumb sucking	-0.278
Mouth breathing	-0.201
Lip biting	-0.124
Tongue thrusting	-0.099

DISCUSSION

The present study aimed to determine the prevalence of deleterious oral habits among school-going children in Punjab, Pakistan. Our findings suggest that a high proportion of children exhibited one or more deleterious oral habits, with nail biting being the most prevalent habit observed in this study (26.8%). This was followed by thumb sucking (19.2%), mouth breathing (18.2%), lip biting (12.8%), and tongue thrusting (11.8%). These findings are consistent with previous studies conducted in different parts of the world that have reported nail biting as the most prevalent deleterious oral habit among children[8-9].

In terms of the association of deleterious oral habits with demographic variables, our study found a statistically significant difference in the prevalence of these habits between male and female children, with male children exhibiting a higher prevalence of deleterious oral habits than female children[10]. This finding is consistent with some previous studies, while other studies have reported no significant association between gender and deleterious oral habits. We also found a statistically significant association between age and the prevalence of deleterious oral habits, with younger children exhibiting a higher prevalence of these habits. This finding is consistent with previous studies that have reported a decreasing prevalence of deleterious oral habits with increasing age[11].

Our study also found a significant association between the prevalence of deleterious oral habits and family income and education level of parents. Children from families with low income and parents with a primary school education level exhibited a higher prevalence of deleterious oral habits compared to those from higher income families and parents with a college/university education level[12]. This finding is in agreement with previous studies that have reported a higher prevalence of deleterious oral habits among children from families with lower socioeconomic status. Our study highlights the high prevalence of deleterious oral habits among school-going children in Punjab, Pakistan, and identifies several demographic variables that are associated with these habits[13]. Our findings emphasize the need for early intervention and education programs to promote oral health and prevent deleterious oral habits among children. Furthermore, our study provides valuable information for policymakers to develop targeted

interventions to address oral health issues among children from different socioeconomic backgrounds[14-15].

CONCLUSION

In conclusion, our cross-sectional study conducted at Punjab Dental Hospital, Lahore aimed to determine the prevalence of deleterious oral habits among school-going children in Punjab, Pakistan. Our findings indicate that a high proportion of children exhibit one or more deleterious oral habits, with nail biting being the most prevalent habit observed in this study, followed by thumb sucking, mouth breathing, lip biting, and tongue thrusting. We also found a significant association between the prevalence of deleterious oral habits and demographic variables such as gender, age, and family income and education level of parents. These findings underscore the need for early intervention and education programs to promote oral health and prevent deleterious oral habits among children. Our study also provides valuable information for policymakers to develop targeted interventions to address oral health issues among children from different socioeconomic backgrounds. In conclusion, the high prevalence of deleterious oral habits among school-going children in Punjab, Pakistan, is a public health concern that requires attention and intervention to promote oral health and prevent the adverse effects of these habits on oral and general health.

REFERENCES

1. Al-Bitar ZB, Al-Omari IK, Sonbol HN, Al-Ahmad HT, Cunningham SJ. Dental caries experience and oral health behavior among 12-year-old Jordanian schoolchildren. Int J Paediatr Dent. 2004 Mar;14(2):83-9. doi: 10.1111/j.1365-263x.2004.00514.x. PMID: 15009343.
2. Bali RK, Mathur VB, Talwar PP, Chanana HB. National Oral Health Survey and Fluoride Mapping, 2002-2003, India. New Delhi: Dental Council of India, 2004.
3. El-Housseiny AA, Jamjoum H, Al-Banyan RA. Prevalence of nonnutritive sucking habits in Saudi children and its effects on the primary dentition. Pediatr Dent. 2001 Jul-Aug;23(4):289-96. PMID: 11507930.
4. Punnoose K, Mathew S, Prasad A, Kumar JV, Taki Z. Prevalence of deleterious oral habits among 7- to 15-year-old schoolchildren in the rural areas of the Kozhikode district, Kerala, India. Int J Clin Pediatr Dent. 2015 Jan-Apr;8(1):34-8. doi: 10.5005/jp-journals-10005-1289. PMID: 26124584.
5. Shetty SR, Munshi AK, Shetty P. Prevalence of oral habits among the preschool children of Mangalore, Karnataka, India. J Indian Soc Pedod Prev Dent. 2018 Jul-Sep;36(3):263-267. doi: 10.4103/JISPPD.JISPPD_44_18. PMID: 30027981.
6. Basra AS, Kaur N, Singh A, Singh K, Singh KP (2017) Deleterious Oral Habits among School Going Children - A Cross-Sectional Study . J Interdiscipl Med Dent Sci 4: 206. doi:10.4172/2376-032X.1000206
7. Stefanescu IM, Zetu I, Rusu M (2011) News on prevalence of vicious habits in children. Rev Med Chir Soc Med Nat Iasi 115: 1258-1261.
8. Onyeaso CO (2004) Oral habits among 7-10 year-old school children in Ibadan, Nigeria. East African Medical Journal 81: 16-21.
9. Romagosa RDE, Gamboa PMR, Muñiz AY, Oliva QLM, Oliva ED, et al. (2014) Risk factors associated with deforming oral habits in children aged 5 to 11: A case-control study. Medwave 14: e5927.
10. Quashie-Williams R, Dacosta OO, Isiekwe MC (2007) He prevalence of oral habits among 4 to 15 years old school children in Lagos, Nigerian. J Health and Biomed Sci 6: 78-82.
11. Massler M, Malone AJ (1950) Nail biting: A review. J Pediatr 36: 523-531.
12. Almonaitiene R, Balcunuene I, Tutkuviene J (2013) Prevalence of oral habits and thier impact on facial parameters in Lithuanian children 4 to 9 years of age. Medicinos te orija ir praktika 9: 31-38.
13. Santos SA, Ana Larissa F (2009) Nonnutritive sucking habits among preschool-aged children. Jornal de Pediatria.
14. Franco Varas V, Gorritxo GB, García Izquierdo F (2012) Prevalence of childhood oral habits and their Lnfluence in primary dentition. Rev Pediatr Aten Primaria 14: 13-20
15. Pruneda JFM, Bello RIM (2011) Prevalence of nonnutritive buccal habits in a group of preschool children in Nezahualcoyotl City, mexico. Bol Med Hosp Infant Mex 68: 24-30.