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Research Article

INFLUENCE OF FAMILY STRUCTURE AND WORKING STATUS OF THE PARENTS ON THE INCIDENCE OF DENTAL CARIES AND ORAL HABITS IN BENGALI CHILDREN

Taniya Thakur, Pratik Kumar Lahiri, Trisha Das Sarma, Poulam Guha and Gautam Kumar Kundu

Department of Pedodontics and Preventive Dentistry Guru Nanak Institute of Dental Sciences and Research
157/F, Nilgunj Road, Sahid Colony, Panihati, Kolkata-700114

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A B S T R A C T

Introduction: Oral habits are repetitive actions which are started and stopped spontaneously with or without deleterious effect on the developing occlusion. Dental caries can affect the physical and mental health of the child with adverse consequences on their families. Parents institutes healthy habits in their children which continue to shape the attitude and lifestyle they make as adults. There is limited focus on oral health and habits of the children in the contemporary scenario of both parents employed.
Aim: To correlate the family related factors, socioeconomic and working status of parents with the incidence of their children's dental caries and oral habits.
Material and methods: A cross sectional study was conducted to assess dental caries and oral deleterious habits status of Bengali children.153 children of age group 3-6 years were randomly selected. Socioeconomic status was evaluated using Kappuswamy's socioeconomic scale (SES), Dental caries using WHO criteria, Family structure, oral habit of the children, working status of the parents using questionnaire.
Results: Family size had significant association with deleterious oral habits and caries status of children. Working status of the mother was associated with caries status. Birth rank and number of siblings were associated with deleterious oral habits in children.

INTRODUCTION

Children are the future of the society. To ensure sound foundation and secure future of any society, no child should be deprived of childhood, of physical growth, personal development, loving care and affection. Children till preschool age requires most attention as this is the period of rapid growth and development. Children of this age group are most vulnerable to malnutrition and many other diseases.

Emotional and physical health, cognitive development as well as social functioning in children are strongly influenced by the social status and functioning of their family. In addition to the social status, the quality of time parents dedicates towards upbringing their child/children can also impact health and developmental outcomes.

Social factors like the occupation, education, income of the children's parents, and children's family structure predisposes children to dental caries. Oral habit is common in the infantile period which is finished spontaneously[1]. Oral habits are often associated with stimulation of the mouth which can be a palliative action for anxiety, hunger fear and stress[2].

Corresponding author:* **Taniya Thakur
Department of Pedodontics and Preventive Dentistry Guru Nanak Institute of Dental Sciences and Research
157/F, Nilgunj Road, Sahid Colony, Panihati, Kolkata-700114

A few non-nutritive habits like bruxism, also known as tooth grinding have been associated with psychosocial distress[3]. Although bruxism in children below 6 years and sleep bruxism may not be related to any significant psychological traits.[4,5]

Children of the working mothers have greater tendencies to develop sucking habits (digit, lip and tongue sucking) since the children must compete with other siblings for the mothers limited time and attention.[6-9]

Thus, all these factors may collectively have the potential to affect oral health and habits outcomes. This study was conducted to correlate the family related factors, socioeconomic and working status of the parents with the incidence of their children's dental caries and oral habits.

MATERIAL AND METHODS

A cross-sectional study was conducted among preschool children of North Kolkata, West Bengal. List of preschools in the area was obtained. From this list, 5 preschools were selected and children were randomly selected.

Permission to conduct the study was obtained from randomly selected schools. Written informed consent was obtained from the parents/caretakers and they were given the opportunity to decline the participation and were assured that their

participation or no participation will not affect the future treatment of their child.

Selection criteria

1. Children in the age group of 2–6 years were "included" as complete primary dentition is present in this age group.
2. All Bengali children were included.
3. No previous invasive dental procedures such as restorative care or extractions were recorded.
4. Non-contributory medical history.
5. Patients with positive parental/guardian consent.

Questionnaire

Data concerning the independent variables were collected using self-structured questionnaire.

Socio-economic status- for the purpose of this study was obtained through a scoring index combining the occupation of the head of the family, education of the head of the family and total monthly income of the family using a revised version of Kuppuswamy socioeconomic scale[10].Kuppuswamy in 1976 devised the Kuppuswamy scale which is based on a composite score considering the education and occupation of the head of the family along with monthly income of the family, which yields a score of 3-29[11]. The revision is linked to the All India Average Consumer Price Index for Industrial Workers (CPI-IW). This scale divides the study population into Upper(I), Upper Middle (II), Lower Middle (III), Upper Lower (IV), Lower(V).

Family‑level variables – information on size of the family as "nuclear family" (parents and children) or "three generational" (grandparents, parents, and children)/ "joint family" systems (grandparents, parents their siblings, and the children) was obtained. The number of siblings was questioned, and for the purpose of analysis, it was divided as "no siblings" and "one or more" siblings. Birth rank of the child and the parenting structure (living with single parent, step parents, both parents, guardian) were inquired.

Questions regarding the working status and working duration of the parents were asked.

Child level factors- Types of oral habit(s) child engaged in if any (digit sucking, tongue sucking, tongue thrusting, lip sucking, nail biting, object biting, bruxism).

Clinical examination- Oral examination for the children was carried out in a natural setting, with the child seated in an ordinary chair facing away from direct sunlight. Sterilized mouth mirrors and probes were used to examine the caries status using the WHO criteria for dental caries assessment. The caries status was assessed by the use of the decayed, missing, and filled teeth/decayed, missing, and filled teeth deft index[12].

Data Analysis

The statistical software SPSS (StatisticalPackage for Social Sciences) version 20 has been used for the analysis.

Categorical variables are expressed as Number of patients and percentage of patients and compared across the groups using Fisher's Exact Test.

An alpha level of 5% has been taken, i.e. if any p value is less than 0.05 it has been considered as significant.

RESULTS

Gender wise distribution of deleterious oral habits and dental caries in our current research among 153 Bengali children: 43.8 % children were females and 56.2% children were males.

65.4% of children were between 4 to 6 years of age and 34.6% children were less than 4 years of age.

Table 1 Association between oral habits and family structure

Variables	Oral habits				
	Present	Absent	Total	p-value	Significance
Parental Structure					
Both parents	34	49	83	0.136	Not significant
Others	60	10	70		
No of Siblings					
1	36	68	104	<0.001	Significant
>1	46	3	49		
Birth rank					
First	36	69	105	<0.001	Significant
Others	46	2	48		

Majority (45.8%) of the children were of Lower Middle Class.

54.9% children lived in the nuclear family.92.8% children lived with both parents. 68.6% children were of first birth rank, 29.4% children were of second birth rank and 2% children of third birth rank.

The caregiver of- 56.9% children were mother, 33.3% children were Grandparents and 9.8% children were Nanny.

98% fathers were working, out of which father of 84% children worked more than 6 hours.
37.9% mothers were working, out of which 15.5% mothers worked more than 6 hours.

Table 2 Association between oral habits and family size

		Family size		Total	P value	Significance
		Nuclear	Joint			
Oral Habits	ABSENT	22(26.19)	15(21.74)	37(24.18)	<0.005	Significant
	ONE	40(47.61)	35(50.72)	75(49.01)		
	TWO	20(23.80)	18(26.08)	38(24.84)		
	THREE	2(2.38)	1(1.45)	3(1.96)		
Total		84(100)	69(100)	153(100)		

Table 3 Association between oral habits and caregiver of the child

		CAREGIVER			Total	P value	Significance
		Mother	Grandmother/ Grandfather	Nanny			
Oral Habits	Absent	33(56.89)	21(26.25)	0(0)	54(35.29)	<0.001	Significant
	One	16(27.58)	35(43.75)	4(26.67)	55(35.94)		
	Two	9(15.51)	23(28.75)	9(60)	41(26.8)		
	Three	0(0)	1(1.25)	2(13.33)	3(1.96)		
Total		58(100)	80(100)	15(100)	153(100)		

Table 4 Association between caries status and Family size

		Family Size		Total	p Value	Significance
		Nuclear	Joint			
DEFT	NO	29(34.52)	13(18.84)	42(27.45)	0.031	Significant
	YES	55(65.48)	56(81.16)	111(72.55)		
Total		84(100)	69(100)	153(100)		

Table 5 Association between caries status and working duration of mother

		Working Hrs Of Mother		Total	p Value	Significance
		<=6	>6			
DEFT	NO	2(22.22)	10(20.41)	12(20.69)	0.013	Significant
	YES	7(77.78)	39(79.59)	46(79.31)		
Total		9(100)	49(100)	58(100)		

Out of 45.8% children who lived in Lower Middle class- 34.29% had one oral habit, 17.14% had two oral habits and 7.14% had three oral habits.

Out of 54.9% children who lived in a nuclear family-47.62% children had one oral habit, 19.05% had two oral habits and 2.38% had three oral habits.

Out of 45.1% children who lived in a Joint family- 44.93%had one oral habit, 36.23% had two oral habits and 7.25% had three oral habits.

Out of 68.6% children of First Birth Rank- 41.9% of children had one oral habits,26.67% had two oral habits and 0.95% had three oral habits.

68% children had 1 sibling and 32% children had more than 1 siblings. Out of 68% children, 42.31% had one oral habit, 26.92% had two oral habits and 0.96%had three habits.

56.9% children whose caregiver were mother- 27.14% had one oral habit, 12.86% had two oral habits and 2.86% had three habits.

84% fathers worked more than 6 hours, their children- 47.62% had one oral habits, 28.57% had two oral habits and 4.76% had three oral habits.

15% mother worked more than 6 hours, their children- 41.38%had one oral habit, 48.28% had two oral habits and 10.24% had three oral habits.

Out of 54.9% children who lived in nuclear family- 65.48% had dental caries and 34.52% had no caries. Out of 45.1% children who lived in Joint family- 81.16% children had dental caries and 18.84% had no dental caries.

DISCUSSION

In our study, significant association between deleterious oral habits was seen with family size, number of siblings, birth rank, caregiver of the child. This study was unable to find any significant association between presence of non-nutritive oral habits with parenting structure, socioeconomic status of children and working status of parents.

A study done by Oyedele TA *et al*[13] on family structure and oral habits, there was a significant association found between oral habits and number of siblings, children with 2-4 siblings have higher probability of developing oral habits.

Murrieta J *et al*[14] noted that primary school children who lived with both parents were more likely to be emotionally stable and therefore adopt less non-nutritive sucking oral habits like our study but our research did not reach statistical significance.

Jahanbin *et al*[15] showed that the child's birth rank, number of siblings and parents' education level were significant factors associated with presence of non-nutritive oral habits in 7-year-old Iranian children like what we found in this study.

Quashie-Williams *et al*[16] who studied the prevalence of non-nutritive oral habits in children 4-15 years, found that significantly more children from higher socioeconomic status had non-nutritive oral habits unlike the present study where prevalence of oral habits was more among children of Lower middle class. But our study did not reach statistical significance.

In our study there was significant association between dental caries with family size and working status of mother. But there was no significant association between presence of dental caries and family structure and socioeconomic status of the children.

N Wellappuli *et al*[17] found family size was significantly associated with the dental caries experience of the preschool children.

Niraj G *et al*[18] found children of lower economic status and working parents had increased risk to dental caries.

McGrath *et al*[19] in United Kingdom found single mothers and mothers with more than two children are significantly less likely to use dental services than are mothers living with spouses and having not more than two children. Ola *et al*[20] had shown that even in an African country, children living with single mothers or without a parent were unlikely to have visited a dentist just as observed in developed countries.

CONCLUSION

Parents are the first teachers in a child's life and play a pivotal role in shaping their adult lives. The foundation of lifestyle choices in adulthood is laid down during the formative years of a child's life. Children are dependent on their environment (family) to institute favorable oral health behaviors. With the advent of the family style where both the parents are at work, this parent-child relationship has also faced a positive and negative impact. There is more disposable income for the parents to spend on the child but less time to engage effectively with their children. As said by Jesse Jackson- Your children need your presence more than your presents. Thus, assessing family related factors is essential when instituting preventive/treatment programs for young children.

References

1. Shahraki N *et al*. Abnormal oral habits: a review. 2012. J Dent Oral Hyg.4(2):12-15.
2. Bear PN, Lestor M. The thumb, the pacifier, the erupting tooth and a beautiful smile.1987. J Pedod.11(2):115-9.
3. Funch DP, Gale EN. Factors associated with nocturnal bruxism and its treatment.1980. J Behav Med.3(4):385-387.
4. Kuch EV *et al*. Bruxing and non-bruxing children: a comparison of their personality traits. 1979.Pediatr Dent.1(3):182-187.
5. Manfredini D, Lobbezoo F. Role of psychosocial factors in the etiology of bruxism. 2009. J Orofac Pain.23(2):153-66.
6. Adair SM. Pacifier use in children: a review of recent literature. 2003. Pediatr Dent.25(5):449-58.
7. Farsi NM, Salama FS. Sucking habits in Saudi children: prevalence, contributing factors and effects on the primary dentition. 1997. Pediatr Dent.19(1):28-33.
8. Turgeon-O'Brien H *et al*. Nutritive and non-nutritive sucking habits: a review.1996. ASDC J Dent Child.63(5):321-7.
9. Warren JJ, Bishara SE. Duration of nutritive and non-nutritive sucking behaviours and their effects on the dental arches in the primary dentition. 2002. Am J OrthodDento-facial Orthop. 121(4):347-56.
10. Sheikh Mohd Saleem. Modified Kuppuswamy socioeconomic scale updated for the year 2019. 2019.

Indian Journal of Forensic and Community Medicine. 6(1).
11. Sukhvinder Singh Oberoi. Updating Income Ranges for Kuppuswamy's Socio-Economic Status Scale for the Year 2014. 2015. *Indian Journal of Public Health*. 59(2):156-157.
12. Gruebbel AO. A measurement of dental caries prevalence and treatment service for deciduous teeth. 1944. J Dent Res.23:163-168.
13. Oyedele TA *et al*. Family Structure and Oral Habits among Children Age 1 to 12 Years resident in Ile-Ife, Nigeria. 2016. Braz J Oral Sci.15(4):288-292.
14. Murrieta JF *et al*. Parafunctional oral habits and its relationship with family structure in a Mexican preschoolers group. 2014. J Oral Res.3(1):29-35.
15. Jahabin A *et al*. Association between sociodemographic factors and nutritive and non-nutritive sucking habits among Iranian girls.2010. East Mediterr Health J.16(11):1143-7.
16. Quashie-Williams R *et al*. The prevalence of oral habits among 4 to 15year old school children in Lagos. 2007. Nig J Health Biomed Sci.6(1):78-82.
17. N.Wellappuli, N.Amarasena. Influence of Family Structure on Dental Caries Experience of Preschool Children in Sri Lanka. 2012. Caries Res.46:208–212.
18. Gokhale N, Nuvvula S. Influence of socioeconomic and working status of the parents on the incidence of children's dental caries. 2019. Jnsbm:127-129.
19. McGrath C *et al*. Are single mothers inBritain failing to monitor their oral health? 2002. Postgrad Med J.78:229‑32.
20. Ola D *et al*. Familystructure, socioeconomic position and utilization of oral healthservices among Nigerian senior secondary school pupils.2013. J Public Health Dent.73:158‑65.

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