

Association of Socio-Demographics with Oral Para Functional Habits

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ABSTRACT

Objective: To find the association of sociodemographic factors with oral parafunctional habits.

Methodology: A Cross-sectional descriptive study was conducted in College of Dentistry, Sharif Medical and Dental College, Lahore over a period of 5 months from July to November 2021. Data was collected using medical questionnaire and ten item personality inventory scale (TIPI).

Results: The association of nail biting with gender ($p=0.315$), marital status ($p=0.653$), occupation ($p=0.137$) and education level ($p=0.081$) was not significant. Similar was the case for teeth grinding and gender ($p=0.223$), marital status ($p=0.927$), occupation ($p=0.711$) and education level ($p=0.197$). The association of teeth clenching habit with gender ($p=0.174$), marital status ($p=1.000$), occupation ($p=0.349$) and education level ($p=0.362$) was not significant. The association of the parafunctional habits of biting hard objects and chewing gum with sociodemographic factors was also not significant.

Conclusion: It was seen that the majority of females, unmarried, unemployed individuals and those with tertiary level of education reported to have the habit of nail biting, teeth grinding and teeth clenching, biting on hard objects and chewing gum.

Keywords: sociodemographic factors, nail biting, teeth clenching, teeth grinding, lip biting

INTRODUCTION

According to Shah et al a habit is an activity that people routinely practise throughout their everyday routines, either knowingly or unknowingly¹. We use the word to refer to any aberrant activation of the oro-mandibular region in the present investigation. This includes bruxism, lips and self - injury, thumb suck, self-harming behaviors, breathing issues, and tongue thrusting according to Alharby et al². Such actions go against how the mastication tissues normally work, which carry out necessary activities avoiding endangering important oral tissues. Knowing the root causes can help in creating helpful therapies because of the possible impacts of such negative behaviors.

Literature shows that the socio-demographic factors are strongly associated with the overall wellbeing and fitness of individual and societies. Sociodemographic factors, which include the employment status, household income, level of education, marital status, and social support are recognized major determinants of many health outcomes, including healthy aging³.

Sleep bruxism, often known as SB, is a habitual behavioral condition that is characterised by teeth crushing or clenching both while awake and while sleeping. The International Classification of Sleep Disorders, Second Edition (ICSD-2) defines SB as "an oral parafunction characterized by teeth crushing or teeth grinding throughout nap which is attributed including an extreme (intense) sleep stimulation action" and places SB inside the latest sleep-related activism diseases segment⁴. Awake bruxism (AB) is characterised by jaw tightening and tooth friction bracing. It is connected to occlusal abnormalities, stress-related illnesses, and/or allergies³. In the overall populace, the incidence of AB ranges between 22.1 % to 31 %, of females experiencing the condition more commonly as males⁵. The frequency of nail biting is reported to be between 20 and 33 % in toddlers, even though it is 45 % in teenage. It seems to decline just after turn of 18, but it could continue into adults⁵. Preschoolers and kids between the ages of 12 and 16 who live in the Riyadh province of Saudi Arabia are more likely than other age groups to bite their nails, with rates of 27 % and 29 %, correspondingly⁷. In India, 37 percent of pupils in the 10 to 19-year-old age range report lip biting as a concern⁸. According to something like this, a research carried out in Saudi Arabia revealed that teenagers between the ages of 12 and 16 years commonly bit their lips and cheeks (41%)⁹.

There is no investigation in the literature that looked at the connection among parafunctional behaviors and socio-demographic factors in individuals. The purpose of this study is to

ascertain the frequency of different kinds of dental parafunctional activities amongst adults and to investigate the relationships among these behaviors and socio-demographic factors in individuals.

METHODOLOGY

A Cross-sectional descriptive study was conducted in College of Dentistry, Sharif Medical and Dental College, Lahore over a period of 5 months from July to November 2021. Ethical approval was obtained from Sharif Medical Research Center (SMRC) (No. SMDC/SMRC/205-21). All individuals irrespective of their age and gender and those who reported having oral parafunctional habits were included in the study. Individuals with a history of smoking and those with any systemic illness were excluded. A sample size of 200 was calculated with the help of WHO sample size determination software keeping the confidence level of 95% with anticipated population proportion of 52.86% with teeth clenching and an absolute precision of 0.07 %¹⁰. Data was collected using medical questionnaire and ten item personality inventory scale (TIPI). The second section consisted of a pre-validated parafunctional habits questionnaire with a Cronbach alpha value of 0.7¹¹. The responses for the parafunctional habit questionnaire were recorded as "1" strongly disagree, "2" disagree, "3" neither agree nor disagree, "4" agree and "5" strongly agree". The Ten Item Personality Inventory scale consisted of a pre-validated self-reported questionnaire was used¹². SPSS 23 was used for statistical analysis. P values less than equal to 0.05 was considered significant. Nominal data was presented as frequency and percentages while numerical data was presented as mean and standard deviation. Chi square test was used to find the association between all the oral parafunctional habits and gender, marital status, occupation and education level while fisher exact test was used to find the association of education level and oral parafunctional habits.

RESULTS

The study was conducted on 200 participants with a mean age of 24.93±6.759 years out of which 29% were males while 71% were females.

Table 1 shows that the associations between parafunctional habits of nail biting, teeth grinding and teeth clenching was not significant. It was seen that the majority of females, unmarried, unemployed individuals and those with tertiary level of education

reported to have the habit of nail biting, teeth grinding and teeth clenching.

Table 1: Association of sociodemographic factors with nail biting, teeth grinding and teeth clenching

Sociodemographic factor		Nail biting		Teeth grinding		Teeth clenching	
		n(%)	P value	n(%)	P value	n(%)	P value
Gender	Male	13 (6.5%)	0.315	7 (3.5%)	0.223	13 (6.5%)	0.174
	Female	23 (11.5%)		29 (14.5%)		47 (23.5%)	
Marital status	Married	6 (3%)	0.653	7 (3.5%)	0.927	12 (6%)	1.000
	Un married	30 (15%)		29 (14.5%)		48 (24%)	
Occupation	Employed	11 (5.5%)	0.137	14 (7%)	0.711	22 (11%)	0.349
	Unemployed	25 (12.5%)		22 (11%)		38 (19%)	
Education level	Illiterate	1 (0.5%)	0.081	1 (0.5%)	0.197	1 (0.5%)	0.362
	Primary	0 (0%)		0 (0%)		0 (0%)	
	Secondary	5 (2.5%)		1 (0.5%)		3 (1.5%)	
	Tertiary	30 (15%)		34 (17%)		56 (28%)	

Table 2: Association of sociodemographic factors with habits of biting on hard objects and chewing gum

Sociodemographic factor		Biting hard objects		Chewing gum		
		n(%)	P value	n(%)	P value	
Gender	Male	13 (6.5%)	0.848	8 (4%)	0.81	
	Female	29 (14.5%)		17 (8.5%)		4
Marital status	Married	4 (2%)	0.081	5 (2.5%)	1.00	
	Un married	38 (19%)		20 (10%)		0
Occupation	Employed	17 (8.5%)	0.861	8 (4%)	0.28	
	Unemployed	25 (12.5%)		17 (8.5%)		7
Education level	Illiterate	1 (0.5%)	0.349	0 (0%)	1.00	
	Primary	0 (0%)		0(0%)		0
	Secondary	2 (1%)		2 (1%)		0
	Tertiary	39 (19.5%)		23 (11.5%)		

Table 2 shows that the associations between oral parafunctional habits of biting on hard objects and chewing gum with the sociodemographic factors of gender, marital status, occupation and education level were not significant. It was seen that the majority of females, unmarried, unemployed individuals and those with tertiary level of education reported to have the habit of biting on hard objects and chewing gum.

DISCUSSION

A spontaneous repetition of a behaviour is referred to as a habit. Among the main causative components that causes deformity in maxillofacial anatomy is habits. 87.9 % and 30 %, correspondingly, of middle school's girls and elementary school children were being found to even have dental behaviors. In their investigation, Quashie-Williams et al. discovered that 34.1% of kids had an oral habit¹³.

Development of oral parafunctional habits is strongly associated with combination of socioeconomic, genetic, occupational, psychological, and health-related factors. Many oral parafunctional habits are more prevalent with specific age group and, e.g thumb sucking. Thumb sucking is the act of sucking one's thumb after just a physiologically necessary interval due of tension, anxiety, or psychological issues. A cross-sectional research on Saudi preschool kids (ages 3-5) in Riyadh revealed that thumb sucking represented the most prevalent kind of sucking practices, with a frequency of 48.4%. When compared to thumb sucks, which were more prevalent at age 5, many pacifier suckers did quit the behavior in their early years of life. Sucking behaviors been discovered to only be connected to parents' learning and the way their children were fed, not to sex, family structure, or family wealth¹⁴.

According our study, the associations between parafunctional habits of nail biting, teeth grinding and teeth clenching was not significant. It was seen that the majority of females, unmarried, unemployed individuals and those with tertiary level of education reported to have the habit of nail biting, teeth grinding and teeth clenching.

When swallowing begins, tongue thrust occurs when the tongue is extended in across mandibular and maxillary front teeth or alveolar surfaces. It must have been found that perhaps the morphology and child's physiological (maturation) were always the

primary etiological reasons for tongue pushing (growth)¹⁵. In a survey of Saudi students, nail biting was shown to be the greatest prevalent oral parafunctional practice (27.7%), whereas bruxism was indeed the lowest prevalent activity (8.4 percent). With the exception of bruxism, most oral parafunctional behaviors were substantially correlated with age. Thumb sucking and cheek bite have been more frequently seen in females compared with males¹⁶. In an investigation Aloumi A represented a strong correlation among socio-demographics and oral parafunctional habit behavior. He shows a statistically strong relationship among the age categories and indeed the practices of lip- and teeth-sucking. As comparing to 0 % in the 3-4-year age category, the frequency of jaw clenching is statistically considerably greater mostly in 4-5-year age category (12%) as well as the 5-6-year age range (8%). As comparing to the 4-5-year age bracket (1.3%) as well as the 5-6-year age range (0.8%), the lip-sucking behaviour is statistically substantially greater within 3-4-year age bracket by 10%. In comparison to 10.5 % for female youngsters, the incidence of oral respiration while sleeping is statistically substantially greater in male offspring (18%). Students attending private schools have a statistically significant greater frequency of tongue thrust (5.6%) than do those attending public schools (1.7%)⁷.

Oral parafunctional behaviors had no statistically important relationship to the child's birth sequence, the number of siblings, dietary preferences, or overall health issues. Murshid et al., on the other hand, discovered a relative relationship among the behaviors (bruxism as well as thumb suck) and average number of offspring, which may be related to maternal deprivation¹⁷. According to a survey in Brazil 9.1% of toddlers showed definite sleep bruxism, and 58.6% of those who had unmarried guardian or parent too had sleeping issues¹⁸.

Our study reported that the associations between oral parafunctional habits of biting on hard objects and chewing gum with the sociodemographic factors of gender, marital status, occupation and education level were not significant. It was seen that the majority of females, unmarried, unemployed individuals and those with tertiary level of education reported to have the habit of biting on hard objects and chewing gum.

Socioeconomic status (SES) represents one of the key variables affecting a country's wellbeing. It is a gauge of one's or a family's economic class and has a significant influence on one's or a family's health, academic performance, food, and quality of life. SES has a strong impact on the oral health and the development of Parafunctional habits. The literature has reported a lot of correlation of SES with progression of periodontal health, tooth wear and other dental problems. A survey by Park HJ et al. examined the relationship between socioeconomic status, dental health behaviors, and periodontal illness inequalities among Korean adults¹⁹. The relationship among socioeconomic background and dental wellness is widely documented. Recent investigations have shown that people with low socioeconomic position had substantially poorer healthcare versus people from higher social classes²⁰.

CONCLUSION

It was seen that the majority of females, unmarried, unemployed individuals and those with tertiary level of education reported to have the habit of nail biting, teeth grinding and teeth clenching, biting on hard objects and chewing gum.

Limitation: A larger sample size would have helped us unravel more findings.

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