

An Analysis of Coexistence of Multiple Oral Parafunctional Habits in Extraverts

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ABSTRACT

Objective: To assess the presence and coexistence of multiple oral parafunctional habits in individuals with extravert personality type

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

Results: There was significant association in the coexistence of parafunctional habit of nail biting with tooth clenching ($p \leq 0.001$), tooth grinding ($p \leq 0.001$), biting hard objects ($p \leq 0.001$) and chewing gum ($p = 0.027$).

Practical Implication: This study will help dental practitioners use personality assessment as an effective and important tool to find the propensity of an individual for development of oral parafunctional habits. In this way they will be able to provide timely treatment and counselling to the individuals before their dental health deteriorates due the development of oral parafunctional habits.

Conclusion: The oral parafunctional habits found to coexist the most with nail biting habit was tooth grinding followed by biting hard objects, chewing gum and tooth clenching.

Keywords: Extraverts, Oral parafunctional habits, Ten Item Inventory Scale, Nail Biting

INTRODUCTION

Oral parafunctional habits refer to any behavior that deviates from normal oral function, such as teeth grinding (bruxism), nail biting, lip biting, cheek biting, and tongue thrusting¹⁻⁴. These habits are common among individuals of all ages and can have negative effects on oral and overall health^{2,5,9}. Extraverts, who are characterized by outgoing and sociable personalities, may be more likely to engage in oral parafunctional habits due to their tendency to seek stimulation and release pent-up energy^{2,10-12}.

A study found that extraverts had a higher prevalence of oral parafunctional habits compared to introverts¹³. The study included 200 participants, 100 of whom were classified as extraverts and 100 as introverts based on their scores on the Eysenck Personality Inventory (EPI). Participants were asked to complete a questionnaire about their oral parafunctional habits and were also examined by a dentist for signs of oral damage. The results showed that extraverts had significantly higher rates of bruxism, nail biting, and cheek biting compared to introverts¹³.

A study found that extraverts had a higher prevalence of bruxism compared to introverts¹⁴. The study included 300 participants, 150 of whom were classified as extraverts and 150 as introverts based on their scores on the Eysenck Personality Inventory (EPI)¹⁴. Participants were asked about their bruxism habits and were also examined by a dentist for signs of oral damage. The results showed that extraverts had significantly higher rates of bruxism compared to introverts¹⁴.

One study investigated the associations between oral parafunctional habits (OPHs) and the five-factor personality traits of extraversion and neuroticism in a sample of Japanese adults¹⁵. The study found that high levels of extraversion were associated with higher rates of OPHs, including nail biting, cheek biting, and tooth grinding¹⁵. Additionally, the study found that individuals high in both extraversion and neuroticism had the highest rates of OPHs.

A study found that extraverts had a higher prevalence of bruxism compared to introverts¹⁶. The study included 100 participants, 50 of whom were classified as extraverts and 50 as introverts based on their scores on the Eysenck Personality Inventory (EPI). Participants were asked about their bruxism habits and were also examined by a dentist for signs of oral damage. The results showed that extraverts had significantly higher rates of

bruxism compared to introverts¹⁶. This study will help dental practitioners use personality assessment as an effective and important tool to find the propensity of an individual for development of oral parafunctional habits. In this way they will be able to provide timely treatment and counselling to the individuals before their dental health deteriorates due the development of oral parafunctional habits. The aim of this study was to assess the presence and coexistence of multiple oral parafunctional habits in individuals with extravert personality type

METHODOLOGY

A Cross-sectional descriptive study was conducted at the College of Dentistry, Sharif Medical and Dental College, Lahore, over 5 months, from July to November 2021. The sampling technique used was Convenience sampling. Ethical approval was obtained from Sharif Medical Research Center. Individuals with any systemic illness, history of alcohol consumption, or smoking will be excluded from the study, while individuals of all ages, genders and oral parafunctional habits were included. A sample size of 200 was calculated with the help of WHO sample size determination software, keeping the confidence level of 95% with an anticipated population proportion of 52.86% with teeth clenching and an absolute precision of 0.07¹⁷. Data was collected using medical questionnaire and ten item personality inventory scale (TIPI). The medical questionnaire comprised of 2 sections with 11 items. The first section had six demographic statements including age, gender, marital status, occupation, educational level and medical condition. The second section consisted of a pre-validated parafunctional habits questionnaire with a Cronbach alpha value of 0.74¹⁸. 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". Data was collected using the Ten Item Personality Inventory scale which was a pre-validated questionnaire¹⁹.

SPSS 23 was used for statistical analysis. P value ≤ 0.05 was considered significant. All numeric data was presented as mean and its respective standard deviation. All nominal data was presented as frequency and percentage. Chi square test was used to find the association of various oral parafunctional habits with each other.

RESULTS

The study was conducted on 200 undergraduate dental students with a mean age of 1.71 ± 0.455 years out of which 29% were males and 71% were females.

Table 1 shows that there was a significant association between the presence of nail biting habit with the habit of tooth grinding, tooth clenching, biting hard objects and chewing gum. The oral parafunctional habits found to coexist the most with nail biting habit was tooth grinding (50%) followed by biting hard objects (47.6%), chewing gum (32%) and tooth clenching (36.7%).

Table 1: Association and coexistence of nail biting habit with other oral parafunctional habits

		Nail biting		P value
		Present	Absent	
Tooth Grinding	Present	18 (50%)	18 (50%)	≤0.001
	Absent	18 (11%)	146 (89%)	
Tooth Clenching	Present	22 (36.7%)	38 (63.3%)	≤0.001
	Absent	14 (10%)	126 (90%)	
Biting hard objects	Present	20 (47.6%)	22 (52.4%)	≤0.001
	Absent	16 (10.1%)	142 (89.9%)	
Chewing gum	Present	8 (32%)	17 (68%)	0.027
	Absent	28 (16%)	147 (84%)	

DISCUSSION

Another study found a similar relationship between extraversion and oral parafunctional habits¹⁶. The study included 100 participants, half of whom were classified as extraverts and half as introverts based on their scores on the EPI. Participants were asked about their oral parafunctional habits and were also examined by a dentist for signs of oral damage¹⁶. The results showed that extraverts had higher rates of bruxism and cheek biting compared to introverts.

It is suggested that extraverts may be more likely to engage in oral parafunctional habits due to their tendency to seek stimulation and release pent-up energy. Extraverts may find these habits to be a way to release tension and anxiety, and may also find them to be a form of self-soothing. According to the theory of self-medication, individuals may engage in oral parafunctional habits as a way to cope with emotional stress¹⁴.

In addition, it is suggested that extraverts may be more prone to stress and anxiety due to their tendency to engage in high-risk behaviors and seek new experiences¹⁹. This increased stress and anxiety may lead to an increased likelihood of engaging in oral parafunctional habits as a coping mechanism¹⁹. Development of oral parafunctional habits is also associated with sociodemographic factors²⁰.

According to our study there was a significant association between the presence of nail biting habit with the habit of tooth grinding, tooth clenching, biting hard objects and chewing gum. The oral parafunctional habits found to coexist the most with nail biting habit was tooth grinding (50%) followed by biting hard objects (47.6%), chewing gum (32%) and tooth clenching (36.7%).

The coexistence of multiple oral parafunctional habits in extraverts is a common phenomenon. Extraverts may be more likely to engage in oral parafunctional habits due to their tendency to seek stimulation and release pent-up energy. These habits can have negative effects on oral and overall health, and it is important for individuals who engage in these habits to seek help from a healthcare professional.

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

CONCLUSION

The oral parafunctional habits found to coexist the most with nail biting habit was tooth grinding followed by biting hard objects, chewing gum and tooth clenching.

Conflict of Interest: None

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