IMPACT OF PERSONALITY TRAIT OF AGREEABLENESS ON ORAL PARAFUNCTIONAL HABITS

Ruhab Afsar[1], Laiba Shoaib[2], Arslan Haider[3], Samra Liaqat[4], Hira Butt[5], Nauman Rauf Khan[6], Maria Jabbar[7]

Correspondence

[5]Hira Butt, Demonstrator, Department of Oral Pathology, College of Dentistry, Sharif Medical and Dental College, Lahore
: +92-320-4635376
: hira.ah.butt@gmail.com
[1]House officer, College of Dentistry, Sharif Medical and Dental College, Lahore
[2]House officer, College of Dentistry, Sharif Medical and Dental College, Lahore
[3]House officer, College of Dentistry, Sharif Medical and Dental College, Lahore
[4]House officer, Islamic International Dental Hospital, Islamabad
[6]Professor, Department of Oral Pathology, College of Dentistry, Sharif Medical and Dental College, Lahore
[7]Postgraduate Resident, Department of Oral and Maxillofacial Surgery, College of Dentistry, Sharif Medical and Dental College, Lahore

How to cite this article

Afsar R, Shoaib L, Haider A, Liaqat S, Butt H, Khan NR, et al. Impact of Personality Trait of Agreeablness on Oral Parafunctional Habits. J Gandhara Gandhara Med Dent Sci. 2023;10(3): 47-50
https://doi.org/10.37762/jgmds.10-3.366

ABSTRACT

OBJECTIVES

To find the impact of agreeable personality trait on oral parafunctional habits.

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). Kruskal Wallis test was to find the difference in the scores of agreeable personality trait across groups of oral parafunctional habits.

RESULTS

There was a statistically significant difference in the agreeable personality trait across the parafunctional habits of tooth grinding (p=0.023) and biting on hard objects (p=0.013). A non-significant difference was seen in the personality trait across the habits of nail biting (p=0.495), tooth clenching (p=0.097) and habit of chewing gum (p=0.371).

CONCLUSION

The individuals who disagreed to having the habit of tooth grinding had the highest score for agreeableness and the least was seen in those who neither agreed nor disagreed to having the habit. The personality trait was the most prevalent in individuals who strongly agreed to having the habit of biting on hard objects and the least in those who agreed to having the habit.

KEYWORDS: *Agreeableness, Nail Biting, Teeth Grinding, Teeth Clenching, Biting Hard Objects, Chewing Gum, Oral Parafunctional Habits*

INTRODUCTION

A habit is a settled practice, particularly one that is difficult to surrender.[1] It is essential to fully understand this term's operational definition before exploring the concept of a parafunctional habit. Parafunctional habits are particularly pathological adaptations that indicate anxiety, depression, or stress. Therefore, parafunctional habits are not part of the functional and physiological behaviors of the stomatognathic system.[2] Among the many examples of abnormal hyperactivity of the oro-mandibular system, are bruxism, lip and nail-biting, thumb sucking, self-injurious habits, mouth breathing, and tongue thrusting.[3,4] The negative impact of such habits is damaged dental health including; wearing down of enamel, fractures, muscular hypertrophy, malocclusion, and temporomandibular joint dysfunction.[5,6,7] The causes of parafunctional oral habits are multifactorial, such as genetic factors, sleep disorders, emotional factors, stress, derangement of the central nervous system, occlusal disturbances, and personality traits.[8] Personality traits are enduring dispositions in behavior that reflect basic dimensions on which people differ.[9] One's individual life is greatly affected by personality traits, whether it's your general performance or decision-making. The Five-Factor model is one of the widely used assessment tools for personality traits, as it describes one's personality through multiple boards by classifying vast individual differences in emotional and social life into five-factor analytically-derived categories. These categories or factors are known as extroversion (the tendency to be talkative), openness to experience (to appreciate new ideas), agreeableness (the ability to agree), conscientiousness (to follow rules), and neuroticism (to frequently experience negative emotions).[10] The aim of this study is to particularly determine the impact of the personality trait of agreeableness on oral parafunctional habits. Focusing on agreeableness, a person with a high score tends to be more submissive, gullible, and agrees

with other's opinions whereas an individual with a low score is uncooperative, manipulative and sticks to their own opinions.[11]

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 (SMRC) (No. SMDC/SMRC/205-21). 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 0.07.[12] 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. 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 0.74.[3] 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 questionnaire.[13] 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. Kruskal Wallis test was to find the difference in the scores of agreeable personality trait across groups of oral parafunctional habits.

RESULTS

A cross-sectional descriptive 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: Difference in the Agreeable Personality Score across the Categories of Oral Parafunctional Habits of Nail Biting and Teeth Grinding

Personality Trait	Oral Parafunctional Habits		N	Mean Rank	Chi Square	df	P-Value
Agreeableness Personality Trait	Nail Biting	Strongly disagree	113	99.49	03.386	04	0.495
		disagree	33	109.71			
		Neither agree nor disagree	18	104.53			
		Agree	21	104.14			
		Strongly agree	15	77.90			
	Teeth Grinding	Strongly disagree	102	96.54	11.372	04	0.023
		disagree	50	122.23			
		Neither agree nor disagree	12	77.38			
		Agree	28	86.09			
		Strongly Agree	08	100.25			

Table 1 shows that the highest mean rank score for agreeableness was seen in individuals who disagreed to having the habit of nail biting while the least was seen in those who strongly agreed. It was also seen that a statistically significant difference in the scores of agreeable personality trait across categories of oral parafunctional habit of tooth grinding with the highest mean rank for agreeableness being that for individuals who disagreed to having the habit of tooth grinding and the least for those who neither agreed nor disagreed as shown in table 1.

Table 2: Difference in the Agreeable Personality Score across the Categories of Oral Parafunctional Habits of Teeth Clenching and Biting Hard Objects

Personality Trait	Oral Parafunctional Habits		N	Mean Rank	Chi Square	df	P-Value
Agreeableness Personality Trait	Teeth Clenching	Strongly disagree	83	100.37	07.851	04	0.097
		Disagree	41	118.07			
		Neither agree nor disagree	16	87.19			
		Agree	51	87.94			
		Strongly agree	09	116.50			
	Biting Hard Objects	Strongly disagree	93	101.79	12.695	04	0.013
		Disagree	41	118.67			
		Neither agree nor disagree	24	82.54			
		Agree	35	81.47			
		Strongly agree	07	133.64			

Table 2 shows the scores of agreeableness were found to be highest for individuals who strongly disagreed to having the habit of tooth clenching while it was the least for those who neither agree or disagree to having the habit. It was also seen that there was a statistically significant difference in the score od agreeableness across the categories of oral parafunctional habits of biting on hard objects with the highest mean rank score being that for individuals who strongly agreed to having the habit and the least being that for those who agreed to having the habit as shown in table 2.

Table 3: Difference in the Agreeable Personality Score across the Categories of Oral Parafunctional Habits of Chewing Gum

Personality Trait	Oral Parafunctional Habits		N	Mean Rank	Chi Square	df	P-Value
Agreeableness Personality Trait	Habit of Chewing Gum	Strongly disagree	81	105.30	04.265	04	0.371
		Disagree	56	103.96			
		Neither agree nor disagree	38	89.57			
		Agree	20	86.18			
		Strongly agree	05	124.40			

Table 3 shows a statistically non-significant difference of agreeableness across the categories of oral parafunctional habit of chewing gum. The highest mean rank score for agreeableness was seen for individuals who strongly agreed to having the habit while the least for those who agreed to having the habit as shown in table 3.

DISCUSSION

Oral parafunctional behaviors are connected to almost any inappropriate oro-mandibular structure activation. These possess significant bodily and psychological repercussions and therefore are present in all civilizations to varying degrees. As parafunctional behaviors surpass a person's physiological endurance and also the anatomical endurance of the masticatory mechanism, these may cause injury to the teeth, mastication process, and/or joints.[14] The terminology is used in a research to describe any aberrant excitability of the oromandibular region, such as grinding, lip- as well as nail-biting, thumb-sucking, self-harming behaviors, mouth breathing, and tongue-protruding.[15] Oral parafunctional behaviors may have a variety of reasons, such as despair, anxiousness, neurologic problems, personality issues, and many more. The role that personality features have in a human's capacity to manage mental and psychological stress, panic, and depressed mood is crucial.[16] Addressing the relationship between oral parafunctional practices and different personality characteristics, numerous analyses have been undertaken in the history. The "Big 5" personality qualities are really the five basic aspects of personality, according to several modern personality psychiatrists. Extraversion, agreeableness, openness, conscientiousness, and neuroticism are indeed the five main personality qualities. Literature shows that there is association of development of oral parafunctional habits with specific personality type. Cooperation, politeness, kindness, and friendliness are all qualities that characterize people who are agreeable. Higher agreeableness individuals tend to be highly dependable, compassionate, charitable, and affiliative in general. People that exhibit this socialization attribute to a high degree are extremely empathic, caring, and quick to lend a hand to those who need it.[17] This study's objective was to ascertain the incidence of different forms of oral parafunctional behaviors in people with agreeable personality types. We concluded that Individuals who disagreed with the behavior of biting their nails had higher mean rank scores for agreeableness than those who strongly agreed. Additionally, it was discovered that there was a statistically significant difference in the scores of the agreeable personality trait throughout subgroups of the oral parafunctional behavior of teeth grinding, with the highest mean position for agreeableness becoming found in people who disagreed with experiencing the habit and the lowest in people who were neither agreeable nor disagreeable. While a study done by reported that following those who possessed the extraversion personality characteristic was teeth clenching (23.5%) followed by object-biting (16.5%).[10] According to contrary findings from a different survey, the majority of extraversion people (56.1%) admitted biting their lips or things, while the least number (32.4%) indicated grinding their teeth.[3] Our analysis shows that a variation in agreeability between groups of oral parafunctional activity of chewing gum that is statistically insignificant. Individuals who firmly agreed to having the habit had the greatest mean rank value for agreeableness, whereas those who consented to have the habit had the lowest. While in a review of Saudi citizens, it was discovered that extraverts were more likely to chew gum (81.4%) than extraverts were to clench their teeth (46.4%), chew their fingernail cuticles (34.7%), or grind their teeth (32.4%).[18] According to a survey, the greatest percentage of people who identified agreeableness as their main personality feature also reported experiencing a tendency of clenching their teeth (28.5%), following by biting on hard surfaces (20%), with gum chewing (12%) receiving the lowest percentage.[10]

LIMITATIONS

A larger sample size and a multicenter study would have helped us unravel more findings.

CONCLUSIONS

There was significant difference in the scores of agreeable personality trait across categories of oral parafunctional habit of tooth grinding. The individuals who disagreed to having the habit of tooth grinding had the highest score for the personality trait and the least was seen in those who neither agreed nor disagreed to having the habit. Similarly, a significant difference in the score of agreeableness across the categories of oral parafunctional habits of biting on hard objects was observed. the personality trait was the most prevalent in individuals who strongly agreed to having the habit and the least in those who agreed to having the habit.

CONFLICT OF INTEREST: None

FUNDING SOURCES: None

REFERENCES

1. Maddux JE. Habit, health, and happiness. J Sport Exerc Psychol. 1997 Dec 1;19(4):331-46.
2. Bernardo BM, da Silva Leitão B, Soares VG, Sobrinho JE, de Almeida Azevedo MQ. PATIENTS WITH PARAFUNCTIONAL HABITS: ASSESSMENT OF THE PSYCHOLOGICAL STATUS AND ITS REPERCUSSIONS BEFORE ORAL AND MAXILLOFACIAL SURGERIES. Health and Society. 2022 Jul 3;2(03):64-86.
3. Almutairi AF, Albesher N, Aljohani M, Alsinanni M, Turkistani O, Salam M. Association of oral parafunctional habits with anxiety and the Big-Five Personality Traits in the Saudi adult population. Saudi Dent J. 2021 Feb 1;33(2):90-8.
4. Ortega AO, Guimarães AS, Ciamponi AL, Marie SK. Frequency of parafunctional oral habits in patients with cerebral palsy. J. Oral Rehabil.. 2007 May;34(5):323-8.
5. Karibe H, Shimazu K, Okamoto A, Kawakami T, Kato Y, Warita-Naoi S. Prevalence and association of self-reported anxiety, pain, and oral parafunctional habits with temporomandibular disorders in Japanese children and adolescents: a cross-sectional survey. BMC Oral Health. 2015 Dec;15(1):1-7.
6. Seraj B, Ahmadi R, Mirkarimi M, Ghadimi S, Beheshti M. Temporomandibular disorders and parafunctional habits in children and adolescence: A review.
7. Winocur E, Littner D, Adams I, Gavish A. Oral habits and their association with signs and symptoms of temporomandibular disorders in adolescents: a gender comparison. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2006 Oct 1;102(4):482-7.
8. Corradi LM, Avelar LE. Oral Parafunction-Aetiology, Implications and Relation to Orthodontic Treatment. InMaxillofacial Surgery and Craniofacial Deformity-Practices and Updates 2019 Apr 19. IntechOpen.
9. Vollrath M, Torgersen S. Personality types and coping. Pers. Individ. Differ.. 2000 Aug 1;29(2):367-78.
10. Butt H, Khan NR, ur Rehman S, Waheed Z, Babary DF, Shah THJPJoM, et al. Association between Oral Parafunctional Habits with Personality Type in Individuals. Pakistan J. Medical Health Sci.. 2022;16(04):561-.
11. Shehzad S, Waheed Z, Butt H, Farooq A, Khan NR, Khan KJP, et al. Big-5 Personality Traits in Medical and Dental Students of Khyber Pakhtunkhwa, Pakistan. Psychology and education. 2020;57(9):7639-43.
12. Vyas T. Effect of chronic nail biting and non-nail biting habit on the oral carriage of enterobacteriaceae. J Adv Med Dent Scie Res. 2017 May 1;5(5):53.
13. Gosling SD, Rentfrow PJ, Swann Jr WB. A very brief measure of the Big-Five personality domains. Journal of Research in personality. 2003 Dec 1;37(6):504-28.
14. Okeson JP. Management of temporomandibular disorders and occlusion-E-book. Elsevier Health Sciences; 2019 Feb 1.
15. Alharby A, Alzayer H, Almahlawi A, Alrashidi Y, Azhar S, Sheikho M, Alandijani A, Aljohani A, Obied M. Parafunctional behaviors and its effect on dental bridges. J. Clin. Med. Res.. 2018 Feb;10(2):73.
16. Childs E, White TL, de Wit HJBp. Personality traits modulate emotional and physiological responses to stress. Behav. Pharmacol. 2014;25(5 0 6):493.
17. Power RA, Pluess MJTp. Heritability estimates of the Big Five personality traits based on common genetic variants. Transl. Psychiatry. 2015;5(7):e604-e.
18. Johansson A, Fareed K, Omar R. Analysis of possible factors influencing the occurrence of occlusal tooth wear in a young Saudi population. Acta odontologica scandinavica. 1991 Jan 1;49(3):139-45.

CONTRIBUTORS

1. ***Ruhab Afsar -*** *Drafting Manuscript*
2. ***Laiba Shoaib -*** *Drafting Manuscript*
3. ***Arslan Haider -*** *Data Acquisition*
4. ***Samra Liaqat -*** *Data Acquisition*
5. ***Hira Butt -*** *Data Acquisition; Data Analysis/Interpretation; Drafting Manuscript; Critical Revision; Supervision; Final Approval*
6. ***Nauman Rauf Khan -*** *Concept & Design; Critical Revision; Supervision; Final Approval*
7. ***Maria Jabbar -*** *Drafting Manuscript*