

Open Access



International Journal of Medical Science and Dental
Health (ISSN: 2454-4191)

Volume 11, Issue 07, July 2025,

Doi: <https://doi.org/10.55640/ijmsdh-11-07-19>

Impact of Dental Esthetics and Oral Health Status on Psychological Well Being and Dental Self Confidence in University Students

Yashi Sharma

Department of Public Health Dentistry, Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India

Ankita Jain

Department of Public Health Dentistry, Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India

Pradeep Tangade

Department of Public Health Dentistry, Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India

Vikas Singh

Department of Public Health Dentistry, Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India

Corresponding Author:-Dr. Yashi Sharma

Sources of funding: No financial support was received from any organization

Ethical Approval: Institutional Ethics Committee issued approval via Approval No: TMDCRC/IEC/TH/22-23/PHD 05 for conducting this study.

Conflict of Interest: No conflicts of interest

Received: 24 June 2025, **accepted:** 09 July 2025, **Published Date:** 30 July 2025

Abstract

Background: Cosmetic dentistry, also known as dental esthetics, focuses on enhancing the appearance of teeth, gums, and overall smile. Procedures such as tooth whitening, orthodontics, veneers, dental implants, and gum contouring aim to improve dental appearance, thereby boosting an individual's self-confidence and quality of life.

Objectives: The study aimed to assess perceived satisfaction with dental appearance, evaluate oral health status, and explore the relationship between dental esthetics, psychological well-being, and self-confidence. This cross-sectional study was conducted at Teerthanker Mahaveer University, Moradabad, involving 1500 participants aged 18 to 35 years.

Methods: The Psychosocial Impact of Dental Aesthetics Questionnaire [PIDAQ] and World Health Organization [WHO] Oral Health Assessment Form (2013) were used for evaluation. Informed consent was obtained and data was collected. Statistical Package for the Social Sciences [SPSS] 26.0 Software, and the Pearson Chi square test to analyse statistical significance.

Results: Of the 1500 participants, 732 (48.8%) were male and 768 (51.2%) females. Results showed that 508 (33.87%) individuals were highly satisfied, 654 (43.6%) satisfied, and 338 (22.53%) dissatisfied with their smile. A significant association was found between gender and smile satisfaction, with females reporting higher levels of concern. Tooth color was the leading cause of dissatisfaction, followed by teeth alignment.

Conclusions: The study concludes that dental esthetics and oral health have a significant impact on individuals' attitudes, psychological wellbeing, and dental self-confidence. Poor dental appearance, especially due to caries and missing teeth, contributes to low self-esteem and increased anxiety. Improving dental esthetics is essential for enhancing both mental health and social confidence in young adults.

Keywords: oral health, dental self-confidence, caries, psychological wellbeing, dental esthetics

Introduction

A beautiful smile leaves a lasting impression and is an essential aspect of facial appeal. Media influence has increased public demand for dental esthetic treatments, as dental appearance impacts self-esteem, social perception, and psychological well-being. Dental esthetics include gingival, facial, microesthetics, and macroesthetics; each contributing to overall smile harmony. Poor dental conditions like caries and missing teeth lower confidence and increase anxiety. Esthetic dentistry helps restore smiles and improve quality of life.

This study aims to evaluate the effect of dental esthetics and oral health on psychological well-being and dental self-confidence in Moradabad university students aged 18 to 35 years.

Materials And Methods

A cross-sectional descriptive study was conducted on 1,500 students aged 18 to 35 years at Teerthanker Mahaveer University, Moradabad, for a duration of 3 months, starting from February 2024 to April 2024. All the students who wanted to volunteer for study were included, except for patients who were undergoing orthodontic treatment and dental students, as these students are aware of all the pros and cons of dental esthetics; hence, there could be manipulation of answers.

Institutional Ethics Committee issued approval for the study via approval no: TMDCRC/IEC/TH/22-23/PHD 05 at the convened meeting on 08/04/2023 (Appendix 1), after which Patient/Participant Informed Consent Form (Appendix 2) was obtained from all the participants who volunteered for the study. To investigate the impact of dental esthetics, a Psychosocial Impact of Dental Esthetics Questionnaire [PIDAQ] (Appendix 3) was designed to pool the questions from three measures: psychosocial impact, dental self-confidence, and esthetic considerations. Furthermore, the World Health

Organization [WHO] oral health assessment proforma 2013 (Appendix 4a, 4b) ^[1] was used to investigate the impact of oral health status on psychological well-being.

Firstly, the students' smile satisfaction was evaluated through a questionnaire where students were asked to rate their smile fulfillment and mention the cause for the same, which was later correlated with various attitudes and practices that impact their psychosocial behaviour and dental self-confidence. Secondly, the students were clinically examined according to the WHO oral health assessment proforma 2013, which was then correlated with their smile satisfaction. Records were obtained by the individuals and entered into Microsoft Excel. Statistical Package for the Social Sciences [SPSS 26.0] software was utilized for evaluation with data assessed through Pearson Chi Square Test. The P-value, also known as significance indicator, with a value less than 0.05 represents significance, while greater than 0.05 represents no significance.

Results

As per data obtained from the PIDAQ Questionnaire and the WHO proforma, the following can be concluded: the mean age of the students was 22.81 ± 3.862 years. Out of 1500 students, 732 males (48.8%) and 768 females (51.2%) were present. 508 (33.9%) people were highly satisfied with their smile, 654 (43.6%) were satisfied, and 338 (22.5%) were not satisfied with their smile. The most common cause of dissatisfaction among students is tooth colour, found in 417 (27.8%) students, followed by position of tooth in 380 (25.3%), shape of tooth in 327 (21.8%), size of tooth in 303 (20.2%), lip shape in 56 (3.7%) and gingival colour and position in 17 (1.1%) students. No statistically significant association between patient's dental appearance with their smile satisfaction was found ($P > 0.05$). (Table 1)

Table 1: Frequency distribution N (%) of patients and association between perceived satisfaction of patient's dental appearance with cause of their dissatisfaction

Satisfaction with their smile	What according to you is not satisfactory about your smile?						Total	Pearson Chi-Square	P value
	Lip shape	Tooth colour	Tooth shape	Tooth size	Tooth position/arrangement	Gingival color & position			
Highly satisfied	11	138	121	109	127	2	508	17.560	0.063*
	0.7%	9.2%	8.1%	7.3%	8.5%	0.1%	33.9%		
Satisfied	26	182	147	124	163	12	654		
	1.7%	12.1%	9.8%	8.3%	10.9%	0.8%	43.6%		
Not satisfied	19	97	59	70	90	3	338		
	1.3%	6.5%	3.9%	4.7%	6.0%	0.2%	22.5%		
Total	56	417	327	303	380	17	1500		
	3.7%	27.8%	21.8%	20.2%	25.3%	1.1%	100.0%		

* P value > 0.05 represents that the observed result is not statistically significant

Gender wise, 634 (82.6%) females are more conscious about their smile in front of the opposite sex than their counterparts, 494 (67.5%) males. Males represented

statistical significance ($P < 0.05$) whereas females showed no statistical significance ($P > 0.05$) with their smile satisfaction (Table 2).

Table 2: Association of gender with satisfaction of smile

Satisfaction with their smile	Does your smile make you conscious in presence of opposite sex?							
	Female				Male			
	Yes	No	Pearson chi-square	P value	Yes	No	Pearson chi-square	P value
Highly satisfied	133	39	4.218	0.121*	179	157	59.533	0.001†
	17.3%	5.1%			24.5%	21.4%		
Satisfied	276	53			264	61		
	35.9%	6.9%			36.1%	8.3%		
Not satisfied	225	42			51	20		
	29.3%	5.5%			7.0%	2.7%		
Total	634	134			494	238		
	82.6%	17.4%			67.5%	32.5%		

* P value > 0.05 represents that the observed result is not statistically significant

† P value < 0.05 represents that the observed result is statistically significant

When the students were analysed on the basis of other components of PIDAQ, it was found that 713 (47.5%) students hide their teeth while smiling, 1124 (74.9%) were comfortable showing their teeth while smiling, 889 (59.3%) like to display their teeth in mirrors, photographs and videos, 704 (46.9%) consider others' thoughts on their smile, 1128 (75.2%) felt conscious in front of the opposite sex, 611 (40.7%) wished that their teeth looked better, 1191 (79.4%) students do not believe that teeth

are the only reason for their dissatisfaction with their smile (Table 3). Participants who felt comfortable showing their teeth, hid their teeth while smiling, were influenced by perceived social views, felt conscious around the opposite sex, or were dissatisfied with their dental appearance represented a statistically significant association between attitude and practice with smile satisfaction ($p < 0.05$), thus rejecting the null hypothesis.

Table 3: Association of attitudes and practices with satisfaction of smile

S. No	Attitude and practice	Highly satisfied (n=508)	Satisfied (n=654)	Not Satisfied (n=338)	Total (n=1500)	Pearson Chi-Square	P value
1	Hide teeth while smiling	211	319	183	713	13.653	0.001†
		41.5%	48.8%	54.1%	47.5%		
2	Comfortable to show teeth	426	465	233	1124	33.131	0.000†
		83.9%	71.1%	68.9%	74.9%		

3	Like to display teeth	314	390	185	889	4.275	0.118*
		61.8%	59.6%	54.7%	59.3%		
4	Perceived notion about views	230	268	206	704	36.522	0.000†
		45.3%	41.0%	60.9%	46.9%		
5	Conscious due to opposite sex	312	540	276	1128	78.342	0.000†
		61.4%	82.6%	81.7%	75.2%		
6	Wishes for better teeth	194	264	153	611	4.275	0.118*
		38.2%	40.4%	45.3%	40.7%		
7	Dissatisfied with looks due to teeth	86	124	99	309	20.865	0.000†
		16.9%	19.0%	29.3%	20.6%		

* P value > 0.05 represents that the observed result is not statistically significant

† P value < 0.05 represents that the observed result is statistically significant

241 (31.9%) people with healthy gums (absence of periodontal disease) report the highest satisfaction with their smile. Individuals with pocket depths of 4-5 mm

(moderate gum disease) or 6 mm+ (severe gum disease) show relatively stable satisfaction levels, with around 36-37% in the highly satisfied category (Figure 1).

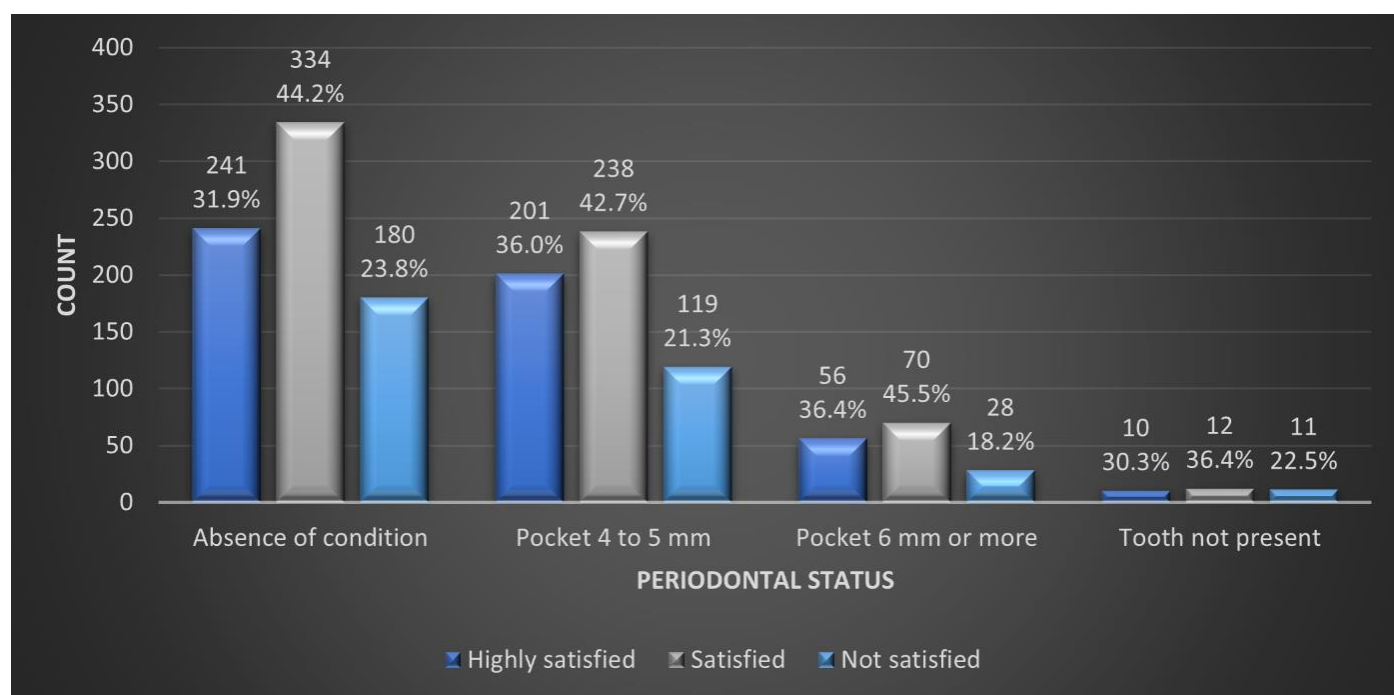


Figure 1: Association of periodontal status with satisfaction of smile

Uncertainly 65 (45.1%) individuals with 6-8 mm severe loss of attachment are satisfied with their smile (Figure 2).

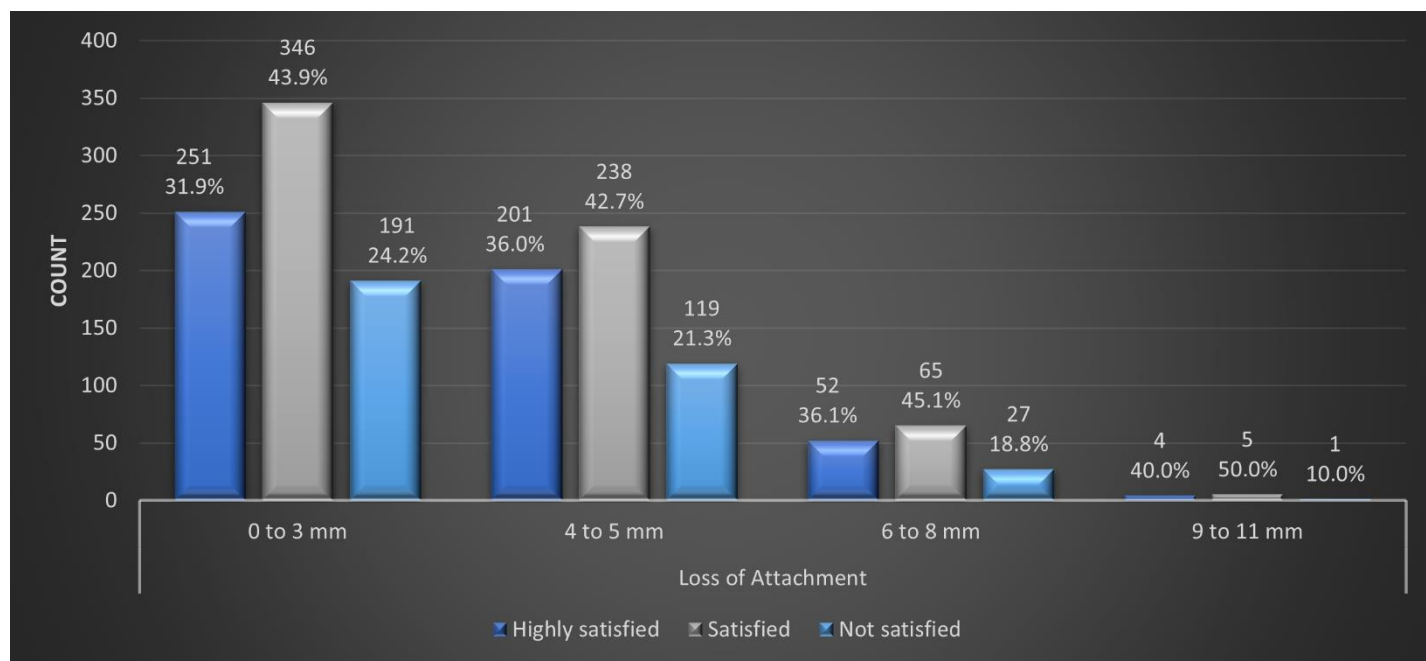


Figure 2: Association of loss of attachment with satisfaction of smile

Individuals with varying opinions on their smiles showed statistically significant differences for every component. 218 (42.9%) highly satisfied individuals, 273 (41.7%) satisfied individuals fall into no intervention needed category. 147 (43.5%) individuals in the not satisfied category fall under the no intervention needed category, representing a lack of dental self confidence (Figure 3). No significant association was found between periodontal status, loss of attachment with smile satisfaction. Intervention urgency was significantly associated with smile satisfaction. SPSS 26.0 software is utilized for evaluation with data assessed through Pearson Chi Square Test.

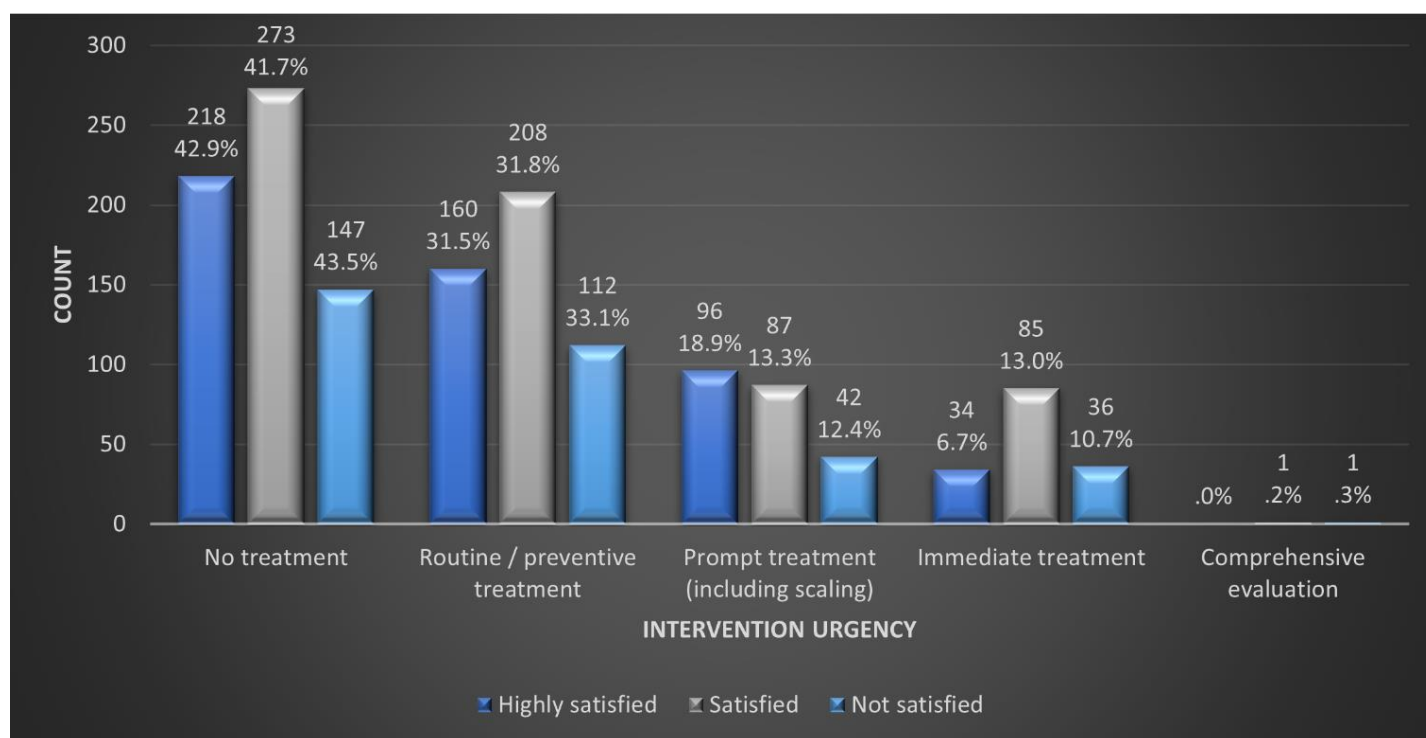


Figure 3: Association of intervention urgency with satisfaction of smile

Discussion

This study aims to evaluate the impact of dental esthetics and oral health status on psychosocial well-being and dental self-confidence among university students, and

also to evaluate the need for improving dental esthetics to gain dental self-confidence. The subjects included in the study were university students from different courses, except dental students, as it was found that

there is a difference in the opinions between dental students and other students. Therefore, the study population was a group that was more concerned about their looks and was at a stage of job placements. The study shows that females are less satisfied with their smile as compared to males. Further studies have found that women are more affected by dental esthetics and have more psychosocial influence. ^[2] Tooth color is the most common reason for dissatisfaction. According to the research done by S. Kershaw et al. in 2008, when discolored teeth were present, participants rated their public compatibility, mental capacity, and psychosocial status lower. ^[3] As the other components of PIDAQ were examined, it was observed that a significant number of individuals in the highly satisfied group were comfortable showing their teeth while smiling and liked how their teeth appeared in the mirror, photographs, and videos. This is related to the fact that higher self-esteem is associated with the practice of displaying self-confidence. When we talk about dental self-confidence, it has been proven by Alina Venete et al. that pupils with the worst oral aesthetics exhibited higher degrees of perfectionism and lower self-esteem. ^[4] This makes social gatherings uncomfortable for these individuals and develops an inferiority complex. Analysing the oral health status, tooth loss due to caries is the most important cause of dissatisfaction with one's smile, and hence, it implies that tooth loss can lead to decreased self-esteem among individuals. The majority of studies show that the lack of dental issues contributes to positive self-image and well-being. Highly satisfied individuals fall into the no intervention needed category, whereas individuals in the not satisfied category, opting for no intervention, demonstrate that the absence of dental issues contributes to positive self-image and well-being. Self-satisfaction, psychological well-being, and dental self-confidence are correlated; if any one of them is affected, a person may develop low self-esteem and may suffer as a result. From a professional point of view, better oral health is needed in various fields so that a good, positive image is created. Helen C. Gift stated in 1992 that adults' quality of life has been influenced by their oral health. Poor dental health may have long-term effects on quality of life. Another example is how eating habits are affected by poor oral health. Beyond just chewing, tasting, and mastication, eating as a social function is enjoyable and emotionally essential for an individual's well-being. Negative reactions are more

pronounced when the orofacial region is unappealing than when other body parts are. ^[5] Smile includes good dentition status, periodontal status, proper alignment, and absence of any oral conditions. Research indicates that self-perceived needs for dental aesthetics are strongly correlated with psychosocial well-being, which is a crucial component of an individual's overall health and shouldn't be jeopardized due to poor dental aesthetics. ^[6] Hiding one's teeth while smiling and not being comfortable showing one's teeth during a smile is a reflection of dissatisfaction; therefore, efforts should be made to restore esthetics through restorations and other interventions, thus enabling people to develop confidence and smile freely. ^[7] Further, females are more conscious than males, leading us to believe that the stereotypical role for females still persists, and the highest beauty levels are assigned for females only, making them more conscious about their beauty. Earlier research shows that dental esthetics and oral health status significantly affect the psychosocial well-being of individuals, which can be seen in their attitudes and practices and can have an impact on their confidence levels. ^[8-12]

Age and sex may impact an individual's opinion of satisfaction. ^[13] Discomfort and esthetics are mentioned as major risks and benefits related to prosthodontics. ^[14] A beautiful smile is a complex composition that includes at least white, properly positioned teeth that are spaced and framed symmetrically and harmoniously with the lips and gingiva. ^[15] Research indicates that self-perceived needs for dental aesthetics are strongly correlated with psychosocial well-being, which is a crucial component of an individual's overall health and shouldn't be jeopardized due to poor dental aesthetics. ^[16] Esthetics aren't just about jaw repair, facial profile modification, and smile correction. Overall, aesthetics are important because they help people feel more confident. ^[17] Furthermore, a variety of variables affect how people perceive oral aesthetics. Unstudied factors, including lifestyle, socioeconomic position, ongoing cosmetic procedures, and treatment outcome expectations, may present study possibilities in the future. ^[18]

Limitations: Our study also suggests similar results but has some limitations. Firstly, this study constitutes only young people, so it cannot be applied to elderly people with better professional status. Secondly, all students

are pursuing higher education, so it will not represent the general population.

Conclusions

Based on the findings of the current study, it can be concluded that self-perception of dental esthetics significantly influences an individual's social and psychological well-being, impacting behavior and self confidence. However, the study has certain limitations. It focused on a younger population, and some participants may have previously undergone esthetic dental treatments, potentially affecting the overall satisfaction results. Future research could include a separate cohort of individuals who have received esthetic dental corrections to compare their satisfaction levels with those who have not.

Acknowledgements

I would like to thank my husband Er. Shashank Sharma for supporting me through thick and thin.

Data availability

Data presented in the study are openly available in Harvard Dataverse at doi: 10.7910/DVN/G3DEKQ

References

1. World Health Organization: Oral health surveys: basic methods - 5th edition. 2013. Available at: <https://www.who.int/publications/i/item/9789241548649>
2. Chakradhar K, Doshi D, Kulkarni S, Reddy BS, Reddy S, Srilatha A. Self perceived psychosocial impact of dental aesthetics among young adults: a cross sectional questionnaire study. *Int J Adolesc Med Health*. 2017 Nov 23;32(3). doi: 10.1515/ijamh-2017-0129
3. Kershaw S, Newton JT, Williams DM, et al.: The influence of tooth colour on the perceptions of personal characteristics among female dental patients: comparisons of unmodified, decayed and 'whitened' teeth. *Br Dent J*. 2008, 204(5):256-57. doi: 10.1038/bdj.2008.134
4. Venete A, Trillo-Lumbreras E, Prado-Gascó VJ, Bellot-Arcís C, Almerich-Silla JM, Montiel-Company JM. Relationship between the psychosocial impact of dental aesthetics and perfectionism and self-esteem. *J Clin Exp Dent*. 2017;9(12):e1453-e1458. doi: 10.4317/jced.54481
5. Gift HC, Redford M. Oral health and the quality of life. *Clin Geriatr Med*. 1992 Aug;8(3):673-83.
6. AlSagob EI, Alkeait F, Alhaimy L, Alqahtani M, Hebbal M, Ben Gassem AA. Impact of Self-Perceived Dental Esthetic on Psycho-Social Well-Being and Dental Self Confidence: A Cross-Sectional Study Among Female Students in Riyadh City. *Patient Prefer Adherence*. 2021 May 6;15:919-926. doi: 10.2147/PPA.S308141
7. Samorodnitzky-Naveh GR, Geiger SB, Levin L. Patients' satisfaction with dental esthetics. *J Am Dent Assoc*. 2007;138(6):805-8. doi: 10.14219/jada.archive.2007.0269
8. Newton JT, Prabhu N, Robinson PG. The impact of dental appearance on the appraisal of personal characteristics. *Int J Prosthodont*. 2003;16(4):429-34
9. Davis LG, Ashworth PD, Spriggs LS: Psychological effects of aesthetic dental treatment. *J Dent*. 1998, 26(7):547-54. doi: 10.1016/s0300-5712(97)00031-6
10. Wolfart S, Quaas AC, Freitag S, Kropp P, Gerber WD, Kern M. General well-being as an important co-factor of self-assessment of dental appearance. *Int J Prosthodont*. 2006;19(5):449-54.
11. Ingham JG, Kreitman NB, Miller PM, Sashidharan SP, Surtees PG. Self-appraisal, anxiety and depression in women. A prospective enquiry. *Br J Psychiatry*. 1987;151:643-51. doi: 10.1192/bjp.151.5.643
12. Zlot SI, Herrmann M, Hofer-Mayer T, Adler M, Adler RH. A comparison of self-concept and personality disorders in women with pain accounted for by psychological factors, women with major depression, and healthy controls. *Int J Psychiatry Med*. 2001;31(1):61-71. doi: 10.2190/1120-85JA-AAMG-LTKE
13. Vallittu PK, Vallittu AS, Lassila VP. Dental aesthetics--a survey of attitudes in different groups of patients. *J Dent*. 1996;24(5):335-8. doi: 10.1016/0300-5712(95)00079-8
14. Teófilo LT, Leles CR. Patients' self-perceived impacts and prosthodontic needs at the time and after tooth loss. *Braz Dent J*. 2007;18(2):91-6. doi: 10.1590/s0103-64402007000200001
15. Montero J, Gómez Polo C, Rosel E, Barrios R, Albaladejo A, López-Valverde A. The role of personality traits in self-rated oral health and

preferences for different types of flawed smiles. J Oral Rehabil. 2016;43(1):39-50. doi: 10.1111/joor.12341

16. Ahmed YT, Al Saffan A, Al Malky AS, Al Nughaimshi HA, Al Herbisch RJ, Al Yahya RE et al. Dental esthetics and its effect on psychological well-being in a university hospital in Riyadh, KSA. Saudi Journal of Oral Sciences. 2020 Sep 1;7(3):189–93. doi: 10.4103/sjos.SJOralSci_33_20
17. Manipal S, Mohan CS, Kumar DL, Cholan PK, Ahmed A, Adusumilli P. The importance of dental aesthetics among dental students assessment of knowledge. J Int Soc Prev Community Dent. 2014;4(1):48-51. doi: 10.4103/2231-0762.131266
18. Stojilković M, Gušić I, Berić J, Prodanović D, Pecikozić N, Veljović T, Mirnić J, Đurić M. Evaluating the influence of dental aesthetics on psychosocial well-being and self-esteem among students of the University of Novi Sad, Serbia: a cross-sectional study. BMC Oral Health. 2024 Feb 26;24(1):277. doi: 10.1186/s12903-024-04002-5