

# Correlation of self-esteem with oral hygiene behaviour and oral health status among adult dental patients

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*Key words: Self-esteem, oral health, oral hygiene, adult patients*

*Parole chiave: Autostima, salute orale, igiene orale, pazienti adulti*

## Abstract

**Background.** Self-esteem is a psychological construct that has been consistently linked to general and oral health. However, most studies interpolating self-esteem and oral health behaviour have been focused on children and adolescents, and there is a dearth of scientific literature on adults. Hence, this study, that is aimed to correlate self-esteem with oral hygiene behaviour and oral health status in Telugu-speaking adult dental patients.

**Methods.** A cross-sectional study involving adult dental patients who were 35–44 years of age and visited the Government Dental Hospital in Hyderabad city, India, was conducted. Self-esteem was assessed using the Telugu-translated version of the Rosenberg Self-esteem Scale, oral health behaviour was determined using the Oral Hygiene Behaviour Index and oral health assessment was performed using the World Health Organization Dentition status, the modified Community Periodontal Index and the Loss of Attachment.

**Results.** A total of 456 patients were included in this study. Most of the participants reported low self-esteem, with a mean score of  $11.8 \pm 2.7$ . Patients with primary school education reported higher self-esteem scores than those with high school and university education ( $p = 0.0001$ ). Furthermore, low Oral Hygiene Behaviour Index scores (64.9%) in the study population and high Decayed, Missing, Filled Teeth scores in females ( $5.7 \pm 4.4$ ;  $p = 0.09$ ) were noted. None of the variables (Decayed, Missing, Filled Teeth scores, Oral Hygiene Behaviour, gingival bleeding and Loss of Attachment) were significantly correlated with self-esteem. Multivariable regression analysis revealed that younger age, lower educational level and presence of dental caries resulted in higher odds for high self-esteem ( $p < 0.01$ ).

**Conclusion.** The findings indicated a significant association between self-esteem and oral health. Individuals with dental caries had significantly higher odds for high self-esteem. Thus, this study emphasises the relevance of psychosocial factors, such as self-esteem, as the mediator of oral health.

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## Introduction

Oral health is an essential and multifaceted domain of health that can affect general health and the overall sense of well-being. According to the World Health Organization (WHO) (1), oral health is “a state of being free from mouth and facial pain, oral and throat cancer, oral infection and sores, periodontal disease, tooth decay, tooth loss and other diseases and disorders that limit an individual’s capacity in biting, chewing, smiling, speaking and in psychosocial well-being”. Oral health is influenced by a plethora of elements, such as cultural background (2), health needs, beliefs, demographic characteristics (3), educational level (3), socioeconomic status (4), habits (5), psychosocial factors (6) and oral hygiene behaviour (7).

Self-esteem is one of the key psychosocial predictors of oral health. Self-esteem can be defined as ‘a personal judgement of an individual’s worthiness, derived from the reflected appraisal of others, and having a dimension with “positive” and “negative” ends’ (8). Various oral pathologies, such as malocclusion, anterior traumatic tooth, periodontal (gum) disease, tooth loss and untreated decay may impact self-esteem. The ability to cope with adversity is greater in individuals with higher self-esteem. A study has reported that individuals with higher self-esteem rated themselves as having better oral health and oral hygiene behaviour (9).

Oral hygiene behaviour is determined by one’s beliefs and attitudes towards maintaining dental health. Regular personal oral health behaviours, such as tooth brushing, flossing, use of fluoride toothpaste and tongue cleaning are crucial for preventing dental diseases (10). An individual’s self-imposed control may influence the intentions to adopt a particular behaviour. Several studies (11-13) have shown that individuals with low self-esteem are significantly more at risk of having poor oral health

behaviour than those with high self-esteem. Knecht et al (14) reported that regular tooth brushing requires perseverance and can be enhanced by high self-esteem, which is a common psychological factor that influences dental self-care. Likewise, studies conducted by Regis et al (15) and Honkala et al (16) observed that self-esteem plays a pertinent role in mediating changes in dental health behaviour and that tooth brushing is strongly influenced by an individual’s social behaviour. Therefore, an increase in self-esteem may provide a stimulus to instil desirable dental health behaviour.

Studies interpolating self-esteem and oral health behaviour have been focused on children/adolescents (9, 15, 17-19), and there is a lack of relevant scientific literature on adults. Recognizing the importance of self-esteem in maintaining oral health, this study aimed to correlate self-esteem with oral hygiene behaviour and oral health status in Telugu-speaking adult dental patients.

## Materials and methods

### *Participants*

A cross-sectional study was performed to assess and correlate self-esteem with oral hygiene behaviour and oral health status in adult dental patients aged 35–44 years. Before commencing the study, ethical approval was obtained from the Institutional Ethics Committee of Government Dental College and Hospital (GDC&H), Hyderabad, India (GDCH-IEC/PG/20-21/08). Furthermore, permission to conduct the study was obtained from the principal of GDC&H. This study adhered to the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) guidelines (20). The study sample was obtained from the outpatient department (OPD) of GDC&H. All study participants were assured of confidentiality and anonymity. Based on the self-esteem prevalence in a previous study (21) (43.7%),

with an expected proportion of 0.43 and a precision of 6% at a confidence interval of 99%, a minimum sample size of 455 was required.

#### *Inclusion and exclusion criteria*

All participants who provided informed consent and could read and understand Telugu were included in the study. All eligible participants were provided oral and written information about the purpose of the study. Upon explanation of the study and agreement to participate in it, signed consent form based on the Declaration of Helsinki was obtained. Patients who were not willing to undergo oral examination and those with systemic conditions, such as diabetes, hypertension and pregnancy, which may influence oral health, were excluded. Moreover, patients with a history of antibiotic usage in the last 39 days and those with oral habits such as tobacco chewing and alcohol consumption were excluded. Also, patients who had undergone oral prophylaxis in the last 3 months were excluded from the study.

#### *Clinical assessment*

The survey tool was a questionnaire categorized into four parts. The first part recorded the demographic details, including age, sex and education. The second part comprised the 10-item Telugu-translated version of the Rosenberg Self-esteem Scale (RSES-T) (22). The third part included the eight-item Oral Hygiene Behaviour Index (OHB Index) developed by Buunk-Werkhoven et al (23). The fourth part of the questionnaire was to register clinical oral examination.

The English version of RSES was translated to Telugu by two independent translators, with one translator being aware of the objectives of the study. A unified translated version was developed with consensus from the translations of both translators, which was then back-translated

into English by two other independent translators. An expert committee comprising all translators and two dentists from the Public Health Department developed the final version of RSES-T and validated it. The internal consistency of RSES-T was found to be good, with a Cronbach's  $\alpha$  of 0.82. Responses for the 10-item RSES-T were recorded on a four-point Likert scale varying from 0 'strongly agree' to 4 'strongly disagree'. The five negatively worded items (2, 5, 6, 8 and 9) were reverse coded. The total calculated score ranged from 0 to 30, with a score of <15 indicating low self-esteem, >25 signifying high self-esteem and 15–25 denoting normal self-esteem.

Oral hygiene behaviour was assessed using the eight-item OHB index (23), which is a measure of overall oral hygiene behaviour based on professional standards. Item scores were assigned as weights ranging from 0 to 2. The scores were then summed and combined into an overall score ranging from 0 to 16, with a higher score indicating a higher level of self-care oral hygiene behaviour.

The questionnaire was distributed to the study participants in the OPD of GDC&H. Adequate time was given to answer the questionnaires. Throughout the study period, the participants were given the opportunity to leave if they experienced any form of discomfort. After completing the questionnaire, they were thanked for volunteering.

Clinical oral examination was performed by a single trained and calibrated dentist based on the WHO Oral Health Assessment Form (24). Dentition status, modified Community Periodontal Index (CPI) and Loss of Attachment (LOA) were recorded for eligible participants.

#### *Statistical analysis*

The completed questionnaires were collected, and the data were entered and analyzed using SPSS (Statistical Package

for Social Sciences) software 24.0 (IBM, New York). Descriptive statistics were expressed as means and standard deviations for numerical variables and as frequencies and percentages for categorical variables. Inferential statistics comprised chi square test, analysis of variance and t-test. In multivariate logistic regression model, Model 1 included only demographic variables, such as age, sex and educational level, Model 2 included the variables in Model 1 as well as oral health status (dental caries and periodontal disease) and Model 3 included the variables in Models 1 and 2 as well as oral hygiene behaviour. The level of significance was set at  $p \leq 0.01$ .

A direct acyclic graph (Figure 1) was drawn to illustrate the direct and indirect causal pathways among self-esteem, oral hygiene behaviour and oral health status. Covariates such as sex and educational level were also added to identify the biased pathways. To design a model containing the exposure factors, outcome variable and other

relevant variables, the DA Gitty software program (version 3.0) was used.

## Results

The study sample included 456 participants [227 (49.8%) males and 229 (50.2%) females] with a mean age of  $38.8 \pm 3.3$  years. It was observed that 15.2% of the study sample had only primary school education, 60.3% completed high school education and 24.5% possessed a university degree.

The overall mean RSES-T score for the study population was  $11.8 \pm 2.7$ . Males and females had comparable mean RSES-T scores ( $p = 0.41$ ). Participants with only primary school education reported significantly higher self-esteem scores ( $12.8 \pm 2.5$ ) than those with high school ( $12.1 \pm 2.6$ ) and university education ( $10.7 \pm 2.6$ ) ( $p = 0.0001$ ). Tukey's multiple post-hoc test indicated that university-educated

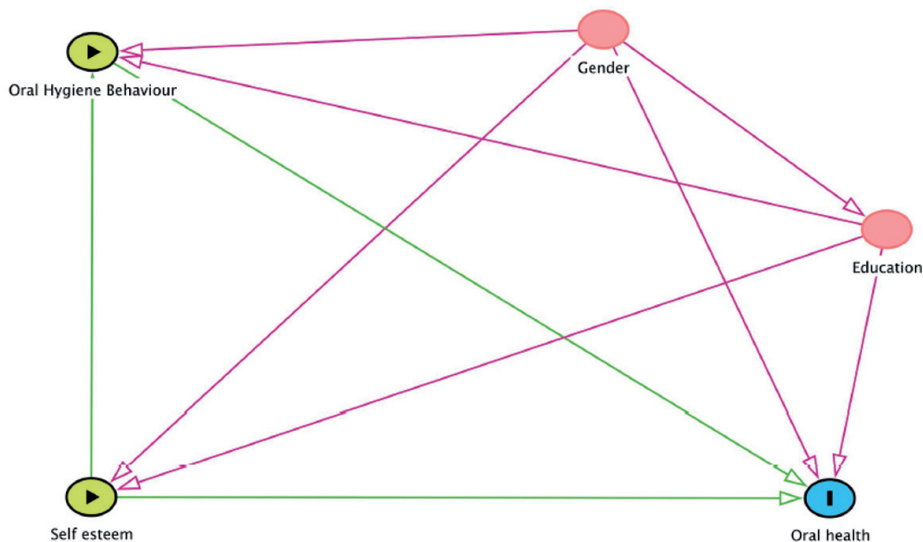


Figure 1 - Directed acyclic graph representing causal relations between self-esteem (exposure), oral hygiene behaviour (exposure) represented by the green oval with the triangle and oral health status (outcome) represented by the blue oval with the line. Variables represented as pink ovals are ancestors of exposure and outcome. Pink lines are biased paths, and the green line between exposure and outcome is the causal path of interest.

Table 1 - Comparison of mean RSES-T Self-esteem scores and OHB scores of study subjects based on Gender and Education

Variable	Mean Self-esteem score (Mean $\pm$ SD)	p-value	Mean OHB scores	p-value
<b>Gender</b>				
Male	11.7 $\pm$ 2.7	0.41	7.7 $\pm$ 1.8	0.91
Female	11.9 $\pm$ 2.7		7.7 $\pm$ 1.9	
<b>Education</b>				
Primary school	12.8 $\pm$ 2.5	<b>0.0001*</b>	7.9 $\pm$ 1.6	<b>0.07</b>
High school	12.1 $\pm$ 2.6		7.6 $\pm$ 1.8	
University	10.7 $\pm$ 2.6		8.0 $\pm$ 2.0	
Total	11.8 $\pm$ 2.7		7.7 $\pm$ 1.8	
<b>Pair wise comparison by Tukey's multiple post hoc test</b>				
Primary versus High	p = 0.11		p = 0.4	
Primary versus University	<b>p = 0.0001*</b>		p = 0.8	
High versus University	<b>p = 0.0001*</b>		p = 0.07	

\* $p \leq 0.01$  statistical significance

participants had significantly lower RSES-T scores than those with only primary ( $p = 0.0001$ ) and high school ( $p = 0.0001$ ) education. The overall mean OHB score of the study participants was  $7.7 \pm 1.8$ . Although patients who possessed a university degree had better OHB Index scores ( $8.0 \pm 2.0$ ) than those with only primary ( $7.9 \pm 1.6$ ) and high school ( $7.6 \pm 1.8$ ) education, the difference was not statistically significant ( $p = 0.07$ ) (Table 1).

When categorized according to levels of self-esteem, most participants reported low self-esteem scores (62.3%) and low OHB Index scores (64.9%). A statistically significant difference was observed based on educational levels. A high number of university degree holders reported low self-esteem levels (79.5%) and a high number of participants with high school education (69.5%) obtained low OHB Index scores (score  $< 8$ ), with  $p$  values of 0.0001 and 0.007, respectively (Table 2).

The total mean DMFT score was found to be higher in females ( $5.7 \pm 4.4$ ) than in males ( $5.0 \pm 3.7$ ), with a  $p$  value of 0.09 (not significant). Only the missing teeth (M)

component score was noted to be statistically significant based on the level of education ( $p = 0.01$ ), where participants with primary school education had a higher mean number of missing teeth ( $3.3 \pm 4.5$ ). Although the total mean DMFT score was higher for participants with primary school education ( $5.8 \pm 4.9$ ) than those with high school ( $5.4 \pm 4.1$ ) and university education ( $5.1 \pm 3.5$ ), the difference was not statistically significant ( $p = 0.48$ ).

Furthermore, 57% of the study sample (55% of males and 58.9% of females) experienced bleeding on probing (score of 1). Although most university degree holders (50%) did not show bleeding on probing (score of 0) and most participants with primary (55%) as well as high school education (61.4%) showed bleeding on probing (score of 1), it was not statistically significant ( $p = 0.5$ ).

On a positive note, 80.4% of the study sample had absence of periodontal pockets (score of 0). In addition, none of the participants had a pocket depth of  $>6$  mm (score of 2).

When CPI pocket depth scores were

Table 2 - Distribution of study population according to the levels of Self-esteem and OHB scores based on Gender and Education

Variable	Levels of Self-esteem n(%)		p-value	Levels of Oral Hygiene Behaviour n (%)		p-value
	Low self-esteem (score 0-15)	High self-esteem (score 26-30)		Low OHB (Score 0-8)	High OHB (Score 9-16)	
<b>Gender</b>						
Male	142 (62.5%)	85 (37.5%)	0.90	150 (66.1%)	77 (33.9%)	0.60
Female	142 (62.1%)	87 (37.9%)		146 (63.7%)	83 (36.3%)	
<b>Education</b>						
Primary school	30 (43.5%)	39 (56.5%)	<b>0.0001*</b>	46 (66.7%)	23 (33.3%)	<b>0.007*</b>
High school	165 (60%)	110 (40%)		191 (69.5%)	84 (30.5%)	
University	89 (79.5%)	23 (20.5%)		59 (52.6%)	53 (47.4%)	
<b>Total</b>	<b>284 (62.3%)</b>	<b>172 (37.7%)</b>		<b>296 (64.9%)</b>	<b>160 (35.1%)</b>	

\* $p \leq 0.01$  statistical significance

compared based on the level of education, a significant difference was observed ( $p = 0.01$ ). Those with only primary school education not only recorded a higher percentage for tooth not present (72.4%) but also had the highest number of individuals with score 1 (18.8%) for the remaining teeth.

The majority of the participants had a score of 0 for LOA (80%). Although a variation in scores was noted based on sex, i.e. a higher number of females had a score of 1, it was not significant ( $p = 0.48$ ). A small percentage of the participants (2.8%) with only primary school education recorded a score of 2 for LOA, as against 0% for university-educated participants ( $p = 0.01$ ).

All parameters, such as decayed teeth, missing teeth, DMFT scores, OHB Index and LOA showed positive correlation with self-esteem. On the contrary, filled teeth and gingival bleeding demonstrated a negative correlation. However, none of the correlations were significant (Table 3).

In Model 1, higher odds for high self-esteem was significant only for age ( $p = 0.0001$ ) and primary school education ( $p = 0.004$ ). Similarly, Model 2 evidenced significant influence of age (odds ratio [OR] = 0.6;  $p = 0.009$ ), primary school education (OR = 3.74;  $p = 0.0001$ ) and high school education (OR = 1.99;  $p = 0.003$ ) on high self-esteem. On the contrary, oral health

Table 3 - Correlation of Self-esteem with Oral Hygiene Behaviour and Oral Health Status

Variables	r-value	p-value
DT	0.046	0.31
MT	0.037	0.42
FT	-0.003	0.94
DMFT	0.05	0.21
Oral Hygiene Behaviour	0.042	0.36
Gingival bleeding	-0.009	0.85
LOA	0.034	0.46

r value – Correlation coefficient



Table 4 - Multivariable Logistic Regression Analysis of High Self-esteem with Age, Gender, Education, Dental Caries, Periodontal Disease and Oral Hygiene Behaviour

Factors		Model 1			Model 2			Model 3				
	OR	95% CI for OR	P-value	OR	95% CI for OR	P-value	OR	95% CI for OR	P-value			
		Lower	Upper		Lower	Upper		Lower	Upper			
Age groups												
<=40yrs	0.51	0.37	0.72	0.0001*	0.60	0.41	0.88	0.009*	0.58	0.39	0.86	0.006*
>=41yrs	Ref.			Ref.					Ref.			
Gender												
Male	0.76	0.54	1.06	0.10	0.95	0.66	1.38	0.80	0.93	0.64	1.34	0.68
Female	Ref.				Ref.				Ref.			
Education												
Primary school	2.18	1.28	3.71	0.004*	3.74	2.02	6.92	0.0001*	3.52	1.89	6.56	0.0001*
High school	1.19	0.84	1.66	0.32	1.99	1.27	3.12	0.003*	1.85	1.16	2.95	0.009*
University	Ref.				Ref.				Ref.			
Dental Caries												
Without	-	-	-	-	Ref.				Ref.			
With	-	-	-	-	0.61	0.38	0.98	0.04	0.57	0.35	0.93	0.01*
Periodontal Disease												
Without	-	-	-	-	Ref.				Ref.			
With	-	-	-	-	0.65	0.44	0.98	0.03	0.64	0.43	0.97	0.03
Oral Hygiene Behaviour												
Low	-	-	-	-	-	-	-	-	1.28	0.85	1.93	0.23
High	-	-	-	-	-	-	-	-	Ref.			

\*p≤0.01 statistical significance

Model 1 included the demographic variables such as age, gender and education

Model 2 included the variables of model 1 as well as oral health status (dental caries and periodontal disease)

Model 3 included variables of model 1,2 and oral hygiene behaviour

status, i.e. dental caries ( $OR = 0.61$ ;  $p = 0.04$ ) and periodontal disease ( $OR = 0.65$ ;  $p = 0.03$ ), did not show any significant association with high self-esteem.

Younger age ( $OR = 0.58$ ;  $p = 0.006$ ), educational levels such as primary school ( $OR = 3.52$ ;  $p = 0.0001$ ) and high school education ( $OR = 1.85$ ;  $p = 0.009$ ) and presence of dental caries ( $OR = 0.57$ ;  $p = 0.01$ ) were significantly associated with high self-esteem, as demonstrated in Model 3. Contrarily, individuals with periodontal disease and low oral hygiene behaviour had 0.64 and 1.28 odds for high self-esteem, respectively, which were not statistically significant (Table 4).

## Discussion

This study examined the influence of self-esteem on oral hygiene behaviour and oral health status in adult dental patients aged 35–44 years. The findings showed that individuals with dental caries had significantly higher odds for high self-esteem ( $p = 0.01$ ); hence, the null hypothesis was rejected.

Till date, no studies have determined the association between self-esteem and oral health in Indian adults. In this study, the age group of 35–44 years was selected because it is the global indicator age group reflecting the complete effect of dental caries, the level of severe periodontal involvement and the general effects of oral health care (24).

The RSES is the simplest method for measuring global self-esteem and possesses adequate test–retest reliability and validity, thereby allowing universal applicability (25); hence it was utilized for this study. In spite of using self-constructed questionnaires as a measure of oral hygiene behaviour like in previous studies (3, 15, 26), we employed a validated tool based on the theory of planned behaviour, i.e. OHB Index (23). This is the only index that provides a comprehensive

measure of frequency, moment, force, duration, method of tooth brushing, usage of fluoridated toothpaste as well as interdental and tongue cleaning. To allow international comparisons, oral health was assessed based on the WHO Oral Health Assessment Form for adults (24).

The findings showed that most of the study population had low self-esteem with a mean score of  $11.8 \pm 2.7$ , which may be related to the phenomenon of life trajectory of self-esteem (27). It posits that one's self-esteem is relatively high in childhood, drops during adolescence, rises gradually throughout adulthood and then declines sharply in old age. This may be a plausible explanation for low self-esteem scores in this age group, wherein younger age, lower level of education and presence of dental caries had higher odds for high self-esteem ( $p < 0.01$ ).

In this study, no significant sex-based differences were perceived either in the item responses or in the mean self-esteem scores for RSES-T. Grecu et al (18) also reported no significant sex-based difference in self-esteem scores in Romanian adults. On the contrary, Macgregor and Balding (9) documented a sex-based difference in self-esteem scores, with higher scores for males than for females ( $p < 0.001$ ) in their investigation. Our finding reveals the bright side of developing India, with females becoming more independent in their personal and career choices. This might have indirectly increased their self-esteem levels, making it on par with those of males. Earlier studies (9, 10) have often stated that males have higher levels of self-esteem than females.

In India, educational qualification is not correlated with the financial status of an individual. Moreover, expectations to meet the societal standards might be lower in individuals with only primary school education. This has been proven by the findings of this study, wherein participants



with only primary school education reported higher self-esteem scores than those with high school and university education ( $p = 0.0001$ ). On the contrary, Knecht et al (14), in their cross-sectional study in Oulu, Finland, noted that individuals with university or college qualification had higher self-esteem than others ( $p = 0.5$ ), which could be attributed to the relatively stable and enduring level of self-esteem in participants with university degree in other countries.

A similar study in Chinese adults (21) found that high self-esteem was associated with good clinical oral health status, such as fewer decayed and missing teeth and more filled teeth. The present study showed contrasting results, wherein the total DMFT scores and the number of decayed teeth were higher in individuals with high self-esteem ( $p > 0.01$ ). The non-threatening nature of dental diseases might have contributed to the neglective behaviour of individuals. Additionally, the high cost of dental treatment and lack of dental insurance in India, less pressure from the social milieu and self-confidence with their present health could have contributed to high self-esteem.

This study observed low OHB Index scores (64.9%) in the study population. Although the OHB scores did not significantly influence the level of self-esteem, it can be inferred that individuals with poor oral hygiene behaviour might have developed more decayed teeth, which could have indirectly influenced their self-esteem.

Based on the OHB scores, it was observed that 67.4% (67.8% of males and 66.8% of females) of the study sample brushed their teeth at least once a day. Conversely, investigations by Knecht et al (14) and Kallestål et al (28) showed that high frequency of tooth brushing was more common in females ( $p = 0.002$ ) and that males had less exemplary behaviour towards oral hygiene ( $p = 0.000$ ). The association of tooth brushing frequency with self-esteem may be confounded by various factors, such

as sex-based roles, peer interactions and cultural emphasis. Moreover, the generalised grooming behaviour could have impacted the self-care behaviour of individuals.

Based on the level of education, a high number of participants with university degree brushed their teeth more than twice a day (35.8%). A similar finding was made by Knecht et al (14), where high frequency of tooth brushing was found to be more common in university degree holders. Greater understanding of the need for oral hygiene and preventive behaviours in university degree holders might be the underlying reasons.

Nevertheless, this study demonstrated higher DMFT scores in females ( $5.7 \pm 4.4$ ;  $p = 0.09$ ). A similar finding was noted in Hong Kong adults (21), where females exhibited poorer tooth conditions, such as more decayed teeth, than males. Therefore, emphasis should be made on oral health programs that include not only awareness and education but also psychological interventions that indirectly enhance the self-esteem of an individual.

A recent study by Shamim et al (29) revealed that probing depth and CPI scores were significantly positively correlated with most of the sub-scale items and total OHIP-14 (Oral Health Impact Profile-14) score in females with low self-esteem. Significant differences were noted in the RSES scores in participants with different plaque levels ( $p < 0.03$ ), and females with less plaque had significantly higher self-esteem. However, till date, none of the studies (3, 5, 9-11, 13, 19, 26, 28) have evaluated the correlation of self-esteem with oral hygiene behaviour and oral health status. This study showed the negative correlation of gingival bleeding with self-esteem ( $r = -0.009$ ,  $p = 0.85$ ). This could be attributed to the fact that although gingival bleeding is a tangible indicator of oral disease, individuals with high self-esteem might have the ability to cope with difficult situations, such as chronic debilitating oral

conditions. Hence, this is another window of opportunity for health personnel to influence the level of self-esteem as part of patient-centered health education.

In this study, the sample size was large enough to provide power, and the data were collected by a single trained and calibrated examiner. Furthermore, this survey can be considered to be the first to provide evidence for the association between self-esteem and oral health among Indian adults, at least those aged 35–44 years.

## Limitations

Nevertheless, several limitations of this study warrant consideration. First, the analysis of cross-sectional data implies that the clear temporal relationship between variables cannot be established. Second, a certain degree of social desirability bias is expected, owing to the self-reporting nature of the self-esteem questionnaire. Finally, the inclusion of a convenience sample from a single institution limits the generalizability of the results.

## Conclusions

The findings from this cross-sectional study aid in understanding the influence of self-esteem on oral health in Indian adult dental patients aged 35–44 years. The results revealed that younger age group, lower educational level and presence of dental caries had significantly higher odds for high self-esteem.

This study emphasises the relevance of psychosocial factors as mediators of oral health. It is necessary to ameliorate the self-esteem of adults to improve their oral hygiene behaviour, which in turn is likely to promote oral health.

## Riassunto

*Correlazione tra autostima, comportamento in tema di igiene orale e stato di salute orale nei pazienti odontoiatrici adulti*

**Premessa.** L'autostima è un costrutto psicologico che è stato costantemente collegato alla salute generale e orale. Tuttavia, la maggior parte degli studi che indagano l'autostima in rapporto con il comportamento della salute orale si sono concentrati su bambini ed adolescenti, mentre vi è carenza di letteratura scientifica sugli adulti. Pertanto, questo studio mirava a correlare l'autostima con il comportamento di igiene orale e lo stato di salute orale nei pazienti odontoiatrici adulti di lingua Telugu.

**Metodi.** È stato condotto uno studio trasversale che ha coinvolto pazienti odontoiatrici adulti di età compresa tra 35 e 44 anni che sono stati visitati dal Government Dental Hospital nella città di Hyderabad, in India. L'autostima è stata valutata utilizzando la versione tradotta in Telugu della scala di autostima di Rosenberg, il comportamento di salute orale è stato determinato utilizzando l'indice di comportamento di igiene orale e la valutazione della salute orale è stata eseguita utilizzando lo stato della dentatura dell'Organizzazione Mondiale della Sanità, l'indice modificato Comunitario parodontale e l'Indice di perdita di attaccamento.

**Risultati.** In questo studio sono stati inclusi un totale di 456 pazienti. La maggior parte dei partecipanti ha riportato una bassa autostima, con un punteggio medio di  $11,8 \pm 2,7$ . I pazienti con istruzione primaria hanno riportato punteggi di autostima più elevati rispetto a quelli con istruzione superiore e universitaria ( $p = 0,0001$ ). Inoltre, sono stati notati bassi punteggi dell'indice di comportamento di igiene orale (64,9%) nella popolazione in studio ed alti punteggi dell'indicatore Denti Cariati, Mancanti ed Otturati nelle donne ( $5,7 \pm 4,4$ ;  $p = 0,09$ ). Nessuna delle variabili (punteggi dei Denti Cariati, Mancanti ed Otturati, comportamento di igiene orale, sanguinamento gengivale e Perdita di Attaccamento) era significativamente correlata con l'autostima. L'analisi di regressione multivariata ha rivelato che l'età più giovane, il livello di istruzione inferiore e la presenza di carie dentali hanno comportato maggiori probabilità di alta autostima ( $p < 0,01$ ).

**Conclusione.** I risultati hanno indicato un'associazione significativa tra autostima e salute orale. Gli individui con carie dentale avevano probabilità significativamente più alte di avere un'elevata autostima. Pertanto, questo studio sottolinea la rilevanza dei fattori psicosociali, come l'autostima, come mediatore della salute orale.

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