# Relationship of Self-esteem with Self- Reported Oral Health Status among 35-44 Year Old Residents of Davangere City -A Cross Sectional Survey

**Anjan Giriraju**[1]


## ABSTRACT

**Intrduction:** Self-esteem is one such psychological construct found to have tremendous potential of improving general health and also oral health. Self-esteem creates a mindset where one feels that maintaining health or oral health is his own responsibility. This in turn will result in improvement in oral health status. Study aimed to assess the relationship of Self-Liking, Self-Competence with self-reported oral health status among 35-44 year old residents of Davangere City.

**Material and Methods**: A descriptive, cross sectional survey was conducted on a total sample consisting of 220 subjects aged 35-44 years in Davangere city. Relevant and required information for the survey was obtained from the study subjects by using specially designed proforma which contained a) Romanian self-administered questionnaire, which was used to record the self-reported oral health status and oral health behaviours**.** b) Tafarodi's SLC scale to measure Self-liking/Self-competence. Chi-square test was used for statistical analysis to assess the relationship between Self-liking, Self-competence and self-reported oral health status and oral health behaviours. Chi-square test was applied as data collected and the outcomes measured were categorical by nature

**Results**: A majority of the participants were found to have moderate Self-competence and Self-liking and their self-reported oral health status was expressed as "excellent". They reported very less or no untreated decayed teeth. They reported very few extracted teeth and very less gingival bleeding.

**Conclusions:** The participants with moderate level of Self-competence and Self-liking perceived their oral health status as good.


**Keywords:** Self-liking, Self-competence, Self-reported oral health status, residents, middle aged.

## INTRODUCTION

Health behavioural management is an important cornerstone of holistic concept and it is one of the approaches in health promotion.[1] Among all characteristics Self-esteem has emerged as one of the important central construct of health promotion during past few decades.[2] Global self-esteem is measured by two distinct constructs: Self –liking (sense of social worth) and Self- competence (sense of personal efficacy).[3] These constructs are often discussed for their motivating role in purposive behaviour and for its adaptive role in coping with stress.[4,5] Exploration of available literature revealed very few studies reported in Indian middle aged population related to self-esteem and oral health status. Thus a study was planned to assess the relationship of Self- liking, Self-competence with self-reported oral health status among 35-44 year old residents of Davangere city.

## MATERIAL AND METHODS

The study was a Descriptive, Cross-sectional survey conducted to assess the relationship of Self-Liking, Self- Competence with self- reported oral health status among 35-44 year old residents of Davangere city**.** Ethical clearance was obtained from Institutional Review Board, Bapuji Dental College and Hospital.

### Eligibility Criteria

**Inclusion Criteria:** Subjects aged 35-44 year old residing in Davangere city for ten or more years.

**Exclusion Criteria:** Subjects who are mentally incapacitated to give valid response to questions.

Sample size was calculated based on the data of a previously published scientific article which had assessed the relationship of Self-liking, Self-competence with dental caries.[4]

Formula for sample size determination

$$n=Z_{\alpha}^{2}\, pq / L^{2}$$ [6]

Total sample size = N = 220 subjects

### Sampling Methodology

Davangere city has been divided into 4 zones (Northeast, Northwest, Southeast and Southwest) for administrative purpose. The same division was used to select the subjects for the study.

### Sampling procedure for 35-44 years age group

55 subjects belonging to the age group of 35-44 years were selected from two localities of each zone by *Multi-stage sampling technique*. Data was collected by conducting door-to-door survey. The street map was obtained from Corporation office, Davangere city. Using the street map, lanes and houses were randomly selected. 55 subjects were selected from one zone. Similarly subjects were selected from other three zones to reach a sample size of 220 subjects.

### Scheduling of survey

A detailed schedule of the survey was prepared well in advance. It was planned to meet all the 35-44 year old participants during afternoon or during evening hours (11.30 a.m to 1.00

Reader, Department of Public Health Dentistry, Rajarajeswari Dental College and Hospital, Bangalore, India

**Corresponding author:** Dr. Anjan.G, Room No.8, Department of Public Health Dentistry, Rajarajeswari Dental College and Hospital, Kumalgodu, Mysore Road, Bangalore-560060

**How to cite this article:** Anjan Giriraju. Relationship of self-esteem with self- reported oral health status among 35-44 year old residents of davangere city -a cross sectional survey. International Journal of Contemporary Medical Research 2016;3(11):3205-3209.

p.m or 5.00 p.m to 7.30 p.m) at their residence depending on their convenience so that not to disturb their routine. Informed consent was obtained by using WHO Informed Consent Protocol for Qualitative studies.[7]

**Administration of questionnaire**

Door to door survey was conducted in this age group. The selected streets or lanes of particular zone were reached during the planned hours of the particular day. The collection of data would start from first house of the lane. If there were any subjects in the desired age group (35-44 years) they were invited to participate in the study. If they were interested to participate then they were included in the survey. If there were no subjects in the specified age group, next house was reached during the survey. The investigator administered the questionnaires (Kannada or English language depending on subject's convenience of understanding). The subjects were then instructed to answer the questions in the questionnaire. They were informed to feel free and raise any questions to clarify their doubts. On an average it took 15-20 minutes for subjects to answer all the questions in the questionnaire. The answered questionnaires were received from the subjects after they finished answering on the same day.

## STATISTICAL ANALYSIS

Statistical analyses were performed using Statistical Package for Social Sciences Software (SPSS version 17, USA). Significance level was fixed at equal to or less than 0.05 ($p = \leq 0.05$). The data collected and the outcomes measured were categorical by nature and were non-parametric. Hence Chi-square test was applied for analysis.

## RESULTS

The response rate found in the survey was 97.27%. Majority of the subjects in the study exhibited Moderate level of Self-liking and Self-competence.

Table 1 shows relationship of Self-competence in relation to perceived dental health, Current untreated caries and current extracted teeth. Out of 214 subjects in 35-44 years old age group, 164 (76.6%) perceived their dental health status to be excellent and difference was found to be statistically significant p=0.02. 174 (81.3%) had not reported of non-treated caries whereas 40(18.7%) had self-reported the presence of non-treated caries. 176 (82.2%) had not reported of extracted teeth whereas 38 (17.8%) reported of extracted teeth.

Table 2 shows relationship of Self-competence in relation to last time tooth ache occurred, self-reported gingival condition and self-reported gingival bleeding. Out of 214 subjects in 35-44 years old age group, 120 (56.1%) reported of not remembering when time tooth ache last occurred. 105 (50.5%) perceived their gingival condition to be very good. 150 (70.1%) reported of no gum bleeding.

Table 3 shows relationship of Self-liking with perceived dental health, current untreated caries and current extracted tooth. Out of 214 subjects in 35-44 years age group, 164 (76.6%) showed excellent perceived dental health. 174 (81.35%) had not reported of non-treated caries. 176 (82.2%) had not reported of extracted teeth.

Table 4 shows relationship of Self-liking with last time tooth ache occurred, self-reported gingival condition and self-reported gingival bleeding. Out of 214 subjects in 35-44 years age group, 120 (56.1%) reported of not remembering when last time tooth ache occurred and this difference between the groups was found to be statistically significant (P=0.00). 108 (50.5%) perceived their gingival condition to be very good. 150 (70.1%) reported of no gum bleeding.

| Age group | Self-competence | Perceived dental health | | | Total |
|---|---|---|---|---|---|
| | | Excellent | Very good | Normal | |
| 35-44 years | Low<br>n(%) | 43<br>(72.9) | 13<br>(22) | 3<br>(5.1) | 59<br>(100) |
| | Moderate<br>n(%) | 77<br>(71.3) | 28<br>(25.9) | 3<br>(2.8) | 108<br>(100) |
| | High<br>n(%) | 44<br>(93.6) | 3<br>(6.4) | 0 | 47<br>(100) |
| | $\chi2$= 3.60, p=0.02 (S) | | | | |
| | | Current non-treated caries | | | |
| | Self-competence | Yes | No | Total | |
| | Low<br>n(%) | 8<br>(13.6) | 51<br>(86.4) | 59<br>(100) | $\chi2$= 4.48,<br>p=0.14 |
| | Moderate<br>n(%) | 21<br>(19.4) | 87<br>(80.6) | 108<br>(100) | |
| | High<br>n(%) | 11<br>(23.4) | 36<br>(76.6) | 47<br>(100) | |
| | Self-competence, Current extracted teeth | | | | |
| | | Yes | No | Total | |
| | Low<br>n(%) | 13<br>(22) | 46<br>(78) | 59<br>(100) | $\chi2$=1.34,<br>p=0.48 |
| | Moderate<br>n(%) | 16<br>(14.8) | 92<br>(85.2) | 108<br>(100) | |
| | High<br>n(%) | 9<br>(19.1) | 38<br>(80.9) | 47<br>(100) | |

**Table-1:** Distribution of study population based on Self-competence levels in relation to perceived dental health, Current dental caries and Current extracted teeth

| Age group | Self-competence | Last time tooth ache occurred | | | Total |
|---|---|---|---|---|---|
| | | Do not remember | More than a year ago | In the previous year | |
| 35-44 years | Low n(%) | 41 (69.4) | 6 (10.1) | 12 (20.3) | 59 (100) |
| | Moderate n(%) | 65 (60.1) | 20 (18.5) | 23 (21.2) | 108 (100) |
| | High n(%) | 29 (61.7) | 12 (25.5) | 16 (34) | 47 (100) |
| | $\chi2$=10.1, p=0.24 | | | | |
| | Self-competence | Self-reported gingival condition | | | |
| | | Excellent | Very good | Good | Total |
| | Low n(%) | 19 (32.2) | 31 (52.5) | 9 (15.3) | 59 (100) |
| | Moderate n(%) | 37 (34.3) | 53 (49.1) | 18 (16.7) | 108 (100) |
| | High n(%) | 20 (42.6) | 24 (51.1) | 3 (6.4) | 47 (100) |
| | $\chi2$=3.24, p=0.47 | | | | |
| | Self-competence | Self-reported gum bleeding | | | |
| | | No | Yes | Total | |
| | Low n(%) | 36 (61.0) | 23 (39.0) | 59 (100) | $\chi2$=4.24, p=0.13 |
| | Moderate n(%) | 77 (71.3) | 31 (28.7) | 108 (100) | |
| | High n(%) | 37 (78.7) | 10 (21.3) | 47 (100) | |

**Table-2:** Distribution of study population based on Self-competence levels in relation to last time tooth ache occurred, self -reported gingival condition and gingival bleeding

| Age group | Self-liking | Perceived dental health | | | Total |
|---|---|---|---|---|---|
| | | Excellent | Very good | Normal | |
| 35-44 years | Low n(%) | 43 (72.9) | 13 (22) | 3 (5.1) | 59 (100) |
| | Moderate n(%) | 77 (71.3) | 28 (25.9) | 3 (2.8) | 108 (100) |
| | High n(%) | 44 (93.6) | 3 (6.4) | 0 | 47 (100) |
| | | $\chi2$= 5.71, p= 0.20 | | | |
| | Self-liking | Current non-treated caries | | | |
| | | Yes | No | Total | $\chi2$=4.48, p=0.41 |
| | Low n(%) | 15 (16.5) | 76 (83.5) | 91 (100) | |
| | Moderate n(%) | 17 (23.6) | 55 (76.4) | 72 (100) | |
| | High n(%) | 8 (15.7) | 43 (84.3) | 51 (100) | |
| | Self-liking | Current extracted teeth | | | |
| | | Yes | No | Total | |
| | Low n(%) | 24 (26.4) | 67 (73.6) | 91 (100) | $\chi2$= 10.12, p=0.00[S] |
| | Moderate n(%) | 5 (6.9) | 67 (93.1) | 72 (100) | |
| | High n(%) | 9 (17.6) | 42 (82.4) | 51 (100) | |

**Table-3:** Distribution of study population based on Self-liking levels in relation to perceived dental health, Current non-treated caries and Current extracted teeth

## DISCUSSION

The study was conducted on 220 subjects in 35-44 year old residents of Davangere city after scientifically determining the sample size based on the finding of a scientific article. At the end of the study only 214 subjects' responses could be used for final analysis of the data as the remaining 6 subjects had given partial response in the study which accounted for 97.27% response rate. This difference did not affect the power of the study because while determining the sample size anticipating

| Age group | Self-liking | Last time tooth ache occurred | | | Total |
|---|---|---|---|---|---|
| | | Do not remember | More than a year ago | In the previous year | |
| 35-44 years | Low n(%) | 68 (74.7) | 9 (9.8) | 14 (15.3) | 91 (100) |
| | Moderate n(%) | 46 (63.8) | 8 (11.1) | 18 (25) | 72 (100) |
| | High n(%) | 21 (36.8) | 21 (36.8) | 9 (15.7) | 57 (100) |
| | $\chi2$=30.9, p=0.00[S] | | | | |
| | Self-liking | Self-reported gingival condition | | | |
| | | Excellent | Very good | Good | Total |
| | Low n(%) | 24 (33.3) | 38 (52.7) | 10 (13.8) | 72 (100) |
| | Moderate n(%) | 33 (38.3) | 36 (41.8) | 17 19.7) | 86 (100) |
| | High n(%) | 14 (29.1) | 31 (64.5) | 3 (6.2) | 48 (100) |
| | $\chi2$=7.36, p=0.09 | | | | |
| | Self-liking | Self-reportedgum bleeding | | | |
| | | No | Yes | Total | |
| | Low n(%) | 61 (67) | 30 (33) | 91 (100) | $\chi2$=1.60 p=0.49 |
| | Moderate n(%) | 50 (69.4) | 22 (30.6) | 72 (100) | |
| | High n(%) | 39 (76.5) | 12 (23.5) | 51 (100) | |

**Table-4:** Distribution of study population based on Self-liking levels in relation to last time tooth ache occurred, self-reported gingival condition and gingival bleeding

the partial response rate, a 10 % increase was done to the sample size (original determined sample size + 10% partial response rate that is 200+20 = 220 subjects).

The age groups 35-44 years was selected because this is the indicator age group as recommended by WHO in Basic Oral health surveys methods.[8] 35-44 year age group is the standard monitoring group for health conditions of adults. The full effect of dental caries, the level of severe periodontal involvement, and general effects of care provided can be monitored using data obtained from this age group.

The result of the study showed that the majority of the study subjects in all the age groups (35-44 years old) had moderate Self-competence and Self-liking. These finding can be explained by concept of Latent growth curve analyses which uses quadratic curve to explain life trajectory of Self-esteem. It explains that Self-esteem increases during middle adulthood and reaches the peak at about age 60 years and declines in the old age. The magnitude of the increase in adulthood corresponds to medium sized effect.[9] As the age of subjects in the present study lie at almost middle part of the quadratic curve, Self-competence and Self-liking in majority of subjects can be expected to be moderate. This finding is in line with the studies conducted by Dumitrescu et al (2007)[10], Locker D (2009)[11], Kawamura et al (2009)[12], Dumitrescu et al (2009)[4], where it was found that as age increased there was increase in Self-esteem.

Majority of the study subjects perceived their dental status to be excellent and difference was found to be statistically significant. These finding are in line with the studies conducted by Dumitrescu et al (2007)[10], Locker D (2008)[11], Kawamura et al (2009)[12],Dumitrescu et al (2009)[2], where majority of the study subjects had higher level of Self-esteem and perceived their dental health to be excellent. The finding of the present study indicates that, good level of Self-competence and Self-liking will generate a feeling of worthiness and self- confidence which can promote self–care right from childhood continuing into adulthood. This results in improved oral health status which would make individuals to perceive their dental status to be excellent.

Majority of the study subjects reported no untreated carious teeth. This finding is in line with the studies conducted by Dumitrescu et al (2007)[10], Kawamura et al (2009)[12], and Dumitrescu et al (2009)[2], where majority of subjects had good Self-esteem and also reported less number of untreated carious teeth. This observation indicates that as individuals develop good hygiene practices from child hood, they develop no or very less dental diseases like dental caries. Even if they develop dental caries, they tend to seek oral health care before the disease onset or at the initial stages of the disease. Such an oral health seeking behaviour may be reason for very few un-treated dental caries in the subjects.

Majority of the study subjects reported of no extracted teeth. This finding is in line with the studies conducted by Dumitrescu et al (2007)[10], Locker D (2008)[11], Kawamura et al (2009)[12] and Dumitrescu et al (2009)[2], where majority of study subjects possessed good Self-esteem and reported of no extracted teeth. A better oral health hygiene practiced right from childhood will enable prevention of oral disease at its initial stage and reduces the ultimate consequences of the disease in adulthood. Thus only a few subjects in the present study reported history of extracted teeth.

Majority of the study subjects reported of not remembering when last time teeth ache occurred. This difference was found

to be statistically significant. These finding are in line with the studies conducted by Dumitrescu et al (2007)[10], Kawamura et al (2009)[12],Dumitrescu et al (2009)[2], where study subjects who participated in those studies had good Self-esteem and majority did not remember when last time teeth ache occurred. Majority of the subjects in the present study maintained good oral health right from their childhood because of good self-esteem level, resulting in very less oral diseases. This may be the reason why majority of subjects did never experience any discomfort due to dental problems since long time to remember of any treatment for oral diseases

Majority of the study subjects reported their gingival condition to be very good and no gum bleeding. These finding are in line with the studies conducted by Dumitrescu et al (2007)[10], Locker D (2008)[11], Kawamura et al (2009)[12],Dumitrescu et al (2009)[2], where majority of subjects had good Self-esteem and reported very good to excellent gingival condition because of practice of good oral hygiene practices right from childhood to adulthood.

Limitation of the present study was oral health status was assessed subjectively. This in turn may have resulted in some subjective biases. However a study has shown that self-reported oral health status has similar outcome as clinically assessed oral health status.[13]

## CONCLUSION

Moderate Self-competence and Self-liking were common occurrences in the study population. A majority of the subjects reported no untreated carious lesions and no history of extracted teeth which suggests a good dental health. Very few subjects reported gum bleeding and majority had good gingival health.

## ACKNOWLEDGEMENT

I would like to thank my friend and my batchmate Dr. Shyam.S, Senior Lecturer, for rendering his support and help throughout my study. I also would like to extend my heartfelt thanks to Dr. Nagesh.L, Professor and Head, Dr. Puja Yavagal, Professor and Dr. Sapna Prasanna, Reader, Dept of Public Health Dentistry, Bapuji Dental College and Hospital, for their guidance during my study.

## REFERENCES

1. Park K. Textbook of Preventive and Social Medicine. 22th ed. Banaras:M/s Banarsidas Bhanot Publishers; 2011. P.11-2.
2. Dumitrescu AL, Toma C, Lascu V. Self-liking, Self-competence, Body Investment and Perfectionism: Associations with Oral Health Status and Oral Health-Related behavior. Oral Health Prev Dent. 2009;7:191-200.
3. Brown JD, Dutton KA, Cook KE. From the top down self-esteem and self-evaluation. Cognition And Emotion. 2001;15:615–31.
4. Tafrodi RW, Swann WB. Self-liking and Self-competence as dimensions of Global Self-esteem: Initial Validation of a Measure. Journal of Personality Assessment. 1995;65:322-342.
5. Smith MB. Competence and Socialization. Newyork: Little Brown Publishers; 1968. p.270-320.
6. Rao NSN. Applied statistics in health sciences; 1st edition; Jaypee Publishers.
7. www.int/rpc/research_ethics. As accessed on 4-7-2016 at 2.20 p.m.
8. WHO. Oral health surveys basic methods; 4th edition. WHO Geneva. A.I.T.B.S Publishers.
9. Orth U, Trzesniewski KH, Robins RW. Self-Esteem Development from young adulthood to old age:A cohort-sequential longitudinal study. Journal of Personality and Social Psychology. 2010;98:645-58.
10. Dumitrescu AL. Investigating the relationship between self-reported oral health status, oral health-related behaviors, type A behavior pattern, perceived stress and emotional intelligence.Rom J Intern Med. 2007;45:67-76.
11. Locker D.Self esteem and socioeconomic disparities in self perceived oral health. JPHD. 2009;69:1-9.
12. Dumitrescu AL, Kawamura M, Toma C, Lascu V.Social desirability, social intelligence and self-rated oral health status and behaviours.Rom J Intern Med. 2007;45:393-400.
13. Seremidi K, Koletsi-Kounari H, Kandilorou H. Self-reported and clinically-diagnosed dental needs: determining the factors that affect subjective assessment. Oral Health Prev Dent. 2009;7:183-90.

**Source of Support:** Nil; **Conflict of Interest:** None

**Submitted:** 05-09-2016; **Published online**: 19-11-2016