

Original Article

## Relationship Between Body Image And Self-Esteem By Using Body Shape Questionnaire (BSQ) And Rosenberg Self-Esteem Scale Among Undergraduate Dental Students.

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**Abstract:**

Self-esteem is very crucial in one's emotional well-being. This study was based on the investigation of the relationship between the body image and self-esteem undergraduate dental students in Chennai. In this study, a total of 200 students was selected by convenience sampling from undergraduate dental students between the age group of 17 to 23 years, who study in Chennai through online google form questionnaire. Two sets of questionnaires were used: Body Shape Questionnaire[BSQ]-16B and Rosenberg self-esteem scale. In BSQ-16B, the scale ranges from never to always and in Rosenberg self-esteem questionnaire, which was based on the Likert Scale, ranging from strongly agree to strongly disagree. SPSS version 22 [IBM cooperative] software was used for statistical analysis to evaluate the results. It indicated that the correlation coefficient value (*r* value) between the BSQ scores and the Rosenberg self-esteem scale scores was -0.373 that is a negative relationship between the BSQ scores and the Rosenberg self-esteem scale scores. As this study was done in late adolescence during their undergraduate study period more surveys with middle-aged group people and / or elderly subjects could thus possibly add up a remarkable quantity of knowledge to the outcomes of this project.

**Key words:** Self-esteem, body image, undergraduate, appearance, Rosenberg scale.

**Introduction:**

Body image denotes person's awareness of the aesthetics and sexual attractiveness of their own physique[1]. Body image can assess how a person value, supports, approves, or disapproves him or herself. Furthermore, body image is picturing of personality form in their minds. It is influenced by their beliefs and attitudes and can be conceptualized as a multidimensional construct that represents how an individualistic think, feel, and be have about their own physical attributes[2]. The concept of body image is used in numerous disciplines like

psychology, medicine, psychiatry, psycho analysis, philosophy, cultural and feminist studies as it is closely related to self-esteem [3, 4]. Many early hypotheses suggested that self-esteem is a basic human need or motivation.

Self-esteem is one of the well-established concepts of psychology and has been defined in several ways. Self-esteem is defined as a positive or negative attitude towards a particular object, namely, the self and makes the person feel that he is a person of worth [4]. He also depicted a person of high self-esteem as an individual, who respects himself, considers himself worthy and not better than others, identifies his limitations, and expects to grow and improve. Self-esteem as the attitudinal and evaluative component of the self. It involves feelings of worth and acceptance which are developed because of the awareness of our competencies and the feedback from the world around us [6]. Self-esteem continually used in psychiatric medicine to reflect a person's overall evaluation or appraisal of his or her own worth.

Body image is considered to be the most important component of an individual's self which not only gives healthy physical but also to the great extent to the mental state. Having this in mind, the self-image, and the associated feeling towards one's own self would greatly influence the self-esteem of the individual. In psychology, it was believed that adolescents body image is poor due to hormonal changes that happens during the puberty [7,8]. Many earlier studies have proved that dental education contribute substantial amount of stress among the dental professionals than the general population. The continuous exposure to this stress may possibly affect adolescent's assessment of their body in a negative way and may lead to body dissatisfaction [10].

Considering the above facts, in this study we aimed to study the relationship between the body image using BSQ and the self-esteem using Rosenberg scale in the undergraduate dental students who are in the adolescent stage of their life.

### **Methods and Materials:**

Total 200 students participated in the study. The study population was selected by convenience sampling among the undergraduate dental students from various universities across Tamil Nadu. We used convenience sampling as it is the most common non-probability sampling strategy used in developmental sciences. [5] The participants included are between the age group of 17 and 23 years old. The questionnaire was made available online till we reach the target sample size. The survey form was circulated through WhatsApp and only those who agree the consent form could take up the survey else they cannot proceed further with the survey. Two sets of questionnaires have been administered for the study through online survey. Body Shape Questionnaire [BSQ] - 16B [TABLE 1] and Rosenberg Self-esteem Scale [TABLE 2] are used in this study [7,8]. Participants are who are willing must agree consent before answering the set of questionnaires. In BSQ-16B, the scale ranges from never to always and in Rosenberg self-esteem questionnaire, which is based on the Likert Scale, ranging from strongly agree to strongly disagree. The questionnaires measured ranges and frequencies such as in Rosenberg Self-esteem questionnaires, the ranging goes from "strongly agree" to "strongly disagree" and in BSQ, the ranging goes from "Never", "Rarely", "Sometimes", "Often", "Very Often" and "Always". SPSS [Statistical Product and Service Solutions] version 22 [IBM cooperative] software was used for statistical analysis to evaluate the results.

### **Results:**

A total of 200 undergraduate dental students between the age group of 17 to 23 years from Chennai participated in this study, of which female participants are more than male participants.

From comparing the results of male and female regarding body shape questionnaires, from Mann-Whitney table, it is found that females have a higher mean rank than that of males. Findings on Rosenberg self-esteem scale expresses the data interpretation for frequency for the whole sample population was distributed normally. The score with highest frequency is learned to be 18. Histogram of the same is depicted in the figure 1. Data interpretation for frequency of the BSQ scores the whole sample population is evenly distributed. The score with highest frequency is 50. The scores are distributed normally, and the lowest score is 96. Histogram of the same is depicted in the figure 2. The Pearson correlation test describes the correlation between the body shape questionnaires (BSQ) scores and the Rosenberg self-esteem scale scores. It indicated that the correlation coefficient value ( $r$  value) between the BSQ scores and the Rosenberg self-esteem scale scores is -0.373. This shows that there is a negative relationship between the BSQ scores and the Rosenberg self-esteem scale scores. Relationship between the BSQ scores and the Rosenberg self-esteem scale scores are shown in the scatter plot figure 3.

### Discussion:

Physical appearance is one of the first individual characteristics noticed by others and has an important impact on social interactions. Appearance in general and body image have been very important concepts among different age groups, in a different variety of cultural norms, and globally. Body image is not just a cognitive construct, but also a reflection of attitudes and interactions with others. The tendency to link physical attractiveness with positive personal qualities has become a cultural stereotype. The images of perfect bodies in mass media, advertising and social media are burdensome to the subconscious, causing people to accept that “what is beautiful is good,” with physical attractiveness often being linked with success. [6,7].

The findings from the study showed that there is negative or weak correlation [ $r = -0.373$ ] between body image and self-esteem of the students. The results also showed that there is no significant relationship between body image and self-esteem under graduate dental students across the study population. In a study conducted on body image perceptions of senior high school students in Cape Coast Metropolis found a moderate positive correlation between body image and self-esteem ( $r = 0.587$ ) among the senior high school student [2, 6 and 8] In another study it was observed that body image is inversely related with self-esteem based on negative correlation of  $r = -0.32$ . Moreover, another study found a moderate but negative correlation ( $r = -0.292$ ,  $p < 0.001$ ) among interpersonal relationships was revealed but statistically significant correlation between body image and healthy lifestyle behaviours. Despite many previous studies reaching to a conclusion that teenagers have relatively low self-esteem because of negative body image [8,9, 10].

In another study it was observed that the desire to lose weight is highly correlated with poor body image, with more women than men wanting to lose weight [11]. This shows a sense of concern with body image which on the other hand affects one’s sense of judgment and feelings about self. The above study revealed that women have more desire and concern about body image than men. It was found that the means self-esteem doesn’t have a significant role. A study has shown that inflating self-esteem by itself can decrease grades [9,12,16]. And another study indicated that the relationship involving self-esteem and academic results does not signify that high self-esteem contributes to high academic results. It simply means that high self-esteem may be accomplished due to high academic performance [13,15].

Our study showed that most of the participants have an average score of body image and

self-esteem. Some participants scored below average about body image but scored average in self-esteem questionnaires. This signifies that people with negative body image do not necessarily have low self-esteem and that self-esteem is affected by several factors other than body image. In a study it is found that there are significant differences according to adolescents', both male and female, self-esteem, and body image, but there are not significant differences according to gender their subjective well-being. Based on this, it may be affective to focus on adolescents' subjective well-being in psychological and guidance studies especially in schools and to implement psycho-education programs towards increasing adolescents' well-being. [11, 12] So, basically, the participants have different levels of self-esteem and body image, but it does not affect their psychological well-being.

While most of the focus is on how body image affects self-esteem, it is crucial to acknowledge that the reverse can also be true. Self-esteem can also influence one's body image. If one doesn't value oneself, it might be hard to notice the good things and give one's body the respect that it deserves [10, 13, 14]. An important number of studies demonstrates, without any doubt, that one of the major factors affecting body image and self-esteem is the cultural differences. As we know the fact that India is known to be a country of diversity, body image and/or self-esteem are common issues regardless the distinct cultural and demographical differences. As this study was done in late adolescence during their undergraduate study period more surveys with middle-aged group people and / or elderly subjects could thus possibly add up a remarkable quantity of knowledge to the outcomes of this project.

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**Relationship between body image and self-esteem by using body shape questionnaire (BSQ) and Rosenberg self-esteem scale among undergraduate dental students within Chennai, Tamil Nadu.**

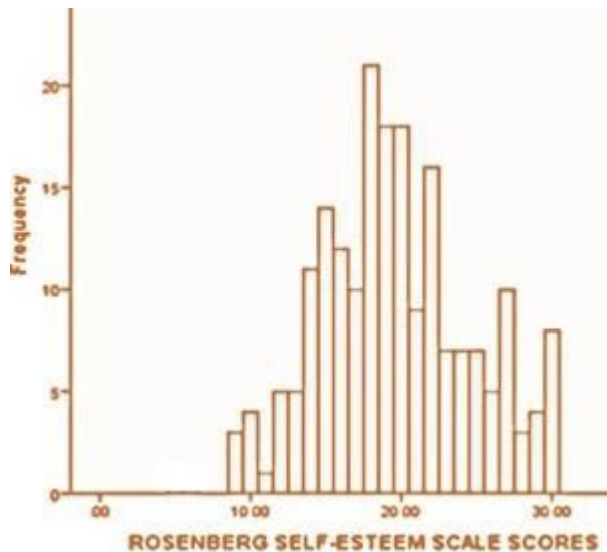


Figure 1: Data interpretation for frequency of the Rosenberg self-esteem scale scores for the sample.

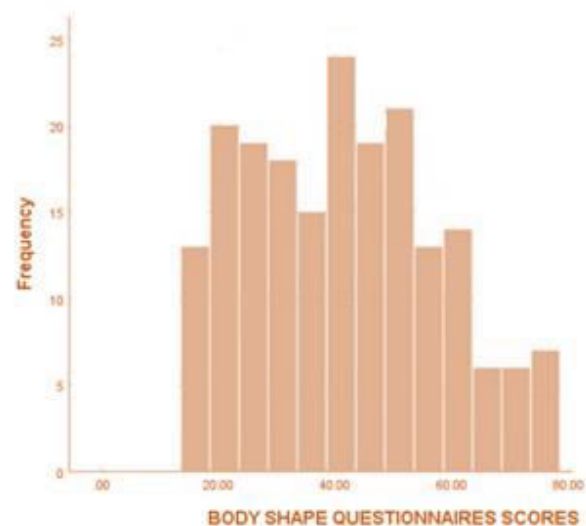
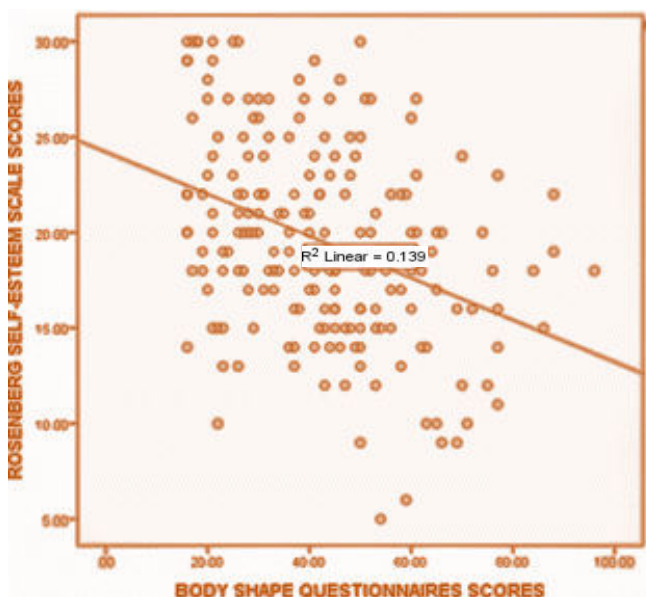


Figure 2: Data interpretation for frequency of the BSQ scores for the sample.

**Figure 3:** Scatter plot shows relationship between the BSQ scores and the Rosenberg self-esteem scale scores.



**Table 1: BSQ-16B**

|     |  |
|-----|--|
| 1.  | Have you been so worried about your shape that you have been feeling you ought to diet?  |
| 2.  | Have you been afraid that you might become fat?  |
| 3.  | Has feeling full (e.g. after eating a large meal) made you feel fat?   |
| 4.  | Have you noticed the shape of other women / men and felt that your own shape compared unfavorably?   |
| 5.  | Has thinking about your shape interfered with your ability to concentrate (e.g. while watching television, reading, listening to conversations)? |
| 6.  | Has being naked, such as when taking a bath, made you feel fat?  |
| 7.  | Have you imagined cutting off fleshy areas of your body?   |
| 8.  | Have you not gone out to social occasions (e.g. parties) because you have felt bad about your shape?   |
| 9.  | Have you felt excessively large and rounded?   |
| 10. | Have you thought that you are in the shape you are because you lack self-control?  |
| 11. | Have you worried about other people seeing rolls of fat around your waist or stomach?  |
| 12. | When in company have you worried about taking up too much room (e.g. sitting on a sofa, or a bus seat)?  |
| 13. | Has seeing your reflection (e.g. in a mirror or shop window) made you feel bad about your shape?   |

|     |  |
|-----|--|
| 14. | Have you pinched areas of your body to see how much fat there is?  |
| 15. | Have you avoided situations where people could see your body (e.g. communal changing rooms or swimming baths)? |
| 16. | Have you been particularly self-conscious about your shape when in the company of others?                      |

18.0 BSQ-16B © Evans & Dolan, 1993. Non-profit-making reproduction unchanged authorised. <http://www.psych.org/tools/bsq/>

**TABLE 2: Rosenberg Self-Esteem Scale**

|     |  |
|-----|--|
| 1.  | On the whole, I am satisfied with myself.                                  |
| 2.  | At times, I think I am no good at all.                                     |
| 3.  | I feel that I have a number of good qualities.                             |
| 4.  | I am able to do things as well as most other people.                       |
| 5.  | I feel I do not have much to be proud of.                                  |
| 6.  | I certainly feel useless at times.   |
| 7.  | I feel that I'm a person of worth, at least on an equal plane with others. |
| 8.  | I wish I could have more respect for myself.                               |
| 9.  | All in all, I am inclined to feel that I am a failure.                     |
| 10. | I take a positive attitude toward myself.                                  |

**-For questions 1, 3, 4, 7, and 10 score SA=3, A=2, D=1, and SD=0: Your Total**

**-For questions 2, 5, 6, 8, and 9 score SA=0, A=1, D=2, and SD=3: Your Total**

**Grand Total (Score between 15-25 are considered average)**