

## ORIGINAL ARTICLE - PUBLIC HEALTH

## BODY IMAGE DISSATISFACTION AND MISPERCEPTION AMONG MEDICAL STUDENTS IN CHENNAI – A CROSS-SECTIONAL STUDY

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Abstract

**Introduction:** Body image dissatisfaction (BID) is defined as the negative perceptions and feelings a person has about their body. BID has been proven to have an impact on physical health as well as psychological well-being. The objective of this study is to find the prevalence of body image dissatisfaction among medical students in Chennai.

**Methods:** A cross-sectional study was done among 314 medical students studying in a medical college in Chennai. Informed written consent was obtained from study participants. A semi-structured self-administered questionnaire was used. Body image discrepancy was assessed using the Contour Drawing Rating Scale. The participants were asked to choose the figure that most accurately reflects their actual figure (FELT BODY IMAGE) and the figure that they would like to look like (IDEAL BODY IMAGE). The feel-ideal discrepancy is used as an index of body image dissatisfaction. Any coping habits adopted for changing body image were also obtained. Misperception is defined as a mismatch between the BMI category and felt body image.

**Results:** Among the students, 75.8% were dissatisfied with their body image, of whom, 33.6% had a desire to be thin and 66.3% had a desire to be fat. Among students who were overweight /obese, 93.9% were dissatisfied with their body image ( $p < 0.001$ ). Among students who had dissatisfaction, 46.6% had adopted coping strategies. However, on comparing with Body mass index, 51.6% had a misperception about their body image.

**Conclusion:** The study highlights the high prevalence of body image dissatisfaction as well as misperception among medical students.

**INTRODUCTION**

According to National Eating Disorders Collaboration, body image is defined as a person's perception of their physical self and the thoughts and feelings, positive, negative, or both, which result from that perception.<sup>1</sup> It has different aspects to it. Body image perception is how one sees his/her own body, which is always not a correct representation of how one looks. For example, a person may perceive themselves as overweight when they are underweight which is called Body Image misperception (BIM). Another aspect is how one wants to be, which is called ideal body image. When there is a discrepancy between the perceived and ideal body image, it may lead to body image dissatisfaction (BID). BID is how one feels about their body, which relates to the amount of satisfaction or dissatisfaction a person has towards their body.<sup>1</sup> A positive feel towards ones' body leads to increased self-esteem, self-acceptance and enables adopting a balanced lifestyle. A negative feel towards ones' body leads to BID. While BID is largely an internal process, it is influenced by various external factors. One of the most common and important external factors which influence body image perception and satisfaction is media, most recently social media. Ideal body images promoted by media, make people constantly fight to meet these standards, and in the process, they end up in BID, which can impact both physically and psychologically. BID

has been largely associated with eating disorders, social isolation, depression, etc.

Though BID is a problem of all ages, it is one of the top-ranked issues among young people. Once considered to be a problem among young women, it has been stated in developed countries, that the prevalence among men is now fast approaching closer to that of women.<sup>2,3</sup> Medical students, with fair knowledge of human biology, are expected to have a correct perception and a positive feel towards their body image. Studies conducted among women medical students in India and elsewhere have shown that there is a substantiate proportion of this population is dissatisfied with their body image.<sup>4-6</sup> Very sparse literature is available on BID among male medical students.<sup>7</sup> However there is a dearth of evidence on body image misperception and its relationship with BID among medical students. Hence, this study was conducted to find the prevalence of Body image misperception and Body image dissatisfaction and to further find the relationship

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between BIM and BID among medical students.

**METHODOLOGY**

A cross-sectional study was conducted among medical students of a medical college in Chennai. The sample size was calculated assuming a prevalence of 52% body image dissatisfaction among female medical students in India 6, with 5% alpha error and 10% relative precision the required sample size was 354. The list of medical students from 1st year to final year was obtained. Using a computer-generated random number, the required sample size was selected. The selected participants were approached and informed of the purpose of the study. Among 354 participants approached, 314 agreed to participate in the study. Informed written consent was obtained from all the study participants. Institutional Ethics Committee clearance was obtained. A semi-structured self-administered questionnaire was used, which collected information on the demographic profile of the participants.

While there are numerous assessment tools available to measure body image, figural drawing scales are the most commonly used as they are proven to be both valid and reliable.<sup>8</sup> For this study, Contour Drawing Rating Scale was used, as it has been validated for use in both adolescents and adults.<sup>8-10</sup> This scale consists of nine 9 silhouette figure drawings of females and males with varying sizes, ranging from underweight (1) to overweight (9). Participants were asked to circle the body figure that best matches their current and their ideal body shape from 1 to 9. Figures 1-3 denote lean images, figures 4-6 denote normal images, figures 7-9 denote obese images. Then the difference “ideal—current” is calculated. Any difference was considered as BID. Zero, positive and negative scores indicate contentment with body shape, desire to be thinner, and desire to be fatter respectively.

The height and weight of the participants were measured using a stadiometer standardized to the nearest of 0.1cm and weight was measured using a digital weighing machine to the nearest to 0.1 kg respectively. Body mass index levels were calculated according to the revised guidelines for Asians (especially Southeast Asian adults including Indians) {Underweight: BMI < 18.5; Normal Weight: BMI 18.5-22.9; Overweight: BMI 23.0 – 27.5; Obese: BMI > 27.5}. The selected silhouette for the current body image in the CDRS was compared with the actual BMI. If there is any discrepancy, it was categorized as Body Image Misperception. Data was entered in excel and analysed using SPSS 16. The Chi-square test was used to measure

the association between categorical variables. P-value was considered statistically significant when it is less than 0.05.

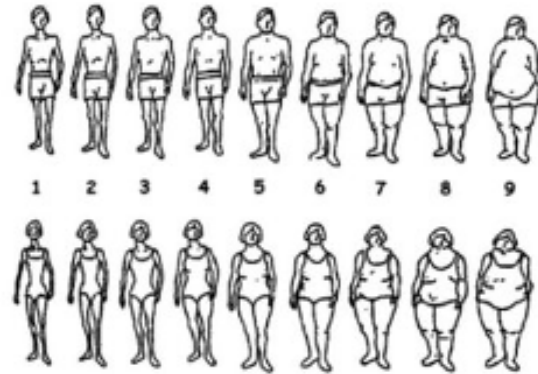


Figure 1: Contour Drawing Rating Scale <sup>10</sup>

**RESULTS**

Among the study participants, 158(50.3%) were women and 156 (49.7%) were men. The mean age of the study participants was 19.8years (SD -1.7 years).

Table 1: Perceived and actual Body image among study participants

	Men	Women	Total
<b>Actual Body Image</b>			
Underweight	23(14.7%)	21(13.3%)	44(14%)
Normal	64(48.7%)	77(41%)	141(49.9%)
Overweight/Obese	69(44.2%)	60(38.2%)	129(41.1%)
<b>Perceived Felt Body Image</b>			
Underweight	19(12.2%)	25(15.8%)	44(14%)
Normal	100(64.1%)	104(65.8%)	204(65%)
Overweight/Obese	37(23.7%)	29(18.4%)	66(21%)
<b>Perceived Ideal Body Image</b>			
Underweight	2(1.3%)	42(26.6%)	44(14%)
Normal	149(95.5%)	116(73.4%)	249(84.4%)
Overweight/Obese	5(3.2%)	0(0%)	5(1.5%)

Body image dissatisfaction is the discrepancy between what they think they are (felt) and what they want to be(ideal). Among the study participants, 75.8% were dissatisfied with their body image and 34.7% had a misperception about their body image.

Table 2: Body image satisfaction among study population

Body Image satisfaction	Men n-156(%)	Women n- 158(%)	Total
Desire to be thinner	62 (39.7%)	96 (60.8%)	158 (50.3%)
Content	35 (22.4%)	41 (25.9%)	76 (24.2%)
Desire to be fatter	59 (37.8%)	21 (13.3%)	80 (25.5%)

Chi -square – 25.828, p value - <0.001

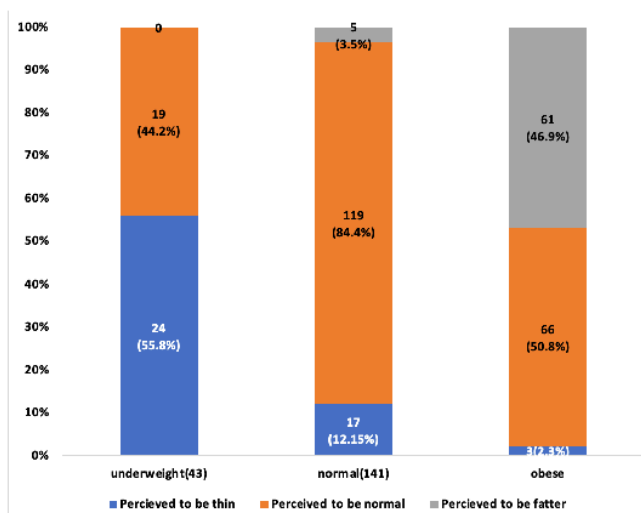


Figure 2: Body Image Misperception among Medical Students

As shown in Figure 2, 44.2% of the underweight students misperceived themselves to have a normal body image. Among medical students who had a normal BMI, 12.5% perceived themselves to have a thin body image, and 3.5% perceived to have a fat body. Among medical students who were either obese or overweight, 2.3% and 50.8% perceived themselves to have a thin and normal body image respectively.

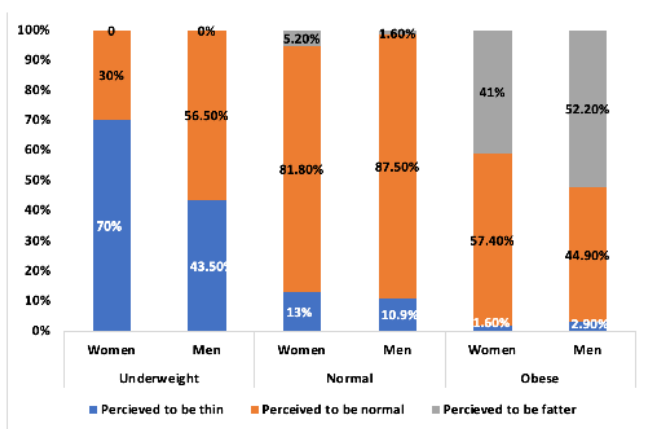


Figure 3: Body Image Misperception based on gender among Medical Students

Gender wise there was no significant difference in the Body image misperception, with 53.7% of the women and 46.3% of men reported misperception. BMI-wise misperception among men and women is shown in Fig. (3).

## DISCUSSION

Among the study participants, 75.8% were dissatisfied with their body image and 34.7% had a misperception about their body image. Only 1/4th of both men and women were content with their body image. Almost 2/3rd of women desired to be thinner, whereas almost equal proportion

of men desired to be either thin or fat. More than 50% of men who were underweight, perceived them to be normal. Among women, 57% of those who were overweight, perceived them to be normal.

The body image dissatisfaction seems to be higher among the study participants compared to other studies done elsewhere. In a study conducted among Brazilian students aged 12-17 years found that 45% to be dissatisfied with their body image.<sup>11</sup> Similarly, the body image dissatisfaction among new entrant girl medical students in Punjab was 54% which was also higher than the higher rate reported in this study.<sup>6</sup> In our study it was found that lesser proportion of male medical students had body image satisfaction compared to women, which was statistically significant. Similar finding was observed in a study conducted among medical students in Pune, which also showed that male medical students had higher dissatisfaction compared to women.<sup>7</sup>

Body image misperception among medical students was 34.7%, which was similar to a 35% reported misperception among undergraduate medical students in New Delhi.<sup>12</sup> There was no gender difference in the misperception, which was also seen in the study conducted in New Delhi.<sup>12</sup>

Though body image dissatisfaction by itself is not a mental health concern, it is a potential risk factor for mental health issues like psychological distress, eating disorders etc. The disparity between actual body image and desired ideal body image drives students to have changes in their eating attitudes. Misperception about their body image further complicates this process as they land up in taking unwanted lifestyle modifications and distress them further. Hence it is very essential that body image dissatisfaction and misperception is addressed appropriately at the earliest to prevent its consequences.

This study is limited by the fact that it has not looked at the determinants of body image dissatisfaction and misperception, which could throw more light on the understanding of the problem and enables taking appropriate measures.

## CONCLUSION

The study highlights the high prevalence of body image dissatisfaction as well as misperception among medical students.

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