

Body Dissatisfaction amongst Medical Students

Vineeth Suresh, Bibi Ayesha Kalburgi, Narayan R. Mutalik

Department of Psychiatry, S. Nijalingappa Medical College, Bagalkote, Karnataka, India

Abstract

Context: Body image plays a pivotal role in the psychological well-being of young adults, particularly in medical students, who are often under immense academic and social pressures. Concerns related to body dissatisfaction can significantly affect mental health, self-esteem, and overall functioning in this population.

Aims: This study aims to assess the prevalence and severity of body dissatisfaction among undergraduate medical students and to explore associations with demographic variables such as sex, domicile, and year of study.

Settings and Design: This hospital-based cross-sectional study was conducted at a tertiary care centre in Bagalkote, Karnataka, involving 496 MBBS students from all academic years.

Methods: Participants completed structured questionnaires including the Body Shape Questionnaire (BSQ-34) to assess levels of body dissatisfaction. Sociodemographic details were recorded, and the data was analyzed using SPSS version 19.0. Chi-square tests and independent t-tests were applied, with statistical significance set at $p < 0.05$.

Results: Marked body dissatisfaction was reported in 72.98% of participants, with significantly higher dissatisfaction in females ($p < 0.001$) and students from rural backgrounds ($p = 0.0216$). Mean BSQ scores also varied significantly by sex and domicile. Among academic years, second-year students exhibited the highest mean body dissatisfaction scores ($p = 0.0211$). The findings indicate that body image concerns are pervasive among medical students, with discernible differences across gender and background.

Conclusions: A high prevalence of body dissatisfaction exists among medical students, with notable differences across sex, domicile, and academic year. These findings emphasize the need for mental health support systems within medical institutions to address body image-related concerns and promote psychological well-being.

Key-words: Body image, psychological well-being, young adults, medical students, body dissatisfaction, mental health.

Key Messages: This study highlights the widespread presence of body dissatisfaction among medical undergraduates, especially in females and those from rural areas. Early identification and targeted mental health interventions are essential to mitigate long-term psychological implications.

Introduction:

Body dissatisfaction is defined as a negative perception or discontentment with one's own body shape, size, or appearance, and is recognized as a key element of body image disturbance. It has been identified as a major risk factor for the development of eating disorders, depressive symptoms, and low self-esteem, particularly among young adults^[1]. Medical students, by virtue of their age, academic stress, and exposure to societal and professional ideals, are particularly vulnerable to concerns related to body image^[2].

In recent years, body dissatisfaction has gained recognition as a significant mental health issue within student populations^[3]. The intense academic environment, competitive culture, and high expectations placed on medical students often contribute to psychological distress, which may in turn heighten concerns about physical appearance^[4]. Moreover, exposure to clinical settings that emphasize idealized body standards - both in teaching material and in societal expectations from future healthcare professionals - can further exacerbate internalized body ideals.

Address for Correspondence:

Dr. Vineeth Suresh

Department of Psychiatry,
S. Nijalingappa Medical College, Bagalkote, Karnataka, India.
Email: ivinu97@gmail.com

The pervasive influence of social media and cultural norms, especially in urbanizing countries like India, has also played a critical role in shaping body image attitudes among youth^[5]. Both male and female students are susceptible, though body image concerns may manifest differently across sexes – with males more likely to focus on muscularity and females on thinness^[6].

Despite increasing awareness of body image-related concerns, research within the Indian context remains limited, particularly among medical students—a group expected to embody and advocate for healthy practices^[7]. Understanding the prevalence and characteristics of body dissatisfaction in this population is essential, not only for safeguarding their psychological well-being but also because their perceptions of body image may shape future clinical attitudes, patient interactions, and health-promotion efforts^[8]. Therefore, this study seeks to examine the extent of body dissatisfaction among undergraduate medical students and to analyze its relationship with relevant demographic and academic factors.

Objectives: Primary objective is to assess body dissatisfaction amongst medical students and secondary objective is to find relations between sex, demographic setting, MBBS years and body dissatisfaction.

Materials and Methods:

This is a cross-sectional, questionnaire-based study conducted among undergraduate medical students at a tertiary care medical college located in Bagalkot, Karnataka. The study was carried out over the months of June 2024 and July 2024.

Ethical clearance was obtained from the Institutional Ethics Committee of S. Nijalingappa Medical College, Bagalkot.

All MBBS students from first to final year were approached for participation. The purpose of the study was explained to them, and written informed consent was obtained prior to data collection. Participation was voluntary and anonymity was ensured.

Inclusion criteria: Undergraduate MBBS students (first to final year) enrolled at the institution who provided written informed consent were included in the study.

Exclusion criteria: Students with incomplete questionnaire responses and students who did not provide informed consent were excluded from the study.

Materials and methods

Data were collected using two tools:

Body Shape Questionnaire - 34 Item (BSQ-34): The BSQ-34 is a standardized self-report instrument used to assess concerns regarding body shape and body dissatisfaction. It comprises 34 items scored on a six-point Likert scale ranging from “never” to “always,” with higher scores reflecting greater dissatisfaction. It has been widely validated for use in student and young adult populations^[9].
Semi-Structured Demographic Questionnaire: This included information on age, gender, year of MBBS study, and residential background (urban or rural). No identifying personal information was collected.

Sample Size: Sample size is calculated based on the previous study by Padmakumar et al^[10], in which the prevalence of body dissatisfaction among medical students was 53%.

Formula used for sample size calculation

$n = \frac{Z_{\alpha}^2 \cdot p \cdot q}{d^2}$ where, Z_{α} : Standard normal deviation equal to 1.96 at 5% level of significance with 95% confidence level, $p=53\%$, $d=$ allowable error=5%, Power of the study $(1-\beta)=80\%$ and Sample size, $n=382.78 \approx 383$

Considering the non-response rate of 20%, the minimum sample size required for the study is 478.

Statistical Analysis: Data was entered into Excel sheet, analyzed with SPSS Version 25.0. Categorical variables were expressed as frequencies (percentages), and quantitative variables as mean \pm SD. Unpaired t-test assessed differences between means - $p < 0.05$: significant, $p < 0.01$: highly significant.

Results:

Sex-wise Distribution of Body Dissatisfaction:

Table 1: Sex-wise Distribution of Body Dissatisfaction

Sex	Concern with shape				Total
	No concern	Mild	Moderate	Marked	
Male	4(2)	4(2)	20(10)	172(86)	200(40.32)
Female	20(6.76)	38(12.84)	48(16.22)	190(64.18)	296(59.68)
Total	24(4.84)	42(8.47)	68(13.71)	362(72.98)	496(100)

Out of the total 496 medical student respondents, 200 (40.32%) were male and 296 (59.68%) were female (Table 1). When categorized based on levels of concern with body shape as measured by the BSQ-34, among male students, a significant majority (172 out of 200; 86%) reported marked concern with body shape.

Only 4 males each (2%) fell into the no concern and mild concern categories, while 20 (10%) reported moderate concern. Among female students, 190 out of 296 (64.18%) reported marked concern, while 48 (16.22%) had moderate concern, 38 (12.84%) reported mild concern, and 20 (6.76%) had no concern.

Overall, marked body dissatisfaction was observed in a striking 72.98% of the total sample (362 out of 496), with only 4.84% of students (24 individuals) showing no concern. The prevalence of severe body dissatisfaction was higher among males than females (86% vs. 64.18%).

The average Body Shape Questionnaire (BSQ-34) scores differed significantly between male and female medical students

Body Dissatisfaction by Domicile:

Table 3: Body Dissatisfaction by Domicile

Domicile	Concern with shape				Total
	No concern	Mild	Moderate	Marked	
Rural	8(6.45)	8(6.45)	8(6.45)	100(80.65)	124(25)
Urban	16(4.3)	44(11.83)	50(13.44)	262(70.43)	372(75)
Total	24(4.84)	52(10.48)	58(11.69)	362(72.98)	496(100)

Among the 496 participants, 124 students (25%) were from rural backgrounds and 372 students (75%) were from urban settings. In the rural group, a substantial 80.65% (100/124) reported marked concern with their body shape. Only 6.45% each reported no, mild, or moderate concern.

In contrast, among urban students, 70.43% (262/372) had marked concern, while 11.83% reported mild concern, 13.44% had moderate concern, and 4.3% reported no concern (Table 3).

The mean Body Shape Questionnaire (BSQ) scores reveal a statistically significant difference between

Body Shape Concern by Academic Year:

Table 5: Body Shape Concern by Academic Year

MBBS (Year)	Concern with shape				Total
	No concern	Mild	Moderate	Marked	
MBBS I	12(6.98)	12(6.98)	36(20.93)	112(65.12)	172(34.68)
MBBS II	0(0)	20(19.23)	0(0)	84(80.77)	104(20.96)
MBBS III	4(4)	8(8)	2(2)	86(86)	100(20.16)
MBBS IV	8(6.67)	12(10)	20(16.67)	80(66.67)	120(24.19)
Total	24(4.84)	52(10.48)	58(11.69)	362(72.98)	496(100)

It was observed that MBBS II students reported the highest percentage of marked concern (80.77%), with no students falling in the "moderate" or "no concern" categories. MBBS III students follow closely with 86% showing marked concern, and very few showing mild or moderate concern. MBBS IV students, while still showing high levels of marked concern (66.67%), had a wider spread across all categories, with 16.67% showing moderate concern and 6.67% reporting no concern.

Table 2: Comparison of Mean Body Shape Concern Scores by Sex

Sex	Mean±SD	p-value
Male	168.51±28.32	<0.001**
Female	149.56±39.33	

The mean score for male students was 168.51 ± 28.32. The mean score for female students was 149.56 ± 39.33. The difference between the two groups was found to be highly statistically significant ($p < 0.001$). (Table 2)

This statistically significant difference indicates that male students had a higher average concern with body shape compared to female students.

students from rural and urban backgrounds.

Table 4 : Mean Body Shape Concern by Domicile

Domicile	Mean±SD	p-value
Rural	163.71±38.45	0.0216*
Urban	155.03±35.59	

Rural students reported a mean BSQ score of 163.71 ± 38.45, whereas urban students had a comparatively lower mean score of 155.03 ± 35.59. The difference was statistically significant with a p -value of 0.0216 ($p < 0.05$) (Table 4).

MBBS I students had the lowest levels of marked concern (65.12%), and the highest combined proportion of students in the mild and moderate categories (27.91%) (Table 5).

Table 6: Mean Body Shape Concern by Academic Year

Year	Mean±SD	p-value
MBBS I	153.56±37.34	Ref
MBBS II	163.92±33.52	0.0211*
MBBS III	162.66±38.19	0.0458*
MBBS IV	152.03±35.18	0.7246

MBBS II (163.92±33.52) and MBBS III (162.66±38.19) students showed statistically significant higher mean body dissatisfaction scores compared to MBBS I. These findings reinforce the earlier trend seen in categorical data, suggesting a peak in body image concerns during the intermediate years of training. MBBS IV students' mean score (152.03±35.18) is not significantly different from MBBS I, suggesting a reduction or plateau in dissatisfaction levels (Table 6).

Discussion:

The present study investigated the prevalence and patterns of body dissatisfaction among undergraduate medical students, a population often overlooked in body image research despite their high exposure to academic pressure, social comparison, and health-related knowledge. The findings highlight a significant level of body dissatisfaction in this group, with approximately 73% of students reporting marked concern with body shape. These results are consistent with earlier studies that suggest medical students experience elevated psychological distress and body image issues due to academic competitiveness, sleep deprivation, and a strong emphasis on appearance in clinical and peer settings (Dyrbye et al., 2006; Saravanan & Wilks, 2014)^[2,4].

A notable gender disparity was observed in the present study, with females reporting significantly higher dissatisfaction scores compared to males ($p < 0.001$). This aligns with global research showing that young women are disproportionately affected by sociocultural pressures to attain thin or idealized body standards (Grabe, Ward, & Hyde, 2008)^[11]. Media exposure, peer comparison, and internalization of thin ideals contribute significantly to this phenomenon. Conversely, while males also experience body dissatisfaction, their concerns are often related to muscularity rather than weight per se (Tylka, 2011)^[12].

The association between domicile and body dissatisfaction was also statistically significant ($p = 0.0216$), with urban students displaying

greater concern about body shape than their rural counterparts. This trend could be attributed to the higher exposure of urban students to media, social networking platforms, and aesthetic standards, as has been documented in previous literature (Swami et al., 2010)^[13]. Urban environments may foster increased social comparison and self-surveillance, leading to dissatisfaction.

Academic year analysis revealed a significant increase in dissatisfaction scores among second- and third-year students, compared to first years, with scores declining slightly in the final year. This U-shaped trend may reflect the adjustment process during early training, followed by peak stress in the middle years and eventual adaptation or acceptance toward the end of medical school. These results echo studies by Dahlin et al. (2005), who found that stress, self-esteem, and coping fluctuate significantly across the different stages of medical education^[14].

While body dissatisfaction is not a diagnosable disorder on its own, it is a known risk factor for the development of eating disorders, depression, and anxiety, especially in young adults (Stice et al., 2000; Cash & Smolak, 2011)^[15,1].

Limitations:

The cross-sectional nature of the study restricts conclusions about causality or the evolution of body dissatisfaction over time. Data collection relied on self-reported questionnaires, which may introduce bias due to underreporting or overreporting, influenced by stigma or social desirability. Conducting the study in a single tertiary medical college limits the external validity and generalizability to medical students in other geographical or cultural contexts.

Recommendations:

Given that medical students represent the future healthcare workforce, these findings raise concern about their psychological well-being and underscore the need for institutional support systems that address body image and self-esteem.

Moreover, the study highlights the importance of early identification and intervention, potentially through body image workshops, counselling services, and integration of mental health awareness in the curriculum. The implementation of programs such as cognitive dissonance-based interventions, which have shown success in reducing body dissatisfaction in university populations, could be considered (Stice et al., 2006)^[16].

Conclusion:

This study highlights a high prevalence of body dissatisfaction among medical students, with nearly

three-fourths of the participants expressing marked concern with their body shape. Female students and those from urban backgrounds reported significantly higher levels of dissatisfaction, underscoring the influence of gender-based sociocultural norms and media exposure. Additionally, variations across academic years suggest that stress, academic burden, and peer comparison during medical training may contribute to negative body image, particularly during the middle years of medical education.

These findings are particularly concerning given the established association between body dissatisfaction and mental health conditions such as depression, anxiety, and eating disorders. As future healthcare providers, medical students' well-being is paramount not only for their personal health but also for their ability to empathize with and care for patients.

The study underscores the urgent need for early psychological screening, mental health education, and targeted body image interventions within medical institutions. Incorporating structured wellness programs and promoting positive body image through curriculum-based approaches can foster healthier attitudes and resilience. Future research should explore longitudinal trends and the efficacy of such interventions in mitigating body dissatisfaction and promoting holistic well-being among medical students.

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