ORIGINAL ARTICLE

Relationship between academic behavior, perception of body image and self-esteem among medical undergraduate students in North Haryana

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ABSTRACT

Introduction: Body image issues among adolescents are rising in India. The grade of body image has alarming influence on functions in all perspectives of life. Outcome like academic absenteeism are connected with one's body perception. There is a need to review the perception of self-esteem and body image of medical undergraduates along with their impacts on academic behavior of undergraduates. **Methodology:** The study involved medical undergraduates and cross-sectional design was used. Questionnaire consisted of Socio demographic profile and 3 scales which includes Rosenberg Self-Esteem Scale, Szuch's scale and Measurement of Academic Behavior (MAB). Data was collected and analyzed using SPSS version 27. **Results:** 540 MBBS students participated in the study. Positive correlation seen amid self-esteem and body image perception with r=0.5 (p=<0.001). Significant positive correlation was observed among academic behavior and self-esteem as r = 0.0.473 (p=<0.001). Body image dissatisfaction was observed in underweight and overweight undergraduates. (p <0.001). **Conclusion:** The results concluded that the undergraduates with poor body image satisfaction and low self-esteem were found to be having low level of academic behavior.

KEYWORDS

Body Image; Academic Behavior; Self-Esteem

INTRODUCTION

Self-esteem and body perception are deeply interconnected aspects of mental and emotional well-being. Adolescents confront unique challenges that can disrupt perception of their bodies which can have crucial role in shaping the development.(1) Unrealistic beauty standards are often projected by media which make challenging for adolescents to embrace their unique body types. Men tend to give preference to well-built muscular physique while women generally wish a slimmer figure.(2) Adolescents make comparisons of their own bodies with professional models, resulting in pessimistic feelings.(3)

Low self-esteem and dissatisfaction with body can negatively impact cognitive abilities and academic achievements.(4) Dissatisfaction with body have negative impact on overall sense of self-worth.(5) Academic performance has been observed to be positively influenced by self-esteem.(6) Undergraduates with high self-esteem students are expected to embrace more challenges, which support the notion that self-image influence academic performance. (7)

Aim:

To Explore the level of self-esteem and assess the influence of satisfaction of body image on general well-being of medical undergraduates.

Objectives:

1. To find out the relationship between self-esteem, body image perception and academic behavior of medical undergraduates.
2. To determine the association of socio demographic factors with self-esteem, body image perception and academic behavior of the medical undergraduates.

MATERIAL & METHODS

Study type: This was an observational study with a Cross-sectional design.

Study period: Study conducted out over a duration of 2 Months (September and October 2023, after approval from IEC & IRC)

Study Population: The study included all medical undergraduates in the Adesh Medical College and Hospital, Mohri.

Inclusion Criteria: Those who gave consent were included in the study.

Exclusion Criteria: Those who did not give consent and who were on leave were excluded.

Randomization method: Nil

Study tool: A predesigned, structured google form questionnaire was used to collect data. Study form was provided and described to students.

Questionnaire: The questions were divided in 4 sections:

Section I – Socio demographic profile of medical undergraduates e.g. sex, age, residence and anthropometric measurement like height, weight.

Section 2: Szuch's scale.(8): - This scale was designed to assess body image perception. Body image refers to perception of one's own body and their perception of what others think of their body. Scale consisted of 10 items with replies designated on a 5-point Likert scale like never, rarely, sometimes, most of the times, and always. Score range was from 10-50 and higher score indicates body image dissatisfaction. From the obtained score, mean and SD were computed and by adding and subtracting SD 8 from means score i.e. 25 to get the 3 groups for the interpretation of body image perception. Score <17 highly satisfied, 17-33 partially satisfied and > 33 dissatisfied.

Section 3: Rosenberg Self-Esteem Scale (RSE).(9):- Self-esteem describes overall evaluation of one's own self, including their own views regarding themselves. RSE scale consisted of 10-items with responses on a 4 points Likert scale from strongly disagree (0 point) to strongly agrees (3 points). 5 items were negatively worded statements and 5 items had positively framed statements. Scoring for 5 positive items were reversed. Score of 30 and 10 was maximum and minimum respectively. As per scale, score of > 15, 15-25, >25 was designated as low, normal and high self-esteem respectively.

Section 4: Measurement of Academic Behaviour (MAB).(10):- Academic behaviour refers to adolescent's opinions about school work and the extent to which they think regarding their preparedness to class. MAB scale consists of 18 items and scoring was done by Likert scale that ranged from always (3 points) to never (0 point). Score of 0 and 54 were minimum and maximum respectively. Mean and SD were computed and by subtracting and adding SD 7 from mean i.e. 27 following 3 categories were obtained. <20 was taken as low academic behaviour, 20 – 34 was taken as average and 34 was taken as high academic behaviour.

Validity of assessment tool was done by expert panel from the department of Community Medicine. A pilot study was also carried out on 20 students which were omitted from the study later.

Ethical Issue and Informed consent: Study was conducted after obtaining clearance from Institutional Ethical Committee. A written informed consent was obtained from study participants

Statistical analysis: Data was entered in MS excel sheet. Mean and standard deviation were presented for continuous variable, % and numbers for categorical variables. SPSS version 27 was used for performing analysis. Chi-square was used to assess the association and correlation between perception of body image, self-esteem and academic behavior was assessed by using Karl Pearson's correlation. P value < 0.05 was taken as significant.

RESULTS

Table 1 shows 13% of participants were having body image dissatisfaction while 70 % were having partial satisfaction with body image. 29.4 % had low self-esteem.14.8% had high academic behavior score and low academic behavior was observed in 17.4%.

Table 1. Distribution of study participants according to their body image perception, academic behaviour and self esteem

Parameters	No. of subjects (n = 540), n%
Perception of body image	
Highly satisfied	92 (17%)
Partially satisfied	378 (70%)
Dissatisfied	70 (13%)
Self esteem	
Low	159 (29.4%)
Normal	368 (68.1%)
High	13 (2.4%)
Academic behaviour	
Low academic behaviour	94 (17.4%)
Average academic behaviour	366 (67.8%)
High academic behaviour	14.8%)

As per table 2, 25% of participants who were having high satisfaction with their body image, had high academic behavior where as among those having body image dissatisfaction, only 7.1% having high academic behavior. (p<0.001) Among participants who have low self-esteem, only 5 % had high academic behavior whereas to those who have high self-esteem, 92% have high academic behavior. (p<0.001)

Table 2. Association between body image perception, academic behaviour and self-esteem

Body image perception	Academic behaviour			Total	P-value
	Low	Average	High		
Highly satisfied	6 (6.5%)	63 (68.4%)	23 (25%)	92	<0.001
Partialy satisfied	32 (8.4%)	294 (77.7%)	52 (13.7%)	378	
Dissatisfied	56 (80%)	9 (12.8%)	5 (7.1%)	70	
Self esteem					
Low self esteem	55 (34.5%)	96 (60.3%)	8 (5%)	159	< 0.01
Normal self esteem	39 (10.5%)	269 (73.1%)	60 (16.3 %)	368	
High self esteem	0	1 (7.7%)	12 (92.3%)	13	

Table 3. Correlation between Body image score, Self-esteem score and Academic behaviour score

Characteristics	Mean ±SD	Karl pearson(r)	p value
Self esteem	11.7±4.6	0.473	<0.001*
Academic behaviour	26.5±6.9		
Perception of body image	25.1±8.2	0.5	<0.001*
Self esteem	11.7±4.6		

As per table 3, significant positive correlation was also seen between both academic behavior score and self-esteem score (r = 0.473) (p < 0.001) and self-esteem and perception of body image (r = 0.5) (p < 0.001).

As per table 4, dissatisfaction with body image was observed to be more in female (14.9 %) than male (10%) (p < 0.05) but low academic behavior was observed more in male (23.8%) as compared to female (13%). (p value <0.001). It was noticed that more rural participants (50 %) had dissatisfied body image perception as compared to urban participants (4.9%) (p value <0.001). 58.3% rural participants observed to have low esteem as compared to 23.1% urban participants. 42.3 % of participant with monthly income <50000 were observed to have dissatisfied body image. 55.5 % of underweight participants were found to have dissatisfied body image and low esteem was observed in 71.4% (p = <0.001). 89.1% obese participants were having low self-esteem.

Table 4. Association of determinants with body image perception, self-esteem and academic behavior

Variables	Body image satisfaction			Self-esteem			Academic behaviour		
	Highly satisfied (%)	Partially n satisfied n (%)	Dissatisfied n (%)	Low n (%)	Normal (%)	n Highn (%)	Low n (%)	Averagen (%)	High n (%)
Age (years)									
<20	27 (19)	99 (69.7)	16 (11.2)	52 (36.6)	86 (60.5)	4 (2.8)	23 (16.1)	95 (66.9)	24 (16.9)
>20	65 (16.3)	279 (70)	54 (13.5)	107 (26.8)	282 (70.8)	9 (2.2)	71 (17.8)	271 (68.1)	56 (14)
P value	0.64			0.07			0.68		
Gender									
Male	29 (13.3)	167 (76.6)	22 (10)	59 (27)	153 (70.1)	6 (2.7)	52 (23.8)	133 (61)	33 (14.2)
Female	63 (19.5)	211 (65.5)	48 (14.9)	100 (31)	215 (66.7)	7 (2.1)	42 (13)	233 (72.3)	47 (14.5)
P value	<0.05			0.5			<0.01		
Residence									
Rural	25 (26)	23 (23.9)	48 (50)	56 (58.3)	35 (36.4)	5 (5.2)	22 (22.9)	60 (62.5)	14 (14.5)
Urban	67 (15)	355 (79.9)	22 (4.9)	103 (23.1)	333 (75)	8 (1.8)	72 (16.2)	306 (68.9)	66 (14.8)
P value	<0.001			<0.001			0.28		
Income (Rs.)									
<50000	19 (13.8)	60 (43.7)	58 (42.3)	85 (62)	50 (36.4)	2 (1.4)	30 (21.8)	89 (64.9)	18 (13.1)
50000-100000	40 (18.8)	166 (78.3)	6 (2.8)	58 (27.3)	148 (69.8)	6 (2.8)	36 (16.9)	149 (70.2)	27 (12.7)
>100000	33 (17.2)	152 (79.5)	6 (3.1)	16 (8.3)	170 (89)	5 (2.6)	28 (14.6)	128 (67)	35 (18.3)
P value	<0.001			<0.001			0.26		
BMI (kg/m2)									
<18.5	73 (26.5)	195 (70.9)	7 (2.5)	10 (3.6)	258 (93.8)	7 (2.5)	50 (18.1)	173 (62.9)	52 (18.9)
18.5-24.9	10 (6)	140 (84.8)	15 (9.1)	71 (43)	91 (55.1)	3 (1.8)	23 (13.9)	130 (78)	12 (7.2)
>25	2 (5.4)	22 (59.4)	13 (35.1)	33 (89.1)	3 (8.1)	1 (2.7)	11 (29.7)	21 (56.7)	5 (13.5)
P value	<0.001			<0.001			<0.05		

DISCUSSION

The result illustrated that satisfaction with body image was found to be significantly positively correlated (r =0.5) (p value<0.001) with self-esteem i.e. decreased body image satisfaction decreases the self-esteem. Similar findings were seen in study by Abamara NC et al who observed that self-esteem and body image had negative correlation.(11) However, Czeglédi E et al. in 2015, had finding opposite to our study and stated that self-esteem was not predictable by multivariate model body height dissatisfaction.(12) They reason for different finding can be attributed to inclusion of only male participants in their study. Self-esteem and academic behaviour had significant positive correlation as increase in self-esteem improves the academic achievements. Arshad et al and Rosli Y et al also indicated that academic behavior and self-esteem had positive correlation.(13,14) High self-esteem may leads to high level of self-confidence and problem solving skills, thus leading to better academic performance.

Higher body dissatisfaction was seen in female (14.9%) as compared to male (10%) undergraduates. This can be explained by fact that female student tends to have more concern about their body shape than male. The findings were similar to study by Yahia N et al which showed female students were more conscious about their body image compared to male.(15) Participants from rural area (50%) tend to have more body dissatisfaction as compared to urban participants (4.9%). However, a study by Fidelix YL et al. in Brazil stated no difference in dissatisfaction about body image in rural and urban individuals.(16)

Body image dissatisfaction was observed in participants with family income less than 50000 (42.3%). Kops NL et al carried out a study on low-income women found that 83.0% were having body image dissatisfaction.(17) The possible reason can be limited financial resources available to low-income students which can restrict their ability to maintain the same level of appearance and lifestyle choices as their wealthier peers. 71.4 % of underweight participants were having low self-esteem and 89.1% of obese were experiencing low self-esteem. A study by Rahim et al concluded that among adolescents, self-esteem was significantly associated with BMI.(18) Individuals who are obese often face societal stigma, negative stereotypes resulting in low self-esteem. These feelings can lead to unhealthy behaviours that exacerbate the problem, such as emotional eating, avoidance of exercise. 31% of female were found to have low self-esteem as compared to 27% male. In male, there is more sense of independence as per our culture and society leading to higher self-esteem. Arshad M et al observed similar finding that female students had lower scores in self-esteem in comparison to male students.(13)

We found a significant correlation among self-esteem and residence, with rural students exhibiting low self-esteem compared to their urban peers (58.3% vs. 23.1% respectively). This disparity can be attributed to the lower availability of civic amenities in rural areas as compared to urban areas, which may lead to diminished degree of self-worth among rural students. Mishra V et al had similar finding and observed that significantly higher degree of self-esteem was seen in urban woman as compared to rural woman.(19) However, Saeedinejat S et al did not observe any significant association between residence and self-esteem.(20) 62% of students with income <50000 were observed to have low self-esteem whereas only 1.4 % of had higher self-esteem. A study by Abdel-Khalek A.M et also stated that economic conditions had positive impact on self-esteem of adolescents.(21) Students with high monthly income are more optimistic in securing job, thus having more self-esteem. Higher academic behaviour was observed in female (14.5%) as compared to male (14.2%). Arshad et al observed that academic performance was higher in female students than male students.(13) Female students tend to be more goal oriented, generally devote more time to academic pursuits, whereas males often prioritize extracurricular activities due to societal expectations of male leadership. High academic behaviour was observed in participants with Normal BMI (18.9%). A study KS Alswat et al demonstrated that obese students performed worse than Normal BMI students in physics results.(22) Positive body image was seen in people with a normal BMI, as they conform to societal beauty ideals. It prevents negative overthinking, allowing for more focus on academic and career goals.

CONCLUSION

Body image perception can greatly impact self-esteem and academic performance. Self-confidence and worth of a person directly affect their ability to focus and engage in academic pursuits. Female, rural background, underweight, and overweight students tend to have negative body image and low self-esteem, which may contribute to poor academic performance.

RECOMMENDATION

Encourage a healthy relationship with one's body by emphasizing the importance of self-care, physical activity and good eating habits. Exercise-based interventions can be utilized to boost body image positivity among adolescents. Dietary modifications and lifestyle interventions can be introduced to promote healthy weight management. Offer counselling or therapy to address issues related to negative self-esteem, concern regarding body image and refrain from negative thoughts.

LIMITATION OF THE STUDY

Only one medical college was included in the study, hence the study result can't be generalized to others.

RELEVANCE OF THE STUDY

This study gave valuable insight idea about influenced of self-esteem on academic performance. This may aid in making policies for betterment of self-esteem.

AUTHORS CONTRIBUTION

All authors have contributed equally.

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Nil

CONFLICT OF INTEREST

Nil

DECLARATION OF GENERATIVE AI AND AI ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

The authors haven't used any generative AI/AI assisted technologies in the writing process.

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