A Study of Body Dysmorphic Disorder, Self Esteem and Social Anxiety in Medical Students

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Abstract:

Introduction: Body Dysmorphic Disorder (BDD) Is A Psychiatric Disorder Characterized By A Preoccupation With An Imagined Or Slight Defect Which Causes Significant Distress Or Impairment In Functioning. There Have Been No Studies In India Estimating The Prevalence Of BDD, Its Relationship With Self Esteem And Social Anxiety In Medical Students.

Aim: This Study Aims To Estimate The Prevalence Of Body Dysmorphic Disorder And Its Correlates With Self-Esteem, Social Anxiety And In Medical Students

Methods: An Internet Based Cross Sectional Survey Was Conducted From June To July Of This Year. A Total Of 113 Individuals Participated In The Study. Individuals Were Asked To Fill A Questionnaire With A Series Of Questions, Which Included Sociodemographic Data, And Questions Regarding The Estimation Of Body Dysmorphic Disorder, Self-Esteem, Social Anxiety. (1)The Presence Of Body Dysmorphic Disorder Was Estimated Using A Questionnaire Based On The DSM-5 Criteria. (2)Self-Esteem Was Calculated Using The Rosenberg Self-Esteem Scale, Which Is A 10 Item Self-Report Of Global Self-Esteem. (3)The SIAS Is A Twenty-Item Measure On Which Respondents Rate Their Experiences In Social Situations Associated With Social Anxiety.

Results: Only 7 Out Of The 113 Participants Were Found To Qualify For The DSM5 Criteria Of Body Dysmorphic Disorder. There Is A Significant Positive Correlation Between Body Dysmorphic Disorder And Low Values Of Self Esteem And High Scores Of Social Anxiety.

Conclusion: The Study Suggests That Persons With Body Dysmorphic Disorder Have Lower Self Esteem And Higher Levels Of Social Anxiety.

Keywords: Body Dysmorphic Disorder, Self-Esteem, Social Anxiety.

Introduction

Body dysmorphic disorder is a poorly studied condition [2]. BDD is a psychological illness in which the individual is preoccupied with one or more perceived defects or flaws in appearance that are not observable or appear slight to others [1]. Individuals suffering from BDD encounter many difficulties when interacting with others in many aspects of their lives such as social, educational or occupational aspects [3]. Stereotyped concepts of beauty emphasized in certain families and within the culture at large may significantly affect patients with BDD [2]. The DSM-5 diagnostic criteria additionally feature a newly added criteria that at some point during the disorder, the person has performed repetitive behaviours (mirror checking, grooming, etc.) or mental acts (comparing appearance to others) in response to their appearance concerns [2].

BDD is characterized by a marked concern that one's appearance is ugly or flawed, in the absence of a real physical deformity or anomaly. This concern manifests in persistent thoughts of one's appearance, and ways of hiding, checking, or fixing one's appearance. In addition, BDD is characterized by repetitive and secretive time-consuming behaviours, such as excessive mirror checking, grooming, camouflaging, reassurance seeking, touching or measuring body parts, researching methods to improve appearance, and comparing appearance with others. The most common areas of concern involve the skin, hair, and nose.

BDD is also marked by avoidance of people, places, and social situations, which contributes to poor functioning and low quality of life. They may experience different emotions such as depression, anxiety, and low self-esteem, which can be incapacitating, leading to social avoidance and seeking reassurance from family and friends [3]. Any part of the body can be involved but mainly include the apparent parts like the face. Some studies reported the prevalence rate of BDD to be 1% - 2% in the general population [7,8]. The prevalence of BDD in clinical settings involving psychiatry and dermatology patients was 16% and 6.3%, respectively [9]. However, studies conducted in nonclinical settings (involving college students) showed a prevalence rate ranging from 1.3% to 5.8% [5]. Individuals in the medical field are looked at through an eye of perfection and thought to be free of any physical or mental problems. This makes them more concerned about an ideal body image. Addressing this issue becomes important as early as medical school years since this might have an adverse impact on their performance as future doctors [5].

Self-esteem is related to the set of feelings and thoughts of the individual regarding his/her own worth, competence, and suitability, which results in a positive or negative attitude towards oneself. Self-esteem is subdivided into negative and positive. The first refers to feelings of worthlessness and failure and the second is related to the feelings of satisfaction and appreciation of oneself. Evidence has shown a positive association between negative self-esteem and body dissatisfaction. Similarly, previous studies showed an inversely proportional association between positive self-esteem and body dissatisfaction.

SAD is often associated with shyness, behavioural inhibition, overanxious disorder, mutism, school refusal, and separation anxiety [10]. With the core defining feature being the fear of negative evaluations by others, many different social situations can cue social anxiety: performance situations such as speaking, eating, or writing in public, initiating or maintaining conversations, going to parties, dating, meeting strangers, or interacting with authority figures [11].

Aims and Objectives

This study aims to estimate the prevalence of body dysmorphic disorder in medical students and also estimate the levels of self-esteem and social anxiety and its correlation.

Methodology

Operational Procedure:

A cross-sectional internet-based survey was conducted from June to July 2021 using Google forms. All participants were informed of the study purpose and procedures, and provided consent to participate. The recipients could forward the link to friends and acquaintances, in a snowball strategy. A total of 114 responses were recorded. Duplicate responses were removed and finally 113 responses were considered in the study.

Study Tools:

Body Dysmorphic Disorder:

A questionnaire was prepared to assess the presence of body dysmorphic disorder using the diagnostic criteria from DSM-5 called the BDD questionnaire. It consisted of 4 questions which included assessment of any perceived defects in their body image, presence of any repetitive behaviours, the amount of time spent thinking about the perceived defect and if this behaviour has caused any significant distress in social, occupational functioning.

Self-Esteem:

Assessed using the Rosenberg self-esteem scale which is a 10 item self-report of global self-esteem. It consists of 10 statements related to the overall feeling of self-worth and self-acceptance. The items are answered on a 4 point scale ranging from strongly agree to strongly disagree.

Social Anxiety:

This was assessed using the Social Interaction Anxiety Scale. The SIAS is a twenty-item measure on which respondents rate their experiences in social situations associated with social anxiety. The items are answered on a 5 point scale ranging from not at all characteristic to extremely characteristic.

Statistical Analysis

Statistical analyses were conducted using IBM SPSS 25.0. Descriptive statistics for continuous variables were presented as means ± standard deviations. Relationship among the variables were examined using correlation analysis.

Results

In total 113 people participated in the study. 51 (44.7%) participants were between ages of 18-25, 58 (50.9%) participants were between the ages of 26-30, 2 (1.8%) participants were between the ages 31-35 and 1 (0.9%) participant was between the ages of 36-40. Out of the 113 participants 89 (78.1%) were females and 24 (21.9%) were male. 97 (85.1%) were single and 16 (14.9%) were married. 9 (7.9%) of the participants were in their second year of under-graduation, 8 (7%) of the participants were in their third year of under-graduation, 5 (4.4%) of the participants were in their fourth year of under-graduation, 29 (25.4%) of the participants were interns, 18 (15.8%) of the participants were in their first year of post-graduation, 16 (14%) of the

participants were in their second year of post-graduation, 29 (25.4%) of the participants were in their third year of post-graduation. The demographic details are enlisted in table 1.

Table1 Gender		
	Frequency	Percent
Male	24	21.9
Female	89	78.1
Total	113	100.0
Marital status		
	Frequency	Percent
Single	97	85.1
Married	16	14.9
Other	0	0.0
Total	113	100.0
Education level		
	Frequency	Percent
Under-graduation 2nd year	9	7.9
Under-graduation 3rd year	8	7
Under-graduation 4th year	5	4.4
Intern	29	25.5
Post-graduation 1st year	18	15.8
Post-graduation 2nd year	16	14
Post-graduation 3rd year	28	25.4
Total	113	100.0
Age Group		
	Frequency	Percent
18-25	51	44.6
26-30	58	50.8
31-35	2	1.7
36-40	1	0.9
Total	113	100.0

Body dysmorphic disorder was assessed using a questionnaire made using the DSM5 criteria for BDD. Out of the 113 participants only 7(6.19%) qualified to have a diagnosis of BDD. The mean score on Rosenberg self-esteem scale was 16.02 (±3.073). 70 (61.94%) participants had normal level of self-esteem, 42 (37.16%) had low self-esteem and 1 (0.88%) participant had high self-esteem. The mean score on the Social Interaction Anxiety Scale was 25.43 (±13.153). 93 (82.3%) of the participants didn't have social anxiety, 20 (17.699%) of the participants had social anxiety.
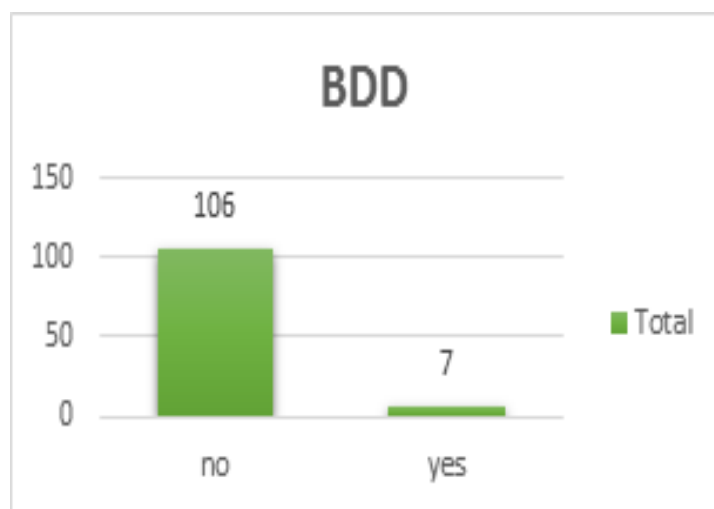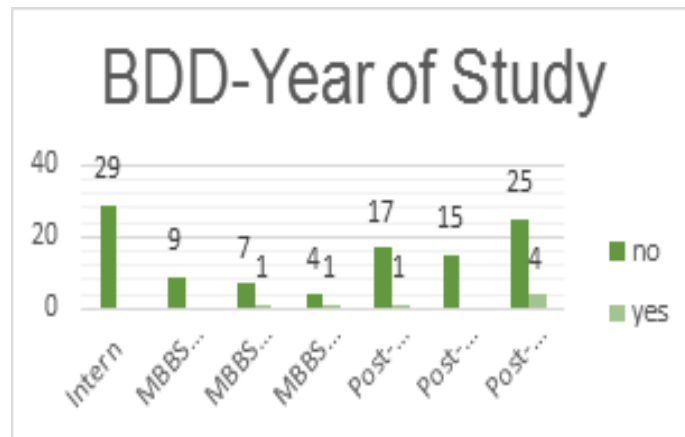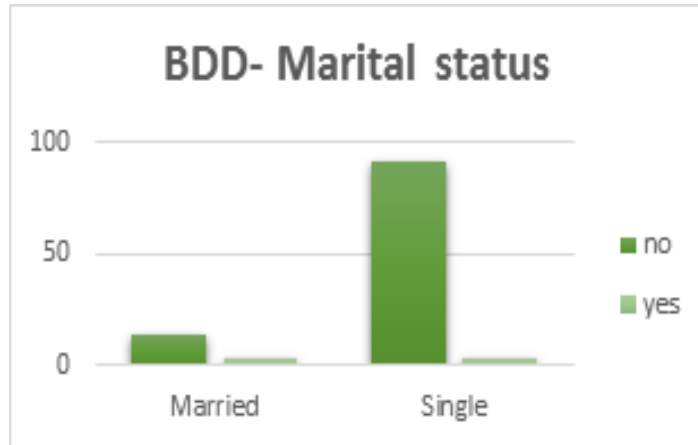
There was a significant correlation between body dysmorphic disorder and self-esteem and social anxiety. The Pearson's correlation value between BDD and Total self-esteem score was 0.190 with p value 0.043. The Pearson's correlation value between BDD and total social interaction anxiety score was 0.185 with p value 0.050. The Pearson's correlation value between BDD and marital status is 0.200 with p value 0.034. The Pearson's correlation between total self-esteem score and total social anxiety score was 0.212 with p value 0.024.

	Total Self-Esteem	Total Sias Score	Xenophobia	Gender	Marital Status
Pearson Correlation	.190*	.185*	.158**	.044	.200*
p-value	0.043	0.050	0.008	0.646	0.034

*Correlation is significant at the 0.05 level (2-tailed)

Discussion

In the present study we have investigated the presence of body dysmorphic disorder in medical students. We have also assessed the levels of self-esteem and presence of social anxiety in medical students. We have also assessed the association between levels of self-esteem and the presence of social anxiety and body dysmorphic disorder.

A total of 113 medical students participated in the study. 51 (44.7%) participants were between ages of 18-25, 58 (50.9%) participants were between the ages of 26-30, 2 (1.8%) participants were between the ages 31-35 and 1 (0.9%) participant was between the ages of 36-40.The reason for increased incidence Of BDD in young age groups could be due to the following reasons. Young people are usually more concerned about their looks than older generations and this could be due the physical and psychological changes they go through during this age. Also pressure from peers, family, and media plays a significant role in developing an opinion about one's body appearance and personality [3]. Out of the 113 participants 89 (78.1%) were females and 24 (21.9%) were male. 97 (85.1%) were single and 16 (14.9%) were married. 9 (7.9%) of the participants were in their second year of under-graduation, 8 (7%) of the participants were in their third year of under-graduation, 5 (4.4%) of the participants were in their fourth year of under-graduation, 29 (25.4%) of the participants were interns, 18 (15.8%) of the participants were in their first year of post-graduation, 16 (14%) of the participants were in their second year of post-graduation, 29 (25.4%) of the participants were in their third year of post-graduation.

Our study showed the prevalence of BDD was 6.19%. The prevalence found in our study was higher than the prevalence in community based studies. Out of them 6 were females and one was male. 4 of them were single and 3 of them married. In a study done in Saudi Arabia done in female medical students by Shaik shaffi et al the prevalence was 4.4% [3]. In another study done by Ather m taqui et al done in Pakistani medical students was around 5.8% [5]. In another study done by Adnan cansever et al in Turkish female college students was around 4.8% [6]. The high prevalence could be accounted for smaller sample size and inclusion of all sexes. The male to female ratio in our study was 1:6. There is a higher prevalence of BDD among males in our study. This finding is similar to a study conducted in Pakistani medical students done by Ather m taqui et al. where the male female ratio of BDD was 1:7.

Self-esteem was assessed using the Rosenberg self-esteem scale. The mean score on Rosenberg self-esteem scale was 16.02 (±3.073). 70 (61.94%) of the participants had normal level of self-esteem, 42 (37.16%) of the participants had low self-esteem and 1 (0.88%) participant had high self-esteem. In participants with BDD 4 of them participants had normal self-esteem, 2 of the participants had low self-esteem, 1 participant had high self-esteem. As mentioned by Flament *et al*, perhaps the adolescents with low self-esteem more often internalize the sociocultural ideal of thinness, which has a negative effect on body dissatisfaction.

The mean score on the Social Interaction Anxiety Scale was 25.43 (±13.153). 93 (82.3%) of the participants didn't have social anxiety, 20 (17.699%) of the participants had social anxiety. 3 of the participants also had BDD, with an estimated prevalence of SAD in BDD of around 42.85 %. In a similar study done by Angela Fan et al they found that around 12-68.8% of people with BDD also had SAD. In a similar study conducted in Chinese medical students by Yanhui Liao et al people with BDD had a higher levels of social anxiety symptoms [4]. As many as one third of patients of BDD are home bound because of worry about being ridiculed for the alleged deformity [2].

There was a significant correlation between body dysmorphic disorder, self-esteem and social anxiety.

The Pearson's correlation value between BDD and Total self-esteem score was 0.190 with p value 0.043. Which indicates that people with BDD have lower self-esteem values when compared to those who do not have BDD.

The Pearson's correlation value between BDD and total social interaction anxiety score was 0.185 with p value 0.050. This indicates that people with BDD have significant social anxiety which is consistent with findings in previous studies.

The Pearson's correlation value between BDD and marital status is 0.200 with p value 0.034. That is participants who are single are most likely to have BDD.

Limitations

The current study the following limitations. First, due to its cross-sectional nature, the study could not establish a causal relation between BDD and Social anxiety or self-esteem. Second, since social anxiety and self-esteem scales were self-reported, recall bias may be present, and the measures may subject to the influence of social circumstances currently.

Conclusion

The study proves that BDD is not as uncommon as epidemiological data given. There is also a significant relationship between BDD and social anxiety which could be because of the perceived deformity and being ridiculed. Self-esteem levels are also found to be low in people with BDD which could be due to societal, stereotyped concepts of beauty and "thinness". Treatment of BDD could also be focussed more on increasing levels of self-esteem and in reducing social anxiety.

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