

Prevalence of Body Dysmorphism and Its Association with Generalized-Anxiety in University Students of Twin Cities

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ABSTRACT

Objectives: To find the percentage of body dysmorphism in university students, and the association between body dysmorphism and generalized-anxiety.

Study Design: Descriptive cross-sectional study.

Place and Duration of Study: Universities of Rawalpindi and Islamabad Pakistan, from Nov 2021 to May 2022.

Methodology: A total of 300 participants were recruited using convenience sampling technique. The questionnaire was provided online via google forms and had three parts. The first part included demographics, the second included a total of 19 questions, and the third part was the Beck Anxiety Inventory (BAI) which consisted of 21 items and measures the severity of anxiety. Frequency and percentages were calculated for descriptive analysis and chi square test of significance was applied to find association between body dysmorphism and general anxiety. Analysis was done via IBM SPSS v 25.

Results: Out of 300 participants, body dysmorphia was detected in 35(11.7%), 16(45.7%) were males, and 19(54.3%) were females. Amongst the 35 participants with dysmorphism, 13(37.1%) had low anxiety, 10(28.5%) had moderate anxiety, and 12(34.3%) had potentially concerning levels of anxiety. There was a significant association between body dysmorphism and anxiety (p -value< 0.00). The frequency of body dysmorphism was greater among participants who were single, undergraduate and had 3-7 hours of phone usage daily.

Conclusion: A significant proportion of students (11.7%) were suffering from body dysmorphia. There was no association between body dysmorphism and gender however male was found to be as much concerned about their bodies as females. Anxiety and Body dysmorphism were strongly associated however it can't be assessed which precedes which.

Keywords: Anxiety, Body dysmorphism, Body dysmorphic disorder, Body shape.

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INTRODUCTION

Body dysmorphism (BDD), also known as Dysmorphobia, is a mental condition in which a person is fixated with an imagined physical defect or a minor defect that others cannot notice.¹ The fixation most commonly involves facial features of a person (skin color, nose, baldness), but other aspects like body size and height may also be the source of constant distress along with parts of the body that the affectee deems "ugly" and "problematic".² The exact cause of body dysmorphism is unknown, but various factors are said to play a crucial role.³ Major risk factors include genetics, i.e., positive family history, low self-worth, psychological and physical trauma, neglect, and physical defects (like acne) in adolescence, which have been resolved.⁴

Body dysmorphism has been categorized under the spectrum of OCDs and related disorders according

to the criterion of diagnosis set by the DSM-5 and is characterized by consuming thoughts about one's appearance, obsessive and compulsive mirror checking, overvalued ideation this may lead to social isolation, work disruption, cosmetic surgeries, and even suicide ideation.⁵ Many studies have found body dysmorphia to be strongly related to conditions such as personality or social anxiety disorders (SAD) however it mostly goes undetected.^{6,7} The dysmorphic patients tend to have higher scores on the Yale-Brown obsessive compulsive scale tailored for Dysmorphia (BDD YBOCS) and on the anxiety and depression inventory tests.⁸ The widespread usage of social media by young adults has led to personal dissatisfaction as well as their strive for an "ideal body" to fit into these faux criteria, therefore, making them more susceptible to developing body dysmorphia and other eating and mental conditions.⁹ BDD may sound inconsequential, but it significantly impacts a person's daily life, from trying to hide their imperfections and constantly comparing themselves to others to avoiding social

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gatherings and seeking opportunities for physical alterations.^{2,9} SAD and BDD are two distinct but conceptually similar nosological entities that have the body as a common denominator. Concerns about how one's physique or certain physical characteristics are seen by others or by oneself are included in both categories.

In several studies throughout the world, body dysmorphic disorder has been observed in study populations. However, the majority of BDD research has so far been conducted in Western nations mostly.⁶⁻⁸ This research aims to explore an area that has not been much explored and delved into before in our setting and lack of literature stems from the general trend of non-acceptance of psychological issues and also because body image dissatisfaction has long been considered a western concern and associated with the stigma of mental illness, however the development of western media in eastern cultures may be leading to a shift in non-Western countries' socio-cultural norms.¹⁰ Through this study, the researchers like to highlight the body image issues faced by the adults and youngsters (i.e., university students) who may have anxiety and deal with the constant pressure of appearing perfect in society.

METHODOLOGY

This was an analytical cross-sectional study conducted in universities of Rawalpindi and Islamabad Pakistan, from November 2021 to May 2022. The sample size was calculated to be 300 using Raosoft sample size calculator keeping margin of error as 5% and confidence of interval as 95%. The data was collected online via Google forms and the participants were recruited using convenience sampling technique.

Inclusion Criteria: Students belonging to universities in Rawalpindi and Islamabad Pakistan.

Exclusion Criteria: Students who were already diagnosed with conditions like depression, OCD or eating disorders were excluded.

The questionnaire used to collect data had three parts. The first part included questions about demographic parameters as: Age, Gender, Education, Marital Status, Field of Work and Height. The second section comprised of the structured Body Image disturbance questionnaire (BIDQ),¹¹ consisting of 7 questions, with responses on a five-point scale. The first two questions assessed the level of concern regarding physical appearance; the third evaluated the level of distress experienced by the participant; and the

subsequent four questions judged the level of impairment in daily functioning. The total score was calculated by taking the mean of all 7 questions. The cut off value for diagnosis of probable body dysmorphism was set at 3.¹² This section also included additional questions regarding social media usage, physical activity, areas of concern, use of aesthetic treatments and adoption of special diets. The third part of the questionnaire was Beck Anxiety Inventory (BAI) which is a multiple-choice self-report questionnaire consisting of 21 items and measures the severity of anxiety in an individual.¹³ The total score was calculated by finding the sum of all the 21 items. A score of 0-21 showed low anxiety; a score of 22-35 indicated moderate anxiety. Whereas, a score of 36 and above implied potentially concerning level of anxiety. Percentages and frequencies were calculated for descriptive variables. Chi-square test was applied to find the relationship between body dysmorphism and generalized anxiety as well as to find the association between gender and body dysmorphism. Data analysis was done via IBM SPSS version 25.0

RESULTS

Out of 300 participants 165(55%) were males whereas 135(45%) of the respondents were females. Most were undergraduate 244(90.66%), while 28 (9.34%) were post-graduates. BDD was and education were found out to be statistically associated with each other ($p=0.012$) while no other demographic variable was statistically significant association with BDD. Detailed sociodemographic characteristics are shown in Table-I.

Body dysmorphia was detected in 35(11.7%) participants out of which 16(45.7%) were males and 19(54.3%) were females. 224(74.7%) had low anxiety, 49(16.3%) had moderate anxiety and 27(9%) had potentially concerning levels of anxiety. Amongst the 35 participants with body dysmorphism, 13(37.1%) had low anxiety, 10(28.5%) had moderate anxiety and 12(34.3%) had potentially concerning levels of anxiety (Figure-1).

Majority of the students 131(43.7%) believed that media has somewhat influenced their self image and 96(32%) participants were unsure and believed that maybe media has somewhat played a role in influencing the way they see themselves.

Though there was no statistically significant association between body dysmorphism and marital status, phones/electronic media daily usage and age of the individual. But, the frequency of body

dysmorphism was greater among the participants who were single (31 out of total 35 individuals having body dysmorphism) and had 3 to 7 hours of average phone usage daily (22 out of 35 students). The number of students was 33 who were having body dysmorphism belonged to younger age group (15-25 years of age).

Table-I: Sociodemographic Characteristics of Respondents

Sociodemographic Characteristics	n	%	p-value
Age (years)			
15-20	102	34	0.768
21-25	180	60	
26-30	4	1.3	
36-40	14	4.7	
Gender			
Male	165	55	0.240
Female	135	45	
Education			
Undergraduate	244	90.66	0.012*
Post-graduate/ Masters	28	9.34	
Marital Status			
Single	275	91.7	0.481
Married	25	8.3	
Field of work			
Medical/ Health sciences	192	64	
Others	108	36	
Height (cm)			
Below 150 cm	7	2.3	
151-160 cm	53	17.7	
161-170 cm	100	33.3	
171-180 cm	110	36.7	
181-190 cm	30	10	

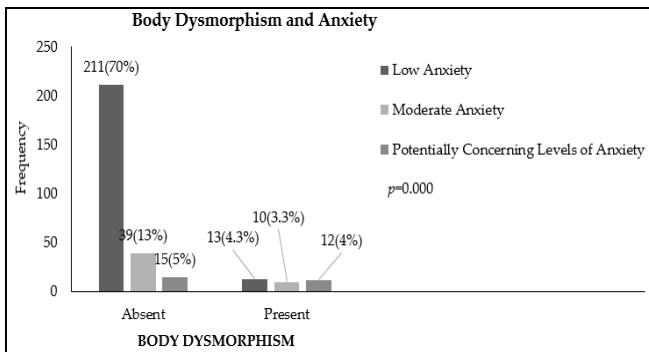


Figure-1: Association of Body Dysmorphism with Generalized Anxiety

DISCUSSION

This research was carried out to determine the frequency of body dysmorphism, any genderbased preponderance & its association with generalized anxiety.

In the study, out of the total 300 participants, a prevalence of Body dysmorphism of 11.5%(45.7% males

and 54.3% females) was found. These results are much higher than the prevalence of BDD found in other studies.^{14,15} According to the research, there was no statistical association between body dysmorphism and gender. The same was seen in research on adolescents in Saudi Arabia.¹⁶ However, Overall, research generally demonstrates either a roughly similar gender distribution or a little higher frequency of SAD and BDD in women,¹⁷ unlike the results of this study .The lack of a statistically significant association may be due to the random distribution of the participants (male/ female distribution was not equal). Recently, male beauty standards and cosmetic procedures for men have also made their debut in the industry which makes them equally conscious as women to maintaining a specific appearance and meeting the aesthetic standards of the times. Moreover, the traditional male outlook taboo makes it comparatively difficult for them to get help for their cosmetic/personal problems rendering them more vulnerable to self-esteem and body image issues.

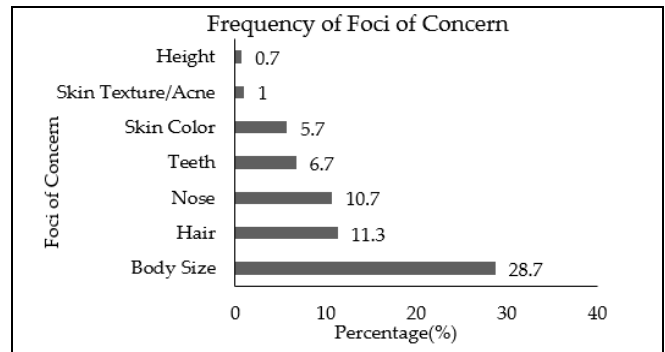


Figure-2: Major Foci of Concern among Participants

Studies have shown that individuals with body dysmorphia and anxiety disorders share the same meaning biases and tend to perceive many social situations in a negative connotation.¹⁸ Patients with body dysmorphia suffer from greatly impaired transition between cognitive-attentional sets, poor decision-making, diminished response inhibition, and greater omission and commission errors on the emotional processing, these cognitive biases are also shared by individuals with OCDs and related disorders, thus establishing the link between them.¹⁹ This research also showed significant association between body dysmorphia and anxiety (p -value=0.00). Similarly another study showed that over 60% of patients with Body dysmorphia had a lifetime anxiety, and 38% had social phobia, which tends to predate the onset of body dysmorphia.^{20,21}

Many researches have suggested a positive link between using social media, upward social comparison and vulnerability to developing body dysmorphia.^{22,23} Social media influencers using Photoshop, implants/fillers, expert makeup looks have created a toxic environment where people do not feel comfortable in their skin anymore and have become fatphobic and completely internalized the “Thin – ideal”.^{23,24} The results showed higher levels of BDD and SAD in participants who spent more than 6 hrs a day on social media or generally on phone. The fact that the study participants were heavily using multiple social media applications may point to the fear of missing out on rewarding experiences that others are having.²⁵ Those with BDD in the current study were more likely to compare their own appearance with famous people in social media, emphasize appearance as an important judgment factor, and underscore the abnormalities of their own body. The heavy use of social media, together with its negative impact on body image, may explain the higher rates of BDD in the current study compared with the general population worldwide.

LIMITATIONS OF STUDY

Despite the originality of these findings, a number of restrictions prevent them from being overgeneralized. First off, we relied on self-ratings for all but the evaluation of body dysmorphic disorder features, when a full psychiatric interview would have assisted in identifying participants with mental issues. Secondly, a crucial aspect of body dysmorphic disorders is the discrepancy between how people see their own bodies and how others perceive them. Therefore, it would have been interesting to learn what other people-friends, classmates, sports teammates, neighbors, and family members – thought about the participants' body types and aesthetic appeal.

CONCLUSION

A significant proportion of students were suffering from body dysmorphia. There was no association between body dysmorphism and gender. However, a significant association was found between body dysmorphism and generalized anxiety. The findings highlight the need of promoting safe social networking, particularly among teenagers, and educating the public about the danger of BDD and its effects. They may also highlight the need of doctors, particularly psychiatrists, cosmetic surgeons, and dermatologists, in recognizing BDD in young patients who are seeking medical attention. To evaluate the link between extended social networking, particularly on Snapchat and Instagram, and BDD as well as eating disorders, further research with bigger sample sizes are required. However, - may require therapy to guard against the potential that ideas about appearance, body shape, and others' expectations on success and social behavior turn out to be untrue.

Conflict of Interest: None.

Author's Contribution

Following authors have made substantial contributions to the manuscript as under:

MAR: Data analysis, Plan, Manuscript review, Technical support & approval for the final version to be published.

SFM: Conception of Idea, Study design, Literature review, Data analysis plan, Result, Manuscript review, Technical support & approval for the final version to be published.

LM:, SA:, MM:, AA:, HS: Literature review, Questionnaire Compilation, Data collection, Data entry, Data analysis, Manuscript writing & approval for the final version to be published.

SAD:, MN: Data Collection, Data analysis & approval for the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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