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# SOCIAL ANXIETY AND DEPRESSION IN YOUTH: MEDIATING ROLE OF BODY DYSMORPHIC SYMPTOMS

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## ABSTRACT

**Objective:** To find out the frequency of body dysmorphic disorder in youth and to investigate the mediating role of body dysmorphic disorder between social anxiety and depression in youth.

**Methodology:** This cross-sectional, correlational study was conducted at the Department of Psychology, University of Gujrat between July and August 2020. The sample consisted of 200 participants between the ages of 19 and 24, who were conveniently recruited from the Hafiz Hayat Campus and Mandi Bahuddin Campus of the University of Gujrat. The data was collected using a locally developed Body Dysmorphic Disorder Scale, a Structured Clinical Diagnostic Interview for Depression, and an Urdu-translated version of the Social Anxiety Scale for Adolescents. The data was analyzed using frequency distributions, percentages, and Pearson Product Moment Correlation Coefficients using SPSS 24. Finally, a path analysis was performed using a structural equation model in AMOS 24.

**Results:** The study revealed that 41.5% of the young participants showed a mild to moderate frequency of Body Dysmorphic Disorder (BDD). A significant positive correlation was found between BDD and both depression ( $r = .26, p < 0.01$ ) and social anxiety ( $r = .41, p < 0.01$ ). Additionally, the results showed that BDD significantly mediated the relationship between depression and social anxiety among youth, with a beta coefficient of 0.03 ( $p < 0.01$ ).

**Conclusion:** BDD is 41.5% prevalent in youth with a complete and partial mediating role in their display of social anxiety and depression, highlighting the importance of screening practices to be carried out in health settings for timely intervention application and management.

**Keywords:** Adolescents, Anxiety, Body Dysmorphic Disorder, Depression, Students.

## INTRODUCTION

Body Dysmorphic Disorder (BDD) is a mental disorder characterized by excessive worry about an imagined or minor flaw in one's appearance. People with BDD spend hours daily engaging in repetitive behaviors such as mirror checking, covering body parts, and seeking cosmetic treatments to relieve pain related to appearance issues.<sup>1</sup> Depression, on the other hand, is a common mental disorder characterized by low mood, loss of interest or pleasure, low energy, feelings of guilt or low self-worth, sleep or appetite disturbances, and poor concentration. Social Anxiety Disorder (SAD), also known as social phobia, is not just nervousness or shyness but often involves significant distress and difficulty in performing daily tasks.<sup>2</sup> Despite the recognition and treatment of BDD in developed countries, there is evidence of under-recognition and under-treatment of BDD in developing countries like Pakistan, making research on BDD in this population crucial.<sup>3</sup>

The current study was conducted on youth studying

at the University of Gujrat to investigate the frequency of body dysmorphia and its association with depression and social anxiety. With the increasing influence of advanced media technologies, Pakistani youth are highly exposed to media content that could contribute to the development of BDD.<sup>4</sup> The prevalence of BDD globally ranges from 0.5-3.2% in the general population, 1.3-5.8% in student populations, 4.9-21.1% in dermatology populations, 0-54.3% in psychiatric populations, and 2.9-57% in cosmetic surgery populations.<sup>5</sup> In China, 32.5% of medical students reported appearance concerns and higher levels of depression and social anxiety compared to students without such concerns.<sup>6</sup> In Germany, 5.3% of students aged 22 reported symptoms of BDD.<sup>7</sup>

The high prevalence of BDD and its correlations with depression and anxiety among Pakistani youth highlights the importance of exploring these variables in the Punjab region, as limited studies have been conducted on this population. Students, in particular, face social anxiety that may stem from their body image concerns, causing significant distress in their academic and so-

cial lives. The objectives of the study are to determine the prevalence of BDD in Punjabi youth and to investigate the mediating role of BDD between depression and social anxiety in these students.

### METHODOLOGY

This cross-sectional correlational research study was conducted on students aged 19 to 24 years old in the Department of Psychology at the University of Gujrat from October 2020 to March 2021. Ethical approval was obtained with reference number UOG/ASRB/Psychology/3/18631 from the Advanced Studies and Research Board at the University of Gujrat. The sample consisted of 200 students (78 boys and 122 girls) with education levels ranging from intermediate to master.

Convenient sampling was used to select the research participants from the University of Gujrat. Inclusion criteria were gender between 19 to 24 years of age and willingness to participate in the study. Participants with physical or mental disabilities were excluded. The screening was done through one question: "Do you have concerns about your face

or other physical features?" Participants who answered "yes" were included in the study. Due to the COVID-19 lockdown, probability sampling techniques were not applied and there was no access to the university's sampling frame.

Personal information was collected through a demographic sheet that included age, gender, education, residential area, family system, and income. The Body Dysmorphic Disorder Scale was used, consisting of 77 items with a five-point Likert response range of 0 to 4. The cut-off scores for normal, subclinical, mild, moderate, and severe categories are 0 to 30, 31 to 77, 78 to 90, 91 to 120 and 121 to 308 respectively<sup>8</sup>, and a reliability coefficient of .96. The Structured Clinical Diagnostic Interview was used to assess depression, consisting of 12 items on a Likert scale ranging from 0 to 4<sup>9</sup>, with a reliability coefficient of .70. The Urdu version of the Social Anxiety Scale for Adolescents (SAS-A) was also used, originally developed by La Greca in 1998 and consisting of 18 items with a five-point Likert rating scale, three subscales (Fear of Negative Evaluation, Social Avoidance and Distress-General, and Social Avoidance and Distress-New Situa-

tions)<sup>10</sup>, and a reliability coefficient of .88.

Google Forms was used to collect data, including informed consent, demographic sheet, BDDs, SCID, and SAS-A. The aim of the study and the confidentiality of participants' personal information were clearly spelled out in the informed consent. Data was analyzed using IBM SPSS-24 and AMOS-24, with regression and correlation analysis applied.

### RESULTS

The majority of the participants in the study were aged between 19 and 21 years old, accounting for 50.5% of the total participants. There were a total of 200 participants, 77 of whom were males and 123 were females. The majority of the participants were graduates, with 92 (46%) holding a graduation degree. The participants were mainly from urban areas, with 60 (80%) living in urban areas, and the majority of them lived in a nuclear family, with 120 (60%) living in such families.

Table 1 shows that 63% of the youth displayed mild to severe levels of Body Dysmor-

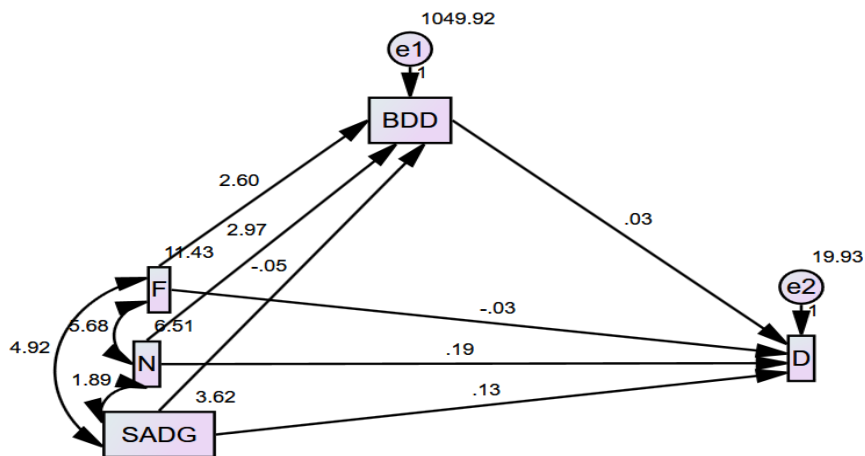


Figure 1: Structure Equation Model for BDD, Depression and Subscales of Social Anxiety in Youth.

phic Disorder (BDD). Table 2 shows that there were no significant gender differences in the symptoms of BDD as perceived by male and female students. This was demonstrated by the results of a t-test ( $t = .147, p = .88$ ).

Table 3 shows that BDD had a positive correlation with Depression ( $r = .26, p < .01$ ) and Social Anxiety ( $r = .41, p < .01$ ), indicating a mild level of association between the two disorders.

Figure 1 shows that regression analysis on study variables confirmed the structure equation model to explore mediating role of body dysmorphic disorder between their social anxiety and depression in youth. Path analysis showed that body dysmorphic disorder ( $\beta = 0.03, p < 0.01$ ) has completely and significantly mediated between fear of negative evaluation aspect of social anxiety ( $\beta = 2.60, p = 0.50$ ) followed by social avoidance and distress in general ( $\beta = -0.05, p = 0.98$ ) with depression. However, in social avoidance and distress in new situations ( $\beta = 2.97, p < 0.05$ ) in relation to depression, the mediation of body dysmorphic disorder ( $\beta = 0.03, p < 0.01$ ) is partially significant.

## DISCUSSION

Neglected Body Dysmorphic Disorder, in the area of mental health, has been studied in the present research. Investigation in Saudi Arabia revealed that BDD is more prevalent in nonmedical students as compared to medical students with high concerns for skin blemishes (64.2%) and hair issues (42.3%) as a result of detrimental impact of social media making youth dearth interested in religious practices<sup>11</sup>. The findings are consistent with the results obtained in Pakistan showing that 63% nonmedical university students exhibited mild to severe symptoms for BDD in the present study. In Lahore, 5% medical students and 10% nonmedical students, between 18 to 26 years old, showed 35% threshold symptoms for BDD<sup>12</sup>. A study

conducted on muscle dysmorphia in Karachi showed 25% of male medical students suffering with symptoms of body dysmorphism<sup>13</sup>. In present study, 22% male non-medical students exhibited severe concerns for their body image. Thus, current findings are consistent with the trend of body apprehensions in males in Karachi.

Another study conducted in Karachi on female students between ages 17 to 25 years, found that media has influenced their body image profoundly. In females with BDD, the area of focus were being too fat or too thin (35%), skin (24.4%), hair (15%), teeth (14%) and nose (14%). 24.4% became sad and depressed because of their appearance. 42% of the subjects spent 1-2 hours watching television every day, and 13.9% watched for 3-7 hours of television per day. 46.7% regularly visit entertainment/beauty websites or read entertainment magazines<sup>14</sup>. Similarly, the prevalence of BDD in medical students showed that males were concerned with head hair (34.3%), being fat (32.8%), skin (14.9%) and nose (14.9%), whereas females were concerned with being fat (40.4%), skin (24.7%) and teeth (18%). Conclusively, BDD has higher prevalence in males as compared to females in medical students<sup>15</sup>.

Unlike findings of the previous research<sup>2</sup>, the males (48%) in the present study showed moderate to severe symptoms of BDD as compared to females (49.6%) in the same level. The reason might be propagation of gender sensitive images in media as gender equity is balanced with equal presentation of body images in television and magazines. A cross-sectional study conducted in Lahore, with a mean age of 26.25( $\pm 5.95$ ) year males showed a moderate level of drive for masculinity for bodybuilders with 62% met the criteria for muscle dysmorphia<sup>16</sup>. In present study, 47% males showed mild to severe level of BDD that implied less proneness towards trendy outlook concerns in Gujrat as compared to metropolitan Lahore.

Moreover, secondary school female students ( $\text{Mage} = 16.78 \pm 1.11$ ) showed 12.3% prevalence for BDD with concerns for skin, hair, teeth and nose<sup>17</sup>. The present study showed that mature youth showed more symptoms for BDD, in comparison to secondary female students because youth are conscious about their body image in transition towards adulthood in a developmental stage<sup>18</sup>. This is observable trend in the research of Schneider et al., in 2017 conducted in Australia<sup>19</sup>.

Body dysmorphic disorder has been found to be empirically linked to depression and anxiety as a causal agent<sup>20-22</sup>. The findings of these researches have been in line with the results of the present study as body dimorphism mediated between depression and social anxiety in youth and either partially or fully strengthened their association.

Neuroticism has significant positive relation with body dysmorphic disorder as more the person is anxious and tense, more he or she is inclined to have BDD as found cosmetic surgery patients of different cosmetic centres in Islamabad and Rawalpindi<sup>23</sup>. Further, psychosocial assessment in adolescents showed that body dysmorphic symptoms was associated with sadness (20.6%), avoidance reactions (17.6%), and social relationships (21.5%)<sup>17</sup>.

Adolescents, enrolled in schools or universities showed signs of depression and anxiety in relation to BDD<sup>19, 23</sup>. This relationship has also been explored in clinical patients and was found to be significant for BDD, anxiety and depression<sup>24</sup>. The findings of the present research are in line with the results of the past researches, indicating enhancement of depression in the presence of body dysmorphic disorder while experiencing fear of negative evaluation and avoidance of social situations in general.

## CONCLUSION

BDD is 63% prevalent in youth with complete and partial mediating role in their display of social anxiety and depression, highlighting importance of screening practices to be carried out in educational settings for timely intervention and management with suitable referrals. However, conscious or unconscious experience of body dysmorphic symptoms has played a dominant role in avoidance of new social situations and interactions in youth. The findings implied that psychoeducational intervention strategies in addition to counselling; timely screening in academic and health settings must be carried out with the youth for better coping styles with accelerating media influence and lowered body image, thereby making them productive contributors of community and career pursuits.

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#### Author's Contribution

SS conceived the idea, helped in data analysis, and provided final approval for the manuscript. QM contributed in data analysis and drafting of the manuscript. FK helped in the collection of data and writeup for the manuscript. 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.

#### Conflict of Interest

Authors declared no conflict of interest

#### Grant Support and Financial Disclosure

None

#### Data Sharing Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.