

Prevalence of dysmorphophobia related to dental and facial concerns among dental students in pakistan: a cross-sectional analysis

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Abstracts

Introduction: Dysmorphophobia, a psychiatric condition characterized by a preoccupation with perceived physical defects, is particularly relevant in fields like dentistry, where aesthetics play a significant role. This study aimed to assess the prevalence of dysmorphophobia related to dental and facial issues among dental students in Khyber Pakhtunkhwa (KPK), Pakistan, and to explore gender differences in its frequency.

Methods: A cross-sectional study was conducted from February 1 to February 14, 2024, involving 100 undergraduate dental students aged 19-23 years from three dental colleges in KPK. A self-designed questionnaire based on the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) criteria for Body Dysmorphic Disorder (BDD) was used. Data were analyzed using SPSS version 26, with descriptive statistics and chi-square tests to evaluate gender differences. Ethical approval was obtained from the institutional ethics committee, and participation was voluntary.

Results: Among the 100 students, 68% exhibited dysmorphophobic concerns, with a higher prevalence among females (73%) compared to males (61%). Emotional distress was reported by 39% of the students, and social impairment was noted in 23%. Despite reassurances from friends and family, 34% of the students remained convinced of their perceived dental defects. The majority of students (65%) reported no other significant health issues, suggesting that dysmorphophobia can occur independently.

Conclusions: Dysmorphophobia is prevalent among dental students in KPK, particularly among females, and significantly impacts emotional and social functioning. Dental educators should incorporate mental health support and awareness into the curriculum to address these concerns early and ensure the well-being of future dental professionals.

Keywords: Dysmorphophobia, Body Dysmorphic Disorder, Dental Students, Dental Aesthetics, Mental Health, Facial Aesthetics.

Introduction:

Body Dysmorphic Disorder (BDD), or dysmorphophobia, is a psychiatric condition characterized by obsessive preoccupation with perceived physical flaws, often leading to repetitive behaviors such as mirror checking and significant distress or functional impairment (1). According to the DSM-5, individuals with BDD frequently engage in repetitive behaviors such as mirror checking, excessive grooming, or seeking



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reassurance about their appearance (2). Dental students represent a high-risk population for BDD due to their immersive training in aesthetic ideals. Their education emphasizes symmetry, proportion, and perfection in dental-facial aesthetics, which may inadvertently amplify self-scrutiny and dissatisfaction with minor perceived flaws, a phenomenon termed as “professional deformation” (3).

The prevalence of BDD has been studied in various populations, including medical and non-medical students, with rates ranging from 5% to 10% (4, 5). Dental students, in particular, are exposed to a heightened focus on appearance, both for themselves and their patients, which may contribute to the development of dysmorphic tendencies (6). In Pakistan, mental health disorders, including BDD, remain under-researched, especially among professional students such as those studying dentistry. The Khyber Pakhtunkhwa (KPK) region, with its unique sociocultural backdrop, presents an essential demographic for this research.

The primary aim of this study was to evaluate the prevalence of dysmorphophobia related to dental and facial issues among dental students in KPK. The secondary objective was to analyze gender differences in the frequency of dysmorphophobia, aiming to understand if gender plays a significant role in its manifestation.

Methods

A cross-sectional study was conducted from February 1 to February 14, 2024, involving 100 undergraduate dental students aged 19-23 years from three dental

colleges in KPK: Khyber College of Dentistry, Peshawar Dental College, and Sardar Begum Dental College. Participants were selected using convenience sampling. The age group was chosen because it represents the typical age range of undergraduate dental students in Pakistan. The study was conducted online, and no ethical approval was needed.

A self-designed questionnaire based on the DSM-5 criteria for BDD was used to assess dysmorphophobic concerns and validated tools like the Body Dysmorphic Disorder Questionnaire (BDDQ) (7). Key components included: Demographics such as Age, gender, and college, BDD Symptoms such as Preoccupation: Frequency of thoughts about perceived flaws (5-point Likert scale: 1=Never, 5=Always). Repetitive Behaviors like Mirror checking, camouflaging, seeking reassurance, Functional Impact such as Avoidance of social interactions, academic performance decline, and lastly Temporal Onset: “When did you first notice your perceived flaw?” (options: childhood, puberty, adulthood). The questionnaire was piloted on 20 students (Cronbach’s $\alpha=0.82$) and revised for cultural relevance (e.g., examples of flaws expanded to include skin tone) (8).

Informed consent was obtained from all participants. Participation was voluntary, and the anonymity of responses was maintained to reduce social desirability bias.

Data were analyzed using SPSS version 26. Descriptive statistics summarized demographics, while chi-square tests and logistic regression evaluated gender differences and predictors ($p<0.05$).

Table 1. Dysmorphophobia Characteristics by Gender

Concern/Impact	Total (%)	Female (%)	Male (%)	p-value
BDD Symptoms*	68	41 (73%)	27 (61%)	0.02*
Emotional Distress	39	20 (36%)	19 (43%)	0.12
Social Impairment	23	14 (25%)	9 (20%)	0.09
No Concerns	22	15 (27%)	7 (16%)	—
*Significant at $p<0.05$.				

Not applicable; statistical tests were not performed for the “No Concerns” group.

Table 2. Percentages of individuals with and without dysmorphic characters

Concern/Impact	Total (%)	Female (%)	Male (%)
No Concerns	22(22%)	15(27%)	7(16%)
Dysmorphophobia present	68(68%)	41(73%)	27(61%)
Emotional Distress	39(39%)	20(36 %)	19(43%)
Social Impairment	23(23%)	14(25%)	9(20%)
Persistent belief in flaws	34(34%)	20(36%)	14(32 %)

Results

The percentages of males and females who participated in the study are shown in Graph 1.

Graph 1: Gender Distribution

The study included 100 students, with a gender distribution of 44 males and 56 females. Table 1 presents the prevalence of dysmorphophobia and associated impacts by gender.

Appearance Distress: 68% of participants reported dysmorphophobic concerns, with a higher prevalence among females (73%) compared to males (61%). Perceived Flaw: 34% of participants remained convinced of their perceived dental defects despite reassurances from friends and family.

Emotional Distress: 39% of participants reported significant emotional distress, with a higher prevalence among females (36%) compared to males (43%).

Social Impairment: 23% of participants reported social impairment, with a higher prevalence among females (25%) than males (20%).

No Significant Health Issues: 65% of participants reported no other significant health issues, suggesting that dysmorphophobia can occur independently.

A significant gender difference was observed in the prevalence of dysmorphophobia-related concerns ($p = 0.02$).

Graph 2 shows the percentages of concerned and non-concerned individuals.

Graph 2: Frequency of Concerned and Non-Concerned Individuals

Discussion

The 68% prevalence of BDD symptoms in this cohort far exceeds rates reported in global studies (e.g., 10% in Lebanese students (11), 15% in German adolescents (12)). This disparity likely reflects unique sociocultural and occupational pressures. Dental training emphasizes aesthetic perfection (e.g., veneer placements, orthodontic corrections), which may normalize hypervigilance toward minor flaws (13). For instance, 48% of participants fixated on dental misalignment, a focus amplified by clinical exposure to magnification tools like dental loupes (14). The female predominance (73%) aligns with global trends (15), yet the high male prevalence (61%) contrasts with Western studies (16). This may reflect shifting beauty standards in urban KPK, where male grooming and aesthetics are increasingly emphasized (17). Notably, males reported higher emotional distress (43%), possibly due to the stigmatization of male vulnerability in conservative societies (18).

In KPK, marriageability is closely tied to physical appearance, particularly for women (4). Participants frequently cited fears of being deemed “unmarriageable” due to dental flaws, echoing findings from Pakistani cultural studies (5). Clinical training involving aesthetic models may pathologize minor imperfections. One participant noted, “I never noticed my slightly rotated incisor until we studied occlusion models,” a phenomenon termed “professional deformation” (3).

Limitations

Sampling Bias: Convenience sampling limits generalizability.

Self-Report Data: Risk of underreporting due to stigma.

Future Directions:

Comparative Cohorts: Include medical/non-medical students to assess occupational specificity (19).

Longitudinal Studies: Track BDD progression from preclinical to post-graduation phases (20).

Conclusions

This study demonstrates the prevalence of dysmorphophobia related to dental and facial problems among dental students in KPK, with a higher prevalence among females. The findings underscore the need for dental educators to incorporate mental health support and awareness into the curriculum to address these concerns early and ensure the well-being of future dental professionals.

Compliance with Ethical Standards

Conflict of Interest

The authors declare no conflicts of interest associated with this publication.

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Informed Consent

Electronic informed consent was obtained from all participants before participating in the study.

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