

Body Dysmorphic Disorder in Female Orthodontic Patients

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Abstract

Introduction: Patients with Body Dysmorphic Disorder (BDD) are preoccupied with slight defect in appearance. Such patients also have anxiety issues with other psychological disturbances and such patients often live compromised social life. Diagnosing such patients is important at suitable age to avoid unnecessary treatments and suitable referrals to the concerned consultants can help manage the situation better. This study was Questionnaire based, designed to assess BDD in Female Orthodontic Patients and its comparison with general population.

Methodology: Quantitative design involved descriptive statistics such as frequency distributions. The multi-center study conducted through online questionnaire, was operated by doctors from department of Orthodontics at Multan Medical & Dental College, Multan, in the duration of six months from June 1st, 2021, to November 2nd, 2021. Online questionnaire-based data was collected from female Orthodontic Patients and females of general group by a doctor from Orthodontic Department. The BDD modification of the Yale-Brown obsessive compulsive scale was used for diagnosis of Body Dysmorphic Disorder.

Results: Out of 287 subjects of general population 17 (6.2 %) members were diagnosed as BDD. Out of 163 patients, 14 (8.5%) female Orthodontic patients showed high concern and distress regarding their facial features and smile. From general population group, severely affected participants showed concern about facial features, weight, and skin color.

Conclusion: It is a dire need of modern world that orthodontists have a thorough understanding of body image to identify orthodontic patients with Body Dysmorphic Disorder (BDD). Unnecessary treatment can be avoided by creating awareness among clinicians about this disorder.

Key words: Body dysmorphophobia, Body image disorder, female body image, body dysfunction

Introduction

Dysmorphophobia is also known as Body Dysmorphic Disorder. In this disorder, person is engrossed in thoughts of slight defect in his

appearance.¹ Sufferers sometimes develop subjective fears of ugliness. It usually starts at childhood or adolescence. Patients are in the habit of checking themselves frequently in mirror for the perceived defects. In the general population prevalence is 1.7-2.4% with a higher incidence rate in females.² Health providers should be aware of this disorder and try not to miss it while diagnosing because of its association with suicidal thoughts and attempts.³ Common complains of such patients are obsessive

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compulsive disorder, depression, and anxiety. Satisfying such patients is challenging for the health care providers and are frequently undergoing cosmetic procedures such as orthodontic treatments to compensate their supposed deficiencies and physical appearances.⁴ Recognition of this disorder is important to save them from committing suicide. Compromised social life, frequent sick leaves and unemployment are frequently faced problems of such patients.⁵ In cosmetic surgery, mild to moderate BDD is not an exclusion criterion and there is requirement of careful treatment planning involving multidisciplinary approach.⁶ Sometimes, people are shy and their diagnosis is challenging. Family doctors are of great help to identify and manage these patients because of their relationship of trust with them.^{7,8}

The main objective of this study was to create awareness of dysmorphophobia among Orthodontists to avoid futile treatments.

Methodology

This Descriptive cross sectional research was proceeded after the approval from Institutional Review Board of Multan Medical and Dental College from June 1st, 2021, to November 2nd, 2021. Sample size of 450 was calculated using following equation $n = (Z_{1-\alpha})^2 \frac{P(1-P)}{d^2}$ considering confidence interval of 95% and chance of error is 5%. Non-Probability Convenience Sampling was used for this quantitative study. Only females from general population and orthodontic patients were included in the study. Patients with syndromes or known Psychological issues were excluded from the study.

Age limit was 18 years and above. 163 female Orthodontic patients and 287 females from general population group filled the Questionnaire online after informed consent

that was based on the BDD modification of the Yale-Brown obsessive compulsive scale.

The group of orthodontic patients comprised 163 female patients with mean of 21 years of age. The general population group comprised 287 subjects with mean of 20.7 years of age. This sample of non-patients who were members of general population studying or working in different programs of hospital.

Comparison of female orthodontic patient and Orthodontic Online Questionnaire was based on Yale-Brown Obsessive-Compulsive Scale Modified for Body Dysmorphic Disorder (BDD-YBOCS scale) and helped in data collection. Both English and Urdu languages were used while designing questionnaire for the ease of participants and it was operated and checked for authenticity by a doctor from Orthodontic Department. Questions were related to smile concern, treatment, covering smile, self-criticism, distress, dislikeness, and social interferences. BDD was found more in female orthodontic patients as compared to females of general population. Female patients showed basic concern regarding facial features and smile whereas females of general population group showed concern about weight and skin colour along with facial features.

Statistical Package of Social Sciences version 23 was used for data interpretation. Descriptive statistics were used for quantitative data and done by assessing mean, ranges, and standard deviation. No significant difference was found in ages of two groups. Data analysis showed 6.2% BDD among females of general population whereas 8.5% among female Orthodontic patients. Numerical values were displayed in large variety of frequency tables.

Result

Results of BDD-YBOCS questionnaire showed that Body Dysmorphic Disorder was found more in female orthodontic patients as compared to females of general population group.

Out of 287 members of general population 17 (6.2 %) members were diagnosed as BDD. Out of 163 subjects, 14 (8.5%) female Orthodontic patients showed high concern and distress regarding their facial features and smile. From general population, severely affected participants showed concern about facial features, weight, and skin color.

Table. I: It shows Ages of subjects in

95% Confidence Interval					
Group	Mean Age	Upper	Lower	SD	Range
Orthodontic Patient	21.0	36	14	3.0	22
General Population	20.7	31	17	2.3	18

Orthodontic patient group.

95% Confidence Interval						
	Group	Mean	Upper	Lower	SD	Range
Smile Concern	Orthodontic Patient	4.3	5	2	.76	4
	General Population	3.5	6	2	.95	3
Treatment	Ortho Patient	3.9	5	2	.98	3
	General Population	3.0	5	2	.98	3
Covering Smile	Ortho Patient	4.1	3	2	.88	3
	General Population	3.0	5	2	1.9	3
Self-Criticism	Ortho Patient	4.4	5	2	.74	3
	General Population	3.4	5	2	.99	3
Distress	Ortho Patient	7.9	9	6	.74	3
	General Population	6.9	9	6	.77	3
Dis-likeness	Ortho Patient	8.2	9	6	.69	3
	General Population	7.0	9	6	.81	3
Social Inter-ferece	Ortho Patient	8.2	9	6	.79	3
	General Population	6.9	9	3	.90	6

Table. II: Mean comparison for Orthodontic patient and general population according to the listed items

Discussion

In our study of Body Dysmorphic Disorder, both female orthodontic patients and general group showed concern regarding facial features. General group also showed concern about weight and skin colour. Problems like

Smile concern, covering smile, self-criticism, distress, dislikeness and social interferences were assessed and compared between the groups. These results showed that awareness of body Dysmorphic disorder among orthodontists is really important to avoid provision of unnecessary treatment to such patients.

This study showed 6.2% BDD in general group and 8.5% BDD in clinical setting, agreeing with the study that showed higher prevalence in clinical setting.⁹ Our study is in agreement with the study on plastic surgery t mostly among women.¹⁰ A study conducted on gender predilection towards male was not in favor of our study.¹¹ Esthetic concerns were more often found in adult women, and this showed similarity with the study by Morita MM.¹² Results of a study showed higher prevalence in men.¹³ Although, results of another research found males and females at same level.¹⁴

Marron et al.¹⁵ showed more concern about facial features like our study. General group of this study showed concerns regarding weight which agrees with the study associated with eating disorders.¹⁶ Our results showed greater worries about Female's features which is similar to the study showing female anxieties.¹⁷ This study assessed the prevalence of body dysmorphic disorder (BDD) and its correlation with depression, anxiety.¹⁸ Females with orthorexic eating behavior showed lower level of self-acceptance by showing body dissatisfaction just like the general population of our study that showed concern about their weight.¹⁹ Researcher found Body Dysmorphic Disorder more in women than general group just like results of this manuscript.²⁰ Study showed that women faced psychological stress due to their body's more than males.²¹ Researcher found no significant difference in age between groups like our results.²² Analysis on face gazing paradigm supports analysis of our study of facial features.²³ Manuscript on somatoform disorder showed form and

symmetry of particular feature.²⁴ Assessment of facial attractiveness supported the results of our study.²⁵ Results of a study reported teeth as the most common areas of concern which agrees with our research that showed concerns of facial features.²⁶

Yale-Brown obsessive compulsive scale was used for Questionnaire. Modification of the scale was done by Philip et al to measure obsession in Body Dysmorphic disorder.²⁷

Strength and Limitations:

Online Questionnaire under careful supervision of doctor helped us to gather maximum data in this time of COVID 19 where physical interactions are limited.

In this study, we couldn't assess body dysmorphic disorder among male patients and those with orthognathic needs.

Conclusion

Orthodontic female patients with Body Dysmorphic Disorder rarely get satisfied of their treatment. Recognizing such patients at time of diagnosis help orthodontists to refer them for proper management. We have tried to create awareness among clinicians about dysmorphismophobia. It is a dire need of modern world that orthodontists have a thorough understanding of this problem while diagnosing and treating orthodontic patients. Unnecessary treatment can be avoided by creating awareness among clinicians about this disorder. Identification of such patients during diagnosis by incorporating relevant questions in history sheet can be a great help for orthodontists.

Future Recommendations:

Further larger epidemiological studies are required in future investigations. Males and Orthognathic patients should also be part of investigations for further detailed assessments of body dysmorphic disorder.

Ethical Approval

The study was approved by the Institutional Review Board of Multan Medical & Dental College, Ibn-e-Sina Hospital & Research Institute, Multan. (IRB/MDC/-20-07-2020)

Disclaimer

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Conflict of Interest

It is declared that the authors don't have any conflict of interest.

Authors' Contribution

QS: Principle Investigator, Article Writing

SH: Concept, Supervision, Proof reading

NMB: Data Collection

EH: Data Collection, Article Writing

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