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RESEARCH ARTICLE

PREVALENCE OF BODY DYSMORPHIC DISORDER AMONG FEMALE PATIENTS SEEKING COSMETIC PROCEDURES

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Abstract

Body dysmorphic disorder (BDD) is a psychiatric illness in which individuals with minimal or non-existent defects related to appearance worry immensely about their looks: which results in displaying significant distress and impairment in behavior and psychosocial functioning. Patients with BDD seeking cosmetic surgery are usually unsatisfied with the outcomes of the surgery. Therefore, it is important to study this phenomenon and increase awareness among physicians about the importance of assessing their patients before starting any cosmetic treatment. To assess the presence of BDD in patients undergoing cosmetic procedures, and to improve the awareness about BDD among providers of cosmetic treatment. This is a cross-sectional study that uses the adult version of the BDD modification of the Y-BOCS (BDD-YBOCS) scale. This scale consists of 12 items related to preoccupied thoughts that participants have about their appearance, and the effects that these thoughts have on their lives. In this study, participants were instructed to answer questions on a 5-point Likert-type scale. Questionnaires were distributed on different online platforms, among females living in the eastern province of Saudi Arabia. Out of these, responses were received from 220 participants. Out of the 220 women who participated in this cross-sectional study, 45 of them had BDD (prevalence rate of 20.5%), which is a significant percentage. The results of the study indicate that BDD is more prevalent among participants in the age group of 20–35 years. The study also revealed that a positive correlation exists between BDD and females seeking cosmetic procedures. We found that one-fifth of the participants were diagnosed to be suffering from BDD. Higher rates of BDD were observed among women who underwent cosmetic procedures. Therefore, we recommend physicians to conduct a BDD screening for patients seeking cosmetic procedures before treatment.

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Introduction:-

Body Dysmorphic Disorder (BDD) is a DSM-V psychiatric illness that is characterized by concerns with minimal or non-existent defects in appearance, showing significant distress and impairment in behavior and psychosocial functioning. These concerns can be as minimal as skin picking, checking mirrors, engaging in grooming activities, applying make-up, excessive exercising, camouflaging with clothes, comparing oneself with others' appearances, and

questioning others' compliments about self-appearance, or as severe as undergoing unnecessary cosmetic procedures repeatedly and performing "do it yourself procedures" on self, in an attempt to improve self-appearance.

BDD is estimated to affect 1-2%^[1] of the general population. However, it is substantially higher among those seeking cosmetic procedures^[2]. It is reported that almost 76% of BDD patients consult plastic surgeons to undergo cosmetic procedures^[3]. 60% of BDD patients undergo unnecessary cosmetic surgeries in an attempt to correct minimal or non-existent imperfections in appearance^[4]. Out of these, 82% of the patients are unsatisfied with the outcome of the surgeries^[5]. This is why it is important to study this phenomenon.

BDD patients require psychiatric evaluation and treatment, and not unnecessary cosmetic procedures. Most of the BDD cases go undetected due to the gross lack of screening for this disorder^[3]. Therefore, it is extremely important for physicians to screen their patients for BDD before giving them any cosmetic treatment.

Methods:-

We conducted a community-based cross-sectional study in the eastern province of Saudi Arabia between November 2020 and April 2021. Ethical approval was obtained from the institutional Review Board (IRB) vide Letter No: IRB-UGS-2020-01-296 approval date 20/10/2020. And informed consent was taken from all participants in the study. We used the BDD modification of the Y-BOCS (BDD-YBOCS) scale to conduct this study. The scale consisted of 12 items related to preoccupied thoughts that participants had about their appearances and the effects that these thoughts had on their lives. Participants responded to questions on a 5-point Likert-type scale. Our target was to obtain responses from approximately 200 female participants living in the eastern province of Saudi Arabia. We are distributing our survey questionnaires randomly on different online platforms and received 220 responses. We used Google forms to create our questionnaire and share it easily to the best possible number of participants belonging to our expected target group, in a randomized manner. We faced some limitations and obstacles during our survey, which restricted us from accessing the best possible number of participants for the study.

Language was the first barrier, since we designed our questionnaire and conducted our study in English. Therefore, although we reached our target number of participants, it was very difficult to obtain an effective diagnosis according to the DSM-V criteria and share it with our target population, who have Arabic as their mother language.

Our second barrier was our doubts about the effectiveness of our study. As our study was community-based and cross-sectional, it did not have the best value in terms of controlling bias and ensuring credibility, when compared to Randomized Control Trial and Meta-Analysis.

We analyzed the differences in BDD in terms of some sociodemographic variables such as age, cosmetic procedures done, and preparation for future cosmetic procedure, as shown in table 1.

Variables	Groups	N	Body Dysmorphic Disorder	
			M (SD)	t (p)
Age	20 - 35 years old	(170)	12.83 (8.21)	2.75 (.007)
	36 - 55 years old	(50)	9.14 (8.22)	
Have you ever undergone any cosmetic procedure?	Yes	(103)	12.17 (8.09)	0.30 (.765)
	No	(117)	11.83 (8.58)	
Are you planning to undergo any cosmetic procedure in the future?	Yes	(141)	12.96 (8.18)	2.31 (.022)
	No	(79)	10.26 (8.39)	

Table 1:- Differences in Variables That Were Studied Among BDD Patients.

We used independent group t-tests and Pearson correlation to compare the data gathered from the two age groups and analyze the relative association between number of procedures and BDD. We studied and evaluated the results using Statistical Package for Social Sciences (SPSS).

We collated all the information obtained from our questionnaires and compared them with our expected results and analyzed if there was a high degree of difference between them. Our study results have been explained in the following paragraphs.

Results:-

Out of the 220 females who participated in this study, 45 of them had BDD (prevalence rate of 20.5%), while 175 did not have BDD (prevalence rate of 79.5%). A previous study conducted in Jeddah had revealed that out of 344 participants, 19.2% had BDD. Another study conducted in Al-Qassim region had revealed that 58 out of 325 (18.6%) participants were suffering from BDD. ^{[6],[7]} Table 2 and Figure 1 below show our current study results regarding the prevalence of BDD among our study participants.

	Cut-off score	n (%)
No BDD	(SCORE < 19)	175 (79.5%)
Participants with BDD	(score ≥ 19)	45 (20.5%)

Table 2:- Prevalence of BDD Among Female Patients Who Underwent Cosmetic Procedures.

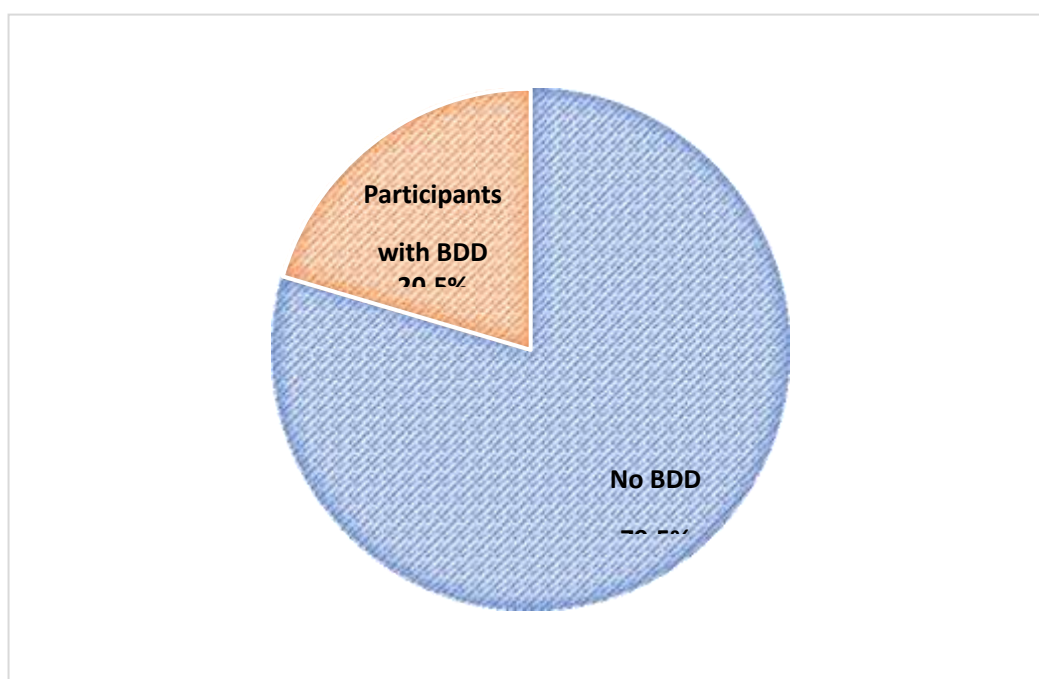


Figure 1:- Prevalence of BDD Among Female Patients Who Underwent Cosmetic Procedures.

The variables that were taken into consideration for analyzing the differences in BDD among patients were age, cosmetic procedures undertaken so far, and intention to undergo cosmetic procedures in the future. The results indicated that BDD patients in the age group of 20–35 years were significantly higher in number than those in the age group of 36–55 years. The number of participants who had undergone cosmetic procedures was almost equal to the number of those who did not. However, participants who intended to undergo cosmetic procedures in the future were higher in number than those who did not intend to. These inferences were drawn from previous table 1 and table 3 that shown below.

Variables		Body Dysmorphic Disorder	Number of Procedures
Body Dysmorphic Disorder	Pearson Correlation Sig. (2-tailed)	1	.414** .000
Number of procedures	Pearson Correlation Sig. (2-tailed)		1

Table 3:- Correlation Between BDD and Number of Procedures.

**, $p < .01$

The correlation analysis shown in table 3 indicates that there was a positive correlation between the presence of BDD and the number of cosmetic procedures undertaken and planned by the patient.

Discussion:-

Out of the 220 respondents who participated in our study, 141 participants (64.1%) indicated that they were planning to undergo cosmetic procedures in the future. We used the BDD-YBOCS scale to determine if these participants had BDD. The results showed that participants who were planning to undergo cosmetic procedures in the future had a higher score of BDD. BDD is a relative contraindication for cosmetic surgeries, as it is predicted that BDD patients will not be happy from the results of the procedures^[8]. Reduced levels of satisfaction will lead them to undergo surgeries again and again. Such unnecessary cosmetic surgeries can be avoided by increasing awareness about BDD among physicians as well as the general public. It is also recommended that physicians screen their patients for BDD before giving them any cosmetic treatment.

Many factors such as age, gender, education level and marital status can cause people to develop BDD.^[11] Our study results indicate that BDD is more prevalent in people belonging to younger age groups than those belonging to older age groups. This result is consistent with the results of the study conducted in Al-Ahsa^[9], which showed a higher prevalence of BDD among younger people. As mentioned previously, this can be due to the fact that youngsters spend more hours on their phones browsing social media channels and draw warped ideas about beauty from people they admire. BDD and its relation to plastic surgeries have been studied by many researchers worldwide. One of the studies conducted in the US reported that 9.7% of the participants who underwent plastic surgeries screened positive for BDD.^[8]

The discrepancy between this result and ours could be due to the fact that their participants belonged to both genders, while our participants were all females. Another study conducted in the US showed that 13.1% of patients undergoing cosmetic surgery and 1.8% of those undergoing reconstructive surgery had BDD.^[12]

While conducting this research, we faced some limitations. Firstly, the sample size was limited. Secondly, the questionnaires could be distributed among prospective participants only through online platforms due to the COVID-19 pandemic. This slowed down the response rate considerably. Thirdly, the research data was collected using a self-reported scale and not a definitive diagnosis. Lastly, the fact that the survey was conducted in English could have affected the results as most of the participants in our region are Arabic speakers who prefer to communicate in Arabic.

Cosmetic surgeries are quite common among Saudi females. There is a high probability that patients who go in for cosmetic surgeries may be suffering from BDD. However, our analysis of past studies indicates that very few national-based studies focusing on BDD have been conducted so far. Therefore, we recommend that more national studies be conducted in this subject, as it will help us gain more knowledge about the relationship between cosmetic surgeries and BDD in the Saudi region.

Conclusion:-

Body Dysmorphic Disorder (BDD) is a severe, and often impairing disorder. Although BDD appears to be a common disorder, it goes undiagnosed in most cases. BDD is considered to be a relative contraindication for cosmetic surgeries. Physicians should avoid performing unnecessary cosmetic surgeries for BDD patients as they will most likely not be satisfied with the outcome and will want to undergo further surgeries.

Therefore, we recommend physicians to screen their patients for BDD before performing any cosmetic surgeries on them. Increasing public awareness about this disorder will also benefit the patients and help reduce unwanted cosmetic surgeries.

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