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(Hard Copy)

E-ISSN : 2456-1045

- International Journal
- Most Cited Journal
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RESEARCH JOURNAL

VOLUME - 48 | ISSUE - 1

ADVANCE RESEARCH
JOURNAL OF
MULTIDISCIPLINARY DISCOVERIES

APRIL
2020



INTERNATIONAL JOURNAL FOUNDATION

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Body Dysmorphic Disorders Among Adults Attending Plastic Surgery Hospitals

ORIGINAL RESEARCH ARTICLE

ISSN : 2456-1045 (Online)
 ICV Impact Value: 72.30
 GIF- Impact Factor: 5.188
 IPI Impact Factor: 3.54
 Publishing Copyright @ International Journal Foundation
 Article Code: MDS-V48-I1-C5-APR-2020
 Category : MEDICAL SCIENCE
 Volume : 48.0 (APRIL-2020 EDITION)
 Issue: 1(One)
 Chapter : 5 (Five)
 Page : 30-35
 Journal URL: www.journalresearchijf.com
 Paper Received: 26.05.2020
 Paper Accepted: 08.06.2020
 Date of Publication: 20-06-2020

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ABSTRACT

Background: Body dysmorphic disorder is characterized by persistent preoccupations about defects or flaws in one's appearance. The defects or flaws appear slight or are not observable to others.

Objectives: Estimation of the prevalence and determinants of body dysmorphic disorder among patients attending plastic surgery hospitals.

Methodology: A cross-sectional study was conducted in two plastic surgery hospitals in Baghdad governorate. Participants were interviewed and data filled using a questionnaire for sociodemographic variables, and body dysmorphic disorder questionnaire.

Results: A total of 100 plastic surgery hospital attendees were approached. Female (70%), male (30%), age was 28.26±8.48 years, 56% were single, 37% were married, 70% were unemployed and 30% were employed. The prevalence of body dysmorphic disorder was 60%. Significant statistical association of body dysmorphic disorder were; gender (P=0.026), marital status (P=0.001), occupation (P=0.008).

Conclusion: Body dysmorphic disorder was high prevalent among attendees to plastic surgery hospitals. Preoperative psychiatric assessment is mandatory.

KEYWORDS: BDD; plastic surgery; prevalence; Baghdad.

CITATION OF THE ARTICLE



Hashim M.T., Al-Abbudi S.J.R., Bahlol F.A. (2020) Body Dysmorphic Disorders among Adults Attending Plastic Surgery Hospitals; *Advance Research Journal of Multidisciplinary Discoveries*; 48(5) pp. 30-35

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Open access, Peer-reviewed and Indexed journal (www.journalresearchijf.com)

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I. INTRODUCTION

Body dysmorphic disorder is characterized by persistent preoccupations about defects or flaws in one's appearance. The defects or flaws appear slight or are not observable to others^[1]. Individuals with BDD are highly distressed due to defects they perceive in their physical appearance that are not noticeable to others^[1]. They have a pervasive feeling of ugliness and are convinced that some part of their body is defective^[2]. The most frequent areas of concern are the face and head, and the main worries are related to problems such as acne, wrinkles, scars, the size and shape of the nose or ears, asymmetric or disproportional face, thinning hair or excessive facial hair. However, there may be a concern regarding any part of the body or with more than one part of the body^[3]. Individuals with BDD engage in excessive grooming, skin picking, mirror checking, and camouflaging of their appearance, with the aim of correcting, hiding, or distracting others from perceived defective parts of the body. Focusing on unattractive parts of the body, rumination, mental rituals or other mental acts are also often reported by individuals with BDD^[4]. These preoccupations are very time-consuming and occur, on average, 3-8 hours per day; they are typically difficult to resist or control^[5]. BDD is associated with significant distress, disability, unnecessary cosmetic surgery, and suicidal behaviour^[6]. BDD seems to be a relatively common psychiatric disorder, affecting about 1-2% of the general population. However, BDD is still under-recognized as well as under-studied^[7]. It usually starts during adolescence and affects both men and women.^[2] Besides thinking about it, one repetitively checks and compares the perceived flaw, and can adopt unusual routines to avoid social contact that exposes it.^[8] Fearing the stigma of vanity, one usually hides the preoccupation.^[8] Commonly unsuspected even by psychiatrists, BDD has been under diagnosed.^[8] Severely impairing quality of life via educational and occupational dysfunction and social isolation, BDD has high rates of suicidal thoughts and suicide attempts.^[8] Although delusional in about one of three cases, the appearance concern is usually non-delusional, an overvalued idea.^[2] The bodily area of focus can be nearly any, yet is commonly face, hair, stomach, thighs, or hips.^[9] Many seek dermatological treatment or cosmetic surgery, which typically do not resolve the distress.^[8] BDD shares features with obsessive-compulsive disorder,^[10] but involves more depression and social avoidance.^[11]

II. AIMS OF THE STUDY

To estimate the prevalence and socio-demographic characteristics of body dysmorphic disorder among patients attending plastic surgery hospitals

III. METHODOLOGY

Design: This is a cross sectional study.

Setting: The study was conducted in two plastic surgery hospitals (Al-Wasty hospital for plastic and reconstructive surgeries and Ghazy Al-Hariri hospital for surgical specialties at Baghdad, Iraq). These hospitals provide tertiary surgical services to all attendees from all over the country.

Study Population and Sampling Technique: A systematic random sampling technique was applied. Where every 3rd patient entering the hospital aged 18 years or more, both genders, seeking for facial cosmetic surgery, who agree to participate, was included. Patients seeking cosmetic surgery for other parts of the body were excluded.

Ethical Issue: The study proposal was fully discussed and approved by the scientific and ethical committee in the Arab board for psychiatry. The agreement of health authorities in the included hospitals was taken before starting the study. Verbal consent was obtained from each individual accepted to participate in the study.

Data Collection Tools: Each selected participant was directly interviewed using the structured questionnaires; a questionnaire gathering socio-demographic data, and The Arabic version of Body Dysmorphic Disorder Questionnaire (BDDQ) ^{[12],[13]}.

Statistical Analysis: Statistical Package of Social sciences (SPSS) version 25 was used for data entry and analysis. Categorical variables were tested using chi square test. P<0.05 was considered statistically significant.

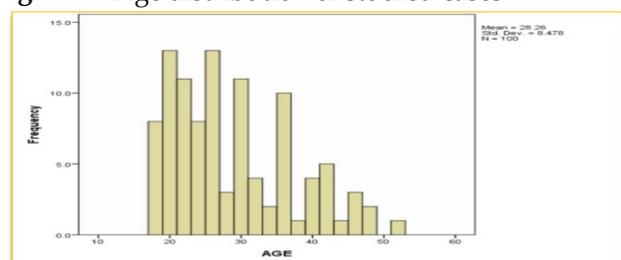
IV. RESULTS

A total of 100 patients were approached. The mean age was 28.26±8.48 years (figure 1). Males were 30%. 56% were single, and 37% were married. 30% of patients were employed (Table 1).

Table 1 distribution of patients according to essential studied variables

		Count	Column N %
Gender	Male	30	30.0%
	Female	70	70.0%
Social state	Single	56	56.0%
	Married	37	37.0%
	Other	7	7.0%
Occupation	Employed	30	30.0%
	Unemployed	70	70.0%

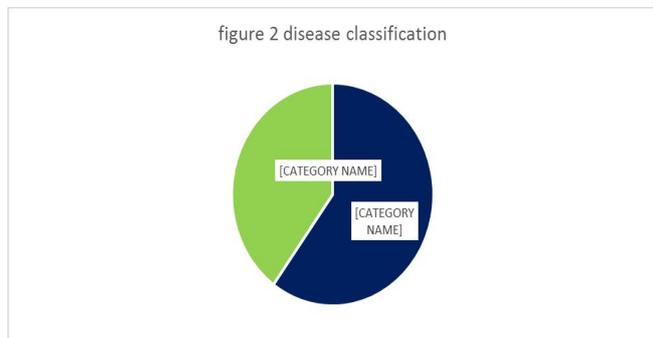
Figure 1: Age distribution of studied cases



Body dysmorphic disorder was 60% (Figure 2). Regarding first surgical intervention, the highest were Rhinoplasty operation (72%), Blepheroblasty (14%). The lowest were otoplasty (1%) and laser (1%) (Table 2).

Table 2 distribution of studied patients according to type of first intervention

	Count	Column N %
Rhinoplasty	72	72.0%
Blepheroplasty	14	14.0%
Chin implantation	2	2.0%
Otoplasty	1	1.0%
blow lift	2	2.0%
Botox	3	3.0%
Mesotherapy	2	2.0%
Laser	1	1.0%
Fat injection	2	2.0%
Filler	1	1.0%



Patients need second operation were 22%. Rhinoplasty was (11%), while the lowest frequency of second operation was Blepheroplasty (1%) and blow lift (1%) (Table 3).

Table 3 distribution of studied patients according to type of second intervention

	Frequency	Percent
No second intervention	78	78.0
Rhinoplasty	11	11.0
Blepheroplasty	1	1.0
blow lift	1	1.0
breast operation	3	3.0
Botox	3	3.0
Mesotherapy	3	3.0
Total	100	100.0

The mean age of patients with BDD was 25.15±6 years which is significantly lower than that without BDD group age (32.9 ±9.5 years), (P=0.001) (Table 4).

Table 4 difference between mean age of BDD and control group according to two sample t test

Group	N	Mean	Std. Deviation	P value
With BDD	60	25.15	6.022	0.001
Without BDD	40	32.93	9.507	

The mean age of male and female BDD patients group reported no significant association between them (P=0.857) (Table 5).

Table 5 independent two sample t test shows difference between mean age of male and female patients of BDD group.

	Gender	Mean	Std. deviation	P value
Age	Male	28.33	7.952	0.857
	Female	28.73	8.505	

About 67.1% of female patients with BDD corresponding to 43.3% of male patients, Chi square test proved the association between female gender and BDD is significant (P=0.026). Significant association were also noticed between single patients and BDD (76.8%) in comparison with married (37.8), and divorced or widowed (42.9%), (P=0.001). It was found that 68.6% of unemployed patients with BDD and 40% of employed person with BDD (P=0.008) (Table 6).

Table 6 association between sociodemographic variables and BDD status

		BDD		NO BDD		
		Count	Row N %	Count	Row N %	
Gender	Male	13	43.3%	17	56.7%	0.026
	Female	47	67.1%	23	32.9%	
Social state	Single	43	76.8%	13	23.2%	0.001
	Married	14	37.8%	23	62.2%	
	Other	3	42.9%	4	57.1%	
Occupation	Employed	12	40.0%	18	60.0%	0.008
	Unemployed	48	68.6%	22	31.4%	

The mean age of patients exposed to second operation was significantly higher than the mean age of other patients (P=0.022) (Table 7)

Table 7 age differences of patients according to history of previous procedure.

Group	N	Mean	Std. Dev.	Std. Error Mean
Previous operation	23	29.31	8.915	0.022
No previous operation	77	24.74	5.659	

The rate of exposure to second operation among female (28.6%) was significantly higher than that among male (10%), (P<0.001). The rate of exposure to second operation among single patients (33.9%) was significantly higher rate noticed in other marital status groups, (P=0.006). No significant association was reported between employment status and seeking for second operation, (P=0.133) (table 8).

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Table 8 association between socio-demographic variables and exposure to second operation

		yes		no		
		Count	Row N %	Count	Row N %	
Gender	Male	3	10.0%	27	90.0%	0.032
	Female	20	28.6%	50	71.4%	
Social state	Single	19	33.9%	37	66.1%	0.006
	Married	2	5.4%	35	94.6%	
	Other	2	28.6%	5	71.4%	
Occupation	Employed	4	13.3%	26	86.7%	0.133
	Unemployed	19	27.1%	51	72.9%	

The great negative effects of BDD on friend's status and dating (70%) which is significantly higher than that of no BDD group (27.5%) (P=0.001) (Table 9).

Table 9 association between sociodemographic variables and history of friends and dating status

		Yes		No		P value
		Count	Row N %	Count	Row N %	
Group	BDD	42	70.0%	18	30.0%	0.001
	No BDD	11	27.5%	29	72.5%	

V. DISCUSSION

Current study showed 60% of patients diagnose as possible cases of body dysmorphic disorder, and met the DSM-V diagnostic criteria of body dysmorphic disorder. Studies that have used semi-structured clinical interviews to assess BDD prevalence have primarily been conducted in psychiatric settings, and have reported BDD prevalence rates of 1.9 to 16% in inpatient samples in Germany, UK and the US⁷ and 3.2 to 11% in outpatient samples, all in the US.^[14] In general settings, a few studies have systematically assessed the occurrence of BDD. Two studies used the SCID to diagnose BDD and found prevalence rates of 6.7% and 8.8% indicating that BDD is common^[15]. Studies using the screening instrument BDDQ-DV found a prevalence of 4.2% in a Turkish sample^[16] and about 14% in two US samples^[17]. Some studies suggest that BDD may be even more common in cosmetic settings.

Studies using semi-structured clinical interviews to diagnose BDD, have found prevalence rates ranging between 2.9 and 15% in cosmetic dermatology clinics, and ranging very widely between 6.3 and 53% in cosmetic surgery settings, although the heterogeneity was high and the study quality varied in the latter setting^[7].

BDD is more common in female and in our study; the female rate was higher (67.1%) of total

number of female in our sample, in comparison with other studies at 38-50%.^[18] This may have been because the majority of our sample referred themselves to the study whereas all previous studies have been on psychiatric population. Moreover, which is expected result because the females take more care or pay attention on their face and more interested in cosmetic surgery than male.

BDD appears to be slightly more common among women, as indicated by a female: male ratio ranging from 1:1 to 3:2 in previous studies^[5]. All of the population-based studies found slightly higher prevalence rates in women than in men, although the differences were statistically non-significant in most studies. In plastic surgical patients, the studies that reported prevalence rates for men and women separately found slightly higher rates in men, although the differences were non-significant. While BDD in its most serious manifestation seems to affect both sexes almost equally, it has been suggested that mild BDD predominantly affects women, and even that preoccupation and manipulation of the body surface is considered a 'normal' gendered activity for women^[19].

Unemployed patients considered, as most common was 68.6% while 40.0% was for employed patients of our sample. This result may be due to unemployed patients had free time than others that exacerbated the preoccupation with a perceived defect in appearance or overemphasis of a slight defect, and might because collected sample of our study in the government hospitals with low cost in comparison with private hospitals that encouraged them to be made plastic procedure. This study was accordance with another study which BDD interferes with functioning and may lead to social isolation, and unemployment, and was accordance with another study which 51.7% of patients with body dysmorphic disorder showed a significant impairment in their academic or job performance because of their symptoms^[20].

The mean age for male was 28.33±7.9, and for female was 28.73±8.5. The distribution of age was equal in both male and female; because the disease affects the psychological well being and appearance in same impact on both gender and both need to prepare for marriage and be beautiful in front of others, in addition may be the older patient is more likely to develop physical diseases which prevent the patient from doing cosmetic surgery. This study was accordance with another study which found that there was no statistically significant between males and females patients and distribution of disease is roughly equal between them.^[21]

According to the results of this is study, we see more patients seeking cosmetic surgery have BDD, and from those of BDD patients about 72% of the

patients seek cosmetic clinics for rhinoplastic surgery and 14% for blepharoplasty. Rhinoplasty has the highest rate. Rhinoplasty has the highest rate, and this is likely because the shape of the nose greatly affects the shape of the face as well as its operation is easier than the rest and the successful rate is high. Rhinoplasty takes a unique position in the field of facial aesthetic surgery^[22]. The morphology of the nose and its central position in the face seem to be crucial not only for facial harmony, but also for normal psychological function.^[22]

After dividing the age of patients with body dysmorphic disorder into groups, we found that there were statistically significant differences between them. It was found that the mean age of body dysmorphic disorder patients was 25.15±6 years were the majority.

This is because the body dysmorphic disorder is more common in this age, as well as people in this age are more interested in cosmetic surgery to be beautiful in front of others or for preparing to marriage. This was accordance with another study, which found that the common age of onset of the disease is adolescence and this associated with increased severity of illness as well as higher levels of co morbidity with other psychiatric disorders.^[23]

Our study shows that the number of previous cosmetic operations of BDD patients to be increasing with increasing age, another research found an explanation for such results that after plastic surgery or minimally invasive treatments, some patients "switched" their preoccupation to another body area. Switching to another body area is not unexpected, because BDD is characterized by distorted body image and tendencies to obsess and excessively worry about nonexistent or minor flaws. Thus, a "surface" change, such as that accomplished by surgery, is unlikely to treat the underlying disorder.^[24]

The study also involved the correlation between the history of previous cosmetic operation and marital status. It was found that there is more positive history among single patients than married and this was accordance with another study that explained such a result as the prevalence of BDD is two time higher in single patients than married and the medical or surgical treatment of them are usually unsatisfactory. Moreover, BDD patients are prone to the over- operation syndrome and are often dissatisfied with the surgery.^[25] Another explanation may be because a person after marriage becomes more responsible and cares about his family and has little attention on his appearance from single in addition to economic causes. In this study, we found that the great negative effects of BDD on friends status and dating which is about 70%, which is similar to findings of

another research in a psychiatric setting showed that this might lead to substantial avoidance of everyday activities, social isolation, reduction of quality of life and suicide^{[18],[26]}. The study conclude that high prevalence of BDD among patients seeking plastic surgery (60%). There is no significant association between the mean age of male and female patients with BDD group. The BDD is more common among single, unemployed and female gender. The BDD is more common among young adult. Preoperative psychiatric assessment is mandatory.

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