

# Challenges Facing Plastic Surgeons in Dealing with Patients Who Suffer from Body Dysmorphic Disorder: Reviewing the Forensic Medicine Commission Files in Tehran, Iran

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## ABSTRACT

**Background:** Psychological disorders can create social challenges. Body dysmorphic disorder is a psychological issue that can lead to interpersonal conflicts. Plastic surgeons face this challenge in some patients referred for cosmetic surgery.

**Methods:** This study was conducted among 210 individuals who had officially filed a complaint regarding the results of cosmetic surgery with the Forensic Medicine Commission of Tehran, Iran from Mar 2023 to March 2024. They all underwent psychological diagnostic tests for body dysmorphic disorder. The gathered data included age, sex, occupation, educational status, surgery type, forensic medical commission petition result, and psychological assessment of the nasal deformity.

**Results:** Most medical forensic plaintiffs were women undergone breast, abdomen, or nose surgeries and were not satisfied with the results. 30.5% of those undergone cosmetic surgery and filed complaints had body dysmorphic disorder; most of them had undergone facial and nose cosmetic surgery. Interestingly, most of those with this psychological disorder had achieved a positive vote from the commission (surgeon convicted) compared to those who were not diagnosed with this disorder.

**Conclusion:** Plastic surgeons do a screening for psychological issues such as body dysmorphic disorder before performing cosmetic surgeries. It would be best to avoid either performing cosmetic surgery for them or, at least, not choose the more invasive procedures first.

## KEYWORDS

Body dysmorphic disorder; Plastic and cosmetic surgery; Forensic medicine; Surgery complications; Iran

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## INTRODUCTION

Appropriate behavior is the cornerstone of developing social relationships, and considering ethics minimizes interpersonal challenges. This is more evident in relationships where both parties have different viewpoints and demands. Before plastic or cosmetic surgery, a person

visits the surgeon with mental expectations about the changes in appearance they hope to achieve. The surgeon performs the surgery based on academic learning and previously approved techniques. The confrontation begins when the person is dissatisfied with the surgery results and seeks to correct the problem they see in the surgeon's work. A possible reason for such dissatisfaction after cosmetic surgery can be psychological, known as body dysmorphic disorder (BDD).<sup>1</sup>

BDD is an obsessive-compulsive psychological disorder that usually begins in adolescence and affects both males and females. It is an obsession with a minor or near-invisible physical defect, characterized by obsessive thoughts and compulsive behaviors that interfere with daily life activities<sup>1</sup>. According to the Diagnostic and Statistical Manual of Mental Disorders, 5<sup>th</sup> Edition (DSM-5), a person with somatoform dysmorphic disorder has repetitive behaviors or mental obsessions related to one or more physical defects that are subtle or invisible to others, to the extent that they are severe enough to interfere with normal social life<sup>1,2</sup>. Its prevalence is presumed to be between 0.5% and 2% in the general population, although it is reported to be 7% to 15% among those who refer for aesthetic and cosmetic surgeries<sup>3,4,5</sup>.

Many BDD patients believe that the only way to resolve their appearance problem is through medical and surgical treatments. People with BDD consult dermatologists and plastic surgeons almost as often as they consult psychologists or psychiatrists<sup>6</sup>. However, cosmetic treatments rarely improve BDD, and these people are usually dissatisfied with the results<sup>7,8</sup>. In many cases, people with BDD have threatened or sued their cosmetic surgeon or clinic as serious legal plaintiffs. Studies have reported that between 9% and 29% of surgeons or physicians have been legally sued by a BDD patient<sup>9,10</sup>.

Most plastic and cosmetic surgeons do not ask for a history of psychological issues, especially BDD or childhood psychological disorders, before performing a surgery<sup>11</sup>. If surgery is performed on BDD patients, more than 75% of them are dissatisfied with the results. Some of them may legally sue the surgeon, and some may commit a violent act against the surgeon. Research shows that performing additional cosmetic surgery on these patients can lead to endless requests for further surgeries, psychosis, and suicidal thoughts.

About 84% of cosmetic surgeons have operated on patients whom they initially believed were suitable candidates but later discovered they had BDD<sup>12</sup>.

The confrontations that arise are always annoying for the person and the surgeon, leading to costs for the healthcare system and affecting the future behavior and viewpoints of both parties, damaging interpersonal relationships and trust. We investigated a number of people with BDD who had filed a complaint in the Forensic Medicine Commission of Tehran after cosmetic surgeries.

## METHODS

This cross-sectional study included 210 individuals who had undergone cosmetic surgery and filed an official complaint with the Forensic Medicine Commission of Tehran from Mar 2023 to March 2024. They were all over 18. They had undergone various cosmetic surgeries, including rhinoplasty, abdominoplasty, blepharoplasty, mammoplasty, and eyebrow and neck lifts.

This study is based on thesis approved by Research Ethics Committee (code: IR.TUMS.IKHC.REC 1402.369).

In the forensic medicine commission, the history of various psychiatric disorders, including depression, anxiety disorders, body dysmorphic disorder, obsessive-compulsive disorder, bipolar disorder, etc., as well as the history of using psychiatric medication, is usually recorded. The history of prior cosmetic surgeries, including reasons, types of surgery, prior complaints, and their causes and outcomes, is also recorded. The reason and type of the current cosmetic surgery for which a complaint was filed are also recorded.

All included participants filled out two questionnaires: 1) the BDD questionnaire validated and available to use by psychologist, and 2) demographic information. To eliminate bias in responses, the survey was conducted after the commission meeting.

After completing the questionnaires, a psychiatric interview was conducted by the psychiatrist stationed at the forensic medicine commission to rule out other mental disorders. Follow-up on the forensic medicine commission's results was recorded only as 'acquitted' or 'not acquitted' for the plastic surgeon.

For homogeneity of variance independent t-test was

**Table 1.** The results of previous complaints of the studied individuals in the Forensic Medicine Commission of Tehran, Iran

| Result of previous complaint | Frequency | Percentage |
|------------------------------|-----------|------------|
| Positive (surgeon convicted) | 8         | 3.8        |
| Negative (surgeon acquitted) | 202       | 96.2       |
| Total                        | 210       | 100        |

**Table 2.** The results of previous complaints of the studied individuals in the Forensic Medicine Commission of Tehran, Iran

| Result of the current complaint | Frequency | Percentage |
|---------------------------------|-----------|------------|
| Positive (surgeon convicted)    | 68        | 32.4       |
| Negative (surgeon acquitted)    | 142       | 67.6       |
| Total                           | 210       | 100        |

**Table 3.** The relationship between BDD and age and history of cosmetic surgeries in the studied individuals

| Variables                   | BDD | Frequency | Mean $\pm$ SD    | P-value |
|-----------------------------|-----|-----------|------------------|---------|
| Age (yr)                    | Yes | 146       | 36.79 $\pm$ 8.49 | 0.395   |
|                             | No  | 64        | 37.86 $\pm$ 7.93 |         |
| History of cosmetic surgery | Yes | 146       | 1.97 $\pm$ 0.71  | < 0.001 |
|                             | No  | 64        | 2.64 $\pm$ 1.04  |         |

**Table 4.** Analyzing the results of the current complaints of the study's individuals

| Variable                        | BDD      | Frequency | Percentage | P-value |
|---------------------------------|----------|-----------|------------|---------|
| Result of the current complaint | Accepted | Yes       | 39         | 60.9    |
|                                 |          | No        | 29         | 19.9    |
|                                 | Rejected | Yes       | 25         | 39.1    |
|                                 |          | No        | 117        | 80.1    |

assessed. For main comparisons  $P < 0.05$  and 95% confidence intervals were considered.

## RESULTS

Overall, 88.6% of the participants were female. 55.2% were married, and 44.8% were single. Many of them had a high school diploma and had never studied at university (44.3%). 64 out of 210 participants had BDD: 58 women and 6 men.

All of the participants with BDD had a history of filing a complaint (it was not their first). 3.8% of participants had achieved a positive outcome from their previous forensic medicine complaint regarding cosmetic surgery results, and this was their second complaint in the forensic medicine commission. However, in the current complaint, 32.4% achieved a positive result from the forensic medicine commission. In 67.6% of the cases, their current complaint was neither resolved nor accepted (Table 1 and 2).

Most complaints were related to breast surgery (26.7%), abdomen (21.9%), and nose (20%),

respectively. Our psychological assessment showed that 30.5% of the studied participants had BDD. The results of the  $t$ -test showed that there was no significant difference in age between those with and without BDD, but there was a significant difference in the number of prior cosmetic surgeries. People with BDD had done significantly more cosmetic surgeries (Table 3).

Interestingly, 60.9% of those with BDD received a positive result from their current complaint (the surgeon was convicted), which was significantly different from those who did not have this disorder. Most of the participants who had BDD had been referred for facial and nasal cosmetic surgery (Table 4).

## DISCUSSION

This study was conducted among 210 individuals who had officially filed a complaint regarding the results of cosmetic surgery with the Forensic Medicine Commission of Tehran, Iran. BDD is prevalent in people seeking cosmetic surgery. In this

regard, Ende et al. estimated the prevalence of BDD at 1% in the general population. This rate increases up to 16% in those who refer to a cosmetic clinic. Moreover, the prevalence of BDD is 12% to 33% among those who seek cosmetic surgery<sup>3</sup>.

In a study, of 130 patients referred for rhinoplasty, about 31.5% had BDD<sup>2</sup>. Another survey has reported the prevalence of BDD among people seeking cosmetic surgery from 12% to 33%. The nose is a common area of concern among people with BDD, the higher rates reported among rhinoplasty patients are not surprising<sup>3</sup>.

In a prospective study, 274 individuals were randomly selected from among those seeking various cosmetic procedures. About 51% of them had psychological problems, including BDD<sup>13</sup>. According to the American Psychiatric Association in 2014, 48% of people referred to cosmetic surgery in the United States had BDD, and more than 64% of them had undergone surgery<sup>1</sup>.

In a study on 188 people with BDD, about 49% were women and 51% were men<sup>14</sup>, different from the study by Marques et al<sup>15</sup>. There is also a debate in the literature regarding gender in BDD patients. Most studies state that most BDD patients are women. In a study by Marques et al on 400 people who had BDD, 310 were women, and 90 were men<sup>15</sup>. In our study, there were 58 women and 6 men who had BDD. However, there was no significant difference among patients with BDD in terms of gender.

In a systematic meta-analysis of 48 published articles in 2022, the prevalence of BDD disorder among those who referred for cosmetic surgery was 19.2%<sup>16</sup>. In our study, this prevalence was 30.5%. In those studies, they assessed BDD among those undergoing cosmetic surgery, whereas we evaluated BDD among those who had officially filed a complaint after surgery. Although there is not enough research on the prevalence of BDD in people who file an official complaint after cosmetic surgery, our result can suggest that about one-third of people who file a complaint after cosmetic surgery may have BDD. Given the challenges that plastic surgeons can face afterward, awareness of BDD among those who refer for plastic surgery and its relatively high prevalence can lead to more careful selection of candidates for cosmetic surgery.

Aghsaghloo et al. compared individuals who requested cosmetic versus non-cosmetic rhinoplasty. The prevalence of BDD in those seeking cosmetic

surgery was four times higher than in those not seeking cosmetic surgery<sup>17</sup>. In another study on 300 participants, de Brito et al divided them into three groups: 1) abdominoplasty, n=90, 2) rhinoplasty, n=151, and 3) rhytidectomy, n=59. The prevalence of BDD was 57%, 52%, and 42% in abdominoplasty, rhinoplasty, and rhytidectomy groups, respectively. Significant differences were observed among the groups in age, body mass index, and the onset of BDD symptoms. There were also within-group differences regarding BDD severity in each group<sup>18</sup>. Raeissosadati et al. studied 250 women referred to a private plastic surgery clinic in Mashhad, Iran, from Mar 2016 to Mar 2018. They were divided into two groups: abdominoplasty and other cosmetic surgeries. BDD was assessed using a modified Bill Brown Questionnaire. Data, including age, marital status, number of children, educational status, and history of cosmetic surgery, were recorded. There was a significant difference between the two groups in BDD scores ( $P<0.001$ ). Although there was a significant relationship between BDD score and marital status, no significant relationship was observed between BDD score and age or educational degree. A significant increase in BDD frequency was observed among those who requested abdominoplasty<sup>19</sup>.

In a cross-sectional study conducted in Saudi Arabia among adults seeking cosmetic surgery at plastic surgery and eye surgery clinics between March 2019 and March 2020, the investigators investigated the prevalence of BDD. Overall, 344 patients with a mean age of  $39.66 \pm 13.76$  yr old participated in the study. 296 (86%) were women. The prevalence of BDD was 19.2%. Among those with BDD, the most commonly requested procedures were abdominoplasty (21.2%) and removal of skin lesions (21.2%). Smoking was associated with BDD: 21.2% of smokers had BDD<sup>20</sup>. In our study, the body areas that underwent surgery were recorded, and a comparative analysis was conducted across cosmetic surgery types (abdominoplasty, mammoplasty, facial plastic surgery, rhinoplasty, etc.). However, there was no significant difference between types of surgeries among cases with BDD.

## LIMITATIONS

This study is based on retrospective evaluation of records and files of forensic medicine center, and

maybe we had some lost necessary data to clarify concisely. Moreover, clients who accepted interview, might have feelings related to their compliment affected the stress of items they had chosen. Though, this study can evoke similar assessments to prepare standard preoperative clues to decrease subsequent dilemma.

## CONCLUSION

About one-third of people who filed an official complaint after undergoing cosmetic surgery had the psychological problems of BDD. Having a history of plastic and cosmetic surgery is an important factor in identifying patients with BDD. Plastic surgeons review a person's medical records or ask about prior cosmetic surgeries before agreeing to perform surgery on them.

Regarding gender differences, although BDD seems to happen less in men, these results might be because women refer more for plastic surgery than men. Thus, assessing men who refer for plastic and cosmetic surgery is also required. People with BDD can gain more positive results from the Forensic Medicine Commission in convicting plastic surgeons, we strongly advise plastic surgeons to review patients' history and look for signs of BDD, and if necessary, do a psychological screening test on patients suspected of BDD before selecting people for aesthetic and cosmetic surgery.

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## CONFLICT OF INTEREST

None.

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