Changing appearances: cosmetic surgery and body dysmorphic disorder

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Cosmetic surgery has become increasingly popular in the past 15 years, and even seems to be common practice. The overall picture communicates that people profit from these interventions. Generally, people wish to alter their appearance when they are dissatisfied about their body image and when appearance determines their self-esteem to a great extent. Body image disturbances, such as body dysmorphic disorder (BDD), are situated within the extreme dissatisfaction range. BDD is a serious disorder which is characterised by a preoccupation with an imaginary defect in appearance or an excessive concern about a slight physical abnormality. Patients can be effectively treated with cognitive behavioural therapy or a serotonin reuptake inhibitor, but most of them are convinced that cosmetic surgery is the only answer. Surgery outcome is often disappointing, however. This article aims to summarise the literature about cosmetic surgery and BDD and argues that cosmetic surgery patients should be screened psychologically to detect whether they have BDD. Results of a pilot study are presented to underpin this claim. (*Netherlands Journal of Psychology*, *62*, 34-41.)

Cosmetic surgery has become increasingly popular in recent years. In the United States, 10.2 million cosmetic surgery procedures were carried out in 2005 (American Society of Plastic and Reconstructive Surgeons (ASPS), 2006). This number includes the classical surgical methods, such as liposuction (a procedure that can help sculpt the body by removing unwanted fat from specific areas, including the abdomen, hips, buttocks, thighs, knees, upper arms, chin, cheeks and neck (ASPS, 2006), rhinoplasty (plastic surgery to the nose), breast augmentation, eyelid correction and facelift, which make up about 1.8 million procedures, as well as new, non-surgical cosmetic procedures, good for nearly 8.5 million procedures. Examples of the latter are botulinum toxin injections (Botox©, Myobloc©), chemical peels, microdermabrasion (a skin-freshening technique that helps repair facial skin that takes a beating from the sun and the effects of ageing; the plastic surgeon uses a device like a fine sandblaster to spray tiny crystals across the face, mixing gentle abrasion with suction to remove the dead, outer layer of skin (ASPS, 2006)) and laser hair removal (Sarwer & Crerand, 2004). The figure represents an increase of nearly 700% since 1992, when cosmetic surgery was limited to surgical techniques only (ASPS, 1992). This expansive growth is largely due to these new, noninvasive techniques.

In the Netherlands there also appears to be an increase in the number of surgical procedures, although actual figures are lacking. It is clear, however, that pri-

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vate hospitals apply themselves more and more to such procedures. The media, too, have recently been paying a great deal of attention to cosmetic surgery. For example, they developed a television program called 'Make me beautiful', a Dutch version of the American 'Extreme makeovers'. In these television programs people undergo a total make-over within about six weeks, while they stay in a clinic, isolated from family and friends. Eventually, they show the result on television.

For a long time, cosmetic medical treatments were the exclusive domain of plastic surgeons, whereas nowadays physicians from various specialties, such as dermatologists, otorhinolaryngologists (ear, nose and throat specialists), and dentists, offer such treatments (Sarwer & Crerand, 2004). People may experience a much lower threshold for deciding to undergo cosmetic medical treatment because of these changes in the medical community, but also because of the advances in technology and wound care (procedures have become safer) and because of the large increase in advertisements and media attention for these procedures (Sarwer & Crerand, 2004).

Why cosmetic surgery?

From the patients' view, the most important reason to undergo cosmetic surgery is dissatisfaction with their body image (Sarwer, Whitaker, Pertschuk, & Wadden, 1998a). Sarwer, Wadden, Pertschuk, and Whitaker (1998b) introduced a theoretical model of the relationship between body image and cosmetic surgery (figure 1).

Body image refers to the way individuals perceive their bodily appearance (Cash, 2004; Mowlawi, Lille, Andrews, Schoeller, Weschelberger, & Anderson, 2000). Physical appearance is an important part of body image as it is the primary source of information that others use to judge us and thus plays a fundamental role in determining beliefs about one's body (Sarwer & Crerand, 2004). Body image is dynamic and is influenced by environmental, time, and interpersonal aspects (Mowlawi et al., 2000). According to Cash (2002), two basic elements – body image valence and body image value - may play the most central role in the model. Body image valence is the measure of the importance of body image to one's self-esteem whereas body image value entails the degree to which one is satisfied or not with one's appearance. The interaction between both factors determines whether or not cosmetic surgery is considered or undergone (Sarwer et al., 1998b). According to the model, only people whose self-esteem greatly depends on body image (positive body image valence) and who are highly dissatisfied with their body image (low body image value) will consider cosmetic surgery. Persons whose self-esteem is not dependent on body image will not consider cosmetic surgery, even if they are dissatisfied with their body (Sarwer et al., 1998b). The latter, thus, implies that people with visible disfigurements who are not dependent upon their physical appearance to support their self-esteem will not consider cosmetic surgery.

Body dysmorphic disorder

Above, a model was described in which cosmetic surgery is predicted by both body image valence (the degree to which self-esteem depends on body image) and body image value (the level of body image dissatisfaction). Body image dissatisfaction can be seen as a continuum, according to Sarwer and colleagues' (1998b) model. At the one end, people who are extremely satisfied about their body image can be found, the other end represents the people with body image dissatisfaction. People with BDD are found in the extremely dissatisfied range. It is unclear, however, at what point people start to experience such distress that they seri-

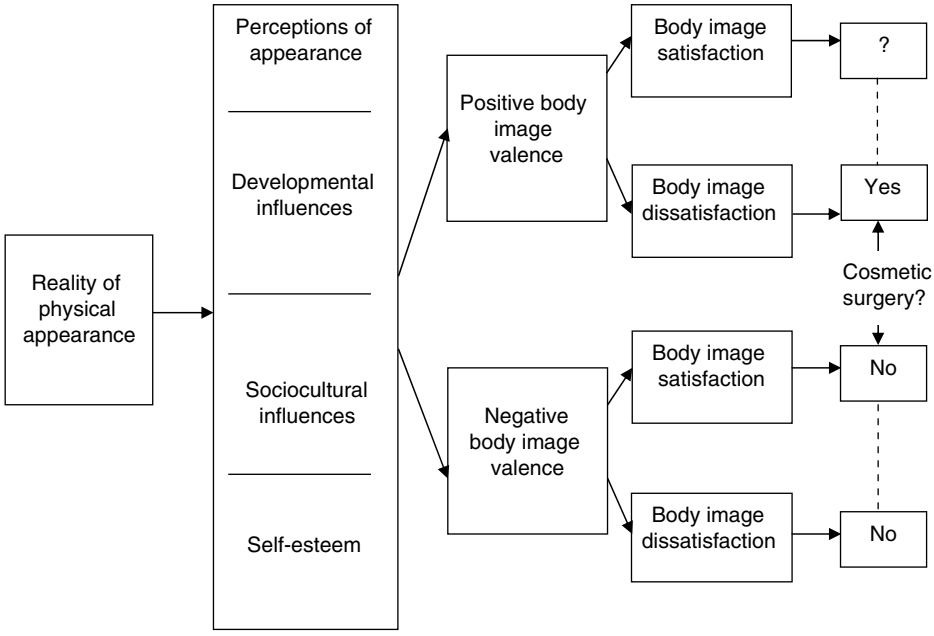

Figure 1
Model of the relationship between body image and cosmetic surgery (Sarwer, Wadden, Pertschuk, & Whitaker, 1998).

ously consider cosmetic surgery. This article focuses on the extreme end of the body image dissatisfaction range, and on body dysmorphic disorder (BDD) in particular.

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; APA, 1994), BDD is defined as a preoccupation with an imagined defect in one's appearance. When a slight anomaly is present, the person's concern is markedly excessive. Furthermore, the preoccupation must cause clinically significant distress or impairment in social, occupational or other important areas of functioning. Any part of the body may be the focus of BDD (Veale, De Haro, & Lambrou, 2003) but the preoccupations often relate to one or more, often visible, aspects of the face or body. The most common areas are the skin, hair and nose (Carrol, Scahill, & Phillips, 2002). Yet, preoccupations with relatively invisible body parts can lead to great distress as well. Examples are muscularity (not being well-muscled, mostly expressed by men) and the size and form of the genitals, which can be a concern of both men and women (Albertini & Phillips, 1999). BDD usually starts in adolescence but it is still unclear whether it is equally common among men and women, although recent reviews suggest that this is indeed the case (Wilhelm & Neziroglu, 2002). It is quite difficult to estimate the number of BDD sufferers; many people are not happy about parts of their body, but their concerns do not significantly affect them. On the other hand, people with BDD-like preoccupations are usually ashamed to reveal their bodily concerns. Still, attempts have been made to assess prevalence rates. Point prevalence rates of 0.7% within the general population have been reported for BDD by at least two studies (Faravelli et al., 1997; Otto, Wilhelm, Cohen, & Harlow, 2001). Phillips (1986) states that the disorder affects 1-2% of the general population, once in their lives.

BDD is time-consuming and chronic in nature, but the level of functioning may vary among patients; some patients may function reasonably well, whereas others become socially isolated, develop secondary mood disorders and may even (try to) commit suicide (Cororve & Gleaves, 2001). BDD may be associated with psychotic disorders if the preoccupations about the bodily defects are of a delusional nature. In this case, the disorder is called delusional disorder, somatic subtype (DSM-IV; APA, 1994). It may sometimes be difficult, however, to distinguish between BDD and delusional disorder (somatic subtype), because the preoccupations of BDD patients can be of a persuasive nature. Therefore, some authors have argued that the extent of delusional conviction of BDD concerns can also be seen as a continuum (Wilhelm & Neziroglu, 2002).

BDD has a large comorbidity with other disorders, the most common being major depressive disorder (Nierenberg et al., 2002; Perugi et al., 1998), social phobia (Brawman Mintzer et al., 1995; Wilhelm, Otto, Zucker, & Pollack, 1997), and obsessive-compulsive disorder (Brawman Mintzer et al., 1995; Wilhelm et al., 1997).

Body dysmorphic disorder and cosmetic medical treatments

Since BDD patients are more or less convinced that the solution to their problem lies in changing their appearances, they may often be encountered in medical treatment settings. However, this topic has received little scientific attention (Phillips, Grant, Siniscalchi, & Albertini, 2001). Phillips et al. (2001) assessed the non-psychiatric medical treatment sought and received by 289 individuals (250 adults and 39 children/ adolescents) with DSM-IV BDD. Non-psychiatric medical treatment was defined as dermatological, surgical and other medical treatment, such as ophthalmological, dental, and paraprofessional (e.g. electrolysis) treatment. It appeared that such treatment was sought by 76.4% and received by 66% of the 250 adults. Dermatological treatment was most often sought (by 45.2% of adults), followed by surgery (by 23.2%). This is comparable with Veale et al.'s (1996) finding that 26% of 50 BDD patients seen in a psychiatric setting had received surgery. Hollander, Cohen, & Simeon (1993) reported an even higher rate of 40%.

The estimated percentage of patients with BDD within cosmetic medical settings varies from 5% to 15% in the United States (Ishigooka et al., 1998; Sarwer et al., 1998a; Veale et al., 2003). In a dermatological setting, 12% met the BDD criteria (Phillips, Dufresne, Wilkel, & Vittorio, 2000). The first European study reported a prevalence rate of 9.1% for BDD in patients in a cosmetic surgery setting (Aouizerate et al., 2003). A recent Dutch study found 3 to 8% of the patients in dermatology and plastic surgery clinics of a university hospital to be suffering from BDD (Vulink et al., 2006).

Taken together, a significant number of BDD patients try to get cosmetic medical treatment for their complaints and within these cosmetic medical treatment settings, a significant number of patients have a BDD diagnosis. Rationally following on from this is the question whether cosmetic medical treatment helps to resolve BDD patients' concerns and make the disorder disappear. Phillips et al. (2001) found that non-psychiatric medical treatments rarely improved BDD symptoms. The most frequent treatment outcome in their study was 'no change in overall BDD severity' (72%). Overall BDD severity worsened in 16.3%, whereas it improved in 11.7% of the individuals under investigation. Only 7.3% of all treatments led to both a decrease in concern about the treated body part *and* overall improvement in BDD. Generally, after treatment, patients worried more about another body area, developed new appearance concerns, became more concerned about more minor imperfections in the treated area, or worried that an improved body part would become ugly again (Phillips et al., 2001). Veale (2000) collected self-reported outcome on 25 patients with BDD who had undergone cosmetic surgery in the past. It appeared that these 25 patients together had undergone a total of 46 procedures, and that the worst outcome was found in those who had undergone rhinoplasty and those undergoing operations. Mammoplasty (plastic surgery of the breasts) and pinnaplasty (plastic surgery of the ears), however, were associated with higher degrees of satisfaction. Nine pa-

tients had performed their own Do it Yourself (DIY) surgery, in which they attempted to alter their appearance themselves (e.g. by using a staple gun). Even when patients were (partly) satisfied, the preoccupation transferred to a different area of the body (Veale, 2000). Although these data were of a retrospective nature and collected within a selective sample, they underpin the fact that cosmetic surgery cannot be recommended for BDD patients.

Castle, Honigman, and Phillips (2002) reviewed the literature with respect to psychosocial outcomes following cosmetic surgery, in general. They conclude that only a few of the reviewed studies formally dealt with factors associated with an unsatisfactory outcome. But all in all, it appeared that more extensive ('type change') procedures (e.g., rhinoplasty) required greater psychosocial adjustment than 'restorative' procedures (e.g., face-lift). Next, they concluded that patients who have unrealistic expectations of outcome are more likely to be dissatisfied with cosmetic procedures and that some people were never satisfied with cosmetic interventions, despite good procedural outcomes. A subgroup of these patients are suffering from BDD (Castle, Honigman, & Phillips, 2002).

Pilot study about dissatisfaction after cosmetic surgery

By means of a pilot study we aimed to investigate the psychiatric condition of dissatisfied patients after cosmetic surgery in the Netherlands (Mulkens, Kerzel, Merckelbach, & Jansen, 2006). Individuals who had applied for cosmetic surgery but who were dissatisfied about the result were invited to our university, where they were interviewed and asked to fill in questionnaires about psychiatric disorders, such as BDD. The scores on the respective questionnaires were then compared with the average scores of the general population to investigate whether dissatisfied individuals suffer from psychiatric complaints relatively often.

Thirteen individuals reacted to our advertisement during a three-month period. After a screening, 9 individuals remained (7 women). Measurements consisted of an interview and several questionnaires:

SCL-90: The Symptom Checklist-90 (Arrindell & Ettema, 1986) is a multidimensional self-report symptom questionnaire. It provides an estimation of pathology experienced in eight domains. The internal consistency is high (alphas ranging from 0.77 to 0.97).

BDDE-SRQ: The Body Dysmorphic Disorder Examination Self-Report Questionnaire (Rosen & Reiter, 1996; Dutch authorised translation by S. Mulkens & C. Kerzel) indicates the existence of body dysmorphic disorder. The internal consistency of the English questionnaire is high (alpha=0.94), as is the test retest reliability (r=0.90; Rosen & Reiter, 1996).

BDI: Beck's Depression Inventory (Beck, Ward, Mendelsohn, Mock, & Erbaugh, 1961) is a self-report scale to indicate depressive and dysphoric symptoms. The BDI has a high internal consistency (alpha=0.86 for psychiatric patients; Beck, Steer, & Garbin, 1988).

PAS: The Perceptual Aberration Scale (Chapman, Chapman, & Raulin, 1978; Dutch translation Hardy, 2001) is developed to detect schizotypal symptoms. It measures perceptual and body image abnormalities by means of yes/no items. The reliability is satisfactory (Chapman, Chapman, & Raulin, 1978).

ADP-IV: The Assessment of DSM-IV Personality Disorders (Schotte, De Doncker, Vankerckhoven, Vertommen, & Cosyns, 1998) is a self-report questionnaire for DSM-IV personality disorders. It consists of 94 items, each measuring two characteristics of a DSM-IV criterion: the extent to which a personality trait is present ('trait score') and the cost of this trait ('distress score'). Besides the ten common personality disorders (paranoid, schizoid, schizotypal, antisocial, borderline, histrionic, narcissistic, avoidant, dependent and obsessive-compulsive), the depressive and the passive-aggressive personality disorders are also represented in the list. The internal consistency of the questionnaire is good (alpha=0.76). When an individual meets the trait score as well as the distress score on a particular item, this points in the direction of the existence of a personality trait.

EDE-Q: The Eating Disorders Examination Questionnaire (Fairburn & Beglin, 1994) is a self-report questionnaire, developed to measure specific eating pathology. It has five subscales (restraint, concerns about eating, concerns about weight, concerns about body shape, eating binges and weight control), asking after the past 28 days.

The scores on the questionnaires were individually compared with norm scores and cut-off points of the respective lists. Individuals received a 'dysfunctional' (+) score per list whenever they scored above the norm score or above the cut-off point. The individual results are summarised in table 1.

Taken together, five out of nine participants appeared to show dysfunctional scores on three or more of the six questionnaires, which is a striking result. In all five persons, BDD complaints played a role.

A critical point in this study is its retrospective nature: it is, of course, possible that psychopathology only developed after the cosmetic surgery had taken place. Still, for a disorder such as BDD this is unlikely, as it usually develops in adolescence and because people generally have their appearances changed as a result of BDD instead of BDD being the consequence.

From these data, no firm diagnoses can be made, since the suitable diagnostic tool is a DSM-IV interview. However, with the above reliable and valid questionnaires it can be concluded that persons who regret having undergone cosmetic surgery are worse off than cosmetic surgeons may suspect.

How to discover BDD patients within medical settings?

Considering the above, it seems extremely important for cosmetic surgeons and other medical caregivers to recognise BDD patients within their population. However, various studies indicate that preoperative psychological screening is rarely carried out (Thomas, Sclafani, Hamilton, & McDonough, 2001). Screening procedures are time-consuming and cost more money than standard procedures. Also, cosmetic surgeons lack

Table 1	**Individual results per questionnaire.**						
Individual		*SCL-90 Total score*	*BDDE-SRQ*	*BDI*	*PAS*	*EDE-Q*	*ADP-IV*
1	♀	+	-	-	-	-	Missing
2	♀	-	+	-	-	-	-
3	♀	+	+	+	-	-	Traits of - Schizoid - Schizotypal - Avoidant - Dependent - Obsessive-compulsive - NOS: Passive-aggressive
4	♀	-	+	+	-	Restraint Concerns about body shape	-
5	♀	+	+	+	-	Restraint Concerns about eating Concerns about weight Concerns about body shape	Traits of - Antisocial
6	♂	+	+	-	-	-	Traits of - Paranoid - Schizoid - Borderline Disorder - Avoidant - Dependent - Obsessive-compulsive
7	♀	-	-	+	-	Restraint Concerns about eating	-
8	♀	+	+	-	-	Restraint Concerns about eating Concerns about weight Concerns about body shape	Traits of - Dependent
9	♂	+	-	-	-	-	Disorder - Histrionic

+ indicates that an individual scored above the norm or above the cut-off point for undisturbed individuals. For the EDE-Q and the ADP-IV, the respective subscales on which individuals scored above the norms are mentioned.

knowledge about psychiatric disorders (Thomas at al., 2001). In any case, a minimum defect, a variation in size or shape, or a minimal scar catastrophised into dislike or disgust should alert the surgeon to the possibility of BDD (Hodgkinson, 2005). Patients with previous surgery, especially those with multiple surgeries who are still dissatisfied, could likely be suffering from BDD (Hodgkinson, 2005). Although disturbances of body image could also take the form of other psychiatric illnesses such as eating disorders, schizophrenia and hypochondriasis, the present article focused on the presence of BDD within the cosmetic medical population (Sarwer & Crerand, 2004).

The above-mentioned findings clearly demonstrate that evaluation of the psychological condition and motivation of the candidate patient in cosmetic medical treatment settings should be standard. Therefore, medical practitioners should seriously consider collaborating with psychologists. A psychological consultation should, ideally, be a standard part of the intake for cosmetic surgery. If this is impossible, cosmetic surgeons should refer to a psychologist as soon as they suspect that their clients have unrealistic expectations or are suffering from body image problems. As well, they could get their patients to fill in one or more questionnaires inquiring about BDD. Examples are the above-mentioned BDDE-SRQ (Rosen & Reiter, 1996) which can easily be administered by physicians.

Furthermore, cosmetic surgeons should be trained to recognise potential problem patients and be informed about psychiatric disorders and their preferred treatments.

Suitable treatments for BDD patients

How can BDD patients, who are detected within cosmetic medical treatment settings, be treated? Williams, Hadjistavropoulos, and Sharpe (2006) reviewed the literature on this topic. They conducted a meta-analysis of randomised clinical trials and case series studies involving psychological or medication therapies. Pharmacotherapy studies investigated the role of serotonin reuptake inhibitors (SRIs), especially clomipramine, fluvoxamine, fluoxetine, and citalopram. Psychological interventions mainly involved behaviour therapy (BT) or cognitive-behaviour therapy (CBT). Behaviour therapy techniques mostly consisted of exposure in vivo with response prevention. That is, patients undergo gradual exposure to anxiety-provoking situations (such as going out) whereas they are prevented from engaging in safety behaviours (like covering the defected part of the body). Cognitive behaviour therapy also entails the above technique but is completed by cognitive techniques. Negative, irrational beliefs about the defective body part are first discovered and then challenged by using the Socratic dialogue. Patient and therapist search for evidence for and against the beliefs by asking questions like 'is it true?', 'what evidence do I have in favour of this belief?', and 'what adverse evidence do I have'? Evidence is further sought by carrying out behavioural experiments, in which the patient tries to find evidence for and against the belief in real life.

Williams et al. (2006) concluded that BDD and depressive symptoms improve with treatment. Furthermore, psychological therapies were found to be more effective than pharmacotherapy, and especially CBT seems to be most promising in the long run, as CBT is often better at helping patients to maintain therapeutic gains and prevent relapse than medication treatment. This has been consistently demonstrated in, for example, the treatment of depression (Fava et al., 2004; Hensley, Nadiga, & Uhlenhuth, 2004). Thus, although SRIs such as clomipramine provide promising results in the short-term treatment of BDD, the state of the art with respect to treatment for BDD is CBT, which is known to have more lasting effects than any other kind of treatment.

Conclusion

In this article, we have presented an overview on the current popularity of cosmetic medical treatments and investigated which individuals typically request these procedures. In general, people will search for cosmetic medical surgery when their self-esteem highly depends on body image (positive body image valence) and when they are highly dissatisfied with their body image (low body image value). There is, however, a group of people in which this kind of treatment has no effects or worse, has adverse outcomes: people with body dysmorphic disorder. Patients with this disorder suffer from a distorted body image for which cosmetic medical treatment is not the appropriate treatment. Cognitive-behavioural therapy is currently the best evidence-based treatment for this group. It is argued that cosmetic surgeons should be better trained to detect these patients and to refer them for psychological treatment. Not only will patients then have a chance to recover from their psychiatric illness, but also cosmetic surgeons will encounter less dissatisfied patients.

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