Article

Prevalence of Body Dysmorphic Disorder in a Community Sample of Women

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Objective: In a large population-based study, the authors examined the prevalence and correlates of body dysmorphic disorder, a debilitating and chronic condition characterized by an imagined defect in appearance.

Method: Rates and diagnostic correlates of body dysmorphic disorder were examined by using data from the Harvard Study of Moods and Cycles. This study used in-person structured clinical interviews to characterize the diagnostic status of a population-based, cross-sectional sample of 318 depressed and 658 nondepressed women between the ages of 36 and 44 who were selected from seven Boston metropolitan area communities.

Results: The presence of body dysmorphic disorder was significantly associated with the presence of major depression and anxiety disorders. The authors estimated the overall point prevalence of body dysmorphic disorder as 0.7% in women in this age range in the community.

Conclusions: The authors found that the presence of body dysmorphic disorder was linked to the presence of major depression and anxiety disorders, which is similar to findings in clinical studies. Their estimate of the point prevalence of body dysmorphic disorder is consistent with data from a community-based sample of Italian women and suggests a prevalence similar to that of other serious psychiatric disorders in women (e.g., schizophrenia and drug abuse and dependence). These prevalence data encourage the further development of treatment options for this debilitating condition.

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Body dysmorphic disorder is a chronic and debilitating mental health problem characterized by a preoccupation with an imagined defect in appearance (1). In addition to core concerns about appearance, body dysmorphic disorder is marked by severe disruptions in self-esteem, time-consuming repetitive behaviors (e.g., comparing, mirror checking, camouflaging, excessive grooming, skin picking, reassurance seeking), and avoidance (e.g., of social situations, mirrors, bright lights) (2, 3). It is also associated with high levels of occupational and social disability, including absenteeism, lost productivity, unemployment, and marital dysfunction, as well as frequent use of medical and plastic surgery services (3, 4). In one study (5), the rate of suicide attempts related to appearance concerns was 24%.

Rates of body dysmorphic disorder have been found to be high among groups of psychiatric outpatients, particularly among patients with anxiety disorders or major depression. For example, in a group of 165 patients with a primary diagnosis of anxiety disorder, we found that 6.7% met lifetime criteria for body dysmorphic disorder; rates were highest for patients with social phobia, followed by patients with obsessive-compulsive disorder (OCD) (6) (see also Brawman-Mintzer et al. [7] and Simeon et al. [8]). Elevated rates of body dysmorphic disorder have also been found in patients with a diagnosis of atypical major depression. Phillips et al. (9) found a 13.8% lifetime history of body dysmorphic disorder in depressed patients; the highest rates were linked to a comorbid diagnosis of OCD.

Less information is available about rates of body dysmorphic disorder in the community. Although subclinical concern about appearance appears to be especially common (10), body dysmorphic disorder may be present in less than 1% of the population. This estimate, however, is based on a study of 673 individuals randomly selected from the community in Florence, Italy, in which a 1-year prevalence estimate of 0.7% was obtained (11). We are not aware of any similar information regarding large community samples in the United States.

In this study, we provide data on the prevalence and correlates of current body dysmorphic disorder among adult women selected from the community. Specifically, we used data from the Harvard Study of Moods and Cycles (12), one of the largest population-based studies of late-reproductive-aged women who were administered in-person structured clinical interviews to identify the presence of psychiatric disorders. To allow examination of the association between depression and hormonal function, the Harvard Study of Moods and Cycles selected women with a history of past or present depression and provided a large comparison group of women without such history. Because of the association between body dysmorphic dis-

order and depression, the Harvard Study of Moods and Cycles provides an ideal context from which to estimate the diagnostic correlates of body dysmorphic disorder in a community sample.

Method

The cohort for the Harvard Study of Moods and Cycles was derived from a population-based, cross-sectional sample of women between the ages of 36 and 44 who were selected from seven Boston metropolitan area communities. From a sample of 4,569 completed screening questionnaires, a cohort of 976 women (318 with a past or present major depression and 658 without) were selected for our study. Selection from the larger sample was on the basis of a score of lower than 16 on the Center for Epidemiologic Studies Depression Scale (CES-D Scale) (12) and the lack of a reported history of depression for the nondepressed cohort and a CES-D Scale score higher than 24 or a self-reported history of depression for the depressed cohort. The participants were sequentially selected for inclusion on the basis of these characteristics; they provided written informed consent and completed in-person diagnostic evaluations. Further details pertaining to the characteristics of the target population can be found elsewhere (13).

Diagnostic status was determined by use of in-person structured clinical interviews (SCID) (14) that included assessments for affective disorders and an assessment module for current body dysmorphic disorder (15). Assessments were conducted by interviewers trained in the SCID; diagnoses were assigned only after review of each interview by a study diagnostician (M.W.O. or L.S.C.) in weekly quality assurance meetings. Consensus diagnosis meetings were held for any difficult diagnosis. Consistent with our previous studies (e.g., Otto et al. [16]), we defined anxiety comorbidity by the presence of social phobia, OCD, panic disorder, posttraumatic stress disorder, or generalized anxiety disorder (specific phobias were excluded from consideration). Significant associations between body dysmorphic disorder and depression or anxiety diagnoses were assessed by using two-tailed Fisher's exact tests.

Results

Eight patients with body dysmorphic disorder were detected in the total sample of 976 women. The mean age at onset of body dysmorphic disorder was 20.1 years (SD= 11.3); five of eight patients reported onset between ages 11 and 14, and the remaining three patients reported onset in their 30s. Body dysmorphic disorder was significantly more common among individuals with a history of depression (N=6, 1.9%) than among individuals without (N= 2, 0.3%) (p=0.02, Fisher's exact test). Likewise, rates of body dysmorphic disorder were significantly higher (N=5, 2.4%) among the 211 patients with an anxiety disorder diagnosis than among those without (3 of 765, 0.4%) (p= 0.02). The co-occurrence of anxiety and depression was high; 70.6% (N=149) of the individuals with an anxiety disorder diagnosis met criteria for past or present major depression.

To arrive at an overall estimate of the point prevalence of body dysmorphic disorder in women in the community, we had to adjust for the specific selection of depressed women in our cohort. The National Comorbidity Survey (17) estimated that the lifetime prevalence of major depression in women aged 36 to 44 years is 23.8%, compared to our selected rate of 32.6% (318 of 976). When we applied our estimates of the prevalence of body dysmorphic disorder in depressed and nondepressed women to community rates for individuals with and without depression ([1.9% × 23.8] + [0.3% × 76.2]), we computed an overall prevalence estimate of approximately 0.7% for current diagnoses of body dysmorphic disorder in women in the community.

Discussion

We computed a point prevalence of body dysmorphic disorder of 0.7% in a community sample of adult women aged 36–44 years. This point prevalence is identical to rates obtained for Italian women in a similar community-based survey. Although body dysmorphic disorder is believed to be a chronic disorder (3), our point prevalence data, gathered in women aged 36–44 years, may not fully reflect episodic rates of the disorder as present in younger samples of women. Indeed, clinical studies tend to enroll younger women (e.g., Wilhelm et al. [18]), raising the possibility that the point prevalence may be even higher in this younger cohort. This hypothesis is consistent with findings that concerns over appearance appear to be particularly widespread in college populations. In a study by Fitts et al. (19), 70% of the students were dissatisfied with some aspect of their bodies, and 46% were preoccupied with this aspect. Moreover, a sample of college students in Germany (unpublished 1998 data of A. Bohne et al.) provided a much higher estimate of symptoms of body dysmorphic disorder (5.3%), which were sufficient to meet the criteria for this disorder. In our sample, the onset of body dysmorphic disorder occurred before age 15 in over one-half of the participants, suggesting that in many cases, our point prevalence reflects body dysmorphic disorder that persisted to middle adulthood. A cautious conclusion is that our point prevalence for body dysmorphic disorder in women between the ages of 36 and 44 may seriously underestimate the lifetime prevalence of this condition.

Consistent with data from previous studies, we found that a diagnosis of body dysmorphic disorder was linked to the presence of anxiety and depressive disorders. However, our sample of patients with body dysmorphic disorder was too small, and the co-occurrence of anxiety and major depression was too great, to allow examination of which comorbid diagnosis was most linked with body dysmorphic disorder. Our data are consistent, however, with the mixed picture provided by clinical studies at our facility (1, 6–8); body dysmorphic disorder is especially prevalent in groups of patients with primary anxiety and depressive disorders.

In summary, we obtained a point prevalence for body dysmorphic disorder of approximately 0.7%, a rate similar to that of other serious psychiatric disorders in women (e.g., schizophrenia and drug abuse and dependence)

(20). Our study was limited to women aged 36–44 years; higher rates may be obtained in younger samples. Our study did not examine rates of body dysmorphic disorder in men, but there are suggestions in the literature that rates of body dysmorphic disorder may be comparable between women and men (21). Given these prevalence findings, clinicians should be vigilant to the potential presence of comorbid body dysmorphic disorder in patients with mood disorders. Moreover, further development of treatment strategies for body dysmorphic disorder is warranted (18, 22, 23).

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