Original paper

Body Dysmorphic Disorder Questionnaire-Dermatology Version (BDD-DV): formation and validation of the Polish language version

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Abstract

Introduction: Body dysmorphic disorder (BDD) is a mental health condition defined by preoccupation with a non-existent or minimal flaw (defect) in appearance. This preoccupation causes significant social and occupational impairment, lot of distress and is not better accounted for by another mental disorder. The defect often regards the skin, face or body build. Data show that 8–14% of dermatological patients suffer from BDD, whereas in the cosmetic dermatology setting the incidence is reported as high as 8–37%. The Body Dysmorphic Disorder Questionnaire-Dermatology version (BDDQ-DV) is a screening tool that may help to diagnose patients with BDD in dermatology settings. The questionnaire is self-reported, therefore it can be used in daily dermatology practice.

Aim: To create and validate the Polish language version of the BDDQ-DV.

Material and methods: The Polish version of BDDQ-DV was created in accordance with international standards. To assess reliability of the questionnaire the Cronbach's α coefficient was used. The reproducibility (test-retest reliability) of the Polish language version of the questionnaire was evaluated using the interclass correlation coefficient (ICC) coefficient.

Results: The Polish version of BDDQ-DV was created. The Cronbach's α coefficient based on the first completion of the questionnaire was 0.92 indicating a correspondingly high internal consistency between the questions of the questionnaire. ICC was assessed at 0.998, which indicates excellent reliability.

Conclusions: The Polish version of BDDQ-DV may help to identify patients with BDD among Polish-speaking individuals.

Key words: body dysmorphic disorder, dysmorphophobia, Body Dysmorphic Disorder Questionnaire-Dermatology version.

Introduction

Body dysmorphic disorder (BDD, formerly called dysmorphophobia) is a mental health condition which comes from the Greek word "dysmorphia" meaning ugliness [1–3]. Individuals with BDD are very concerned with a minimal or non-existent flaw (defect) in appearance, and these concerns preoccupy them. The patient constantly believes that the defect, which often concerns the skin and hair, is noticed by others. This preoccupation causes significant impairment in professional life or other important areas of functioning, social avoidance, a lot of distress and is not better accounted for by another mental disorder [2–5]. An additional criterion is repetitive behaviours or mental acts in response to preoccupation with this defect. BDD is currently classified as a mental disorder diagnosed according to criteria defined in the Diagnostic and Statistical Manual of Mental Disorders (DSM). The severity of symptoms can vary from obsessive to delusional and vice versa [2, 3, 6]. Most patients, however, seek help from dermatologists, plastic surgeons, aesthetic medicine doctors and beauticians [2, 6, 7]. BDD is a relatively common but undiagnosed and therefore untreated condition [8]. Data show that 8–14% of dermatological patients suffer from BDD, whereas in the cosmetic dermatology setting the incidence is reported as high as 8–37%. In plastic surgery practices, this percentage may increase even up to 53%, with a general population prevalence rate of 0.7–2.4% [6, 9]. Therefore, patients with BDD often first visit dermatologists or plastic surgeons. Usually, the first symptoms of the condition appear during adolescence. According to the literature, there are no major differences in the incidence of BDD between men and women, with the incidence among women compared to men ranging from 1 : 1 to 3 : 2 [6, 10, 11]. BDD is associated not only with high rates of occupational impairment

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and social dysfunction but also with high comorbidity with a major depressive disorder, social anxiety disorder and obsessive-compulsive disorder [3, 5]. As reported, 17–77% of patients with BDD have suicidal ideation and as many as 3–63% attempt suicide [3].

The Body Dysmorphic Disorder Questionnaire – Dermatology version (BDDQ-DV) was created by Katharine Phillips *et al.* from Brown University School of Medicine, Rhode Island, USA, and was published in 2000. It is a modified version of the BDD Questionnaire, which was created based on DSM-IV criteria and validated for use in the psychiatric setting. BDDQ-DV is a screening tool that may help to diagnose patients with BDD in dermatology settings [4, 7, 11, 12]. The questionnaire is self-reported, therefore it can be used in the daily dermatology practice (Acknowledgment 1).

BDDQ-DV questionnaire contains not only YES or NO and open questions concerning the presence of BDD symptoms but also questions concerning the severity of BDD symptoms according to the five-level Likert scale. The patient is first asked: "Are you very concerned about the appearance of some part of your body which you consider especially unattractive?". If the answer is "Yes", the patient is further asked "Do these concerns preoccupy you? That is, you think about them a lot and they are hard to stop thinking about?". To screen an individual for BDD, the patient should report the presence of concerns with the appearance of some part of their body as well as the preoccupation with these concerns (answer "yes" to the first and second question supplemented with the following open question: "What are these concerns? What specifically bothers you about the appearance of these body part(s)?". The patient is further asked: "What effect has your preoccupation with your appearance had on your life?). The additional criterion to screen the patient for BDD is that the defect in appearance should at least moderately cause a lot of distress, torment or pain (the question should be rated at least 3 on the five-level Likert scale) or should at least moderately impair the social, occupational or other important areas of functioning (the question should be rated at least 3 on the five-level Likert scale) [7, 12].

Aim

The aim of the current study was to create and validate the Polish language version of BDDQ-DV created by Katherine Phillips [7, 12]. This version of BDDQ-DV may be used among Polish-speaking people, both routinely in practices dealing with dermatology and aesthetic medicine as well as for survey purposes to screen patients for BDD [7, 12].

Material and methods

The Polish version of BDDQ-DV was created in accordance with international standards [13, 14]. The permission to prepare the Polish language version of BDDQ-DV was given by Katharine Philips.

In the first step, the original English language version of BDDQ-DV created by Katharine Philips [6] was translated into Polish by two independent translators. Then, a bilingual medical expert in the field evaluated both Polish versions of translation and compared them for any differences to obtain the consensual version. The produced version met the semantic consistency condition for each response. In the next step, two back translations from Polish to English were prepared by other independent two translators, who were not familiar with the original English language version of BBDQ-DV. As a result of this multistep procedure, the final Polish language version of BDDQ-DV was created (Acknowledgment 2).

In the next step, in order to assess comprehensibility and wording, the cognitive debriefing was performed. The questionnaire was tested on a group of 6 female patients aged 35 to 56 (mean ± SD = 45.5 ±8.9). The respondents were asked if the questions are clear to them in terms of comprehensibility and wording. The time required to complete the questionnaire was noted. The respondents did not raise any concerns, comments, or suggestions. Thus, the questionnaire was approved for the next step with no changes.

The further step was the validation of BDDQ-DV conducted on a group of 26 Polish-speaking patients using aesthetic medicine and dermatology procedures. This part was carried out in Estena DERM Clinic using the Polish language version of BDDQ-DV questionnaire. The respondents answered the questions on their own. The additional short questionnaire was introduced to obtain more information about the study group. The respondents were asked to complete the questionnaire twice at an interval of 5 days.

Statistical analysis

The data were subjected to statistical analysis to assess internal consistency and reproducibility of the questionnaire. Numbering of the questions was introduced to conduct statistical analysis. The internal consistency of the questionnaire was evaluated based on Cronbach's α coefficient, using the data from the first administration of the questionnaire. Additionally, Spearman's correlation coefficient between the response to each question and the total questionnaire score was calculated.

The interrater reliability of the questionnaire was assessed based on interclass correlation coefficient (ICC) by the comparison of responses to each question given by the same person on day 1 and day 5. ICC values > 0.7 are considered as acceptable.

All statistical analyses were performed using Statistica 13.1 for the assumed level of significance (probability of type I error less than 5%).

Results

The respondents needed less than 10 min to complete the questionnaire.

The BDD questionnaire was completed by 26 patients. The study group consisted of 22 women aged 18 to 74 years (mean ± SD = 49 ±11 years) and 4 men aged 23 to 54 years (mean ± SD = 37 ±13 years) using aesthetic medicine procedures.

The Cronbach's α coefficient based on the first completion of the questionnaire was 0.92 indicating a correspondingly high internal consistency between the questions of the questionnaire [14]. Moreover, Cronbach's $\alpha \geq 0.9$ suggests that the questionnaire items may be redundant [14]. Therefore, removing items that essentially ask the same thing in multiple ways should be considered. The Cronbach's α coefficients after the elimination of individual items were calculated and summarised in Table 1. The lowest value was calculated for question 3B. After the additional analysis of the questionnaire items, no questions asking the same thing were detected.

Based on Spearman's correlation coefficient, there were statistically significant, strong positive correlations between the result obtained for each question and total questionnaire score (Table 2).

The reproducibility (test-retest reliability) of the Polish language version of the questionnaire was evaluated using the ICC coefficient. ICC was assessed at 0.998, $p < 0.001$, which indicates excellent reliability. There was a statistically significant, very strong positive correlation between scores of individual questions obtained during the first and the second questionnaire completion (Table 3).

The respondents had higher education (61.5%), secondary education (34.6%), and primary education (3.8%). The analysed group of patients mainly used the following treatments: botulinum toxin, hyaluronic acid, mesotherapy, laser treatments and VPL (Variable Pulsed Light). More than half of the respondents had treatments once every 6 months. Only 2 people indicated that "once they have finished one treatment, they immediately start the next one". Most subjects (18 women and 3 men) felt significantly better after the treatment. They had the following expectations after the treatment: the desire to look better (11 women and 4 men) or younger (7 women), the desire to find a better job, and the desire to keep or find a partner (1 man).

BDD was diagnosed in 5 respondents (4 women and 1 man), aged 18–56, mean ± SD = 38 ±15 years. This group accounted for 19.2%.

Discussion

In the process of validation of the Polish language version of BDDQ-DV, international standards were ap-

Table 1. Cronbach's α values after the elimination of particular items (the analysis conducted for the first completion of the questionnaire)

Question	Cronbach's α coefficient when the question was removed
1	0.914299
2	0.906703
3A	0.914884
3B	0.906558
4	0.911318
5	0.917868
6	0.911318

Table 2. Correlations between individual question score (Q) and total questionnaire score after the first completion of the questionnaire

Question vs. Total	*N*	Spearman's correlation coefficient (*R*)	*P*-value
Q1 and total score	26	0.90	< 0.0001
Q2 and total score	26	0.84	< 0.0001
Q3a and total score	26	0.94	< 0.0001
Q3b and total score	26	0.94	< 0.0001
Q4 and total score	26	0.77	< 0.0001
Q5 and total score	26	0.72	< 0.0001
Q6 and total score	26	0.77	< 0.0001

Table 3. Reproducibility of the questionnaire

Question or Total scale score	The first completion, mean ± SD	The second completion, mean ± SD	Spearman correlation coefficient (*R*)	*P*-value
Question 1	1.42 ±0.5	1.42 ±0.5	1	–
Question 2	1.31 ±0.47	1.31 ±0.47	1	–
Question 3a	1.57 ±1.1	1.61 ±1.16	0.99	< 0.001
Question 3b	1.50 ±1.14	1.46 ±1.06	0.99	< 0.001
Question 4	1.23 ±0.43	1.23 ±0.43	1	–
Question 5	1.19 ±0.4	1.19 ±0.4	1	–
Question 6	1.23 ±0.42	1.23 ±0.42	1	–
Total scale score	9.46 ±4.11	9.46 ±4.11	0.99	–

plied, as described above, including verification for possible cultural discrepancies [13, 14]. This makes the questionnaire suitable for use among Polish-speaking patients mainly by dermatologists but also by doctors of other specialisations dealing with aesthetic medicine and beauticians [7, 11, 12]. The validation of the Polish language version of BDDQ-DV produced a very good internal consistency with Cronbach's α coefficient of 0.92, which means that the individual items of the validated questionnaire are closely related to one another. Further, BDDQ-DV has excellent reproducibility assessed with ICC. Therefore, the Polish language version of BDDQ-DV can be regarded as reliable and suitable to screen Polish-speaking individuals for BDD. The diagnosis of BDD is very important as BDD is a long-term condition that interferes with patients' occupational and social functioning in many aspects of their lives [1–3].

Despite the usually early onset of the disease, there is often a delay in diagnosis [11]. Due to the fast development of aesthetic dermatology and medicine and the huge spread of various cosmetic procedures, more and more patients visit the doctors or beauticians to improve their appearance. Patients with BDD are often dissatisfied with these procedures and have unrealistic expectations leading to irritation and demanding attitudes towards doctors. The demands placed on doctors often escalate and result in litigation. It should be remembered that the emotional defect cannot be eliminated, even if all types of aesthetic procedures, including surgical corrections are performed [6]. Given the psychological and psychiatric therapy opportunities and quite frequent suicide attempts among BDD patients, it is necessary to adopt an interdisciplinary approach and promote cooperation between dermatologists, psychiatrists and psychologists [8, 15, 16]. Regarding the prevalence of BDD, it may be suggested that the BDDQ-DV questionnaire should become a standard procedure during the first visit in practices performing dermatological and aesthetic treatments. The questionnaire enables quick screening of patients for BDD. If the BDD is identified, consultations with psychiatrists or psychologists should be considered and the doctor should be warned that the patient may be dissatisfied with the procedures. In the current study, 19.2% of respondents were positively screened for BDD.

BDD is a common disease entity, especially among patients using dermatological and aesthetic treatment. Unfortunately, it is still rarely diagnosed and often suboptimally treated without cooperation with psychiatrists [6, 8, 15, 16]. With the promotion of beautiful faces and flawless figures in the mass media, and the rapid development of aesthetic medicine, BDD patients are more likely to use all sorts of beauty treatments. After temporary satisfaction or even delight, they may return to the doctor who performed the procedure, sometimes even showing hostile attitudes. After all, the expectations of BDD patients are often unrealistic, and the period of satisfaction can be short [6]. Therefore, a relatively clear BDDQ-DV by Phillips [7], in addition to the standard medical history, may become an important method to screen patients for BDD.

Conflict of interest

The authors declare no conflict of interest.

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Acknowledgments

1. BDDQ-DV – English version [11]

Are you very concerned about the appearance of some part of your body, which you consider especially unattractive?			Y	N
If no, thank you for your time and attention. You are finished with this questionnaire.				
If yes, do these concerns preoccupy you? That is, you think about them a lot and they're hard to stop thinking about?			Y	N
What are these concerns? What specifically bothers you about the appearance of these body parts?				
What effect has your preoccupation with your appearance had on your life?				
Has your defect often caused you a lot of distress, torment or pain? How much? (circle best answer)				
1	2	3	4	5
No distress	Mild, and not too disturbing	Moderate and disturbing but still manageable	Severe, and very disturbing	Extreme, and disabling
Has your defect caused you impairment in social, occupational or other important areas of functioning? How much? (circle best answer)				
1	2	3	4	5
No limitation	Mild interference but overall performance not impaired	Moderate, definite interference, but still manageable	Severe, causes substantial impairment	Extreme, incapacitating
Has your defect often significantly interfered with your social life?			Y	N
If yes, how?				
Has your defect often significantly interfered with your school work, your job, or your ability to function in your role?			Y	N
Are there things you avoid because of your defect?			Y	N

2. BDDQ-DV – Polish version

Czy bardzo martwisz się wyglądem którejś z części Twojego ciała, którą uważasz za szczególnie nieatrakcyjną?

..... Tak ..... Nie

Jeśli nie, dziękujemy za poświęcony czas i uwagę. Jest to dla Ciebie koniec tego kwestionariusza.

Jeśli tak, to czy ten problem (zmartwienie) zaprząta Twoje myśli, absorbuje Ciebie? To znaczy myślisz o nim dużo i jest Ci trudno przestać o nim myśleć?

..... Tak ..... Nie

Czego dotyczy Twój problem (zmartwienie)? Co dokładnie przeszkadza Ci w wyglądzie tej/tych części ciała?

.....

.....

Jaki wpływ na Twoje życie ma zaabsorbowanie Twoim wyglądem? .....

Czy Twój problem (defekt) często powoduje u Ciebie znaczny dyskomfort, udrękę, cierpienie lub ból? W jakim stopniu? (zakreśl najlepszą odpowiedź)

1	2	3	4	5
Nie powoduje	W nieznacznym stopniu, niezbyt mi to przeszkadza	W umiarkowanym stopniu i przeszkadza mi to, ale wciąż jestem w stanie sobie z tym poradzić	W znacznym stopniu, bardzo mi to przeszkadza	W bardzo dużym stopniu, upośledzająco

Czy Twój problem (defekt) zaburza Twoje życie socjalne, zawodowe lub funkcjonowanie w innych ważnych dziedzinach życia? W jakim stopniu? (zakreśl najlepszą odpowiedź)

1	2	3	4	5
Nie, bez ograniczeń	Nieznacznie przeszkadza, ale ogólnie nie zaburza to mojego funkcjonowania	W umiarkowanym stopniu, wyraźnie przeszkadza, ale wciąż jestem w stanie sobie z tym poradzić	W znacznym stopniu, istotnie zaburza to moje funkcjonowanie	W bardzo dużym stopniu, upośledza to moje funkcjonowanie

Czy Twój problem (defekt) często istotnie przeszkadza Ci w Twoim życiu towarzyskim?

..... Tak ..... Nie

Jeśli tak, to w jaki sposób?

.....

.....

Czy Twój problem (defekt) często istotnie przeszkadza Ci w pracy, nauce i obowiązkach szkolnych lub w funkcjonowaniu w roli, jaką odgrywasz w swoim życiu?

..... Tak ..... Nie

Czy unikasz czegoś ze względu na Twój problem (defekt)?

..... Tak ..... Nie