

The Short Version of the Borderline Symptom List (BSL-23): Development and Initial Data on Psychometric Properties

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Key Words

Borderline personality disorder · Borderline Symptom List · Dialectical behavior therapy

Abstract

Background: The full version of the Borderline Symptom List (BSL; for clarification now labeled BSL-95) is a self-rating instrument for specific assessment of borderline-typical symptomatology. The BSL-95 items are based on criteria of the DSM-IV, the revised version of the Diagnostic Interview for Borderline Personality Disorder, and the opinions of both clinical experts and borderline patients. The BSL-95 includes 95 items. In order to reduce patient burden and assessment time, a short version with 23 items (BSL-23) was developed.

Methods: The development of the BSL-23 was based on a sample of 379 borderline patients, considering the items from the BSL-95 that had the highest levels of sensitivity to change and the highest ability to discriminate borderline patients from other patient groups. In a second step, the psychometric properties of the BSL-23 were investigated and compared with the psychometric properties of the BSL-95 in

5 different samples, including a total of 659 borderline patients. **Results:** In all of the samples, a high correlation of the sum score was found between the BSL-23 and the BSL-95 (range: 0.958–0.963). The internal consistency was high for both versions (BSL-23/Cronbach's α : 0.935–0.969; BSL-95/Cronbach's α : 0.977–0.978). Both BSL-23 and BSL-95 clearly discriminated borderline personality disorder patients from patients with an axis I diagnosis (mean effect sizes were 1.13 and 0.96 for the BSL-23 and BSL-95, respectively). In addition, comparisons before and after 3 months of dialectical behavior therapy revealed a numerically larger effect size for the BSL-23 ($d = 0.47$) compared to the BSL-95 ($d = 0.38$). **Conclusion:** The results indicate that the BSL-23 is an efficient and convenient self-rating instrument that displays good psychometric properties comparable to those of the BSL-95. The BSL-23 also demonstrated sensitivity to the effects of therapy.

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Introduction

Borderline personality disorder (BPD) is a serious mental disorder, affecting approximately 1–2% of the general population [1, 2]. Patients with BPD suffer from a dysregulation of the affective system and show patterns of instability in several areas: affect regulation, impulse control, interpersonal relationships and self-image. Characterized by significant psychosocial impairment [3] and a mortality rate by suicide of almost 10% [4], BPD patients are overrepresented among psychiatric in- and outpatients [1], utilizing more mental health resources than most other psychiatric groups [5, 6].

In order to receive a diagnosis of BPD, an individual must meet 5 of the 9 DSM-IV [7] diagnostic criteria for BPD. Several clinician-administered diagnostic assessment tools have been developed to assess severity and change in BPD symptoms, such as the ZAN-BPD [8], and the Borderline Disorder Severity Index [9], among others. Although these assessment methods have often demonstrated strong psychometric properties, they require clinician expertise for administration and interpretation. Valid self-report measures of BPD symptoms like the Borderline Symptom List (BSL) [10, 11], the Questionnaire of Thoughts and Feelings [12], the Personality Belief Questionnaire [13] and the Personality Disorder Beliefs Questionnaire [14] would facilitate the assessment of BPD symptoms in settings in which trained clinicians are not available, and would be useful for research on BPD as well.

The full version of the BSL (for clarification now labeled BSL-95) is a dimensional self-report measure specifically developed to quantify borderline symptomatology [11]. The BSL-95 contains a list of 95 subjective complaints and impairments often reported by borderline patients. These BSL items are based on criteria of the DSM-IV, the revised version of the Diagnostic Interview for BPD [15], and the opinions of both clinical experts and of BPD patients. The questionnaire uses a Likert-type rating format (0 = 'not at all', 1 = 'a little', 2 = 'rather', 3 = 'much', and 4 = 'very strong'), asking the patient to evaluate the symptoms during the past week. One visual analog scale can be administered along with the 95 items, assessing the global well-being (range: 0 = 'very bad' to 100 = 'excellent'). The evaluation of the BSL-95 was based on data from a total of 478 BPD patients, 204 healthy controls and 283 psychiatric patients with different axis I diagnoses [11]. The first unrotated factor accounted for 32% of the total variance among the items, and the internal consistency of the entire item set was high ($\alpha = 0.97$), in-

dicating that a total score on the BSL-95 is an appropriate measure of overall severity of BPD symptoms. The total score is calculated by dividing the total sum by the number of valid items and ranges from 0.0 to 4.0. A factor analysis of the BSL-95 also revealed a 7-factor solution: self-perception, affect regulation, self-destruction, dysphoria, loneliness, intrusions and hostility.

Data showed that the BSL-95 has good psychometric properties [11]. In addition to high internal consistency, the test-retest reliability within 1 week was high ($r = 0.80$, $p < 0.001$). The BSL-95 demonstrated favorable convergent validity, with a moderate positive correlation with the 90-item revised Symptom Checklist (SCL-90-R) [16], global severity index (a measure of overall psychopathology), as well as moderate correlations with measures of anxiety. The BSL-95 was also negatively correlated with the visual analog scale we developed to measure global well-being ($r = -0.74$, $p < 0.001$). Supporting the ability of the BSL-95 to discriminate groups, scores on this measure were significantly higher for BPD patients than for healthy controls or patients with other axis I diagnoses. The results did not reveal a particular influence of gender, age or level of education on the BSL-95 scores. In addition, data suggest that scores on the BSL-95 are sensitive to therapeutic change in BPD symptoms. Patients with BPD ($n = 63$) demonstrated significant reductions from pretreatment BSL-95 total scores after 3 months of inpatient Dialectical Behavior Therapy (DBT) [11]. It is well known that DBT leads to a significant reduction of the Global Severity Index (GSI) score of the SCL-90-R.

Despite its strong psychometric properties, the BSL-95 might be too long to be practical in some clinical settings. This is particularly true for treatment outcome studies, for which BPD symptoms constitute only one of many different variables of interest. Studies with multiple measurement points require time-saving instruments. Thus, to reduce the patient burden and to increase researchers' and clinicians' willingness to use the BSL, a brief, uncomplicated, convenient measure would be beneficial. The current article describes the development of the short version of the BSL. The goal was to develop a brief version of the BSL-95 that retains good psychometric properties, is sensitive to change, and discriminates between BPD patients and other patient groups. We hypothesized that the BSL-23 would discriminate BPD patients from healthy controls and other psychiatric groups, and that the BSL-23 would have positive correlations with measures of psychopathology, depression and anxiety, and negative correlations with a measure of global well-being. An addi-

tional aim was to ensure that this brief measure is easy to administer and score; hence, we aimed to eliminate reverse-scored items as well.

Methods

Subjects

The results reported in this article were based on 5 different samples with BPD patients (samples 1–4, 6) and 275 patients with different axis I diagnoses (samples 5a–5e). Samples 1–3 and samples 5a–5c were also used to develop and evaluate the full version of the BSL (BSL-95) [11]. Samples 4, 5d–5e and 6 are new and were evaluated for the first time in this study. In all samples, the patients were asked to fill out the BSL-95. Twenty-three items were then extracted from the BSL-95 to evaluate the short version (BSL-23) in samples 1–5e. Sample 6 completed the new BSL-23.

Sample 1

Analyses to develop the BSL-23 and initial analyses to evaluate the BSL-23 were based on a sample of 379 psychiatric in- and outpatients (age: mean = 30.4 years, SD = 7.62; range 17–58) who met the DSM-IV criteria for BPD. The majority of the patients were female (81.1%). The subjects were recruited in 68 psychiatric hospitals and 5 psychotherapeutic practices in Germany. Twenty-seven percent met 5 DSM-IV criteria, 35% met 6 criteria, 22% met 7 criteria, 11% met 8 criteria and 5% met 9 criteria. The interviews were carried out by trained and experienced clinicians. The BSL-23 was derived from data collected using the BSL-95.

Sample 2

Analyses of the scale's sensitivity to change were based on a sample of 63 female BPD patients (diagnosis based on the Structured Clinical Interview for DSM-IV Axis II Personality Disorders [17]). Inpatients were recruited at 2 psychiatric hospitals in Germany, and 39 outpatients were recruited by therapists of the DBT Competency Network Darmstadt, Germany. Diagnostic interviews were carried out by trained and experienced clinicians. The patients were asked to fill in the BSL-95 before and after a 3-month treatment with DBT. There is strong empirical evidence that 3-month treatment with DBT leads to a significant reduction of the GSI score of the SCL-90-R [18, 19]. The BSL-23 was extracted from data collected using the BSL-95.

Sample 3

To determine the test-retest reliability, the BSL-95 was administered a second time to 35 females in inpatient treatment experiencing BPD (diagnoses based on the Structured Clinical Interview for DSM-IV Axis II Personality Disorders) [20] after an interval of 7 days. The BSL-23 was extracted from data collected using the BSL-95.

Sample 4

Additional analyses to evaluate the BSL-23 were based on a sample of 147 female BPD patients: out of 390 female patients that were screened for the study, 155 patients met the criteria for BPD and fulfilled all inclusion (age 18–65, fluent German speaking, signing the informed consent form) and no exclusion criteria (history or current symptoms of a serious organic condition;

schizophrenia, schizoaffective disorder or bipolar I disorder). The patients were referred to the Department of Psychiatry at the University of Freiburg and the Department for Psychosomatic Medicine at the Central Institute of Mental Health in Mannheim by psychiatrists or general physicians over a period of 2 years (2002–2004). A majority of the patients contacted the unit to be diagnosed and subsequently to participate in an inpatient DBT program. Diagnosis was assessed by means of the BPD segments of the International Personality Disorder Examination (IPDE). The interviews were carried out by trained and experienced clinicians (interrater reliability/IPDE: 0.77): 16.1% met 5 DSM-IV criteria, 20.0% met 6 criteria, 28.4% met 7 criteria, 20.0% met 8 criteria and 15.5% met 9 criteria. Eight patients were excluded due to frequent missing values; thus, 147 patients were included into data analysis (age: mean = 29 years, SD = 7.85; range 18–51). The BSL-23 was derived from data collected using the BSL-95.

All four studies (referring to samples 1–4) were carried out in accordance with the Helsinki Declaration, the Convention of the Council of Europe on Human Rights and Biomedicine.

Samples 5a–5e

To test if the BSL-23 discriminates between BPD patients and other patient groups, the BSL-95 was administered to patients with different axis I disorders and no co-occurring diagnosis of BPD (the BSL-23 was derived from data collected using the BSL-95):

Sample 5a: 84 patients with a major depression (age: mean = 46 years; range 18–77).

Sample 5b: 51 patients with schizophrenia (age: mean = 35 years; range 20–65).

Sample 5c: 48 patients with anxiety disorders (age: mean = 42 years; range 20–63).

Sample 5d: 56 patients with an attention deficit and hyperactive disorder (age: mean = 35 years; range 20–53).

Sample 5e: 36 patients with a current post-traumatic stress disorder, but no co-occurring BPD (age: mean = 39 years; range 20–53).

All patients were diagnosed according to the criteria of the DSM-IV. The patients in samples 5a–5d were recruited at the Department of Psychiatry at the University of Freiburg. The patients in sample 5e were recruited at the Central Institute of Mental Health in Mannheim.

Sample 6

To test if the complete short version of the BSL differs from the extraction of the BSL-95 regarding internal consistency, we collected data from 35 female BPD patients (diagnosed with the IPDE according to the criteria of the DSM-IV). Most of them had formerly been diagnosed for treatment or research projects at the Central Institute of Mental Health in Mannheim (age: mean = 30.7 years, range 19–49).

Statistical Analysis

To test psychometric properties, detailed item analyses were carried out, including independent t tests and effect size (d) (using pooled standard deviations) followed by regression analysis and estimates of internal consistency (Cronbach's α). We examined the validity of the BSL-23 through correlation analyses and t tests, the test of sensitivity to change by means of one-sample t tests and effect size d (using pooled standard deviation). Calculations were

made with the full version of the BSL (BSL-95) and the short version (BSL-23). High correlations are defined as statistically significant values of >0.50 .

Development of the Short Version of the BSL

The First Step of the Development

To create a short version with a high ability to discriminate BPD patients from other patient groups, items were selected according to analyses comparing the BPD sample 1 with two different samples of patients with major depression (sample 5a) and attention deficit and hyperactive disorder (sample 5d). Each one of the original 95 items was analyzed using independent t tests. There were 9 items that showed a high ability to discriminate between BPD patients and the other two patient groups (all t values were at least 5.0).

The Second Step of the Development

In order to achieve a high degree of sensitivity for therapeutically induced change, effect sizes of the pooled within-group comparisons (before and after treatment) were calculated for each item in the full version of the BSL (sample 2). A minimum effect size d of 0.30 was necessary to consider an item sensitive to change. Seventeen items fulfilled this criterion.

The Third Step of the Development

Twenty-six items remained after the first two steps of the process. In order to further reduce redundancy, regression analyses were conducted to select items that did not add additional information to the BSL-23. This process was conducted in a stepwise manner (i.e. each regression analysis led to the exclusion of the item with the highest variance inflation factor according to collinearity diagnostics). During this process, 3 items were excluded. The remaining 23 items were double-checked for clinical significance and considered to be very important in the assessment of borderline symptomatology. This resulted in the 23 items selected for the short version of the BSL (BSL-23). Nine of these items had a high ability to discriminate BPD patients from other patient groups and 14 items had a high degree of sensitivity to change.

To examine the homogeneity of the global score of the BSL-23, a principal component analysis was calculated.

In accordance with the full version of the BSL, all items are rated on a 5-step Likert scale (range: 0–4), and the severity of the symptoms is assessed with regard to the past week. Moreover, in accordance with the BSL-95, the total score of the BSL-23 is calculated by dividing the total sum by the number of valid items, i.e. the total score can range from 0.0 to 4.0.

Further Instruments

To evaluate the convergent validity of the BSL, the Beck Depression Inventory (BDI) [21] and the SCL-90-R [16] were applied.

Results

Factor Analysis

The principal component analysis yielded one dominant factor which accounted for 40.6% of the total vari-

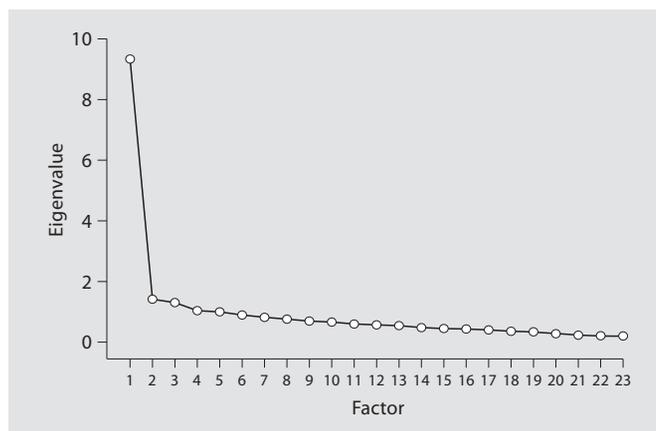


Fig. 1. Eigenvalue scree plot of the principal component analysis ($n = 379$).

ance. The scree plot of eigenvalues clearly supported the dominance of the first unrotated factor and rather suggested the composition of a total score than to divide the BSL-23 into several subscales (fig. 1).

Reliability

Initial analyses of the internal consistency of the BSL-23 were based on 379 BPD patients (sample 1). The BSL-23 was derived from data collected using the BSL-95. These results showed a high internal consistency for the BSL-23 with a Cronbach's α of 0.97.

Cronbach's α was also calculated based on an additional sample with 147 BPD patients (sample 4) to evaluate the internal consistency of both the BSL-95 and the BSL-23. These results showed high internal consistency for both the BSL-95 ($\alpha = 0.98$) and the BSL-23 ($\alpha = 0.94$). The high internal consistency of the BSL-23 was also confirmed in sample 6, where the BSL-23 was used directly for the data assessment ($\alpha = 0.96$).

The analysis of test-retest reliability within 1 week was based on sample 3 (assessment 1: mean = 2.18, SD = 0.86; assessment 2: mean = 2.05, SD = 0.96). The test-retest reliability was high for the BSL-23 ($r = 0.82$; $p < 0.0001$).

Validity

Investigation of convergent validity also provided favorable results. Positive moderate to high correlations were observed between the BSL-23 and depression as measured by the BDI ($r = 0.83$), as well as general severity of psychopathology as measured by the SCL-90-R GSI ($r = 0.48$; $p < 0.001$). In sample 6, correlations between the BSL-23 and BDI ($r = 0.87$; $p < 0.01$), as well as SCL-90-R

Table 1. Intercorrelations (Pearson) between the short version (BSL-23) and the full version of the BSL (BSL-95), and the visual analog scale for global well-being (VAS), the GSI of the SCL-90-R, and the BDI in 3 samples

	Intercorrelations: Sample 1 (n = 379)		Intercorrelations: Sample 2 (n = 63)		Intercorrelations: Sample 4 (n = 147)	
	BSL-23	BSL-95	BSL-23	BSL-95	BSL-23	BSL-95
BSL-23	1	–	1	–	1	–
BSL-95	0.96*	1	0.96*	1	0.96*	1
VAS	–0.69*	–0.73*	–0.66*	–0.67*	–0.63*	–0.58*
GSI	–	–	0.48*	0.47*	–	–
BDI	–	–	0.83*	0.82*	–	–

* p < 0.001.

Table 2. Analyzing the ability of the BSL-23 and the BSL-95 to distinguish between patient groups by comparison of patients with BPD and patients with axis I disorders (between-group comparison pooled effect size)

Samples	BSL-23	BSL-95 ¹	Effect size BSL-23	Effect size BSL-95
BPD (n = 379)	2.05 ± 0.90	2.00 ± 0.76	–	–
ADHD (n = 56)	1.02 ± 0.78	1.19 ± 0.72	1.22	1.09
Sch (n = 51)	0.92 ± 0.53	1.04 ± 1.15	1.53	0.98
MD (n = 84)	1.38 ± 0.83	1.44 ± 0.76	0.77	0.74
Anxiety (n = 48)	1.09 ± 0.62	1.16 ± 1.18	1.24	0.85
PTSD (n = 36)	1.19 ± 0.63	1.27 ± 0.52	0.87	1.12

ADHD = Attention deficit hyperactive disorder; Sch = schizophrenia; MD = major depression; PTSD = post-traumatic stress disorder.

¹ With the exception of the effect size, these results for the patients with BPD, schizophrenia, major depression and anxiety have been reported in more detail in a previous article [11].

GSI ($r = 0.89$; $p < 0.01$) were also high. In addition, high scores on the BSL-23 were associated with low scores on the visual analog scale that measured global well-being ($r = -0.47$; $p < 0.01$ in sample 6; for samples 1, 2 and 4 see table 1; all p values < 0.001).

Table 1 also shows a high intercorrelation between the BSL-95 and the BSL-23 in all samples: $r = 0.96$ (sample 1), $r = 0.96$ (sample 2) and $r = 0.96$ (sample 4) (all p values < 0.001).

As shown in table 2, all BSL-23 and BSL-95 scores of BPD patients were higher than in patients with different axis I diagnoses (samples 5a–5e). After comparing BPD patients with other patient groups, the BSL-23 showed a

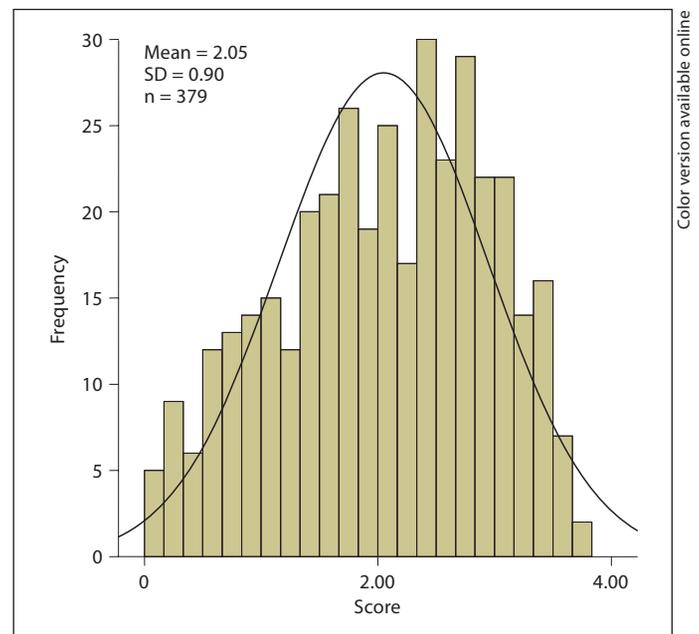


Fig. 2. Distribution of BSL-23 total scores in a sample of 379 BPD patients.

numerically higher effect size (mean effect size: 1.13) compared with the BSL-95 (mean effect size: 0.96).

Distribution of BSL-23 Scores in BPD Patients

Floor or ceiling effects would preclude the valid examination of the severity of BPD and changes in BPD symptoms. Figure 2 shows the distribution of the total scores of the BSL-23 in 379 BPD patients (sample 1). The scores ranged from 0.04 to 3.83; thus, there was no evidence for floor or ceiling effects. The values for skewness

Table 3. Comparison of the BSL scores before and after treatment (t tests) (n = 64)

	Before treatment	After treatment	t test	d.f.	p	Effect size, d
BSL-23	2.25 ± 0.85	1.82 ± 0.99	3.94	63	0.0001	0.47
BSL-95 ¹	2.09 ± 0.68	1.80 ± 0.82	3.14	63	0.003	0.38

¹ With the exception of the effect size, these results have been reported in more detail in a previous article [11].

(-0.27) and kurtosis (-0.83) were within an acceptable range. Similar results were found in sample 6: the scores ranged from 0.35 to 3.87 and the values for skewness and kurtosis were -0.39 and -1.01, respectively.

Sensitivity to Change

To measure sensitivity to change, the BSL-95 was administered before treatment and after 12 weeks of DBT twice to 63 female BPD patients (sample 2) [18, 19]. The BSL-23 was derived from data collected using the BSL-95. Table 3 shows that the BSL-23 scores significantly improved from pre- to post-treatment assessment. The effect sizes were numerically larger for the BSL-23 than for the BSL-95.

Discussion

The aim of this study was to develop and evaluate a short version of the BSL. Twenty-three items that displayed a high level of sensitivity to change and a high ability to discriminate BPD patients from other psychiatric patients were selected from the item pool of the full version of the BSL-95. In the evaluation of the psychometric properties of the short version (BSL-23), the BSL-23 items were partially derived from data collected using the full version (BSL-95). The principal component analysis strongly suggested the composition of a global score. The results showed that the BSL-23 has excellent internal consistency and good test-retest reliability. The analyses of validity also yielded favorable results. Initial analyses showed that the BSL-23 is sensitive to change after treatment.

Findings from this study indicated that the BSL-23 has strong reliability, similar to that of the BSL-95. The α coefficient of 0.97 for the BSL-23 is similar to that reported for the BSL-95 (0.97) [11]. Similarly, high internal consistency was apparent within a new sample of 147 female

BPD patients. The test-retest reliability for a 1-week period was also high ($r = 0.82$) and similar in magnitude to that of the BSL-95 [11].

Findings from the present study also supported the convergent validity of the BSL-23 as the correlations of the BSL-23 with structurally related scales were moderate to high. As anticipated, the correlation of the BSL-23 with a measure of global well-being was high and negative in both samples. In addition, the intercorrelation between the BSL-95 and BSL-23 was extremely high in both the sample of 379 BPD patients and in the sample of 147 female BPD patients.

BPD patients had higher BSL-23 scores in comparison with other patient groups (samples 5a-5e). This result is consistent with previous results on the BSL-95 [11]. As many of the items of the BSL-23 had been selected because of their high ability to discriminate between BPD patients and other patient groups with different axis I diagnoses, it was not surprising that the BSL-23 showed a numerically higher effect size d (between-group comparisons; mean effect size: 1.13) compared with the BSL-95 (mean effect size: 0.96). Interestingly, the BSL-23 discriminated between BPD patients and patients with a post-traumatic stress disorder, even though these patients show many similarities in symptoms. In addition, all results in our previous paper on the psychometric properties of the BSL-95 [11] based on sample 1 ($n = 379$) were confirmed by the results based on a new sample (sample 4) with 147 BPD patients and in a sample of 35 female BPD patients directly using the BSL-23 (sample 6).

The preliminary data on the sensitivity to change also showed good results. In the course of a 12-week disorder-specific treatment of BPD, the BSL-23 indicated significant improvements in the symptomatology ($d = 0.47$). This effect size was numerically larger than the effect size for the BSL-95 ($d = 0.38$). Again, this result was expected, as the items were partially selected for sensitivity to change. Thus, this promising result regarding sensitivity to change warrants replication in a new study.

In sum, data suggest that the BSL-23 has good to excellent psychometric properties. The results are consistent with those of the BSL-95. In particular, the BSL-23 discriminates BPD patients from other patient groups and shows a moderate level of sensitivity to change. The BSL-23 is a brief, efficient measure of borderline-typical symptomatology that can limit the patient burden and the assessment time.

In the present article, the BSL-23 was partially developed from data collected using the BSL-95 (samples 1-5).

Therefore, it is important to continue the evaluation of the BSL-23 using data from other independent samples assessed directly with the BSL-23. Future research should also investigate the possibility to use the BSL-95 and the BSL-23 as a screening instrument. Along these lines, future studies might examine the diagnostic efficiency (sensitivity, specificity, positive and negative predictive power) of BSL-23 scores when referenced to diagnoses of BPD.

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Appendix 1. Borderline Symptom List: Short Version (BSL-23)

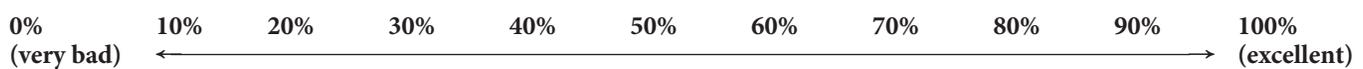
Name/Code:

Date:

Please follow these instructions when answering the questionnaire: In the following table you will find a set of difficulties and problems which possibly describe you. Please work through the questionnaire and decide how much you suffered from each problem in the course of the last week. In case you have no feelings at all at the present moment, please answer according to how you *think you might have felt*. Please answer honestly. All questions refer to the last week. If you felt different ways at different times in the week, give a rating for how things were for you on average. Please be sure to answer each question.

In the course of last week...	not at all	a little	rather	much	very strong
1 It was hard for me to concentrate	0	1	2	3	4
2 I felt helpless	0	1	2	3	4
3 I was absent-minded and unable to remember what I was actually doing	0	1	2	3	4
4 I felt disgust	0	1	2	3	4
5 I thought of hurting myself	0	1	2	3	4
6 I didn't trust other people	0	1	2	3	4
7 I didn't believe in my right to live	0	1	2	3	4
8 I was lonely	0	1	2	3	4
9 I experienced stressful inner tension	0	1	2	3	4
10 I had images that I was very much afraid of	0	1	2	3	4
11 I hated myself	0	1	2	3	4
12 I wanted to punish myself	0	1	2	3	4
13 I suffered from shame	0	1	2	3	4
14 My mood rapidly cycled in terms of anxiety, anger, and depression	0	1	2	3	4
15 I suffered from voices and noises from inside and/or outside my head	0	1	2	3	4
16 Criticism had a devastating effect on me	0	1	2	3	4
17 I felt vulnerable	0	1	2	3	4
18 The idea of death had a certain fascination for me	0	1	2	3	4
19 Everything seemed senseless to me	0	1	2	3	4
20 I was afraid of losing control	0	1	2	3	4
21 I felt disgusted by myself	0	1	2	3	4
22 I felt as if I was far away from myself	0	1	2	3	4
23 I felt worthless	0	1	2	3	4

Now we would like to know in addition the quality of your **overall** personal state in the course of the last week. 0% means **absolutely down**, 100% means **excellent**. Please check the percentage which comes closest.



Please double-check for missing answers

References

- 1 Lieb K, Zanarini MC, Schmahl C, Linehan MM, Bohus M: Borderline personality disorder. *Lancet* 2004;364:459–461.
- 2 Coid J, Yang M, Tyrer P, Roberts A, Ullrich S: Prevalence and correlates of personality disorder in Great Britain. *Br J Psychiatry* 2006;188:423–431.
- 3 Skodol AE, Gunderson JG, McGlashan TH, Dyck IR, Stout RL, Bender DS, Grilo CM, Shea MT, Zanarini MC, Morey LC, Sanislow CA, Oldham JM: Functional impairment in patients with schizotypal, borderline, avoidant, or obsessive-compulsive personality disorder. *Am J Psychiatry* 2002;159:276–283.
- 4 American Psychiatric Association: Practice guideline for the treatment of patients with borderline personality disorder – Introduction. *Am J Psychiatry* 2001;158:2.
- 5 Bender DS, Dolan RT, Skodol AE, Sanislow CA, Dyck IR, McGlashan TH, Shea MT, Zanarini MC, Oldham JM, Gunderson JG: Treatment utilization by patients with personality disorders. *Am J Psychiatry* 2001;158:295–302.
- 6 Zanarini MC, Frankenburg FR, Khera GS, Bleichmar J: Treatment histories of borderline inpatients. *Compr Psychiatry* 2001;42:144–150.
- 7 American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders*, ed 4. Washington, American Psychiatric Association, 1994.
- 8 Zanarini MC: Zanarini Rating Scale for Borderline Personality Disorder (ZAN-BPD): a continuous measure of DSM-IV borderline psychopathology. *J Personal Disord* 2003;17:233–242.
- 9 Arntz A, van den Hoorn M, Cornelis J, Verheul R, van den Bosch WMC, de Boer SF: Reliability and validity of the borderline personality disorder severity index. *J Personal Disord* 2003;17:45–59.
- 10 Bohus M, Limberger MF, Frank U, Sender I, Gratwohl T, Stieglitz RD: Entwicklung der Borderline-Symptom-Liste. *Psychother Psychosom Med Psychol* 2001;51:201–211.
- 11 Bohus M, Limberger MF, Frank U, Chapman AL, Kuehler T, Stieglitz RD: Psychometric properties of the Borderline Symptom List (BSL). *Psychopathology* 2007;40:126–132.
- 12 Renneberg B, Schmidt-Rathjens C, Hippin R, Backenstrass M, Fydrich T: Cognitive characteristics of patients with borderline personality disorder: development and validation of a self-report inventory. *J Behav Ther Exp Psychiatry* 2005;36:173–182.
- 13 Butler AC, Brown GK, Beck AT, Grisham JR: Assessment of dysfunctional beliefs in borderline personality disorder. *Behav Res Ther* 2002;40:1231–1240.
- 14 Arntz A, Dietzel R, Dreessen L: Assumptions in borderline personality disorder: specificity, stability and relationship with etiological factors. *Behav Res Ther* 1999;37:545–557.
- 15 Zanarini MC, Gunderson JG, Frankenburg FR, Chauncey DL: The revised diagnostic interview for borderlines: discriminating BPD from other axis II disorders. *J Personal Disord* 1989;3:10–18.
- 16 Derogatis LR: *SCL-90-R: Administration, Scoring and Procedures Manual II*. Towson, Clinical Psychometric Research, 1977.
- 17 First MB, Spitzer RL, Gibbon M, Williams JBW: *User's Guide for the Structured Clinical Interview for DSM-IV Personality Disorders (SCID-II)*. Washington, American Psychiatric Press, 1996.
- 18 Bohus M, Haaf B, Stiglmayr C, Pohl U, Boehme R, Linehan MM: Evaluation of inpatient dialectical-behavioral therapy for borderline personality disorder – A prospective study. *Behav Res Ther* 2000;38:875–887.
- 19 Bohus M, Haaf B, Simms T, Limberger MF, Schmahl C, Unckel C, Lieb K, Linehan MM: Effectiveness of inpatient dialectical behavioral therapy for borderline personality disorder: a controlled trial. *Behav Res Ther* 2004;42:487–499.
- 20 Loranger AW, Sartorius N, Andreoli A, Berger P, Buchheim P, Channabasavanna SM, Coid B, Dahl AA, Diekstra RFW, Ferguson B, Jakobsberg L, Mombour W, Pull C, Ono Y, Regier DA: *Deutschsprachige Fassung der International Personality Disorder Examination: IPDE*. Geneva, World Health Organization, 1998.
- 21 Beck AT, Ward CH, Mendelson M, Mock H, Erbaugh J: An inventory for measuring depression. *Arch Gen Psychiatry* 1961;4:561–571.