

Brief Symptom Inventory (BSI)

Derogatis, L.
1975

Description of Measure

Purpose

To identify self-reported clinically relevant psychological symptoms in adolescents and adults.

Conceptual Organization

The Brief Symptom Inventory (BSI) consists of 53 items covering nine symptom dimensions: Somatization, Obsession-Compulsion, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic anxiety, Paranoid ideation and Psychoticism; and three global indices of distress: Global Severity Index, Positive Symptom Distress Index, and Positive Symptom Total. The global indices measure current or past level of symptomatology, intensity of symptoms, and number of reported symptoms, respectively.

Item Origin/Selection Process

The BSI is the short version of the SCL-R-90 (Derogatis, 1975, 1977), which measures the same dimensions. Items for each dimension of the BSI were selected based on a factor analysis of the SCL-R-90, with the highest loading items on each dimension selected for the BSI (Derogatis, 1993; Derogatis & Cleary, 1977; Derogatis & Spencer, 1982).

Materials

Copyrighted forms and the BSI manual (Derogatis, 1993) are available from the publisher.

Time Required

8-12 minutes

Administration Method

Self- or interviewer-administered

Training

Minimal

Scoring

Score Types

Respondents rank each feeling item (e.g., “your feelings being easily hurt”) on a 5-point scale ranging from 0 (not at all) to 4 (extremely). Rankings characterize the intensity of distress during the past seven days.

The items comprising each of the 9 primary symptom dimensions are as follows:

- Somatization: Items 2, 7, 23, 29, 30, 33, and 37
- Obsession-Compulsion: Items 5, 15, 26, 27, 32, and 36
- Interpersonal Sensitivity: Items 20, 21, 22, and 42
- Depression: Items 9, 16, 17, 18, 35, and 50
- Anxiety: Items 1, 12, 19, 38, 45, and 49
- Hostility: Items 6, 13, 40, 41, and 46
- Phobic Anxiety: Items 8, 28, 31, 43, and 47
- Paranoid Ideation: Items 4, 10, 24, 48, and 51
- Psychoticism: Items 3, 14, 34, 44, and 53.

Items 11, 25, 39, and 52 do not factor into any of the dimensions, but are included because they are clinically important. For example, the presence of conscious feelings of guilt is useful information to a clinician. These items are included when calculating Grand Total Scores.

Dimension scores are calculated by summing the values for the items included in that dimension and dividing by the number of items endorsed in that dimension.

Calculating scores for the three global indices is done as follows:

1. Global Severity Index (GSI). The GSI is calculated using the sums for the nine symptom dimensions plus the four additional items not included in any of the dimension scores, and dividing by the total number of items to which the individual responded. If no items were skipped the GSI will be the mean for all 53 items. Of the three global indices the GSI is the most sensitive indicator of the respondent’s distress level and combines information about the number of

symptoms and the intensity of distress. The author recommends that GSI T scores of 63 and above be considered cases, as should instances when any two primary dimension scores are 63 or above.

2. Positive Symptom Total (PST). The PST is a count of all the items with non-zero responses and reveals the number of symptoms the respondent reports experiencing.
3. Positive Symptom Distress Index (PSDI). The PSDI is the sum of the values of the items receiving non-zero responses divided by the PST. This index provides information about the average level of distress the respondent experiences.

Raw scores should be converted to T scores using the tables provided in the BSI manual.

Score Interpretation

Scores are interpreted by comparison to age-appropriate norms. Normative data are available for both clinical and non-clinical samples of adolescents (over 13 years) and adults (Derogatis, 1993; Derogatis & Spencer, 1982). This appropriate comparison group for LONGSCAN caregiver respondents is non-patient adult females. For this group, a T-score of 60 corresponds to the 84th percentile, a T-score of 70 corresponds to the 93rd percentile, and a T-score of 80 corresponds to the 98th percentile. GSI T scores of 63 or above are considered clinical, as are cases in which two of the dimension scores are 63 or above.

Norms and/or Comparative Data

The BSI Administration, Scoring, and Procedures Manual (Derogatis, 1993) provides normative data for four different samples, including non-patient adults, adolescents aged 13-17, adult psychiatric outpatients, and adult psychiatric inpatients. Tables 16 through 19 in the manual (pp. 35-36) list the BSI mean raw scores for the 9 dimensions and 3 globals for each of the four samples.

Psychometric Support

Reliability

The authors report good internal consistency reliability for the nine dimensions, ranging from .71 on Psychoticism to .85 on Depression. Good internal consistency reliability is

supported by several other independent studies (Croog et al., 1986; Aroian & Patsdaughter, 1989 in Derogatis, 1993). No alpha reliability is reported for the three global indices.

Test-retest reliability for the nine symptom dimensions ranges from .68 (Somatization) to .91 (Phobic Anxiety), and for the three Global Indices from .87 (PSDI) to .90 (GSI).

Validity

Correlations between the BSI and the Wiggins content scales and the Tryon cluster scores from the MMPI ranged from .30 to .72 with the most relevant score correlations averaging above .50 (Conoley & Kramer, 1989; Derogatis, Rickles, & Rock, 1976 in Derogatis, 1993). Factor analysis results confirmed the a priori construction of the symptom dimensions. In addition, correlations between the BSI and SCL-R-90 were .92 to .99 (Derogatis, 1993).

References to other studies attesting to the validity of the BSI are found in the manual (Derogatis, 1993).

LONGSCAN Use

Data Points

Age 8

Respondent

Primary maternal caregiver

Mnemonic and Version

BSA

Rationale

At the Age 8 interview, the BSI was administered rather than the previously used CES-D (Center for Epidemiological Studies Depression Scale) to measure a broader range of symptomatology. Parental psychopathology may interact with other characteristics of the child's environment to increase the likelihood of child maltreatment or developmental problems. Maternal psychopathology has also been shown to be associated with maternal perceptions of child behavior problems (Estroff, Herrera, Gaines, Shaffer, Gould, & Green, 1984).

Administration and Scoring Notes

LONGSCAN scoring follows the procedure recommended by the author (Derogatis, 1993). See SCORING above.

Note about missing data: Scores should not be calculated if more than 13 of the 53 items are missing. If 12 or fewer items are missing, and missing items are randomly distributed, scores should be based on the number of non-missing items. For symptom dimensions, scores should not be calculated if more than one item is missing.

Results

Descriptive Statistics

Table 1 shows the means and standard deviations for global index scores by caregiver race and study site. None of the mean scores approach clinical significance. T-scores are similar by race, with the Hispanic population revealing a slightly lower tendency toward psychopathology. T-scores are also similar by site, although the Southwest site reveals a decreased rate of psychopathology in comparison to the other sites. This may be attributable to the high proportion of substitute caregivers at the SW site.

Table 1 about here

Table 2 shows results that are similar across race. Results differ by site in that the Northwest seems to have the highest levels of psychopathology, whereas the southwest has the lowest levels.

Table 2 about here

Table 3 shows that whites have an overall tendency toward higher levels of psychopathology. Specifically whites scored higher on measures of somatization, depression, hostility, and psychoticism. Blacks suffer from more paranoid ideation than other groups, and Hispanics experience greater levels of anxiety.

Table 3 about here

Publisher Information

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Table 1. Mean Global Index Scores on the Brief Symptom Inventory by Caregiver Race and Study Site. Age 8 Interview

	N	Global Severity Index (GSI)		Positive Symptom Distress Index (PSDI)		Positive Symptom Total (PST)	
		M (SD)	Tscore	M (SD)	Tscore	M (SD)	Tscore
Total	1037	0.34 (0.42)	48.04	1.45 (0.54)	53.13	11.15 (10.67)	47.31
Race							
White	281	0.39 (0.46)	49.39	1.42 (0.51)	52.66	12.52 (10.81)	49.01
Black	419	0.36 (0.43)	48.48	1.50 (0.57)	54.16	11.45 (11.03)	47.48
Hispanic	47	0.26 (0.34)	46.09	1.42 (0.51)	52.32	8.79 (9.00)	45.43
Multiracial	24	0.42 (0.43)	49.71	1.45 (0.56)	53.41	14.08 (10.99)	50.71
Other	18	0.35 (0.57)	47.17	1.57 (0.81)	54.91	9.67 (10.29)	45.06
Site							
EA	236	0.31 (0.38)	47.38	1.47 (0.59)	53.35	10.20 (10.17)	46.19
MW	127	0.34 (0.40)	48.16	1.52 (0.58)	54.27	10.87 (10.71)	46.98
SO	183	0.37 (0.45)	48.49	1.56 (0.58)	55.25	11.41 (11.20)	47.15
SW	270	0.28 (0.39)	45.75	1.33 (0.45)	50.86	9.74 (9.99)	45.93
NW	221	0.43 (0.48)	51.04	1.45 (0.51)	53.29	13.82 (11.12)	50.49

Source. Based on data received at the LONGSCAN Coordinating Center through 8/24/01.

Table 2. Mean Symptom Dimension Scores on the Brief Symptom Inventory by Caregiver Race and Study Site. Age 8 Interview

	N	Somatization		Obsession Compulsion		Interpersonal Sensitivity		Depression		Anxiety	
		M (SD)	Tscore	M (SD)	Tscore	M (SD)	Tscore	M (SD)	Tscore	M (SD)	Tscore
Total	1037	0.32 (0.53)	48.87	0.48 (0.63)	48.76	0.35 (0.56)	48.66	0.31 (0.53)	48.94	0.33 (0.51)	46.43
Race											
White	281	0.36 (0.58)	49.62	0.62 (0.73)	51.13	0.40 (0.64)	49.32	0.35 (0.54)	49.90	0.42 (0.61)	47.93
Black	419	0.34 (0.53)	48.93	0.42 (0.58)	47.77	0.39 (0.56)	49.42	0.34 (0.56)	49.35	0.30 (0.47)	45.89
Hispanic	47	0.31 (0.57)	48.31	0.41 (0.60)	47.78	0.27 (0.49)	47.17	0.21 (0.36)	47.43	0.34 (0.52)	47.11
Multiracial	24	0.32 (0.47)	49.91	0.58 (0.61)	51.00	0.42 (0.67)	49.75	0.47 (0.49)	53.22	0.41 (0.57)	48.04
Other	18	0.29 (0.55)	49.44	0.53 (1.04)	47.24	0.25 (0.53)	46.39	0.32 (0.78)	47.22	0.43 (0.60)	49.17
Site											
EA	236	0.29 (0.47)	48.25	0.35 (0.48)	46.31	0.33 (0.50)	48.30	0.29 (0.52)	48.76	0.25 (0.44)	44.48
MW	127	0.34 (0.54)	49.12	0.43 (0.63)	47.73	0.39 (0.54)	49.61	0.30 (0.45)	49.30	0.29 (0.44)	45.55
SO	183	0.34 (0.53)	49.03	0.47 (0.65)	48.49	0.38 (0.60)	48.92	0.35 (0.59)	49.09	0.35 (0.52)	46.73
SW	270	0.31 (0.56)	48.24	0.45 (0.61)	48.45	0.27 (0.52)	47.24	0.22 (0.44)	47.47	0.33 (0.54)	46.59
NW	221	0.36 (0.55)	50.04	0.68 (0.74)	52.56	0.42 (0.64)	50.02	0.41 (0.61)	50.64	0.43 (0.58)	48.66
	N	Hostility		Phobic anxiety		Paranoid Ideation		Psychoticism			
		M (SD)	Tscore	M (SD)	Tscore	M (SD)	Tscore	M (SD)	Tscore		
Total	1037	0.34 (0.48)	50.17	0.18 (0.39)	50.05	0.50 (0.66)	53.31	0.22 (0.42)	52.33		
Race											
White	281	0.40 (0.47)	52.14	0.18 (0.41)	50.19	0.47 (0.64)	52.78	0.26 (0.47)	52.98		
Black	419	0.34 (0.48)	49.91	0.21 (0.42)	50.64	0.63 (0.73)	55.15	0.23 (0.42)	52.65		
Hispanic	47	0.23 (0.45)	47.04	0.12 (0.24)	49.11	0.26 (0.46)	49.19	0.16 (0.28)	52.11		
Multiracial	24	0.52 (0.71)	53.00	0.17 (0.33)	49.96	0.55 (0.67)	54.08	0.33 (0.39)	55.88		
Other	18	0.37 (0.87)	48.83	0.30 (0.61)	51.56	0.49 (0.70)	51.67	0.16 (0.30)	51.39		
Site											
EA	236	0.34 (0.46)	49.72	0.18 (0.34)	50.48	0.57 (0.67)	54.77	0.20 (0.39)	52.01		
MW	127	0.29 (0.44)	48.64	0.18 (0.38)	50.04	0.57 (0.73)	54.03	0.23 (0.42)	52.76		
SO	183	0.39 (0.59)	50.22	0.21 (0.42)	50.38	0.57 (0.76)	53.74	0.23 (0.43)	52.61		
SW	270	0.27 (0.36)	49.15	0.14 (0.36)	49.00	0.34 (0.52)	50.59	0.16 (0.36)	51.12		
NW	221	0.43 (0.52)	52.72	0.20 (0.44)	50.62	0.55 (0.66)	54.33	0.28 (0.50)	53.66		

Source. Based on data received at the LONGSCAN Coordinating Center through 8/24/01.

Table 3. Percent of Respondents Classified as Symptomatic on the Brief Symptom Inventory based on T-Scores for Symptom Dimensions and those classified as a “Case” based on Derogatis’ criteria by Caregiver Race and Study Site. Age 8 Interview

	N	Somatization %	Obsession Compulsion %	Interpersonal Sensitivity %	Depression %	Anxiety %
Total	1037	8.5	13.6	13.2	8.8	7.8
Race						
White	281	10.7	18.5	15.0	10.0	10.0
Black	419	8.6	11.5	16.0	10.3	7.0
Hispanic	47	8.5	12.8	10.6	2.1	10.6
Multiracial	24	4.2	12.5	12.5	16.7	12.5
Other	18	5.6	11.1	11.1	11.1	11.1
Site						
EA	236	6.8	7.6	13.1	8.9	5.1
MW	127	8.7	13.4	16.5	7.1	7.9
SO	183	10.9	15.3	14.2	10.4	8.7
SW	270	7.4	11.9	9.3	4.4	8.5
NW	221	9.5	20.8	15.4	13.6	9.1
	N	Hostility %	Phobic Anxiety %	Paranoid Ideation %	Psychoticism %	Case %
Total	1037	9.5	12.8	21.2	15.0	22.9
Race						
White	281	11.4	11.0	18.9	18.9	25.6
Black	419	10.0	15.5	27.7	16.0	24.6
Hispanic	47	6.4	10.6	8.5	8.5	17.0
Multiracial	24	16.7	12.5	20.8	29.2	25.0
Other	18	5.6	16.7	27.8	5.6	22.2
Site						
EA	236	9.3	16.1	23.3	14.0	21.6
MW	127	6.3	13.4	25.2	15.8	22.8
SO	183	14.2	13.1	26.2	16.9	29.0
SW	270	5.6	10.0	13.3	10.4	15.2
NW	221	12.2	12.2	22.2	19.9	28.5

Source. Based on data received at the LONGSCAN Coordinating Center through 8/24/01.

Brief Symptom Inventory BSA

“Here I have a list of problems people sometimes have. As I read each one to you, I want you to tell me **HOW MUCH THAT PROBLEM HAS DISTRESSED OR BOTHERED YOU DURING THE PAST 7 DAYS INCLUDING TODAY.** These are the answers I want you to use. *[Hand card and read answers.]*
Do you have any questions?”

0 = Not at all
 1 = A little bit
 2 = Moderately
 3 = Quite a bit
 4 = Extremely
 R = Refused

DURING THE PAST 7 DAYS, how much were you distressed by:

1. Nervousness or shakiness inside	0	1	2	3	4	R
2. Faintness or dizziness	0	1	2	3	4	R
3. The idea that someone else can control your thoughts	0	1	2	3	4	R
4. Feeling others are to blame for most of your troubles	0	1	2	3	4	R
5. Trouble remembering things	0	1	2	3	4	R
6. Feeling easily annoyed or irritated	0	1	2	3	4	R
7. Pains in the heart or chest	0	1	2	3	4	R
8. Feeling afraid in open spaces	0	1	2	3	4	R
9. Thoughts of ending your life	0	1	2	3	4	R

DURING THE PAST 7 DAYS, how much were you distressed by:

10. Feeling that most people cannot be trusted	0	1	2	3	4	R
11. Poor appetite	0	1	2	3	4	R
12. Suddenly scared for no reason	0	1	2	3	4	R
13. Temper outbursts that you could not control	0	1	2	3	4	R
14. Feeling lonely even when you are with people	0	1	2	3	4	R
15. Feeling blocked in getting things done	0	1	2	3	4	R
16. Feeling lonely	0	1	2	3	4	R
17. Feeling blue	0	1	2	3	4	R
18. Feeling no interest in things	0	1	2	3	4	R

0 = Not at all

1 = A little bit

2 = Moderately

3 = Quite a bit

4 = Extremely

R = Refused

DURING THE PAST 7 DAYS, how much were you distressed by:

19. Feeling fearful	0	1	2	3	4	R
20. Your feelings being easily hurt	0	1	2	3	4	R
21. Feeling that people are unfriendly or dislike you	0	1	2	3	4	R
22. Feeling inferior to others	0	1	2	3	4	R
23. Nausea or upset stomach	0	1	2	3	4	R
24. Feeling that you are watched or talked about by others	0	1	2	3	4	R
25. Trouble falling asleep	0	1	2	3	4	R
26. Having to check and double check what you do	0	1	2	3	4	R
27. Difficulty making decisions	0	1	2	3	4	R

DURING THE PAST 7 DAYS, how much were you distressed by:

28. Feeling afraid to travel on buses, subways, or trains	0	1	2	3	4	R
29. Trouble getting your breath	0	1	2	3	4	R
30. Hot or cold spells	0	1	2	3	4	R
31. Having to avoid certain things, places, or activities because they frighten you	0	1	2	3	4	R
32. Your mind going blank	0	1	2	3	4	R
33. Numbness or tingling in parts of your body	0	1	2	3	4	R
34. The idea that you should be punished for your sins	0	1	2	3	4	R
35. Feeling hopeless about the future	0	1	2	3	4	R
36. Trouble concentrating	0	1	2	3	4	R

0 = Not at all

1 = A little bit

2 = Moderately

3 = Quite a bit

4 = Extremely

R = Refused

DURING THE PAST 7 DAYS, how much were you distressed by:

37. Feeling weak in parts of your body	0	1	2	3	4	R
38. Feeling tense or keyed up	0	1	2	3	4	R
39. Thoughts of death or dying	0	1	2	3	4	R
40. Having urges to beat, injure, or harm someone	0	1	2	3	4	R
41. Having urges to break or smash things	0	1	2	3	4	R
42. Feeling very self-conscious with others	0	1	2	3	4	R
43. Feeling uneasy in crowds	0	1	2	3	4	R
44. Never feeling close to another person	0	1	2	3	4	R
45. Spells of terror or panic	0	1	2	3	4	R

DURING THE PAST 7 DAYS, how much were you distressed by:

46. Getting into frequent arguments	0	1	2	3	4	R
47. Feeling nervous when you are left alone	0	1	2	3	4	R
48. Others not giving you proper credit for your achievements	0	1	2	3	4	R
49. Feeling so restless you couldn't sit still	0	1	2	3	4	R
50. Feelings of worthlessness	0	1	2	3	4	R
51. Feeling that people will take advantage of you if you let them	0	1	2	3	4	R
52. Feeling of guilt	0	1	2	3	4	R
53. The idea that something is wrong with your mind	0	1	2	3	4	R