

Symptom Distress Scale (Adapted from Symptom Checklist-90)

The Symptom Checklist (SCL) is a self-report instrument intended to measure severity of psychiatric symptoms on a number of different subscales. Its earlier version, Hopkins Symptom Checklist (HSCL-58; Mattsson et al. 1969), had 58 items and was reported to measure four to six symptom dimensions (Williams et al. 1968; Mattsson et al. 1969; Lipman et al. 1969; Derogatis et al. 1971; Derogatis et al. 1972). The checklist has since been expanded to 90 items that were postulated to yield nine subscale scores: ASomatization, AObsessive-Compulsive, AInterpersonal Sensitivity, ADepression, AAnxiety, ANger-Hostility, APhobic Anxiety, APsychotism, and AParanoid Ideation (Derogatis et al. 1973). The checklist's later versions were HSCL-90 (Lipman, Covi, and Shapiro 1977), SCL-90 (Derogatis, Lipman, and Covi 1973), and SCL-90-Revised (Derogatis 1977).

All SCL versions have encountered problems in defining consistently independent dimensions of psychopathology. First, the SCL factorial structure was shown to be rather unstable across studies (see table 2) as well as across social class groups (Derogatis 1971) and diagnostic groups (Derogatis 1972); Hoffmann and Overall 1978; Holcomb, Adams, and Ponder 1983; Hafkenscheid 1993). Next, several studies reported a disproportionately large amount of variance accounted for by the first unrotated factor, high inter-correlations among factors, loading of many items on multiple factors, and somewhat low inter-correlations among items that load on the same factor (see table 2). Finally, the absence of evidence for the discriminant validity of the symptom dimensions was demonstrated by findings that all standard SCL-90 dimensions correlate quite strongly with the Beck Depression Inventory (Beck 1967) and with all but two Minnesota Multiphasic Inventory (MMPI; Wiggins 1966) scales (Dinning and Evans 1977; Brophy, Norvell, and Kiluk 1988) and that the dimensions poorly differentiate different diagnostic groups of patients (Clark and Friedman 1983; Hafkenscheid 1993).

Based on these findings, many researchers have suggested that the SCL-90 measures a general complaint or general discomfort dimension rather than distinct dimensions of psychopathology (Hoffman and Overall 1978; Clark and Friedman 1983; Cyr et al. 1985; Brophy, Norvell, and Kiluk 1988). A number of studies that have demonstrated validity and reliability of the checklist's total scale (Hoffmann and Overall 1978; Brophy et al. 1988; Margo et al. 1992) support this proposition.

Following Hoffmann and Overall's (1978) assertion that a single global score on the SCL-90 might well be used as an index of psychopathology. Nguyen et al. (1983) attempted to construct a shortened version of the checklist for assessment of general psychological discomfort. The new scale, the SCL-10, included ten SCL-90 items that loaded highest on the three most important factors identified by Hoffmann and Overall (1978). Nguyen et al. (1983) provided evidence of the SCL-10 internal consistency and concluded that it is a likely measure of dysphoria, demoralization, and neurotic anxiety.

Five other items, which were reported to load on the SCL-90 AAnxiety dimension (Derogatis and Cleary 1977), were added to the Nguyen's et al. (1983) SCL-10 to create a 15 item Symptom Distress Scale for the MHSIP Mental Health Report Card. Each item of this scale is scored on a 5-point scale of distress ranging from Anot at all (0) to Aextremely (4). The total symptom distress score is obtained by summing scores across all 15 items.

Table 2

Study	Scale	Subjects	Number of Dimensions & the Four Most Important Dimensions Identified	Factor Stability	PV ¹	Inter-Factor Correlations (IFC)/Multiple Factor Loading	Reliability	Convergent Validity	Discriminant Validity
Williams et al. 1968	Hopkins Symptom Check List-58 (HSCL-58)	Persons with neurotic anxiety	Five factors, clinically meaningful, having at least three items with factor loadings $\geq .45$		5.2	24 items (41%) had factor loading $\geq .30$ on more than one factor ²			
Mattsson et al. 1969	HSCL-58	Persons with neurotic anxiety	Six factors, clinically meaningful, having at least three items with factor loadings $\geq .40$; <ul style="list-style-type: none"> ⊆ <i>General Neurotic Feelings</i> ⊆ <i>Somatization</i> ⊆ <i>Performance Difficulty</i> ⊆ <i>Anxious Depression</i> 	<ul style="list-style-type: none"> ⊆ Only four factors replicated the study by Williams et al. (1968); ⊆ Based on the criterion of factor loadings $\geq .45$, the proportion of items in disagreement between the factors yielded by this study and the one by Williams et al. (1968) ranged from 22 to 89 percent (see footnote 3) 	4.6	31 items (53%) had factor loading $\geq .30$ on more than one factor (see footnote 3)			

¹ PV - Proportion of the amount of variance accounted for by the first unrotated factor to the amount of variance accounted for by the next largest factor.

² Computed by Cyr et al. (1985) based on the data presented by the study's author.

Lipman et al. 1977	HSCL-90	<ul style="list-style-type: none"> • Consumers of outpatient services with depression C (N=320)	Eight factors, clinically meaningful, having at least five items with factor loadings $\geq .40$; C <i>Interpersonal Sensitivity</i> C <i>Phobic Anxiety</i> C <i>Retarded Depression</i> C <i>Anger-Hostility</i>	Only seven dimensions postulated by Derogatis et al. (1973) were confirmed; C Many items did not have the hypothesized factor loadings					
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Study	Scale	Subjects	Number of Dimensions & the Four Most Important Dimensions Identified	Factor Stability	PV5	Inter-Factor Correlations (IFC)/Multiple Factor Loading	Reliability	Convergent Validity	Discriminant Validity
Derogatis & Cleary 1977	SCL-90	<ul style="list-style-type: none"> ◦ Consumers of outpatient psychiatric services ◦ (N=1,002) 	<ul style="list-style-type: none"> ◦ Nine factors, which accounted for 53% of the total variance; ◦ Items with factor loadings of a least .30 were selected to represent factors 	<ul style="list-style-type: none"> ◦ Eight factors matched well the dimensions postulated by Derogatis et al. (1973); ◦ The ninth factor "Psychotism" did not emerge as predicted; ◦ Overall, 39% of the items did not load on the same factors in both this and Lipman's et al. (1977) studies (see footnote 3) 					
Dinning & Evans 1977	SCL-90	<ul style="list-style-type: none"> ◦ Consumers of psychiatric inpatient services in short-term treatment units ◦ (N=113) 				Average IFC of .67		Each SCL-90 scale had its highest r with the corresponding MMPI scale	Each SCL-90 scale had from moderate to high rs with all but two MMPI scales, with the Beck Depression Inventory, and with trait anxiety

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Hoffman & Overall 1978	SCL-90	<ul style="list-style-type: none"> ∩ Sample representative of general psychiatric outpatient population ∩ (N=358) 	<ul style="list-style-type: none"> ∩ Five clinically meaningful factors; ∩ 81 items with factor loadings of at least .35 were selected to represent factors; ∩ <i>Depression</i> ∩ <i>Somatization</i> ∩ <i>Phobic Anxiety</i> ∩ <i>Functional Impairment</i> 	<ul style="list-style-type: none"> ∩ The factors agreed with those reported by Lipman et al. (1977); ∩ Only four of the standard SCL-90 dimensions replicated 	6.4	<ul style="list-style-type: none"> ∩ IFCs ranged from .50 to .75; ∩ The factors=rs with the total scale ranged from .75 to .93 ∩ Factors defined by Lipman et al. (1977) and scored for this study sample had IFCs ranging from .41 to .8 and rs with the total scale ranging from .77 to .91 	<ul style="list-style-type: none"> ∩ alpha ranged from .83 to .94 for the factors and was .97 for the total scale; ∩ For the total scale Spearman-Brown split-half reliability between odd and even items was .98 		
Lipman et al. 1979		Dutch consumers of inpatient services	Ten factors	The 10-dimensional structure differed from nine dimensions postulated by Derogatis et al. (1973) by the addition of a sleep difficulty subscale.					

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Everson et al. 1980	SCL-90	Consumers of outpatient services in an urban state psychiatric hospital	Twelve factors		9.2				
Holcomb, Adams, & Ponder 1983	SCL-90	<p>Consumers of acute psychiatric inpatient services (N=451)</p> <p>38% of the sample were involuntary patients</p>	<p>Nine factors;</p> <p>items with factor loadings of at least .40 were selected to represent factors</p> <p><i>Depression</i></p> <p><i>Somatisation</i></p> <p><i>Paranoia</i></p> <p><i>Tension</i></p>	Factor structure differed from the one obtained for the consumers of outpatient services	8.8	IFCs ranged from .45 to .74 with a mean of .59	Alpha for the dimensions ranged from .56 to .96		

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Clark & Friedman 1983	SCL-90	<p>VA consumers of psychiatric outpatient services (N=442)</p>	<p>Nine factors, which best separated items that Derogatis et al. (1973) postulated to load on the different symptom dimensions;</p> <p><i>Depression</i> <i>Somatization</i> <i>Phobic Anxiety</i> <i>Interpersonal Sensitivity/Paranoia</i></p>	<p>Only five of the standard SCL-90 dimensions replicated</p>	8.1	<p>For the standard SCL-90 factors calculated for this study sample, IFCs ranged from .47 to .81 with a mean of .67</p>			<p>Symptom profile shapes produced by the standard SCL-90 dimensions discriminated poorly among persons with depression, anxiety, and schizophrenia</p> <p>Symptoms= severity differentiated the groups well</p>

Margo et al. 1992	SCL-90-Revised (SCL-90-R)	Consumers of inpatient services (N=71) who suffered from depression (N=50) and other disorders	Total scale					<p>SCL-90-R total scale had rs with the Beck Depression Inventory and the Brief Psychiatric Rating Scale (Overall 1974) r of .69 and .45, respectively, obtained for the entire study sample & r of .66 and .45 respectively, obtained for the depressed persons sample</p>	
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Hafkenscheid 1993; part 1	SCL-90	<ul style="list-style-type: none"> ⊆ Short-stay consumers of psychiatric inpatient services (N=437); ⊆ Consumers of psychiatric outpatient services (N=269) 	Nine or ten factors proposed by Derogatis et al. (1973) and Lipman et al. (1979) were not supported	<ul style="list-style-type: none"> ⊆ In both inpatient and outpatient samples, only 72 checklist items correlated the factor which they were postulated to represent; ⊆ Only 35 and 29 items, respectively, in the two samples had $r_s \geq .40$ with the \timescorrect=factors, provided that the next largest r with one of the other factors was at least .10 lower 		<ul style="list-style-type: none"> ⊆ In the inpatient sample, IFCs ranged from .12 to .74; ⊆ Only 8 items in the inpatient sample and 9 items in the outpatient sample, while having r_s with the \timescorrect=factors $\geq .40$, had the next largest r with one of the other factors of at least .20 lower 	<ul style="list-style-type: none"> ⊆ In the inpatient sample, alpha for the factors ranged from .76 to .89; ⊆ Mean r_s among items loading on the same factor ranged from .24 to .56 		

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Hafkenscheid 1993; part 2	SCL-90	<ul style="list-style-type: none"> ○ Short-stay consumers of psychiatric inpatient services (N=437); ○ Consumer of psychiatric outpatient services (N=269) 	<ul style="list-style-type: none"> ○ Four clinically meaningful factors, having at least four items with factor loadings $\geq .40$, whose next largest loading on one of the other factors was at least .20 lower; ○ Factors covered only 50 items and accounted for 39.1% of the total variance; ○ <i>Depression</i> ○ <i>Hostile-Suspiciousness</i> ○ <i>Somatization</i> ○ <i>Phobic Anxiety</i> 	The factors were similar to those emerged in previous studies	4.2	IFCs were small to moderate with the largest of .57	<ul style="list-style-type: none"> ○ 3-7 days test-retest reliability ranged from .68 to .91 for the factors and was .79 for the total scale (N=55); ○ alpha ranged from .85 to .91 for the factors and was also high for the total scale 		While the dimensions discriminated poorly between different clinical groups, they quite successfully discriminated persons receiving treatment from healthy controls