

**The New Mexico Refugee Symptom Checklist-121
(NMRSCCL-121)[®]**

New Mexico Refugee Symptom Checklist-121

Instructions: Using the scale beside each symptom, please indicate the degree to which the symptom has been bothersome to you over the past year. If the symptom has not been bothersome to you during the past year, circle "NOT AT ALL."

SYMPTOMS	NOT AT ALL	A LITTLE BIT	MOD-ERATELY	QUITE A BIT	EX-TREMELY	SYMPTOMS	NOT AT ALL	A LITTLE BIT	MOD-ERATELY	QUITE A BIT	EX-TREMELY
1. Weight loss	0	1	2	3	4	25. Coughing	0	1	2	3	4
2. Weight gain	0	1	2	3	4	26. Wheezing during breathing	0	1	2	3	4
3. Weakness	0	1	2	3	4	27. Sneezing	0	1	2	3	4
4. Tiredness	0	1	2	3	4	28. Trouble breathing	0	1	2	3	4
5. Fever	0	1	2	3	4	29. Shortness of breath	0	1	2	3	4
6. Chills	0	1	2	3	4	30. Choking	0	1	2	3	4
7. Fatigue	0	1	2	3	4	31. Problems swallowing	0	1	2	3	4
8. Sweats	0	1	2	3	4	32. Heartburn	0	1	2	3	4
9. Rashes on your skin	0	1	2	3	4	33. Nausea	0	1	2	3	4
10. Itching	0	1	2	3	4	34. Vomiting	0	1	2	3	4
11. Swollen glands	0	1	2	3	4	35. Gas	0	1	2	3	4
12. Poor vision	0	1	2	3	4	36. Abdominal pain	0	1	2	3	4
13. Blurred vision	0	1	2	3	4	37. Heavy stomach	0	1	2	3	4
14. Poor hearing	0	1	2	3	4	38. Diarrhea	0	1	2	3	4
15. Ringing in your ears	0	1	2	3	4	39. Constipation	0	1	2	3	4
16. Tingling in your ears	0	1	2	3	4	40. Bleeding in vomit or stool	0	1	2	3	4
17. Poor ability to taste	0	1	2	3	4	41. Appetite problems	0	1	2	3	4
18. Poor ability to feel	0	1	2	3	4	42. Pain with urination	0	1	2	3	4
19. Poor ability to smell	0	1	2	3	4	43. Urgency of urination	0	1	2	3	4
20. Chest pains or chest heaviness	0	1	2	3	4	44. Frequent urination	0	1	2	3	4
21. Shortness of breath at night	0	1	2	3	4	45. Pain with menstruation	0	1	2	3	4
22. Palpitations of heart	0	1	2	3	4	46. Irregular menses (bleeding)	0	1	2	3	4
23. Fast or strong heart beat	0	1	2	3	4	47. Decreased interest or sex drive	0	1	2	3	4
24. Throbbing vessels	0	1	2	3	4	48. Problem getting or maintaining an erection	0	1	2	3	4

SYMPTOMS	NOT AT ALL	A LITTLE BIT	MOD-ERATELY	QUITE A BIT	EX-TREMELY	SYMPTOMS	NOT AT ALL	A LITTLE BIT	MOD-ERATELY	QUITE A BIT	EX-TREMELY
49. Pain with intercourse	0	1	2	3	4	74. Worry that is excessive	0	1	2	3	4
50. Sexually satisfied too soon	0	1	2	3	4	75. Generally anxious	0	1	2	3	4
51. Muscle, bone, joint pains	0	1	2	3	4	76. Jumpy or fidgety	0	1	2	3	4
52. Tense muscles	0	1	2	3	4	77. Fear or jumpiness at loud noises	0	1	2	3	4
53. Shoulder, back, or head pain	0	1	2	3	4	78. Fearful of things such that you avoid them (such as small places, crowds, heights, smells, or being in public or around certain people)	0	1	2	3	4
54. Pain with walking	0	1	2	3	4	79. Fear when thinking of past life events	0	1	2	3	4
55. Pain in your muscles or bones during cold	0	1	2	3	4	80. Feeling like you have no future	0	1	2	3	4
56. Stiffness	0	1	2	3	4	81. Feeling like you might suddenly die	0	1	2	3	4
57. Twitching (in your muscles)	0	1	2	3	4	82. Thinking that your illness will shorten your life	0	1	2	3	4
58. Shaking (in your body)	0	1	2	3	4	83. Thinking that somebody is watching you	0	1	2	3	4
59. Swelling in your arms or legs	0	1	2	3	4	84. Thinking that the enemy is still close and coming up on you	0	1	2	3	4
60. Leg cramps	0	1	2	3	4	85. When you see something that reminds you of the war (e.g., jet, police), thinking that it is coming for you	0	1	2	3	4
61. Grinding of your teeth	0	1	2	3	4	86. Thinking that past horrible events will happen again	0	1	2	3	4
62. Thinking that your body has changed in any way	0	1	2	3	4	87. Feeling unsafe	0	1	2	3	4
63. Headaches	0	1	2	3	4	88. Thinking that the universe is a horrible and fearful place	0	1	2	3	4
64. Dizziness	0	1	2	3	4	89. Feeling like you do not belong anywhere	0	1	2	3	4
65. Numbness	0	1	2	3	4	90. Lack of emotional feelings for other people	0	1	2	3	4
66. Tingling in your extremities	0	1	2	3	4	91. Feeling like nothing is beautiful	0	1	2	3	4
67. Seizures or convulsions	0	1	2	3	4	92. Feeling down, sad, or blue most of the time	0	1	2	3	4
68. Loss of consciousness	0	1	2	3	4	93. Turning blue	0	1	2	3	4
69. Problems walking	0	1	2	3	4	94. Feeling troubled	0	1	2	3	4
70. Fear	0	1	2	3	4	95. Feeling discontent	0	1	2	3	4
71. Nervousness	0	1	2	3	4	96. Loss of interest in your daily activities	0	1	2	3	4
72. Sudden attacks of anxiety	0	1	2	3	4	97. Wanting to be alone	0	1	2	3	4
73. Panic feelings	0	1	2	3	4	98. Loneliness	0	1	2	3	4

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99. Feeling homesick	0	1	2	3	4	111. Mind in crisis	0	1	2	3	4
100. Concentration problems	0	1	2	3	4	112. Tense mind	0	1	2	3	4
101. Disturbing dreams or nightmares	0	1	2	3	4	113. Thoughts are hard to get hold of	0	1	2	3	4
102. Problems falling asleep	0	1	2	3	4	114. Too much thinking or too many thoughts	0	1	2	3	4
103. Restless sleep	0	1	2	3	4	115. Too many thoughts or feelings of painful events in the past	0	1	2	3	4
104. Problems staying asleep	0	1	2	3	4	116. Confused or disorganized	0	1	2	3	4
105. Memory problems	0	1	2	3	4	117. Jumbled thoughts	0	1	2	3	4
106. Feeling defeated	0	1	2	3	4	118. Heat	0	1	2	3	4
107. Feeling worthless	0	1	2	3	4	119. Feeling you are out of your body	0	1	2	3	4
108. Anger or irritability	0	1	2	3	4	120. Feeling helpless	0	1	2	3	4
109. Thinking that life is shortened	0	1	2	3	4	121. Feeling hopeless	0	1	2	3	4
110. Abnormal or irregular mind	0	1	2	3	4						

New Mexico Refugee Symptom Checklist-121 (NMRSC-121)[®]

Scoring

Scoring may be conducted by adding the sum of the scores for each scale (severity scores), or by adding the presence of each symptom in each scale (symptom count).

Published data utilize the severity score since the correlation between severity and symptom count is .95.

The total scale, whether utilizing severity score or symptom count is the simple sum of each scale.

Scale 1: PTSD/Depression: 3, 4, 7, 62, 63, 79-82, 89, 91-121

Scale 2: Musculoskeletal: 51-58, 60, 69

Scale 3: Sensory: 12-19, 41, 47-50

Scale 4: Cardiovascular: 11, 20-26, 28, 29

Scale 5: Gastrointestinal: 27, 30-39

Scale 6: Anxiety: 61, 70-78

Scale 7: Urinary: 42-44

Scale 8: Posttraumatic Vulnerability: 83-88, 90

Scale 9: Neurologic and Bleeding: 40, 64, 67, 68

Scale 10: Skin Sensation: 9, 10, 65, 66

Scale 11: Menstrual: 45, 46

Scale 12: Constitutional, 1, 2, 5, 6, 8, 59

Psychometric properties of the NMRSC-121

Descriptive

In a sample of 252 refugees living in the U.S. (117 Kurds and 135 Vietnamese), the mean number of symptoms reported was 48 ($SD=31$; range 0 to 118). Quartiles (25th, 50th, and 75th) were 19, 43, and 73 symptoms, respectively. The mean NMRSC-121 severity score was 91 ($SD=77$; range 0 to 348). Quartiles for severity were 32, 67, and 133, respectively. Correlation between dichotomous (symptom

number) and sum (severity) values for the 12 scales ranged from 0.86 to 0.91. Means for the two refugee groups studied are shown in the table at the end of this section.

Reliability

Internal reliability

A second order factor analysis of the 12 subscale scores support a single factor of the NMRSCCL-121 that explains 57% of the variance with an internal consistency of 0.98. However, that high consistency is much due to the large number of items (36). The 12 subscales showed varying internal consistency ranging from 0.55 to 0.97 with nine scales greater than 0.81. This variation was partly due to the variation in number of items per subscale. Discrimination between subscales was shown by variability of correlations between them (range .38 to .81). Details of factor and reliability analyses are available from the authors.

Test-retest reliability

Total NMRSCCL-121 test-retest correlation was .81. Eleven subscales had acceptable retest reliabilities ranging from .62 to .81 with 9 of the 12 scales above .70 (only the Menstrual subscale for women ($n=34$) had an unacceptable retest correlation of .50). Mean scores for the total NMRSCCL-121 were not significantly different from test to retest ($Ms=133.5$ vs. 124.9 ; $t[79]=1.3$; $p=.20$), yet changed significantly for 3 scales: Depression and PTSD ($Ms=59.3$ vs. 51.6 ; $t[79]=2.8$; $p<.01$), Posttraumatic Vulnerability ($Ms=7.7$ vs. 6.5 ; $t[79]=1.4$; $p<.05$), and Neurological and Bleeding ($Ms=2.0$ vs. 2.6 ; $t[79]=2.4$; $p<.02$).

Validity

Concurrent validity: NMRSCCL-121 correlations with symptom health measures

The NMRSCCL-121 total score and all 12 subscales were strongly correlated with the HSCL-25 depression ($r=0.75$; $p<.01$) and anxiety ($r=0.75$; $p<.01$) scores as well as with the PSS-SR score ($r=0.63$; $p<.01$). As expected, strong correlations were found between symptom health outcome measures and the analogous scale on the NMRSCCL-121: (1) HSCL-25 depression with NMRSCCL-121 PTSD/Depression, $r=.81$; (2) HSCL-25 anxiety with NMRSCCL-121 anxiety, $r=.72$; and (3) the PSS-SR with both NMRSCCL-121 PTSD/Depression, $r=.76$ and Posttraumatic Vulnerability, $r=.70$. All 12 subscales were also reliably correlated with HSCL-25 depression (mean $r=0.50$, range 0.26 to 0.81, all $p<0.01$), with HSCL-25 anxiety (mean $r=0.52$, range 0.26 to 0.76, all $p<0.01$), and with PSS-SR PTSD (mean $r = 0.48$, range 0.28 to 0.76, all $p < 0.01$).

Construct validity: Discriminating by traumatic experiences.

The NMRSCCL-121 discriminated between refugees who were tortured vs. those who were in a non-torture war-related trauma group vs. those with no war-related trauma in a one-way ANOVA model ($F[3,247]=8.75; p<.01$). Mean NMRSCCL-121 symptoms were higher for the torture group than for the non-torture war-related trauma group, $M_s=56$ ($SD=32$) vs. 45 ($SD=31$), $d=0.34$, $p=.05$, and the no war-related trauma group, $M_s=56$ ($SD=32$) vs. 31 ($SD=22$), $d=0.92$, $p<.01$. Symptoms for the non-torture war-related group were higher than for the no war-related trauma group, $M_s=45$ ($SD=31$) vs. 31 ($SD=22$), $d=0.42$, $p=.06$.

CTI-104 events were strongly correlated with the NMRSCCL-121 severity score ($r=0.47$, $p<.01$). Of the 12 NMRSCCL-121 subscales all but Menstrual were moderately to strongly correlated with the CTI-104 (mean $r=0.42$, range 0.30 to 0.46, all $p<.01$). As expected, CTI-104 events were most strongly correlated with NMRSCCL-121 PTSD/Depression ($r=.42$, $p<.01$) and Posttraumatic Vulnerability ($r=.46$, $p<.01$).

Construct validity: NMRSCCL-121 correlations with impairment health measures (Table 3)

The total NMRSCCL-121 score was moderately to strongly correlated with all 8 SF-36 domains ($r=.35$ to 0.58 , all $p<.01$), all 3 SDI scales ($r=.53$ to $.55$, all $p<.01$) and the SDI Global Disability Scale ($r=0.40$, $p<.01$), and the SOC-13 ($r=0.37$, $p<.01$). Of the 12 NMRSCCL-121 subscales, all except Menstrual were moderately to strongly correlated with the impairment health measures.

Scales:

SF36 = Medical Outcomes Study Short-form 36; PF=Physical Functioning; RP=Role-Physical; BP=Bodily Pain; GH=General Health; V=Vitality; SF=Social Functioning; RE=Role-Emotional; MH=Mental Health;
SDI = Sheehan Disability Inventory; WI=Work impairment; SLI=Social/Life impairment; FLI=Family Life impairment; GD=Global Disability;
SOC = Sense of Coherence-13
HSCCL-25 = Hopkins Symptom Checklist – 25
PSS-SR = Posttraumatic Symptom Scale – Self Report
CTI-104 = Comprehensive Trauma Inventory-104

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Table. Mean (SD) NMRSCCL-121 Severity scores by ethnicity and gender and severity scale reliability.

Scale (number of items)	Total Sample (N = 252)	Kurds (n = 135)	Vietnamese (n = 117)	Males (n = 135)	Females (n = 117)	Alpha Coefficient (n = 252)	Test-Retest Correlation (4 - 6 week)
Depression and PTSD (41)	41.2 (35.2)	47.9 (36.9) ^a	35.3 (32.8)	42.8 (36.6)	39.3 (33.6)	0.97*	0.81*
Musculoskeletal (10)	7.8 (8.4)	9.7 (9.6) ^a	6.2 (7.0)	7.5 (8.8)	8.2 (8.0)	0.91*	0.78*
Sensory (13)	7.6 (8.8)	6.6 (8.7)	8.5 (8.8)	8.7 (10.1) ^b	6.3 (6.8)	0.92*	0.75*
Cardiopulmonary (10)	5.7 (7.5)	6.6 (8.9)	5.0 (6.1)	6.0 (8.0)	5.4 (7.0)	0.92*	0.72*
Gastrointestinal (11)	6.5 (7.2)	7.8 (8.0) ^a	5.3 (6.1)	6.9 (7.9)	6.0 (6.2)	0.88*	0.72*
Anxiety (10)	7.7 (8.1)	8.4 (8.6)	7.1 (7.6)	7.3 (8.5)	8.1 (7.6)	0.91*	0.62*
Urinary (3)	1.7 (2.5)	1.9 (2.7)	1.5 (2.4)	2.0 (2.6)	1.4 (2.4)	0.81*	0.71*
Posttraumatic Vulnerability (7) ^a	5.1 (6.0)	6.9 (6.6) ^a	3.5 (4.9)	5.6 (6.5)	4.5 (5.3)	0.89*	0.70*
Neurological & Bleeding (4)	1.4 (1.9)	1.5 (2.2)	1.3 (1.6)	1.2 (2.2)	1.5 (1.5)	0.57*	0.72*
Skin Sensation (4)	2.3 (3.3)	3.0 (3.9) ^a	1.7 (2.5)	2.3 (3.3)	2.3 (3.2)	0.82*	0.75*
Menstrual (2) (N=117)	1.4 (1.8)	1.4 (1.8)	1.4 (1.8)	N/A	1.4 (1.8)	0.55*	0.50*
Constitutional (6)	3.3 (3.2)	3.7 (3.7) ^a	2.8 (2.5)	3.2 (3.6)	3.3 (2.7)	0.62*	0.67*
Total Severity Scale (121)	90.8 (77.1)	104.6 (85.3) ^a	78.8 (67.2)	93.5 (83.1)	87.6 (69.7)	0.98*	0.81*

^a $p < 0.05$ on Ethnicity

^b $p < 0.05$ on Gender

* $p < 0.01$