

# **Assessing Trauma and Associated Symptoms in Refugees and Torture Survivors**

**A CVT Webinar  
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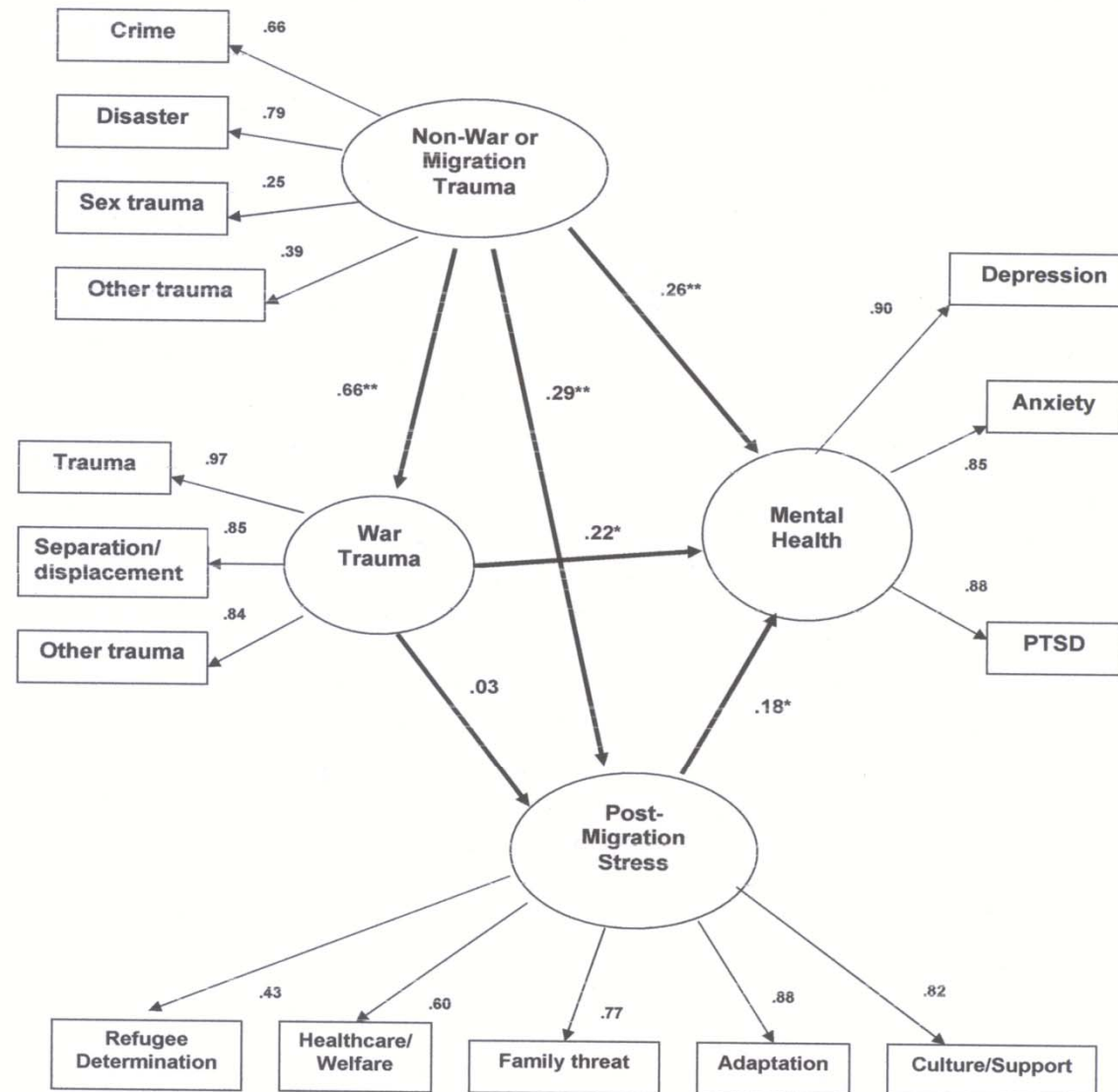


# Objectives

1. Learn about the available assessments for trauma and associated symptoms in refugees and torture survivors
2. Learn about basic qualitative and quantitative methods for developing assessments about trauma and symptoms
3. Identify current instruments available for use and potentially discuss needs for new instruments.

# The Relative Role of Trauma/Stress Type in Predicting Health Outcome

Predicting Mental Health From Various Sources of Trauma: Vietnamese (N = 135, Standardized Regression Weights and Factor Loadings)



\*\* $P < .01$ ; \* $p < .05$

Full Model:  $\chi^2 = 145.1$ ,  $DF = 84$ ,  $p < .001$ ,  $RMR = 1.29$ ,  $GFI = 0.93$ ,  $AGFI = 0.90$

# Instrument Construction

- Purpose

*Why do you want or need an assessment?*

- Construct definition

*Define as exactly as possible what you want to assess.*

- Instrument design

*Describe what it will look like and for what purpose.*

- Development described

*Describe how it was developed.*

- Metric testing

*Evaluate its validity and reliability.*

# Metric Testing



# Validity

- Construct

*Are you assessing what you want?*

- Predictive

*Does your assessment predict an outcome?*

- Concurrent

*Does your assessment agree with similar assessments?*

- Discriminant

*Are instrument subscales different from each other?*

# Reliability

- A subset of validity

- Internal

*Does your scale or instrument assess one thing?*

- Stable

*Is your instrument stable over an appropriate time frame?*

# Purpose

- What do you want to assess?
- What will it be used for?
- In what context will it be used?





# Purpose:

## Theories of Measuring Trauma

- Dose
  - Cumulative by number
  - Cumulative by type
  - Hi and low impact events
- Severity
  - Is it just about numbers?
  - Is it just about perception?
  - Can it be measured in individuals?
- Perceptual
  - The role of the event
  - The role of previous trauma

17 trauma items

Rationally developed

One item for “torture”  
(not strongest  
predictor of health  
outcomes)

Good reliability

Moderate  
relationship to  
health outcomes

# HARVARD TRAUMA QUESTIONNAIRE



CAMBODIAN  
VERSION

Please indicate whether you have experienced, witnessed, or heard any of the following events.

សូមលោកអ្នកចេញត្រួតពិនិត្យបញ្ជាក់នូវព្រឹត្តិការណ៍ណាមួយដូចខាងក្រោមនេះ បើសិនជាលោកអ្នកធ្លាប់បានជួបប្រទះដោយផ្ទាល់ខ្លួន(E) ឬ ធ្លាប់បានឃើញ(W) ឬ ធ្លាប់បានឮ(H)។

**E= Experienced**  
**W= Witnessed**

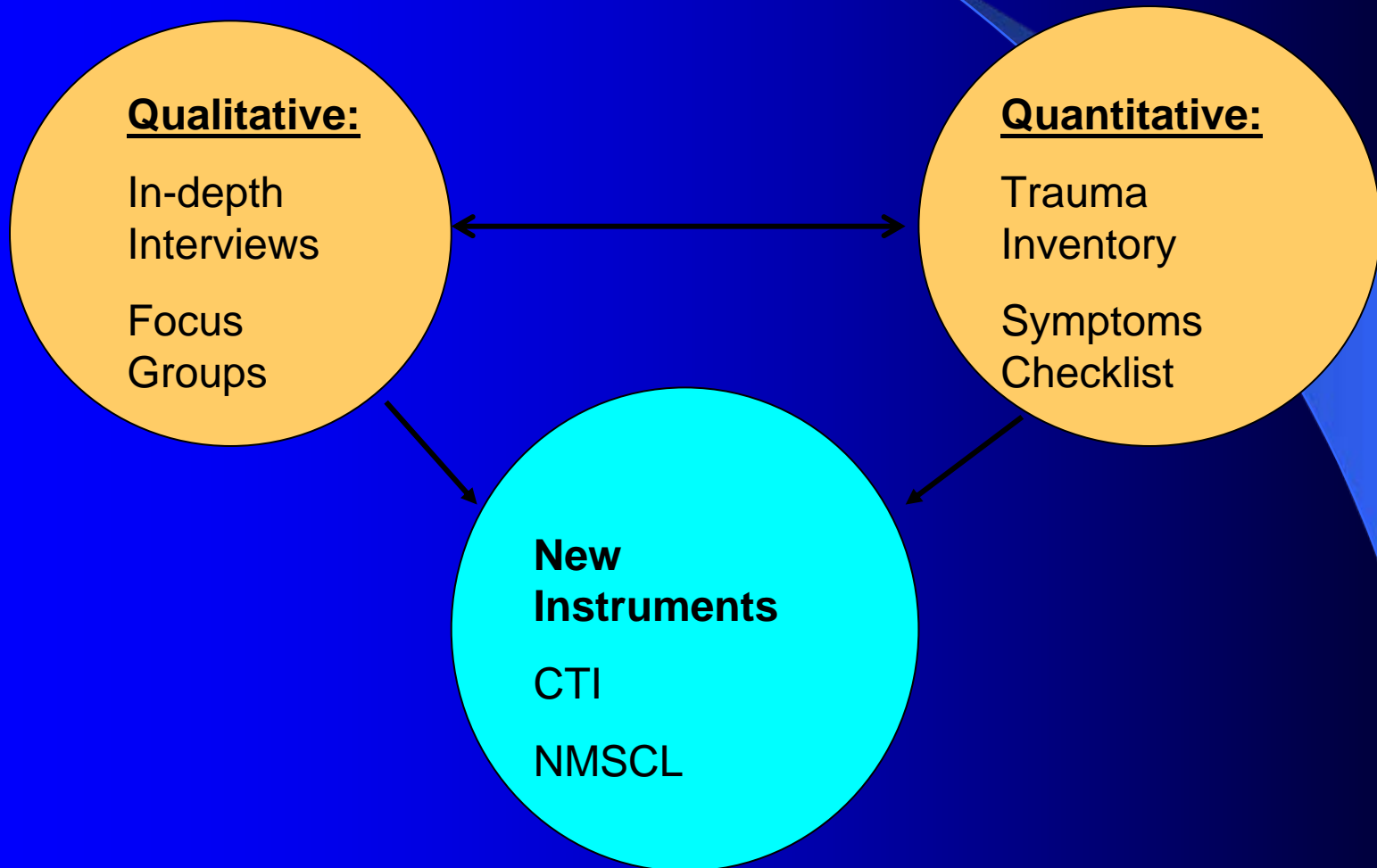
**H= Heard about it**  
**N= No**

		E	W	H	N
1.	Lack of food or water. ខ្វះខាតម្ហូបអាហារឬទឹក				
2.	Ill health without access to medical care. ឈឺថ្កាត់ដោយគ្មានពេទ្យព្យាបាល				
3.	Lack of shelter. ខ្វះខាតជម្រក				
4.	Imprisonment. ជាប់ឃុំឃាំង				
5.	Serious injury. របួសធ្ងន់ ឬ មានគ្រោះថ្នាក់				

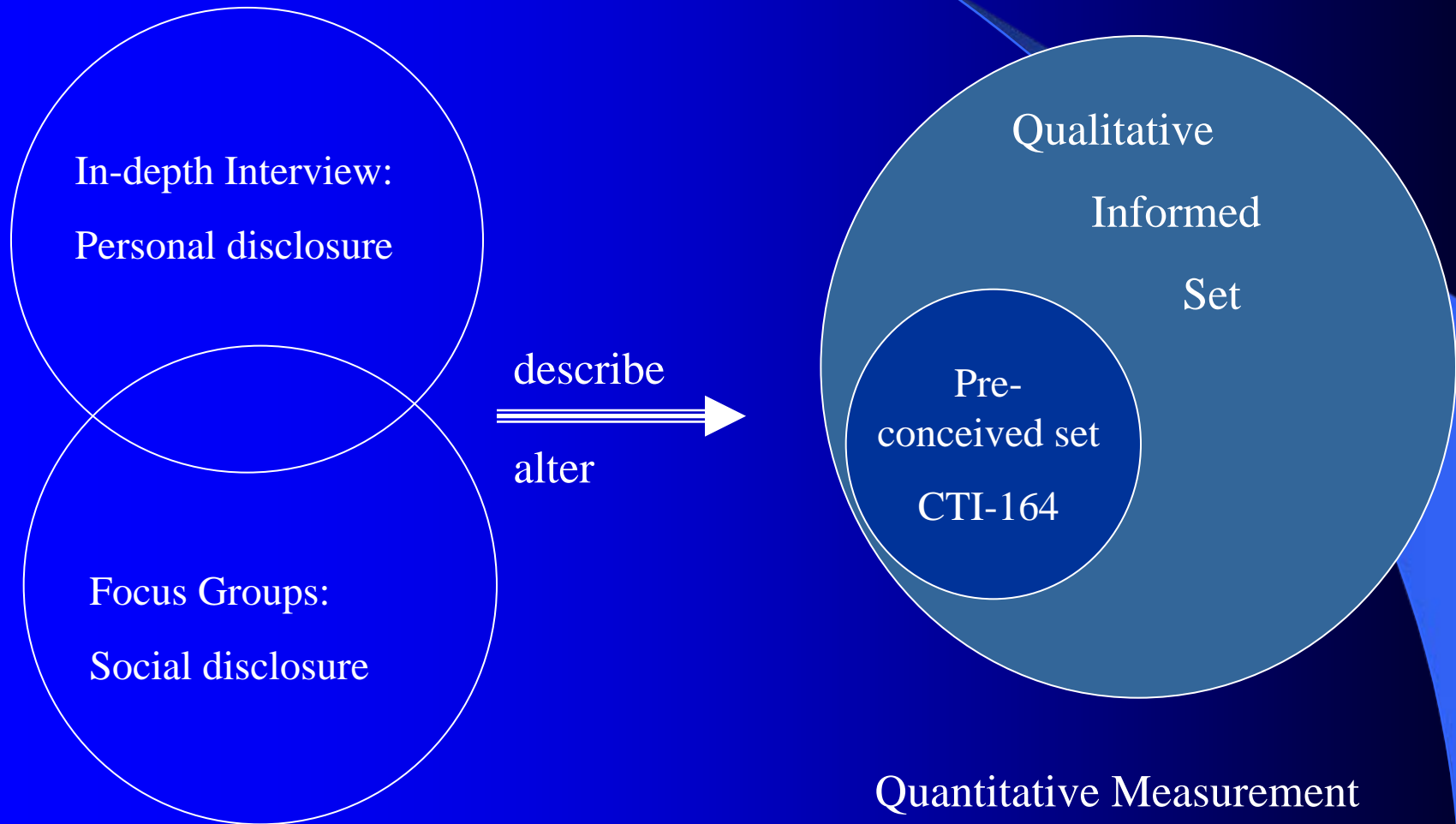
# **The Construct of Trauma in Refugees: The Comprehensive Trauma Inventory**

- To better understand the full range of war-related experiences in refugees
- To better understand how trauma experiences are related to illness and disease: building models for prevention
- Documentation of human rights abuses

# Triangulating Qualitative and Quantitative Methods



# Construct Influences Instrument Development: From The New Mexico Refugee Project



# Constructing the Comprehensive Trauma Inventory: In-depth Interview Results

		Total	Physical	Psych	Sexual	Combat
<b>Vietnamese</b> (N=31)	M(N=18)	508	162	249	2	95
	F (N=13)	171	34	104	1	32
	TOTAL	679	196	353	3	127
<b>Kurdish</b> (N=35)	Male (n=17)	631	110	358	4	159
	Female (n=18)	401	29	275	1	96
	TOTAL	1032	139	633	5	255
<b>TOTAL</b> (N=66)	Male (n=35)	1139	272	607	6	254
	Female (n=31)	572	63	379	2	128
	<b>TOTAL</b>	1711	335	986	8	382

# Constructing the Comprehensive Trauma Inventory: CTQ-164 Results

Total and Percent Endorsed of Trauma Events

N = 66

Category	Total	Percent yes	Me	Percent yes	Saw	Percent yes	Heard	Percent yes
Psychological Trauma	4156	48	948	57	1361	54	1847	40
Physical Trauma	2498	29	343	21	583	23	1572	34
Sexual Trauma	500	6	11	1	28	1	461	10
War Trauma	1580	18	361	21	532	21	687	15

Totals

8,734

1,663

2,504

4,567



# New Mexico Refugee Project

## Phase I (N = 66)

- CTQ-164 (expert, consensus quantitative instrument)
  - No one endorsed 29 items
  - Types of “phys,” “psych,” “sexual,” and “combat” were highly correlated and did not discriminate on health measures
  - Modestly associated with symptoms and impairment
- In-depth interviews (1,711 events)
  - 123 events were not on the CTQ-164

# Constructing the CTI-104

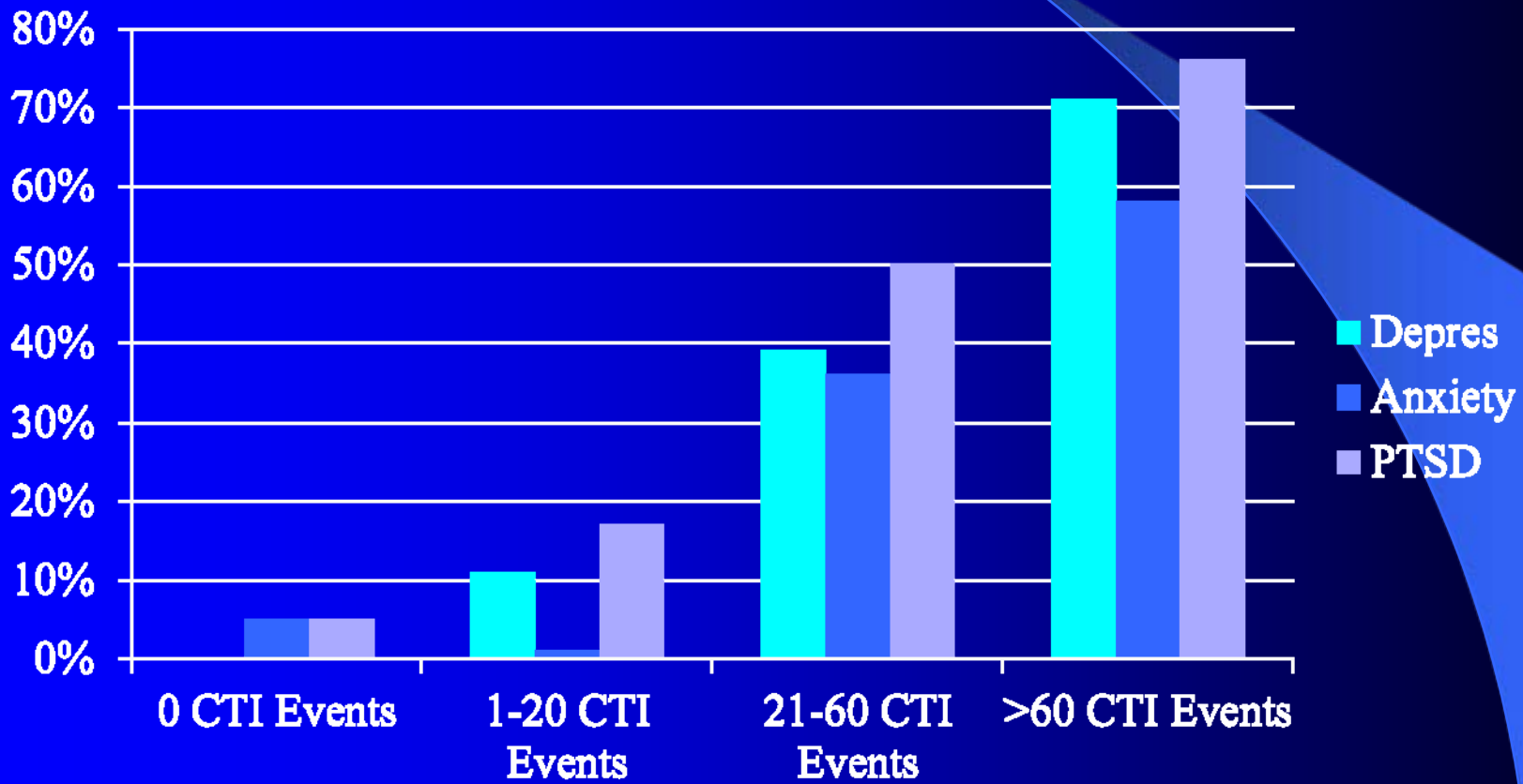
- Data analyses (factor) demonstrated 12 event types:
  - Psychological Injury
  - Physical Injury
  - Detention and Intentional Abuse
  - Sexual Injury
  - Witnessing Abuse, Injury or Death
  - Hearing about Injury and Death
  - Deprivation and Discrimination
  - Betrayal
  - Domestic Discord and Violence
  - Separation and Isolation
  - Difficulties During Migration
- So, The CTQ-164 was revised into the CTI-104 for phase II

# The Comprehensive Trauma Inventory

## CTI-104 Reliability Properties (N=252)

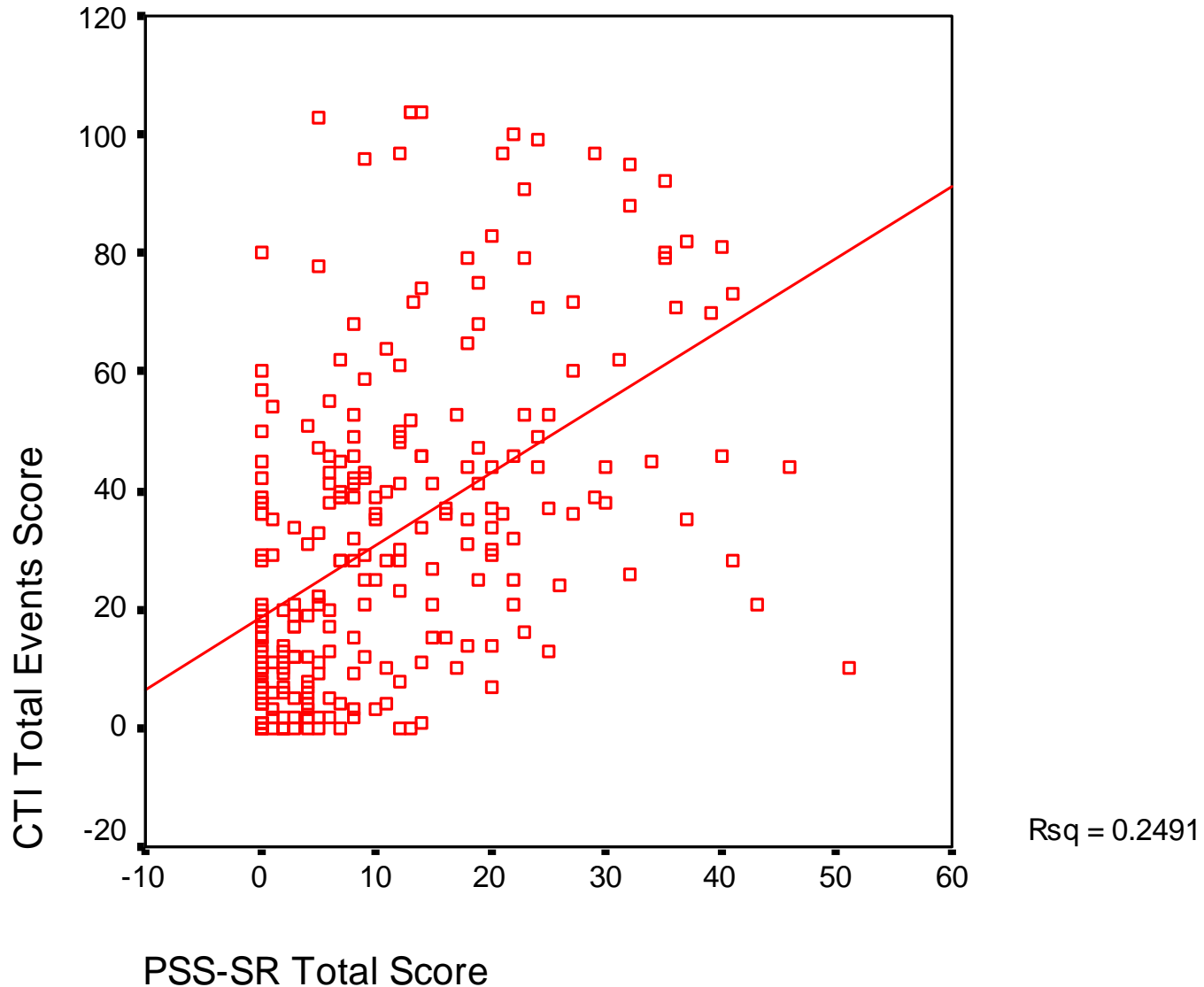
Factor	# Items	Alpha	Test-retest
Psychological Injury	15	.91	.80
Physical Injury	3	.77	.75
Detention & Intentional Abuse	32	.98	.81
Sexual Trauma/Abuse	6	.96	.76
Witnessing Abuse, Injury or Death	14	.94	.83
Hearing About Abuse, Injury or Death	3	.94	.29
Deprivation & Discrimination	6	.90	.69
Betrayal	8	.87	.74
Domestic Discord & Violence	2	.94	.75
Displacement	3	.69	.68
Separation & Isolation	7	.86	.66
Migration	5	.88	.81

# CTI-104: Event Number Predicts Health Outcomes



# War Trauma in Refugees

## The effects of traumatic events



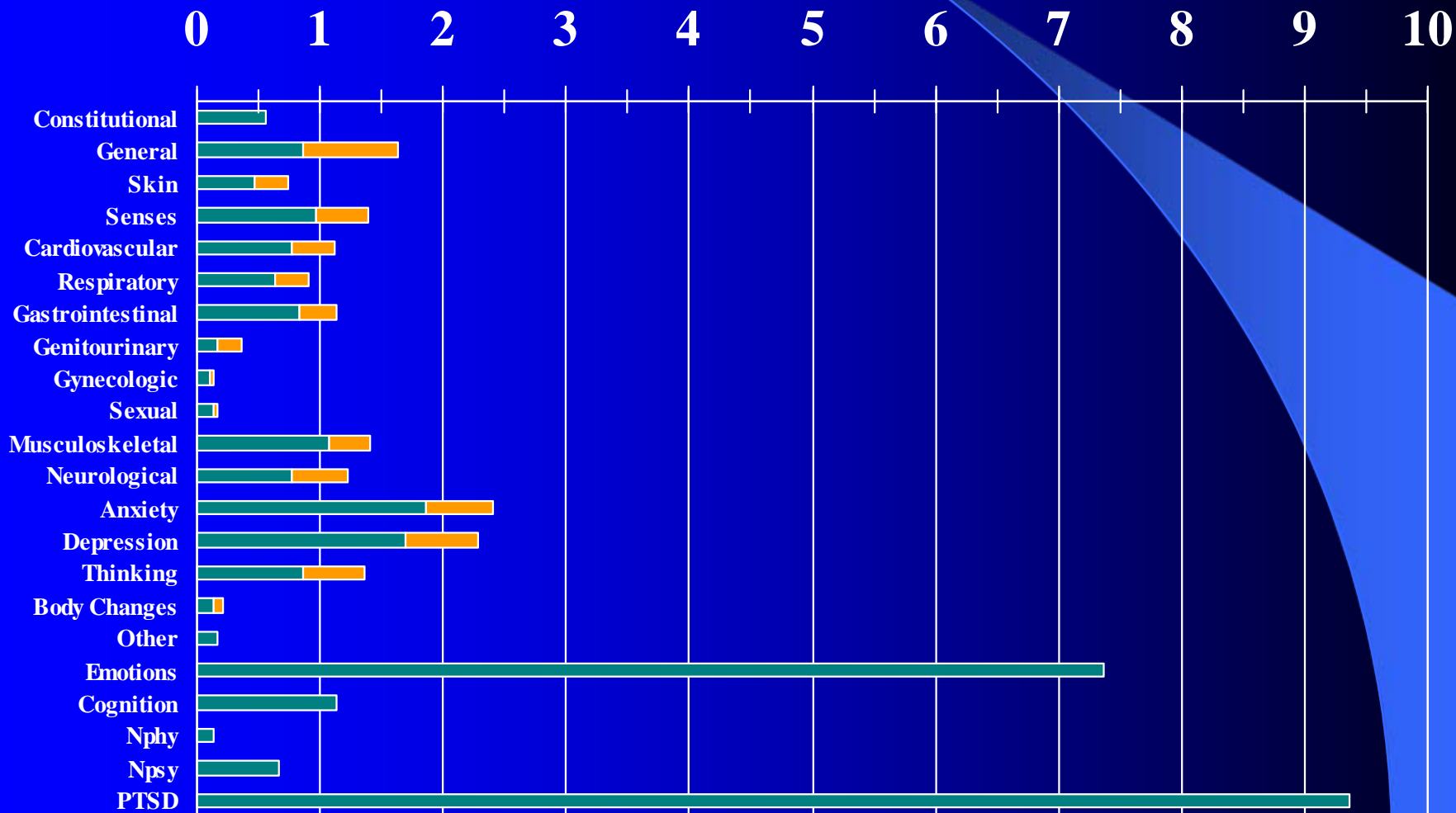
# The Construct of “Distressing Symptoms” in Refugees

- The broad range of symptoms in refugees has not been identified
- Instrument measures are either about mental health or physical health
- Current instruments were developed by expert, rational methods
- “Listen to the voices of refugees”<sup>1</sup>

# Average Number of Symptoms per Participant In-Depth Interview (IDI) vs. Symptom Checklist (SCL)

N = 66

■ IDI ■ SCL



# TOTAL NUMBER OF SYMPTOMS N = 66

Sx Category	IDI		SCL	
	N=30		N=26	
Constitutional	17			
General	26	8%	20	15%
Skin	14	4%	7	5%
Senses	29	8%	11	8%
Cardiovascular	23	7%	9	7%
Respiratory	19	6%	7	5%
Gastrointestinal	25	7%	8	6%
Genitourinary	5	1%	5	4%
Gynecologic	3	1%	1	1%
Sexual	4	1%	1	1%
Musculoskeletal	32	9%	9	7%
Neurological	23	7%	12	9%
Anxiety	56	16%	14	10%
Depression	51	15%	15	11%
Thinking	26	8%	13	10%
Body Changes	4	1%	2	1%
Other	5	1%	0	0%
Emotions	221			
Cognition	34			
Nphy	4			
Npsy	20			
PTSD	281			
Total # of Symptoms	922	100%	134	100%
Symptoms per Person	30.73		5.15	



# Constructing the NMRSCCL-121

- Qualitative data and quantitative statistics (factor analyses) demonstrated 12 symptom types and 121 items:
  - PTSD/Depression
  - Musculoskeletal
  - Sensory
  - Cardiovascular
  - Gastrointestinal
  - Anxiety
  - Urinary
  - Posttraumatic Vulnerability
  - Neurologic and Bleeding
  - Skin Sensation
  - Menstrual
  - Constitutional

# The New Mexico Refugee Symptom Checklist-121

## Reliability Properties

Factor	# Items	Alpha	Test-retest
Depression and PTSD	42	.97	.81
Musculoskeletal	10	.91	.78
Cardiopulmonary	10	.92	.72
Gastrointestinal	11	.88	.72
Anxiety	10	.91	.62
Sensory	13	.90	.75
PTSD-Vulnerability	7	.89	.70
Urinary	3	.81	.71
Skin Sensation	4	.82	.75
Menstrual	2	.62	.50
Neurological & Bleeding	5	.68	.72
Constitutional	6	.62	.67

# The NMRSCCL-121

## Symptoms by Ethnic Group

## Discriminant Validity

Scale (number of items)	Total Sample (N = 252)	Kurds (n = 135)	Vietnamese (n = 117)
Depression and PTSD (41)	41.2 (35.2)	47.9 (36.9)	35.3 (32.8)
Musculoskeletal (10)	7.8 (8.4)	9.7 (9.6)	6.2 (7.0)
Sensory (13)	7.6 (8.8)	6.6 (8.7)	8.5 (8.8)
Cardiopulmonary (10)	5.7 (7.5)	6.6 (8.9)	5.0 (6.1)
Gastrointestinal (11)	6.5 (7.2)	7.8 (8.0)	5.3 (6.1)
Anxiety (10)	7.7 (8.1)	8.4 (8.6)	7.1 (7.6)
Urinary (3)	1.7 (2.5)	1.9 (2.7)	1.5 (2.4)
Posttraumatic Vulnerability (7)	5.1 (6.0)	6.9 (6.6)	3.5 (4.9)
Neurological & Bleeding (4)	1.4 (1.9)	1.5 (2.2)	1.3 (1.6)
Skin Sensation (4)	2.3 (3.3)	3.0 (3.9)	1.7 (2.5)
Menstrual (2) (N=117)	1.4 (1.8)	1.4 (1.8)	1.4 (1.8)
Constitutional (6)	3.3 (3.2)	3.7 (3.7)	2.8 (2.5)
Total Severity Scale (121)	90.8 (77.1)	104.6 (85.3)	78.8 (67.2)

Each item 0 to 4; Scale is additive

<b>Correlation of the NMRSCL-121 with established symptom health measures</b>	<b>Scale (number of items)</b>	<b>Depression (HSCL-25)</b>	<b>Anxiety (HSCL-25)</b>	<b>PTSD (PSS-SR)</b>
	Depression and PTSD (41)	0.81*	0.76*	0.76*
Musculoskeletal (10)	0.52*	0.54*	0.49*	
Sensory (13)	0.45*	0.44*	0.43*	
Cardiopulmonary (10)	0.52*	0.56*	0.53*	
Gastrointestinal (11)	0.47*	0.49*	0.46*	
<b>Concurrent and Predictive Validity</b>	Anxiety (10)	0.65*	0.72*	0.61*
Urinary (3)	0.34*	0.34*	0.28*	
Posttraumatic Vulnerability (7)	0.66*	0.66*	0.70*	
Neurological and Bleeding (4)	0.42*	0.49*	0.39*	
Skin Sensation (4)	0.44*	0.50*	0.48*	
Menstrual (2) (N=117)	0.26*	0.26*	0.28*	
Constitutional (6)	0.40*	0.44*	0.35*	
Total Severity Scale (121)	0.75*	0.75*	0.63*	

# Constructs and Pragmatism

- The CTI-104 and the NMRSCL-121 are both useful to assess to full range of events and symptoms
- They are long for routine practice
- They have not been evaluated for change with intervention
- The CTI-12 has been developed
- The Refugee Health Screening-1 has been recently developed (15 items)

# The CTI-12 (Unpublished)

Did you have to flee or hide from soldiers or enemies, or were you threatened with harm or serious danger?

Were you injured by chemicals, bullets, or explosives?

Were you interrogated or physically searched?

Were you detained or imprisoned?

Were you humiliated in front of others (stripped naked, insulted, or beaten)?

Did you see others being severely hurt or killed?

Did you help severely wounded people or handle dead bodies?

Did you have your home, business or important personal property confiscated?

Did you experience severe family conflict because of the war?

Did you have to flee or move to a new area because of war or discrimination?

Were you separated from a family member because of the war problems?

Were you afraid that you would be sent back to your country from a refugee camp?

# **The Pathways to Wellness Project**

## **The RHS-1**

### **PROJECT PARTNERS:**

- **Lutheran Community Services Northwest**
- **Asian Counseling and Referral Services**
- **Public Health Seattle & King County**
- **Dr. Michael Hollifield**



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# Pathways to Wellness

## - The Vision -

### Early mental health screening

(while refugees still have resources)

- \* Prevent refugees in crisis
- \* Lower emotional distress
- \* Improve adjustment

### Build capacity for refugee mental health

(mental health agencies & refugee communities)

- \* Increase access
- \* Decrease stigma

### Design of evidence-based, validated tools

- \* Provide effective approach to reduce burden of mental illness
- \* Offer tools to other resettlement areas for replication



# Developing an Efficient and Effective Screening for Emotional Distress in Refugees

- For development of the RHS-1, we utilized:
  - 27 NMRSCL-121 items as the initial screening instrument
  - As diagnostic proxies:
    - The HSCL-25
    - The PSS-SR

# Developing an Efficient and Effective Screening for Emotional Distress in Refugees

- 251 refugees 14 years or older in four groups screened
  - 93 Iraqi
  - 75 Nepali Bhutanese
  - 36 Karen
  - 45 Burmese Speaking (Karenni and Chin ethnic groups)
- 190 of those screened were administered the diagnostic proxies within 2 weeks
- 35 % screened positive for significant emotional distress
- 70% accepted referral to care; connection to outreach

# Developing an Efficient and Effective Screening for Emotional Distress in Refugees

- Methods used to classify persons with **anxiety, depression, or PTSD**:
  - Discriminant analysis (DA)
  - Naïve Bayesian analysis (BAY)
  - Chi-square (CHI) for each item by diagnostic proxy
- Using
  - All 27 initial screening items
  - 17 PSS-SR items
  - 25 HSCL-25 items

# Results: Key symptoms

- Muscle, bone, joint pains
- Down, sad, blue
- Too much thinking, too many thoughts
- Feeling helpless
- Suddenly scared for no reason
- Faint, dizzy, weak
- Nervousness or shaky inside
- Feeling restless, can't sit still
- Crying easily

# Results: Key Symptoms

- Reliving trauma
- Physical reactions to reliving trauma
- Feeling numb
- Jumpy, easily startled
- Capacity to cope with what comes along

# The RHS-1: Predictive Validity

Items selected by BAY	PSS-SR $\geq 16$	PTSD diagnosis	HSCL-25 Anxiety	HSCL-25 Depression	Any Proxy
<b>Musc pain</b>	X		X	X	
<b>Down blue Thoughts</b>				X	
<b>Helpless</b>				X	X
<b>Coping</b>			X		
<b>Reliving</b>	X				
<b>Physical rx</b>				X	
<b>Numb</b>	X	X	X		X
<b>Startle</b>				X	
<b>Sud scared</b>		X	X	X	X
<b>Dizzy weak</b>			X		
<b>Nerv shaky</b>	X				
<b>Restless</b>	X				
<b>Crying</b>				X	
<b>Sensitivity</b>	1.00	0.89	1.00	1.00	0.96
<b>Specificity</b>	0.94	0.83	0.91	0.93	0.86

# What Instruments to Use, When, and Why



# Twelve Instruments Developed in Refugee Populations

From Hollifield et al, JAMA, 2002

Author, year	Instrument	Trauma	Health Status	Method	Validity testing	Reliability testing
<b>Developed and described instruments – published, accessible and useable</b>						
Kinzie, 1982, 1987	Vietnamese Depression Scale, Published	No	Culturally Valid Depression Scale	Qualitative + Quantitative, Rational + consensus	Yes	No
Mollica, 1992	Harvard Trauma Questionnaire, Published	17 Trauma Items, one is Torture	30 symptoms: PTSD and Depression	Quantitative, Rational + Consensus	Yes	Yes
<b>Developed and described instruments – not published or easily useable</b>						
Clarke, Sack, 1993	Resettlement Stressor Scale, Unpublished	Yes	No	Quantitative, Rational + Consensus	Yes	No
Clarke, Sack, 1993	War Trauma Scale, Unpublished	Yes	No	Quantitative, Rational + Consensus	Yes	Yes
Silove, 1998	Post-Migration Living Difficulties, Unpublished	Difficult Life Events in Resettlement	No	Quantitative, Rational + Consensus	Yes	No



# Twelve Instruments Developed in Refugee Populations (con't)

From Hollifield et al, JAMA, 2002

Author, year	Instrument	Trauma	Health Status	Method	Validity testing	Reliability testing
<b>Potentially useful instruments (either in development, not described well, or not tested well)</b>						
Beiser, 1986	Unnamed, Unpublished	No	4 Mental Health Factors	Quantitative and rational, from existing scale items	Yes	No
McCloskey, 1995	Unnamed, Unpublished	Yes	PTSD Inventory	Combined Qualitative/Quantitative,	No	No
Van Velsen, 1996	Survivor of Torture Assessment Record, Unpublished	7 Trauma Events	9 Health Symptoms/Losses	Combined Qualitative/Quantitative	Yes	No
Cunningham, 1997	Unnamed, Unpublished	Trauma Types by PCA	Symptom Types by PCA	Quantitative and Statistical	No	No
Ekblad, 1999	Unnamed, Unpublished	No	Quality of Life	Qualitative	Yes	No
Bolton, 2001	Unnamed, Published	No	2 Mental Health Factors	Qualitative, Empirical	Yes	Yes
Weine, 2001	Unnamed, Unpublished	No	Quality of Care: Providers	Rational + Qualitative	Yes	No

# Eight Instruments Tested or Adapted for Use in Refugee Populations

From Hollifield et al, JAMA, 2002

Author, year of evaluation	Instrument and Author	Trauma	Health Status	Validity testing	Reliability testing
Lin et al., 1979	Cornell Medical Index; Brodman, 1956	No	Symptoms List	No	No
Chung et al., 1995	Health Opinion Survey; Leighton, 1963	No	Anxiety and Depression Scales	No	No
Mollica et al., 1987	Hopkins Symptom Checklist – 25; Derogatis, 1974	No	Anxiety, Depression	Yes	Yes
Westermeyer et al, 1983; 1986; 1989	Symptom Checklist – 90; Derogatis, 1977	No	10 Symptom Scales	Yes	No
Dyregov et al, 1996; Schwartzwald et al., 1987	Impact of Events Scale; Horowitz, 1979	No	Intrusion, Avoidance, Total score	Yes	No
Westermeyer et al, ?	Beck Depression Scale; Beck ?	No	Depression	Yes	Yes
Shishana et al, 1987	Norbeck Social Support Questionnaire; Norbeck, 1981	No	Support as a moderator to health status	Yes	No
Thelusius, et al., 1999	Posttraumatic Symptom Scale – 10; ?	No	Posttraumatic Stress Symptoms	No	Yes

# Goodness of Instrument Construction and Access

From Hollifield et al, JAMA, 2002

	Purpose	Construct Definition	Design	Development	Validity/ Reliability	Published in useable form
<b>Twelve instruments developed in refugee research</b>						
HTQ sections 1 & 3	Yes	Yes	Yes	Part	Yes/Yes	Yes
PMLD	Yes	Yes	Part	Part	Yes/No	No
RSS	Yes	Yes	Part	Part	Yes/No	No
WTS	Yes	Yes	Part	Part	Yes/Yes	No
VDS	Yes	Yes	Yes	Yes	Yes/No	Yes
Unnamed (Beiser)	Yes	Yes	Part	Part	Yes/No	No
Unnamed (Bolton)	Yes	Yes	Part	Yes	Yes/Yes	No
Unnamed (Ekblad)	Yes	Part	Part	Part	Yes/No	No
Unnamed (Weine)	Yes	Yes	Part	No	Yes/No	No
Unnamed (Cunningham)	Yes	Part	Part	Part	No/No	No
STAR	Yes	Part	Part	Part	Yes/No	No
Unnamed (McCloskey)	Yes	Part	Part	Part	No/No	No
<b>Eight instruments adapted/tested in refugee research*</b>						
HSCL-25	Yes	Yes	Yes	Yes	Yes/Yes	Yes
IES	Yes	Yes	Yes	Yes	Yes/No	Yes
SCL-90	Yes	Yes	Yes	Yes	Yes/No	Yes
HOS <sup>1</sup>	Yes	Yes	Yes	Yes	No/No	Yes
CMI <sup>2</sup>	Yes	Yes	Yes	Yes	No/No	Yes
PSS-10	Yes	Yes	Yes	Yes	No/Yes	Yes
BDI	Yes	Yes	Yes	Yes	Yes/Yes	Yes
NSSQ	Yes	Yes	Yes	Yes	Yes/No	Yes

# Goodness of Instrument Construction and Access

	Purpose	Construct Definition	Design	Development	Validity/ Reliability	Published in useable form
<b>Recent instruments developed in refugee populations</b>						
Comprehensive Trauma Inventory - 104	Yes	Yes	Yes	Yes	Yes/Yes	Yes
New Mexico Refugee Symptom Checklist - 121	Yes	Yes	Yes	Yes	Yes/Yes	Yes
CTI Short Form - 12	Yes	Yes	No	No	Yes/No	No
The Refugee Health Screen - 1	Yes	Yes	Yes	Partly	Maybe/No	No



**Thank you!**

**Comments Appreciated  
Collaborations Encouraged**

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