ORGANIZATION NEWS

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Measurement Characteristics and Clinical Utility of the West Haven-Yale Multidimensional Pain Inventory in a Chronic Pain Population

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Chronic pain is defined as "pain that is not fleeting or minor and lasting at least 6 months."[1(p.1234)] Chronic pain affects approximately one third of the U.S. adult population and is associated with poorer socioeconomic indicators (eg, unemployment, lowest household income).[1] The West Haven-Yale Multidimensional Pain Inventory (WHYMPI) was developed using a sample of patients with chronic pain, emphasizing the role of cognitive, emotional, and behavioral factors in the experience of pain and related disability.[2] This self-report measure consists of 52 items across 12 subscales and 3 overall domains: pain experience, responses of others to the patient's communicated pain, and performance of daily living activities. Each item is rated from 0 to 6. Subscale scores are calculated by taking the mean score of all items within the subscale. Higher subscale scores for pain interference and severity indicate greater levels of pain and interference in life, whereas higher subscale scores for activity indicate greater ability in daily activities. The WHYMPI demonstrates adequate to excellent test-retest reliability in Swedish, Swiss, and Dutch chronic pain samples,[3-5] and adequate to excellent internal consistency.[2,3] Confirmatory factor analysis supports a 4-factor solution, accounting for 67% to 94% of the variance.[2,6] Convergent validity is supported by adequate to excellent correlations between various commonly used scales and at least one factor of the WHYMPI.[2] The WHYMPI can be administered in 15 to 30 minutes and does not require training or additional equipment. The measure and additional resources can be found on the U.S. Department of Veterans Affairs website.[7]

This abbreviated summary provides a review of the psychometric properties of the WHYMPI in people with chronic pain. A full review of the WHYMPI and reviews of nearly 377 other instruments for patients with various health conditions can be found at: www.rehabmeasures.org.

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Rehabilitation MEASURES	**Measure Name:** **West Haven-Yale Multidimensional Pain Inventory**	**Summary Authors:** A. Peipert, E. Engel & L. Ehrlich-Jones

Populations Reviewed:	**Admin Time:**	**Items:**	**Score:**	**Acronym:**	**Required Equipment:**
Chronic Pain	15-30 Min	52	0-6 per item	WHYMPI	None

Purpose and Administration Instructions:

The WHYMPI provides a tool to assess chronic pain in individuals and assess the impact chronic pain has on patient's daily life, others' reactions to patient's communication of pain, and the degree to which patients are able to participate in everyday activities.

Training Required:

No formal training, but an understanding of how subscales relate to cognitive-behavioral perspectives of pain is required.

Validity:

Content Validity:[2]
Three separate sections of the West Haven-Yale Multidimensional Pain Inventory, WHYMPI) were created:
- The first section addresses 5 important aspects of the pain experience: interference in areas of functioning, support from others, severity, self-control, and negative mood.
- The second section addresses perceived responses of others to the communicated pain in three types: negative (punishing), solicitous, and distracting responses.
- The third section of the WHYMPI assesses the patient's reported activity in 4 areas: household chores, outdoor work, activities away from home, and social activities.

Construct Validity:
The construct validity was assessed using a combination of the Kaiser and Scree criteria and a principal axis factor analysis, both supporting a 4-factor solution, accounting for 67-94% of the variance.[2,6]

Convergent Validity:[2]
Excellent correlation between the affective stress dimension of the WHYMPI and the State-Trait Anxiety Inventory-State form (STAI-S): r = 0.86
Excellent correlation between the affective stress dimension of the WHYMPI and the Beck Depression Inventory (BDI): r = 0.76
Excellent correlation between affective stress dimension of the WHYMPI and the Depression Adjective Check List (DACL): r = 0.68
Excellent correlation between measured support from others by the WHYMPI and the Marital Adjustment Scale (MAS): r = 0.71
Adequate correlation between measured support from others of the WHYMPI and the Multidimensional Health Locus of Control (MHLC)-Powerful Others Scale: r = 0.35
Adequate correlation between the activity level dimension of the WHYMPI and the McGill Pain Questionnaire (MPQ)- Total Pain Rating Index and Present Pain Intensity: r = 0.47 and 0.44, respectively

Standard Error of Measurement:

SEM varies for the 12 subscales from 0.376 to 0.719[2]

Considerations:

The WHYMPI has been translated into several languages, including German, Dutch, Swedish Chinese, and Turkish.

Normative Data:

Mean normative subscale scores range from 0.97 to 4.31[2]

Reliability:

Adequate to Excellent test-retest reliability (ICC = 0.57 to 0.94)[3,4,5]

Internal Consistency:

Adequate to Excellent internal consistency (Cronbach's alpha = 0.70 to 0.90)[2]

Poor-Excellent internal consistency (Cronbach's alpha = 0.66 to 0.86)[3]

Scoring Information:

Each item is rated from 0-6 and subscale scores are calculated by taking the mean score of all items within the subscale.

Higher subscale scores for pain interference and severity indicate greater levels of pain and interference in life, whereas higher subscale scores for activity indicate greater ability in daily activities.

Cut-off Criteria:

	r	ICC
Excellent	$\geq$ .6	$\geq$ .75
Adequate	.31-.59	.40 -.74
Poor	$\leq$ .3	< .4