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The Mental Health Recovery Measure (MHRM): Updated Normative Data and Psychometric Properties

Overview

The Mental Health Recovery Measure (MHRM; Young & Bullock, 2003; Bullock, 2005) is a 30 item self-report measure designed to assess the recovery process for individuals who have serious and persistent mental illnesses such as recurrent major depression, bipolar disorder, or schizophrenia spectrum disorders. The MHRM is scored using a 5 point Likert Scale (0 to 4) for each item, yielding a theoretical range from 0 – 120 for Total Score. The item content of the MHRM and the MHRM conceptual domains are based upon a specific theoretical model of mental health recovery that is grounded in the experiences of persons with psychiatric disabilities (Young & Ensing, 1999).

The MHRM is currently being used as an outcome measure in an open clinical trial evaluating the Wellness Management and Recovery (WMR) program (Bullock et al., 2009). The WMR program implementation and its associated outcome research are supported by the Ohio Department of Mental Health and are managed by the Coordinating Center of Excellence for Wellness Management and Recovery. The WMR program is being implemented across the State of Ohio in a variety of mental health settings, including community mental health centers, consumer-operated service centers, and inpatient psychiatric hospitals.

Currently, the MHRM is being used as a clinical program outcome measure at 19 WMR implementation sites across the State of Ohio. It is also being used at many other sites around the United States and internationally as an individual outcome measure and assessment tool for recovery-oriented program evaluation. The MHRM has been translated into several languages, including French, Danish, Chinese, Dutch, Korean, and Portuguese.

Normative Data for the MHRM

Original Sample. The original normative sample (N=279) for the MHRM was comprised of an ethnically diverse group of adult mental health consumers from five community mental health center sites and two consumer-operated service center sites that provided peer support. The average MHRM Total Score for this sample was 80 (SD=20). The internal reliability (coefficient alpha) of the MHRM Total Score was .93. One-week test-retest reliability was .92. No significant differences were found between ethnic groups for the average Total Score, although the mean for African-Americans (M=83) was higher than the mean for Whites (M=78). In a subsample given multiple outcomes measures (N=180), the MHRM Total Score was found

to have a significant positive correlation with self-report measures of Empowerment (r = .67) and Resiliency (r = .73). (See Bullock, 2005.)

Current Sample. The use of the MHRM as one of the outcome measures for the current WMR implementation project has provided the opportunity to evaluate the normative and psychometric properties of the MHRM with a new, large normative sample (N = 671), as well as evaluate the use of the MHRM as a measure of change following participation in a program that is designed to promote the mental health recovery process. The most recent normative sample is based on an ethnically diverse group of adults (43% male; 57% female) from 17 community mental health center (CMHC) sites and consumer-operated service (COS) sites around the state of Ohio. Both urban and rural sites are part of the WMR implementation project. Four of the 17 sites were COS sites. The average age of WMR participants was 44.8 (SD=11.1; Range=18 – 77). The proportion of ethnic minorities was African-American = 22.5%; Native American/Pacific Islander = 3.4%; Hispanic/Latino = 2.2%; Asian = 1.0%

The average MHRM Total Score for the most recent normative sample was 78 (SD=21.7). The internal reliability (coefficient alpha) for the MHRM items was .95. As with the original standardization sample, the mean for African-Americans in the new sample (M=83) was higher than that of whites (M=76), a difference that is statistically significant with the current larger sample size.

Convergent Validity of the MHRM

In the most recent normative sample, between 433 and 514 participants completed several other recovery-oriented outcome measures in addition to the MHRM. These included the Empowerment Scale by Rogers, Chamberlin, Ellison, & Crean, T. (1997) and a multi-dimensional measure developed by the Ohio Department of Mental Health (ODMH, 2000). The ODMH outcomes measure includes scales that assess Quality of Life, Symptom Distress, and Safety and Health.

The MHRM Total Score and total score on the Empowerment Scale were significantly positively correlated (r = .58.) Of the subscales on the Empowerment Scale, the MHRM Total Score correlated most highly with the Self-Esteem (r = .68) and Optimism (r = .45) subscales. The MHRM Total Score did not correlate significantly with the Empowerment Scale subscales of Power-Powerlessness (r = .05) or Righteous Anger (r = -.17), but did correlate significantly, albeit modestly, with the subscale of Community Activism (r = .29).

On the Ohio outcomes measure, the MHRM Total Score was significantly negatively correlated with total score on the Symptom Distress scale (r = -.45), i.e., as recovery score increased, symptom distress decreased. The MHRM Total Score was also significantly correlated with the Safety and Health scale (r = .39), but was not correlated with the Quality of Life scale (r = .09).

Measuring Significant Change Over Time

In the current Wellness Management and Recovery implementation project, the MHRM is being used as a pre-treatment, post-treatment, and follow-up (3 – 6 months) assessment. The MHRM can be used to compare group average changes (e.g., average pre-treatment score vs. post vs. follow-up), or the Total Score change can be assessed on an individual basis (as a difference score) and compared to a threshold for significant change. In this way, the proportion of individuals whose change scores represent "reliable improvement" or "reliable deterioration" over the course of the treatment program may be calculated. Based on the one-week test-retest reliability of the MHRM items (.92), combined with the mean (80) and standard deviation (20) of the MHRM Total Score from the original standardization sample, a change score of ± 10 (Reliable Change Index = 1.29) on the MHRM is being used as an indication of significant individual change (see Jacobson & Truax, 1981). This is a somewhat more liberal RCI (than the usual RCI = 1.96), but reflects a half-standard deviation ($p < .20$) level of change that we believe is reflective of "clinically meaningful change" in an individual's mental health recovery process. If a more conservative cut point is desired (Reliable Change Index = 1.96; $p < .05$), then a change score of ± 15 should be used. For example, the 15 point change threshold may be used when comparing the MHRM Total Score to other outcome measures that have a previously calculated threshold of reliable change based on the RCI = 1.96.

In our most recent research we have found the following with regard to significant individual changes from Pre-treatment to Post-treatment for the Wellness Management and Recovery Program. (N=361 individuals measured at Pre and Post-WMR treatment on the MHRM.) Reliable improvement (Change ≥ 15) = 33%; Meaningful improvement (Change 10 - 14) = 14% ; Combined improvement (Change ≥ 10) = 47% ; Reliable deterioration = 7% ; Meaningful deterioration = 5%; Combined deterioration = 12%

Scoring and Interpreting the MHRM

The Total Score for the MHRM is derived by adding up the number corresponding to the response for each item (using a 0, 1, 2, 3, 4 Likert scale with 0 = Strongly Disagree; 1 = Disagree; 2 = Not Sure; 3 = Agree; and 4 = Strongly Agree). There are no reverse scored items. The theoretical range for the Total Score is 0 to 120, and in practice, we have seen the full range of scores obtained by individuals in our normative samples.

There is no formal prorating for missed items, so respondents should be encouraged to complete all the items in order to have valid scores. When there are just a few omitted items, there are two strategies that can be used to assign a score to the omitted items. First, by definition, a score of "2" is "Not Sure" – which may make most sense to assign to a skipped item. Second, the omitted items can be assigned the average of the other item responses – essentially prorating those skipped items. If 4 or more items have been omitted, the validity of the Total Score for that respondent would be questionable – especially if looking at change scores over time.

It is also helpful to be aware of possible response sets when individuals are filling out the form. Although the MHRM has no formal "response set" indicator, anyone answering all 0s or all 4s may be indicative of a positive or negative response set, or not paying attention to item content.

While it is possible to derive individual scores for the conceptual domains that comprise the MHRM, our focus has been on using the MHRM Total Score as an overall assessment of self-reported recovery. If researchers or program evaluators want to look at scores on the individual conceptual domains, the items comprising each domain are as follows (for more information on these conceptual domains, see Bullock & Young, 2003; Young & Ensing, 1999):

Overcoming Stuckness: Items 1, 2, 3, 4
Self-Empowerment: Items 5, 6, 7, 8
Learning and Self-Redefinition: Items 9, 10, 11, 12
Basic Functioning: Items 13, 14, 15, 16,
Overall Well-Being: Items 17, 18, 19, 20
New Potentials: Items 21, 22, 23, 24
Spirituality: Items 25, 26
Advocacy/Enrichment: 27, 28, 29, 30

MHRM Total Score = sum of scores for items 1 through 30 (using a 0, 1, 2, 3, 4 Likert scale.)

Higher scores correspond to a higher self-reported level of mental health recovery. At this time separate norms have not been developed for different populations, although our research has found that individuals in some forensic settings (e.g., jail) score lower on average, while those individuals who have completed a recovery-oriented program (such as Wellness Management and Recovery, WRAP, or BRIDGES) score higher. If researchers or program evaluators are assessing a "recovery sophisticated" group, the mean for the group may be somewhat higher than the means of 78 and 80 found for our two normative samples. If an individual (or a group as a whole) starts out scoring extremely high on the MHRM, then the potential difficulty of a ceiling effect comes into play in terms of measuring improvement over time. The MHRM Total Score is not currently being used in conjunction with any kind of "clinical cut point" to determine who is or is not "in recovery." Nonetheless, anyone scoring below a 60 on MHRM Total Score (i.e., more than one standard deviation from the mean of 80) is describing their current recovery process at a level that is significantly below average compared to their peers.

Copyright Information

The Wellness Management and Recovery program web site is http://www.wmrohio.org/wmrnews.html

Wesley A. Bullock's departmental web site is http://psychology.utoledo.edu/showpage.asp?name=bullock

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