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The Barriers to Mental Health Services Scale Revised: Psychometric analysis among older adults

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ABSTRACT

Objectives: Older adults underutilize mental health services suggesting that significant barriers are operating. This study presents reliability and validity data for a revised version of the self-report Barriers to Mental Health Services Scale (BMHSS) designed to quantify 10 barriers to mental health service use, so that barriers can be examined collectively.

Methods: The Barriers to Mental Health Services Scale Revised (BMHSS-R) was revised to improve its reliability and validity, including adding items, eliminating poor items, and balancing the number of items across subscales. A sample of 100 older adults (M age = 72.1 years, SD = 17.8 years) completed the BMHSS-R, the Beliefs Toward Mental Illness Scale, and the Willingness to Seek Help Questionnaire.

Results: Internal consistency for the 10 subscales of the BMHSS-R ranged between 0.63 and 0.87, with 8 of the 10 values greater than 0.70. Correlational analyses indicated that many of the subscales overlap considerably but are still distinct. Convergent validity of the BMHSS-R subscales of help-seeking and stigma was partially supported, although correlations were modest.

Conclusion: Revisions to the BMHSS resulted in improved reliability estimates for use as a measure of perceived barriers to mental health services. We recommend when using the BMHSS-R to combine results with other information (e.g., service utilization data) to characterize a profile of barriers. We discuss directions for future research and further refinement of the BMHSS-R.

1. Introduction

The prevalence of mental health conditions among older adults residing in the community ranges from 6.8% to 10.2% with only 10% of those in need actually receiving mental health services (Institute of Medicine (IOM), 2012). The gap between the number of older adults with mental health care needs and those receiving services is anticipated to grow as the population of older adults increases (IOM). A variety of barriers have been posed as reasons for this underuse of services. These include intrinsic barriers attributed to internal characteristics and beliefs, such as perceptions of stigma about receiving services and extrinsic barriers due to external social, economic, geographic, and other service-related factors, such as the number of clinicians available (Pepin, Segal, & Coolidge, 2009). To maximize appropriate, efficient, and effective use of mental health services for older adults, metrics to characterize and quantify these barriers are needed. In a prior report (Pepin et al., 2009), we described a self-report instrument that aggregates the most commonly cited barriers into a multicomponent scale (Barriers to Mental Health Services Scale, BMHSS). A preliminary study of the psychometric characteristics of the original version of the scale provided evidence of its promise as a measure of barriers to seeking services with the majority of subscales reaching acceptable values of internal consistency (Pepin et al., 2009). The next step in the development of this instrument was to refine the scale to achieve the most parsimonious and balanced set of questions and to characterize the instrument's reliability and validity. This report describes the revisions and reliability and validity analyses of the revised measure.

Previous research has identified several barriers that explain why older adults underutilize mental health services, despite their demonstrated need for such services. Determining which obstacles are most limiting for older adults has been challenging due to a lack of research that systematically examines which barriers are the most prevalent and most influential in limiting use of needed mental health services. Quantitative studies typically have examined only one or two barriers of interest (e.g., Mackenzie,

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Scott, Mather, & Sareen, 2008; Sarkisian, Lee-Henderson, & Mangione, 2003; Segal, Coolidge, Mincic, & O'Riley, 2005) whereas qualitative studies on barriers have included multiple barriers simultaneously, but were unable to quantify the comparative strength of different barriers (Choi & Kimbell, 2009; Palinkas et al., 2007; Solway, Estes, Goldberg, & Berry, 2010).

Individual barriers to mental health services that older adults encounter have been described in numerous accounts, but it is unlikely that each barrier operates in isolation. For example, it is not uncommon for an older adult to have limited financial resources, to believe that feelings of sadness are normal for older people, *and also* to be unlikely to disclose their mental health symptoms to their primary care provider due to concerns related to the stigma of mental illness. An understanding of various barriers to mental health services can be used to identify points within a service delivery system where improvements may be made to decrease obstacles and expand access to services. Because more than one barrier may be present, there is a need for a measure that provides both individual and aggregate ratings of a broad array of potential barriers. This multidimensional measure will improve understanding of how intrinsic and extrinsic obstacles to care contribute to the low utilization of mental health services in older adults (Pepin et al., 2009). Our review of the literature failed to identify any instruments that included a comprehensive array of both of these types of barriers, which prompted our development of the original Barriers to Mental Health Services Scale.

The BMHSS is comprised of 10 subscales, each representing a barrier to mental health services that has been described in the literature. The BMHSS is designed to quantify the obstacles that are most prevalent within a given population of older adults (e.g., a subpopulation of older adults, a catchment area, or a geographic territory). The results from the BMHSS can be used to characterize a profile of barriers, underscoring the barriers that are higher and those that are lower, identifying points where changes can be made to improve a delivery system and decrease barriers.

The first version of the BMHSS was developed by conducting a review of the mental health services research literature on barriers to mental health services for older adults, followed by item generation, and expert review of the proposed measure (Pepin et al., 2009). We used information derived from our literature review to develop a measure with 10 subscales, each characterizing a barrier prominent in the literature. The instrument was organized into two domains, intrinsic barriers and extrinsic barriers. Five intrinsic barriers were identified, each representing a subscale of the BMHSS: help-seeking attitudes; stigma; knowledge and fear of psychotherapy; belief about inability to find a psychotherapist; and belief that depressive symptoms are normal. Five extrinsic barriers were also identified, each representing a subscale of the BMHSS: insurance and payment concerns; ageism; concerns about psychotherapist's qualifications; physician referral; and transportation concerns. Over 200 items were initially developed and were presented to experts in geropsychology for review to ensure adequate domain coverage with minimal redundancy. Many of the items were redundant and thus deleted, resulting in a 63-item instrument. The BMHSS was administered to younger and older adults. Our initial pilot assessment of the performance of this measure found many of the subscales reached acceptable values of internal consistency, with 6 of the 10 subscales having Cronbach's alpha values above 0.70, and two of the subscales having Cronbach's alpha values of 0.69 (Pepin et al., 2009). Nevertheless, the BMHSS had some notable limitations including:

- *Subscale scores with low reliability estimates*. Four subscales' scores had reliability estimates below the acceptable value (0.70 or greater [Streiner, 2003]).
- *Inconsistent distribution of items across subscales*. The number of items comprising subscales ranged from 3 to 12.
- *Items with reverse scoring*. Items with reversed scoring frequently have lower internal consistency values, particularly among older adults. Many popular instruments designed for use with older adults do not include reverse score items (e.g., Geriatric Anxiety Scale; Center for Epidemiological Studies – Depression Scale). It has been recommended that instruments for older adults be designed without reverse-scored items (Carlson et al., 2011), and the removal of reverse score items was described in an article reporting the development and validation of the Geriatric Anxiety Inventory (Pachana et al., 2007).
- *Neutral response category*. The original version of the BMHSS had a neutral mid-point of "neither agree nor disagree." A neutral response option is somewhat artificial in this case as it suggests that respondents may be unsure whether or not a barrier a barrier has impacted their use of mental health services.
- *Layout of the instrument*. The first version of the BMHSS was not optimized to be consistent with the standard of being easy to use and appearing "clear and uncluttered" (Fowler, 1988, p. 103).

Based on these findings and limitations, we identified the need to refine the initial version of the BMHSS to create a new version that addressed the limitations described above. We revised the scale based on procedures for survey development suggested by DeVellis (2012). The aim of this report is to describe the process used to develop the BMHSS-Revised (BMHSS-R), resulting in a more parsimonious and psychometrically robust instrument designed to reliably and validly assess barriers to mental health services for older adults.

2. Method

To evaluate the reliability and validity of the revised instrument, we administered the BMHSS-R to a sample of older adults and then conducted the following analyses: (1) reliability by internal consistency and correlations between subscales of the BMHSS-R and total score; and (2) convergent validity by correlations between the BMHSS-R subscales of stigma and help-seeking with similar existing measures.

2.1. Participants

The participant sample was comprised of 100 community dwelling older adults aged 60–98 years-old ($M=72.1$ years, $SD=7.6$; 75% women, 89% European American) with years of education ranging from 2 to 20 years ($M=14.5$, $SD=3.4$). See Table 1 for full demographic details. The self-reported measure of overall physical health ranged from 1 to 100 ($M=75.6$, $SD=22.4$). We selected a community dwelling sample of older adults to

Table 1
Demographic information of participant sample.

Demographic	
Age, mean (SD)	72.09 (7.56)
Women (%, *n*)	75.30% (73)
European American (%, *n*)	89.90% (89)
Completed high school or less (%, *n*)	32.00% (31)
Married or partnered (%, n)	48.50% (47)
Has children (%, *n*)	91.90% (91)
Religious (%, *n*)	81.30% (78)
Has health insurance (%, *n*)	96.00% (96)
Visited a mental health clinician (%, *n*)	43.40% (43)