# The Integrated Behavioral Model of Mental Health Help Seeking Questionnaire (IBM-HS-Q): Synchronization and Validity Evidence

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**Abstract**

The Integrated Behavioral Model of Mental Health Help Seeking (IBM-HS) is a theoretical model for understanding the constructs that influence access to mental healthcare. However, promising measures of IBM-HS constructs require synchronization and unified psychometric validation. Therefore, the language of six measures (i.e., Mental Help Seeking Attitude Scale [MHSAS], Perceived Norm: Injunctive Scale [PN:IS], Perceived Norm: Descriptive Scale [PN:DS], Personal Agency: Autonomy Scale [PA:AS], and Personal Agency: Capacity Scale [PA:CS], Mental Help Seeking Intention Scale [MHSIS]) was synchronized to a shared definition of mental health help-seeking behavior and evaluated in a racially/ethnically diverse sample of 597 adults (aged 18 to 88 [$M$ = 46.88, $SD$ = 17.06], 64% women, 31% men, 2% nonbinary individuals). These synchronized mechanism (i.e., MHSAS, PN:IS, PN:DS, PA:AS, PA:CS) and intention (i.e., MHSIS) measures generally demonstrated appropriate factor structure (e.g., single dimension per measure; $\beta$'s ≥ .572), internal consistency ($\alpha$'s > .753), variability (i.e., absence of problematic skewness/kurtosis), convergent evidence of validity (Average Variance Extracted ≥ .556 and H index ≥ .820). The mechanism measures demonstrated criterion evidence of validity, correlating ($r$'s ≥ .303) at least moderately with intention and jointly accounted for substantial variance in intention ($R^2$ = 72%). The intention measure demonstrated predictive evidence of validity by longitudinally predicting prospective help-seeking behavior ($r$ = .215; $OR$ = 2.225). These synchronized measures are formalized as the IBM-HS Questionnaire (IBM-HS-Q). The IBM-HS-Q is a standardized reasoned action tradition questionnaire that can make assessment of mental health help-seeking constructs more accessible and consistent across health services studies.

*Keywords*: mental health help seeking, health services treatment access, health care utilization, integrated behavioral model, validity

# The Integrated Behavioral Model of Mental Health Help Seeking Questionnaire (IBM-HS-Q): Synchronization and Validity Evidence

More than half of adults with a current mental health condition do not seek professional help (Reinert et al., 2021). Closing this treatment gap requires study of the help seeking (i.e., health services treatment access, health care utilization) process to identify the constructs that help or hinder individuals from seeking mental healthcare (Doblyte & Jiménez-Mejías, 2017). Various theoretical traditions (e.g., Behavioral Model of Health Services Use; Andersen et al., 2014) have been used to guide the study of help-seeking constructs, but one of the most used is the *reasoned action tradition* (Rickwood & Thomas, 2012). This tradition began with the Theory of Reasoned Action (TRA; Ajzen & Fishbein, 1980) and was then extended into the Theory of Planned Behavior (TPB; Ajzen, 1985), and subsequently the Integrative Model of Behavioral Prediction (IM; Fishbein & Ajzen, 2010) and Integrated Behavioral Model (IBM; Montaño & Kasprzyk, 2015). The IBM posits that various external variables (e.g., demographics, individual differences) shape people's beliefs about a given behavior (e.g., condom use), and these beliefs shape people's perceptions (e.g., attitude) of the behavior, which in turn dictate intention to perform the behavior. Intention, along with other components (e.g., knowledge and skill to perform the behavior), directly affect prospective performance of that behavior. The IBM "provides a sequential roadmap for applying mixed methods to systematically identify the most important factors that drive a given behavior within a specific population" and "accounts for many of the factors embedded in other theories" of behavioral prediction (Hammer, Wright, et al., 2024, p. 1201). However, the IBM and its predecessors are generalized theories of behavior not designed to account for the nuances of mental health help-seeking behavior. As a result, reasoned action-based research has been inconsistent with how help-seeking constructs are

conceptualized and measured, imperiling accurate synthesis of findings (Hammer, Vogel, et al., 2024).

To address this inconsistency, Hammer, Vogel, and colleagues (2024) adapted these reasoned action tradition models to the mental health help seeking context to create the *Integrated Behavioral Model of Mental Health Help Seeking* (IBM-HS). The IBM-HS refines the conceptualization, measurement, and causal interrelations of reasoned action constructs as applied to mental health help-seeking behavior. Although measures of help-seeking constructs exist that align with the IBM-HS, they require synchronization and psychometric validation in diverse adult populations to verify their appropriateness for use in projects guided by the IBM-HS.

Therefore, the present study sought to synchronize and evaluate a battery of measures to formalize the *Integrated Behavioral Model of Mental Health Help-Seeking Questionnaire* (IBM-HS-Q). The IBM-HS-Q seeks to provide a standardized set of help-seeking measures that are aligned with the IBM-HS, synchronized to a shared definition of mental health help-seeking behavior, and suitable for administration to diverse adult populations. Such a battery would respond to calls from scholars (e.g., Adams et al., 2022) for the development of a standardized reasoned action tradition questionnaire specific to mental health help seeking. The IBM-HS-Q could make the assessment of help-seeking constructs more accessible to both scholarly and applied professionals, elevating the quality and consistency of data collected (Hammer, Vogel, et al., 2024). This paper will briefly describe the IBM-HS, review the limitations of current measures of IBM-HS constructs, delineate the process our team undertook to synchronize existing measures to create the IBM-HS-Q, and document evidence of reliability and validity for these measures in a racially/ethnically diverse sample of adults living in the United States.

**Brief Overview of the IBM-HS**

The IBM-HS specifies a causal sequence of constructs that influence mental health help-seeking behavior (see Figure 1 of Hammer, Vogel, et al., 2024). *Help-seeking determinants* are the wide variety of constructs that can shape the help-seeking process, including structural forces; cultural influences; environmental constraints; past help-seeking experience; evaluated need; mental health perceptions, knowledge, and skills; and social support. Help-seeking determinants shape *help-seeking beliefs*, which are people's subjective perceptions about the act of seeking help. The IBM-HS categorizes these beliefs into five types: outcome beliefs (i.e., anticipated attributes and results of seeking help such as "seeking help will help me feel better"), experiential beliefs (i.e., anticipated emotional responses to the idea of seeking help such as "hopeful"), beliefs about others' expectations (i.e., perceived degree to which relevant people/groups in one's life such as "friends" would encourage the respondent to seek help), beliefs about others' behavior (i.e., perceived likelihood those relevant people/groups would themselves seek help if psychologically distressed), and logistical beliefs (i.e., anticipated informational and practical factors that may serve as barriers or facilitators when attempting to seek help such as "I would have no time for seeking help"). Help-seeking beliefs determine their respective *help-seeking mechanisms*. Specifically, outcome/experiential beliefs determine *attitude* (i.e., overall positive versus negative evaluation of seeking help), beliefs about others' expectations/behavior determine *perceived norm* (i.e., degree of perceived social pressure/encouragement to seek help), and logistical beliefs determine *personal agency* (i.e., perceived ability to seek help). In turn, these mechanisms collectively dictate people's *intention* (i.e., readiness to exert effort to seek help), with more favorable attitude, perceived norm, and personal agency generally leading to greater intention. Intention drives *prospective help-seeking*

*behavior* (i.e., voluntarily seeking help from a mental health professional). However, this intention-behavior relationship is subject to potential moderating effects of certain determinants. For example, distress may compromise a person's ability to follow through on their intention to seek help (Sareen et al., 2005), people with greater social support may have enhanced access to logistical assistance (Han et al., 2018) in the face of challenges (e.g., locating suitable providers) during the help seeking process, unforeseen environmental constraints (e.g., long waiting lists) can thwart even the most committed help seeker (Brown et al., 2016), past help seeking experience can prepare people to properly anticipate the barriers they will face in the future when seeking help (Gulliver et al., 2010), and the possession of skills—related to finding mental health provider information, navigating insurance considerations, and identifying providers who will offer the right professional fit for one's mental health treatment needs—may help one's intention translate into successful receipt of care. A summary of the empirical evidence for these theorized associations in the context of mental health help seeking is provided in Online Resource 1. Beyond the mental health help-seeking domain, studies using the Integrated Behavioral Model to examine other health behaviors have also found support for these theorized associations (e.g., Montaño & Kasprzyk, 2015).

**Limitations of Existing Measures of IBM-HS Constructs**

The IBM-HS recognizes two types of measures: direct measures and indirect measures. Help-seeking beliefs are measured with population-specific *indirect measures* composed of heterogenous items analyzed individually (e.g., "Seeking help would bring shame on my family", "Seeking help would help me feel less stressed"). In contrast, help-seeking determinants, intention, and mechanisms are measured with *direct measures* composed of interchangeable, internally consistent items (e.g., "I have the ability to seek help", "I have the

capacity to seek help") designed for use across a variety of populations, like most multi-item measures used in the social sciences. Because (a) incorporating measures of the many constructs within each of the seven help-seeking determinant categories of the IBM-HS into the IBM-HS-Q is impractical and (b) our goal was to develop a standardized set of non-population-specific measures suitable for administration to racially/ethnically diverse adults, this investigation focused on synchronizing a battery of direct measures to assess intention and the mechanisms. Therefore, this section will focus on reviewing the limitations of measures of intention and the mechanisms. Figure 1 provides a visual of how the measures composing the IBM-HS-Q align with the IBM-HS.

*[Figure 1 here]*

Both the reasoned action tradition and the IBM-HS consider intention to be a (1) unidimensional construct that (2) should be measured with multiple internally consistent items that (3) can predict prospective behavior. Hammer and Spiker (2018) provided evidence that the Mental Help Seeking Intention Scale (MHSIS), but not the other two most popular intention measures in use, the Intentions to Seek Counseling Inventory (ISCI; Cash et al., 1975) and General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2005), met these three criteria. However, unidimensionality and predictive evidence of validity for the English-language version of the MHSIS has thus far only been established using a predominantly white (86%) sample of adults who all self-identified as having a mental illness. Because it is important for the MHSIS to demonstrate utility for a diverse range of adults, including people of color and those who are distressed yet do not self-identify as having a mental illness, these limitations must be addressed. Given that some people who would benefit from treatment do not recognize that they have a mental health issue and this can be a key barrier to accessing care (Aguirre Velasco et al., 2020),

it is important for an intention measure to demonstrate the ability to predict future help-seeking behavior in a sample inclusive of this group of distressed persons.

Both the reasoned action tradition and the IBM-HS consider attitude to be a (1) unidimensional construct that (2) should be measured with a set of internally consistent items that (3) avoid assessing construct-irrelevant variance (American Educational Research Association et al., 2014). Hammer and colleagues (2018) provided evidence that the Mental Help Seeking Attitude Scale (MHSAS), but not the other two most popular attitude measures in use, the Attitudes Toward Seeking Professional Psychological Help scale – short form (ATSPPH-SF; Fischer & Farina, 1995) and the Inventory of Attitudes Toward Seeking Mental Health Services (IASMHS; Mackenzie, Knox, Gekoski, & Macaulay, 2004), met these three criteria. This aligns with the conclusions of Bian and colleagues' (2023) systematic review of attitude measures, which reported that, of all measures available, only the MHSAS met criteria for being strongly recommended for use with adults. However, unidimensionality for the English-language version of the MHSAS has thus far only been established using a predominantly white (67%) adult sample.

To date, perceived norm and personal agency have primarily been assessed with ad hoc (i.e., unvalidated) measures adapted from Ajzen's (2006; revised 2019) reasoned action tradition measure templates. To address this, Hammer, Wright, and colleagues (2024) developed 3-item mental health help-seeking measures of *perceived norms: injunctive* (others' perceived expectations around seeking help), *perceived norms: descriptive* (others' perceived help-seeking behavior), *personal agency: autonomy* (sense of personal control of one's help seeking), and *personal agency: capacity* (confidence in one's ability to seek help). However, these measures

have not yet been evaluated for unidimensionality, variability, or criterion evidence of validity in a non-college adult sample.

Lastly, when a professional seeks to study how beliefs, mechanisms, intention, and prospective behavior interrelate, the reasoned action tradition and the IBM-HS emphasize that all administered measures must comply with the principle of compatibility (Ajzen & Fishbein, 1980): they must reference the same definition of behavior, in terms of action (e.g., seeking help), target (e.g., mental health professional), context (e.g., counseling center), time (e.g., next three months), and condition (e.g., if experiencing a serious mental health concern). However, the aforementioned measures do not all reference the same definition, which can lead to underestimation of the true relationship among these constructs (Fishbein & Ajzen, 2010). Therefore, there is a need to synchronize the language of these measures to a shared definition, thereby creating a standardized battery that complies with the principle of compatibility. In summary, as reviewed in Figure 2, these measures of IBM-HS constructs are subject to five limitations that require psychometric attention.

*[Figure 2 here]*

**Present Study**

To address these five limitations, the present study synchronized and psychometrically evaluated these six measures of IBM-HS constructs within a racially/ethnically diverse sample of 597 adults living in the United States. Psychometric evaluation involved testing seven hypotheses pertaining to reliability and validity, summarized in Table 1. If these synchronized measures were to demonstrate sufficient evidence of reliability and validity, this would enhance scholarly and applied professionals' confidence in the use of the IBM-HS-Q to assess the help-seeking constructs at the core of the IBM-HS, a theory that holds promise for increasing the

replicability of mental health help-seeking research. This standardized battery of six measures could be used to comprehensively investigate the causal mechanisms (i.e., attitude, perceived norm, personal agency) by which specific help-seeking determinants and beliefs impact people's intention to seek help (Figure 1). Furthermore, the IBM-HS-Q could provide essential information when seeking to evaluate whether and how (i.e., mechanisms of change) a given intervention impacts help-seeking perceptions and behavior, which can inform intervention validation and refinement. In addition, help-seeking research grounded in the reasoned action tradition has often overlooked perceived norm and personal agency (refer to Online Resource 2 for evidence) as mechanisms, despite their established importance in shaping help-seeking intention (Adams et al., 2022). The IBM-HS-Q, which includes measures for perceived norm and personal agency, can help address this gap.

*[Table 1 here]*

## Method

### Defining Help-Seeking Behavior and Synchronizing the IBM-HS-Q Measures

Professionals must define the help-seeking behavior of interest before making measurement decisions (Hammer, Vogel, et al., 2024). Different professionals may be interested in different operationalizations of help seeking. Because the purpose of the IBM-HS-Q is to serve as a standardized battery composed of measures that can be adapted, if necessary, to accommodate different definitions of help-seeking behavior, we sought to adopt a definition of help-seeking behavior that is common in the help-seeking literature and lends itself to adaptation. Therefore, we defined help-seeking behavior as "seeking help from a mental health professional within the next three months if experiencing a serious mental health concern." This definition specifies the action (seeking help), target (mental health professional), timeframe (next three

months), and condition (i.e., serious mental health concern). This definition purposely does not specify a specific context because many researchers are interested in treatment access across setting types (e.g., mental health agency, private practice) rather than narrowing focus to a specific setting type.

The three-month time frame was chosen because it is a common time window used in help-seeking research (e.g., Hammer & Spiker, 2018; Hammer, Vogel, et al., 2024) and seeks to balance the dialectical forces of predictive accuracy and statistical power. Regarding the former, "the correlation between intention and behavior tends to decline as the time interval between measurement of intention and behavior increases, presumably because there is a greater potential for intervening events to produce changes in beliefs" (p. 321, Ajzen, 2020). Thus, the longer the specified behavioral window (e.g., 3 months versus 12 months), the less likely intention measured at time 1 will predict that behavior. Regarding the latter, in some populations, seeking help is rare. Prediction of a rare behavior requires that the cell size (i.e., number of people who did seek help in the behavioral window) be sufficient for it to be statistically possible to predict the rare behavior. Thus, the shorter the specified behavioral window, the smaller the number of people who will have sought help in that span of time, and thus the smaller the number of cases in that "sought help" cell, and the less likely intention measured at baseline will have a fair opportunity to predict that prospective behavior. In addition, the three-month time frame aligns with a critical window for clinical intervention for depression (Posternak et al., 2006) and suicidal ideation (Arizona Health Care Cost Containment System, n.d.), minimizes confounding influences from seasonal fluctuations (Modzelewski et al., 2025) and academic cycles (Radhakrishnan et al., 2023), and aligns with the CDC's Behavioral Risk Factor Surveillance System (BRFSS) use of quarterly intervals to detect short-term trends in service use and

symptom burden (Centers for Disease Control and Prevention [CDC], 2023) and the DSM-5-TR's "within 3 months of stressor onset" criterion for Adjustment Disorder (APA, 2022).

The use of a hypothetical mental health condition in the definition (i.e., "if experiencing a serious mental health concern") is congruent with published help-seeking measures that use hypothetical framing in their instructions and/or items (e.g., Fischer & Farina, 1995, Hammer & Spiker 2018, Wilson et al., 2005). Because users frequently desire the ability to study help-seeking perceptions in a population comprised of both those who are currently distressed and those who are not (Adams et al., 2022), using a hypothetical frame for help-seeking measures makes it useful to sample from the entire population, rather than only a clinically distressed subset. The reason: researchers who sample from a population containing many non-distressed people can encounter a floor effect on measures such as help-seeking intention, as there is little reason to intend to seek professional help for mental distress when one is not distressed. The target term of "mental health professional" likewise aligns with published help-seeking research (Adams et al., 2022). However, because the terms "serious mental health concern" and "mental health professional" can be understood differently by different respondents, it is important to provide respondents with a clear definition of these terms (see Procedure).

To comply with the principle of compatibility, the survey/measure instructions and items of the six IBM-HS-Q measures were synchronized to reference this definition of help-seeking behavior, thereby addressing one key limitations of existing measures (refer to Figure 2). Online Resource 3 provides a detailed description of the actions taken to synchronize the target, timeframe, and condition of the six measures. In brief, synchronization adjustments included: (a) introducing overarching start-of-battery instructions that precede display of the IBM-HS-Q measures and provide uniform definitions and response guidance (IBM-HS-Q instructions and

measure items can be viewed in Online Resource 4), (b) expanding the target list of professionals defined under the umbrella of "mental health professional" in the start-of-battery instructions, (c) uniformly adopting a behavioral timeframe of "in the next three months" across all measure items, and (d) updating condition to specify particular mental health symptoms and functional impacts through the incorporation of a hypothetical vignette scenario into the start-of-battery instructions.

**Measures**

Table 2 lists information about measures administered at time 1 or time 2. We adjusted the original response scaling for the IBM-HS-Q measures from a seven-point scale to a six-point scale based on the recommendations of Simms and colleagues (2019). The first and last scale points are labeled with unlabeled intermediate points (per Ajzen, 2006; revised 2019). For all IBM-HS-Q measures, a higher score indicates a positive valence and more of that construct (e.g., more favorable attitude, more supportive perceived norm, more personal agency, stronger intention). A complete copy of the IBM-HS-Q measures and start-of-battery instructions are provided in Online Resource 4. Whereas most IBM-HS-Q measures use 3-item instruments to measure their conceptually narrow constructs, the MHSAS uses a longer 9-item instrument because the attitude construct has instrumental (cognitive) and experiential (affective) elements. Indeed, Hammer and colleagues' (2018) Item Response Theory evaluation of the MHSAS indicated that the fit, approximate test information function, and item difficulties were optimized at nine items, as opposed to six or 12 items.

*[Table 2 here]*

**Participants and Procedure**

Ethical approval was obtained from the University of Kentucky Office of Research Integrity (#:85059) and participants gave consent for use and publication of their de-identified aggregate data. We report how we determined our sample size, all data exclusions, all manipulations, and all measures in this non-pre-registered study. Study data are available at https://doi.org/10.17605/OSF.IO/M5FWZ. For the time 1 survey, we recruited from ResearchMatch.org, a national health volunteer registry created by several academic institutions and supported by the U.S. National Institutes of Health as part of the Clinical Translational Science Award program. Participants were contacted via the registry messaging system regarding the study, which was advertised as a study about how people feel about seeking mental health care. Inclusion criteria included minimum age of 18, residence in the United States, and fluency in written English. Interested participants were directed to an online survey that began with an informed consent page, continued with the survey instructions and survey items, and ended with a conclusion page.

Time 1 participants who met the moderate psychological distress threshold on the K6 (Kessler et al., 2002) and/or who self-identified as having a mental health concern were invited to complete a follow-up time 2 survey three months later, which included the Prospective Help Seeking Behavior measure. Two hundred fifty-one (63% of the qualifying time 1 participants invited) provided time 2 data. An Independent samples *t* test showed that those who completed the time 2 survey did not have different mean scores on any IBM-HS-Q measure than those who were invited but did not complete the time 2 survey. Participants had the option of entering a drawing for one of several $25 gift cards (1 for every 100 participants) each time they completed a survey. Additional measures, not analyzed for the present study, were included in the surveys to inform future investigations.

Regarding the survey instructions, we stated, “for the purposes of this survey, ‘mental health professionals’ include psychologists, psychiatrists, clinical social workers, and mental health therapists and counselors.” We then stated, “As you answer the questions in this survey, we would like you to imagine something. Imagine that you have been experiencing a serious mental health concern for the last month. You feel significantly more nervous, restless, hopeless, and isolated, and are having trouble sleeping and concentrating on your work. In the following pages of this survey, we’re going to ask you some questions about how you—given your personal views and experiences to date—might feel about seeking help from a mental health professional if you were dealing with this hypothetical mental health concern right now.” Using such vignette scenarios has precedent in help-seeking literature (Adams et al., 2022) and vignettes are one of the more effective ways to prime people to answer hypothetical questions about their conditional perceptions (Schoenberg & Ravdal, 2000). We provided a high color contrast reminder image at the top of each survey page featuring the IBM-HS-Q measures that stated: “Reminder: Imagine that you have been experiencing a serious mental health concern for the last month. You are having trouble sleeping and concentrating on your work. You feel significantly more overwhelmed, feel isolated from others.”

Because item order effects (i.e., each item primes the respondent to think about a certain idea, which then influences interpretation of subsequent item) can inflate internal consistency and create artificially independent latent dimensions (Clifton, 2020), to permit a more rigorous test of the dimensionality and reliability of the IBM-HS-Q measures, the 24 total items from the six IBM-HS-Q measures were interspersed as a series of multiple-choice type questions in a single block within the Qualtrics survey, with all items randomized such that approximately 11 questions appeared on each of four pages. Whereas this interspersion is not required for

administration of the IBM-HS-Q measures, interspersion has been recommended by the developers of the reasoned action tradition (Ajzen, 2006; revised 2019) and is permissible because each measure does not require its own unique set of scale instructions to be shown to respondents prior to asking them to fill out the items. Time 1 participants ($N$ = 597) were adults living in the United States who ranged from 18 to 88 ($M$ = 46.88, $SD$ = 17.06) years of age. Demographic information for these participants is provided in Table 3.

*[Table 3 here]*

**Data Cleaning and Analysis Plan**

Cases were removed if they dropped out of the time 1 survey before completing the first survey block containing the direct measure items (n = 81), failed at least one of the three Instructed Response Items (Meade & Craig, 2012) (n = 143), responded "no" when asked the SRSI UseMe question (i.e., "In your honest opinion, should we use your data in our analysis in this study?"; n = 7; Meade & Craig, 2012), or, when asked about the name of the state and county they lived in, provided a county name that does not match the counties of that state, which we interpreted as a sign that the survey may have been completed by a computer bot (n = 7), resulting in a final retained dataset of n = 597. In the retained sample, missing data on IBM-HS-Q measure items ranged from a low of 0% to a high of 0.2%, with an overall missing data rate of 0.01%. Eight participants that failed the Instructed Response item on the time 2 survey were likewise not included in analyses involving time 2 data. Soper's (2025) sample size calculator for structural equation models (SEM) was used to calculate the minimum sample size needed for adequate power in the current study (effect size = 0.20, power = 0.80, alpha = 0.05, number of latent variables = 6, number of observed variables = 24). The present sample ($N$ =

597) exceeds the sample required (N = 403) by the six correlated factors confirmatory factor analysis (CFA) measurement model used in the present study.

We used Mplus version 8.8 (Muthén & Muthén, 2022) for all analyses, which uses maximum likelihood estimation with robust standard errors (MLR) to handle missing data assumed to be missing at random (Graham, 2009). Regarding factor structure (Hypothesis 1), the proposed factor structure of the IBM-HS-Q, consisting of six closely related but conceptually separable factors (the five mechanism measures and the intention measure), was tested by conducting a six correlated factors CFA measurement model. We also tested the model fit of a unidimensional model (all 24 items loading on a single factor) and bifactor model (all 24 items load on a general factor and those items also load their respective specific factors, with all factors set orthogonal to each other). Lastly, we conducted a supplemental comparison of the six correlated factors model with an exploratory structural equation model (ESEM). Exact model data fit was determined using a standard $\chi^2$ goodness of fit test and approximate fit was evaluated based on common fit indices: RMSEA < .05 (Browne & Cudeck, 1992); CFI > .95 and TLI > .95 (Sharma et al., 2005); and SRMR < .05 (Byrne, 1998). Also, for model data fit to be deemed acceptable, residual correlations should be less than |.10| (Kline, 2023).

Regarding reliability (≥ .70), McDonald's omega (McDonald, 1999), Cronbach's alpha (Cronbach, 1951) and Composite Reliability (CR; Jöreskog, 1971) were calculated (Hypothesis 2). Regarding normality (Hypothesis 3), problematic skewness (> 3) or kurtosis (> 10) was checked for, as these can lead to underestimation of relationships with other variables (Weston & Gore, 2006). Regarding convergent evidence of validity (Hypothesis 4), we calculated the average variance extracted (AVE) to confirm each construct explains sufficient indicator

variance (AVE ≥ .50; Hair et al., 2022) and the H index to confirm each measure latent variable is likely to be replicated across studies (H index > .80; Rodriguez et al., 2016).

Regarding criterion evidence of validity, given that the reasoned action tradition and IBM-HS state that intention is shaped by the mechanisms, we used latent bivariate correlations (Hypothesis 5) from the CFA model to confirm that each mechanism measure was at least moderately (i.e., $r > .30$; Cohen, 1988) positively correlated with the intention measure. Furthermore, given that the mental health help-seeking mechanisms have demonstrated the ability to jointly account for substantial (i.e., $R^2 \geq .26$; Cohen, 1988) variance in help-seeking intention per the studies reviewed by Adams and colleagues (2022), we used latent multiple linear regression to confirm that the five mechanism measures jointly accounted for at least 26% of the variance in the intention measure (Hypothesis 6).

Regarding predictive evidence of validity (Hypothesis 7), because intention is theorized to be the primary driver of prospective behavior (Hammer, Vogel, et al., 2024) and intention is frequently used by researchers as an empirical proxy for prospective behavior (Hammer & Spiker, 2018), it is important for an intention measure to demonstrate the ability to predict prospective behavior. Given that help-seeking intention measures have, on average, demonstrated at least a small (i.e., $.1 \leq r \leq .3$; Cohen, 1988) point-biserial correlation with prospective behavior per our review of longitudinal studies (refer to Online Resource 6), we used a latent binary logistic regression to confirm that the intention measure (self-reported at time 1) demonstrated at least a small correlation with prospective help-seeking behavior (self-reported at time 2).

## Results

Table 1 summarizes psychometric results pertaining to the seven study hypotheses. Regarding factor structure of the six IBM-HS-Q measures, the theorized six correlated factors model demonstrated approximate fit (MLR-$\chi^2$ [237] = 526.456, $p < .001$; RMSEA = .045, 90% CI [.040, .050], $p$(RMSEA < .05) = .934; CFI = .957; TLI = .950; SRMR = .046), though 7% (18 of 276) of residual correlations were greater than |.100|, with most involving Item 2 of the PN:IS. The ESEM model also demonstrated approximate fit (MLR-χ2 [147] = 194.544, $p = .005$, RMSEA = .023, 90% CI [.013, .032], $p$(RMSEA < .05) > .999, CFI = .993, TLI = .987, SRMR = .012); refer to Online Resource 5 for the in-depth supplemental comparison of the six correlated factors CFA model with the ESEM. Due to the poor fit of the unidimensional model (MLR-$\chi^2$ [252] = 2596.226, $p < .001$, RMSEA = .125, 90% CI [.120, .129], $p$(RMSEA < .05) < .001); CFI = .655; TLI = .622; SRMR = .119), it is not considered further. Likewise, the bifactor model failed fit criteria for TLI (MLR-$\chi^2$ [228] = 541.610, $p < .001$; RMSEA = .048, 90% CI [.043, .053], $p$(RMSEA < .05) = .730); CFI = .954; TLI = .944; SRMR = .067). In addition, because general Explained Common Variance (ECV = .535) was not greater than .60, despite Omega Hierarchical (OmegaH = .835) of the general factor being greater than .70, it is not reasonable to interpret the 24 items as essentially unidimensional (Reise et al., 2013). Because ECV was low and the model did not demonstrate clear approximate fit, the bifactor model is not considered further. Table 4 provides descriptive statistics (*M* and *SD*) as well as loadings for the six correlated factors CFA and ESEM models. In sum, there was clear support for Hypothesis 1 (factor structure indicating six closely related but conceptually separable factors) for most measures, and partial support for Hypothesis 1 for the PN:IS due primarily to misfit involving Item 2 of the PN:IS (refer to Online Resource 5 for a detailed explanation).

*[Table 4 here]*

Regarding reliability, omegas, alphas, and Composite Reliability coefficients for all six measures met or exceeded .753, supporting Hypothesis 2. Regarding normality, the six measures did not display problematic skewness (-0.186 to -1.996) or kurtosis (-0.459 to 4.378), supporting Hypothesis 3. Regarding convergent evidence of validity, the AVE (≥ .556) and H index (≥ .820) coefficients for all six measures met or exceeded threshold values (AVE ≥ .50 and H index > .80), supporting Hypothesis 4. Regarding criterion evidence of validity, the five mechanism measures correlated (*r's* ≥ .303) at least moderately with intention and jointly accounted for substantial variance in intention ($R^2$ = 72%), supporting Hypotheses 5 and 6, respectively. Online Resource 5 provides correlation matrices for the CFA/ESEM factors and observed scores. Regarding predictive evidence of validity, the MHSIS had at least a small point-biserial correlation (*r* = .215; derived from *OR* = 2.225 via Lin's [2023] calculator) with prospective behavior, supporting Hypothesis 7. Refer to Table 1 for full results for these hypotheses.

## Discussion

This paper detailed our process for addressing five limitations (refer to Figure 2) of existing measures of IBM-HS constructs by synchronizing and evaluating the reliability and validity of the five mental health help-seeking mechanism measures (i.e., MHSAS, PN:IS, PN:DS, PA:AS, PA:CS) and an intention measure (MHSIS), which collectively comprise the new IBM-HS-Q, for use with adults living in the United States. After synchronizing the instruction and item language across the six IBM-HS-Q measures to a shared definition of mental health help-seeking behavior, we used data from 597 racially/ethnically diverse adults for psychometric evaluation of seven hypotheses (refer to Table 1). We now summarize conclusions that can be drawn about the IBM-HS-Q measures, articulate future directions, and offer guidelines for use of this measurement battery.

**Psychometric Conclusions and Implications**

The six IBM-HS-Q measures generally demonstrated appropriate factor structure. Despite being worded in a similar fashion, which is necessary to comply with the principle of compatibility, these measures demonstrated sufficient factorial independence to warrant treating these as measures of closely related, yet conceptually separable, constructs. However, Item 2 of the PN:IS (i.e., "It would be expected of me that I seek help from a mental health professional in the next 3 months.") demonstrated a lower-than-ideal factor loading and higher-than-ideal residual correlations, likely due to idiosyncrasies with how the item is worded compared to the other two PN:IS items (e.g., "Most people [who are] important to me…"). Online Resource 5 provides detailed commentary on these idiosyncrasies. Our resulting recommendation, subject to psychometric verification via future research, is to use revised phrasing ("Most people would expect me to seek help from a mental health professional in the next 3 months.") for Item 2 of the PN:IS that we anticipate will improve the factor loading of this item in future administrations. In addition, we note that the associations between the six measures were sometimes strong, particularly between the MHSIS and MHSAS. We interpreted this very strong association between the MHSIS and MHSAS as a theory-consistent and accurate reflection of the very strong conceptual link that can arise between (a) personally perceiving that seeking help is a good thing and (b) intending to seek help in certain samples, rather than evidence that the two measures are assessing redundant constructs, for two reasons. First, such very strong associations have been documented in other reasoned action tradition mental health help-seeking studies (e.g., Bohon et al., 2016; Hyland et al., 2012). Second, studies have reported non-large ($r < .50$) correlations between the MHSIS and MHSAS in other samples (Aruta et al., 2023; Nelson et al., 2025), indicating the presence of population differences in the strength of the attitude-

intention association. That being said, Items 2 (“important”) and 9 (“desirable”) showed notable cross-loadings in the ESEM with intention, which partially accounts for the inflated correlation between the MHSIS and MHSAS. This suggests that future revisions to the MHSAS should specifically reevaluate the retention of these two items, pending future replication of this cross-loading pattern.

The six IBM-HS-Q measures demonstrated sufficient internal consistency and variability, which are prerequisites to a measure having the capacity to assess their construct’s true degree of association with other constructs of interest. The five help-seeking mechanism measures demonstrated criterion evidence of validity, suggesting that these measures can provide a robust understanding of what shapes the help-seeking intention of adults from this population. The availability of such measures is critical when seeking to examine the causal mechanisms by which help-seeking determinants and beliefs—and interventions targeting these constructs—exert their downstream impact on intention.

In addition, this study was the first to provide evidence regarding factor structure, internal consistency, variability, convergent evidence of validity, and criterion evidence of validity for measures of mental health help-seeking perceived norm and personal agency in a non-college adult sample. These constructs, though essential to achieving a complete understanding of what drives people’s intention to seek help (Adams et al., 2022), have been understudied, due to a lack of psychometrically sound measures. The present psychometric evidence for the PN:IS, PN:DS, PA:AS, and PA:CS suggests that these are promising measures of these understudied IBM-HS constructs. However, given the partial support for the unidimensionality of the PN:IS, additional testing of the factor structure of the PN:IS utilizing revised phrasing for Item 2 is recommended.

Lastly, this study was the first to provide predictive evidence of validity for the MHSIS in a racially/ethnically diverse sample that included distressed adults who do not self-identify as having a mental illness, a key segment of distressed people at particularly risk for not accessing care (Aguirre Velasco et al., 2020). The MHSIS is an essential tool for studying how determinants (e.g., environmental constraints; Hammer, Vogel, et al., 2024) and other constructs (e.g., forgetting; Sheeran & Webb, 2016) may moderate the relationship between intention and future help-seeking behavior. In summary, these psychometric results support the position, subject to continued replication in future research, that these measures of the IBM-HS-Q generally assess what they were designed to assess.

**Addressing Limitations Through Future Research**

One paper cannot examine all psychometric properties of a measure, as validation is a continuous process (AERA et al., 2014). The next steps for validation of the IBM-HS-Q include examining test-retest reliability to assess temporal stability, developing ultra-brief forms of these measures suitable for use in epidemiological surveys, measurement equivalence/invariance (ME/I) testing across key sociodemographic groups, testing alternate-language versions of the IBM-HS-Q, reexamining the dimensionality of the PN:IS that uses the recommended revised phrasing for Item 2, reexamining cross-loadings of MHSAS Items 2 and 9 on intention, and examining the psychometric properties of the IBM-HS-Q in samples of people significantly different from this initial sample, which skewed formally educated, older, familiar with mental health help seeking, and socioeconomically privileged. To this end, we (a) report preliminary evidence of moderate test-retest reliability for the six IBM-HS-Q measures derived from a college student sample in Online Resource 7, (b) are currently collecting longitudinal data that will permit test-retest analysis in a general adult sample, (c) are currently using IRT methods to

identify a potential ultra-brief version of the MHSAS that would be a similar length as the other IBM-HS-Q measures, (d) are currently conducting ME/I analysis using data derived from a United States college student sample, (e) have completed translation and back translation of the IBM-HS-Q into Chinese and are analyzing the psychometric properties of these Mandarin versions, and (f) have finished collecting IBM-HS-Q data in a variety of sociodemographic populations (e.g., South Asian adults, older adults). We wish to partner with community-engaged researchers interested in culturally and linguistically adapting the IBM-HS-Q measures to their populations of focus, and sharing the resulting adapted versions with the wider professional community. We also encourage future users of the IBM-HS-Q to replicate these psychometric analyses in their own samples and include those results in the supplemental material of their papers, which will facilitate determination of the stability of the present findings across populations.

**Guidelines for Use of IBM-HS-Q**

Please visit HelpSeekingResearch.com to request permission from the corresponding author to use, and obtain the latest version of, the IBM-HS-Q measures. The IBM-HS-Q is designed to measure central constructs theorized by the IBM-HS in a manner that complies with the conceptualization and measurement guidelines of the IBM-HS and wider reasoned action tradition. Because it is possible to develop different measures of the same construct, grounded in different theories and/or intended uses, we encourage professionals to follow several guidelines for valid use of the IBM-HS-Q measures.

First, this version of the IBM-HS-Q uses a common standardized definition of help-seeking behavior that specifies a particular action, target, timeframe, and condition. Prior to data collection, professionals using the IBM-HS-Q will need to determine whether this default

definition aligns with the goals, context, and focal population of their project. Professionals must define their help-seeking behavior of interest and then synchronize the language of all IBM-HS-Q measures accordingly. The principle of compatibility is important to follow, otherwise the degree of covariance among these IBM-HS-Q constructs will be underestimated (Fishbein & Ajzen, 2010).

Related to this, depending on the definition of help-seeking behavior adopted, it may be necessary to define key terms (e.g., “mental health concern”, “mental health professional”) for respondents to ensure they interpret those terms in intended manner. When using hypothetical/conditional framing (e.g., If I had a mental health concern, I would intend to seek help…”), professionals should ensure respondents can effectively picture the conditional situation in their mind, perhaps with a vignette scenario provided at the start of the survey.

The IBM-HS-Q is intended to help scholarly and applied professionals answer questions about the help-seeking constructs that shape the help-seeking intention and behavior of a given population, and particular sociodemographic segments therein. It is not validated for high stakes assessment and/or clinical decision making regarding a particular individual (e.g., therapy client). Such decisions require instruments that have been developed and validated for individual-level assessment, which involves a wider and deeper set of psychometric vetting procedures.

Professionals using the IBM-HS-Q are advised to ground themselves in the conceptual definitions of each IBM-HS construct to ensure the way in which they are making meaning of scores on the IBM-HS-Q measures is congruent with the conceptual definitions. For example, it would be inappropriate to treat the PA:CS score as a measure of help-seeking “self-efficacy,” because this construct is operationalized somewhat differently in the reasoned action and

Bandura (1982) traditions. In the Bandura tradition, self-efficacy is operationalized as confidence in performing a given behavior across a variety of impeding contexts (e.g., “when I am feeling tired”, “after experiencing family problems”, “when I have other time commitments”), which is not how capacity is operationalized in the reasoned action tradition. Furthermore, because the IBM-HS-Q defines certain constructs (e.g., personal agency) differently than older models within the reasoned action tradition (e.g., TRA), professionals should use caution when comparing findings derived from IBM-HS-Q measures with findings derived from older reasoned action tradition measures.

The IBM-HS-Q does not incorporate indirect help-seeking belief measures, as those are population specific. However, one of the feature attractions of the IBM-HS is its capacity to guide users in the assessment of primary beliefs (i.e., the subset of salient beliefs that most distinguish those who intend to seek help from those who do not; Hammer, Vogel, et al., 2024). Therefore, we strongly encourage professionals to adapt or develop help-seeking belief measures for their population of interest and use these indirect measures alongside the standardized measures of the IBM-HS-Q to systematically identify the factors that help or hinder members of that population from seeking help.

The IBM-HS-Q is the first psychometrically vetted instrument battery to provide a synchronized set of measures for all reasoned action tradition (i.e., TRA, TPB, IM, IBM, IBM-HS) mechanism (e.g., attitude) and intention constructs specific to mental health help seeking. Consistent use of these six measures in future research and program evaluation could increase the quality, replicability, and aggregability of mental health help seeking knowledge, thereby addressing a key limitation of the current help seeking literature (Hammer, Vogel, et al., 2024). The IBM-HS-Q can be used to inform basic/fundamental/bench research, as well as intervention

and program evaluation efforts in a number of ways, such as: (a) to measure the degree to which interventions designed to improve a population's mental health help seeking perceptions succeed in doing so, (b) help identify the causal change pathways (i.e., the mechanisms that mediate the effect of intervention components on ultimate outcomes) that account for interventions (in)effectiveness in increasing intention and prospective behavior, thereby informing future intervention refinement and implementation, (c) study whether and how sociodemographic segments of a population differ in their mental health help-seeking perceptions, including potential differential responsiveness to interventions, (d) and examine how mental health help-seeking perceptions are shaped by salient determinants and beliefs (e.g., mental health literacy; illness perceptions; stigma; perceived benefits of seeking help; racialized capitalism; perceived provider cultural competence; readiness for change; systemic, predisposing, and enabling factors) and how these perceptions may or may not translate into future treatment access. Given that a recent systematic review (van den Broek et al., 2023) found that 0% of 42 studies reported data on factors that mediate the impact of mental health interventions on help-seeking behavior, the IBM-HS-Q can fill a critical gap by helping professionals examine the mediating help-seeking perceptions that explain the impact of future interventions. The IBM-HS-Q is also relevant for a variety of mental health help seeking intervention and program evaluation frameworks. For example, the IBM-HS-Q can be measured to measure help-seeking perceptions as immediate targets of change (i.e., short-term outcomes) when evaluating mental health prevention and early intervention programs (Eberhart et al., 2017). Likewise, the CDC's Program Evaluation Framework (CDC, 2024) calls for valid and reliable outcome evaluation measures at Step 4 of the program evaluation process, and the IBM-HS-Q provides such measures when evaluating programs designed to improve mental health help-seeking perceptions and behavior.

In summary, the IBM-HS-Q offers utility to professionals seeking to understand the psychological constructs that shape the mental health help-seeking process of the populations they seek to serve.

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**Table 1**

*Summary of Study Hypotheses and Psychometric Results*

| | Hypotheses* | | | | |
|---|---|---|---|---|---|
| Measure Name | H1: Theorized Factor Structure** | H2: Internally consistent at ≥ .70 | H3: Absence of problematic skewness (> 3) or kurtosis (> 10) | H4: Convergent evidence of validity (AVE ≥ .50, H index > .80) | H5: Criterion evidence of validity via bivariate association with intention |
| Mental Help Seeking Intention Scale (MHSIS) | Supported (β's ≥ .869) | Supported ($\omega$ = .949, $\alpha$ = .915, *CR* = .954) | Supported (skewness = -.679, kurtosis = -.363) | Supported (AVE = .785, H index = .919) | n/a |
| Mental Help Seeking Attitude Scale (MHSAS) | Supported (β's ≥ .792) | Supported (ω = .785, α = .948, *CR* = .971) | Supported (skewness = -.903, kurtosis = -.333) | Supported (AVE = .675, H index = .951) | Supported (*r* = .819) |
| Perceived Norm: Injunctive Scale (PN:IS) | Partially Supported (β's ≥ .572) | Supported (ω = .871, α = .753, *CR* = .861) | Supported (skewness = -.490, kurtosis = -.387) | Supported (AVE = .556, H index = .820) | Supported (*r* = .530) |
| Perceived Norm: Descriptive Scale (PN:DS) | Supported (β's ≥ .795) | Supported (ω = .871, α = .869, *CR* = .925) | Supported (skewness = -.186, kurtosis = -.459) | Supported (AVE = .692, H index = .875) | Supported (*r* = .396) |
| Personal Agency: Autonomy Scale (PA:AS) | Supported (β's ≥ .764) | Supported (ω = .850, α = .863, *CR* = .925) | Supported (skewness = -1.996, kurtosis = 4.378) | Supported (AVE = .693, H index = .881) | Supported (*r* = .303) |
| Personal Agency: Capacity Scale (PA:CS) | Supported (β's ≥ .778) | Supported (ω = .916, α = .850, *CR* = .911) | Supported (skewness = -.848, kurtosis = -.100) | Supported (AVE = .655, H index = .853) | Supported (*r* = .539) |

*Note*. *CR* = Composite Reliability. *Hypothesis 6 (Criterion evidence of validity via the five mechanism measures jointly accounting for at least 26% of the variance in the intention measure; present study $R2$ = 72%) and Hypothesis 7 (Predictive evidence of validity via correlation with prospective help-seeking behavior; present study $r$ = .215 and *OR* = 2.225) were both supported. **A confirmatory factor analysis model in which the six measures were specified as correlated factors demonstrated approximate fit and item factor loadings were all significant at $p < .05$ but see Discussion for commentary regarding PN:IS Item 2 and MHSAS Items 2 and 9.

**Table 2**

*Study Measure Information*

| Measure Name | Citation | Construct Measured | Sample Item (IBM-HS-Q Revised Item Stem Wording) | Administered on Which Survey | Items | Prior Reliability and Validity Evidence |
|---|---|---|---|---|---|---|
| Mental Help Seeking Intention Scale (MHSIS) | Hammer & Spiker (2018) | readiness to exert effort to seek help from a mental health professional | I would intend to seek help from a mental health professional in the next 3 months. | Time 1 | 3 | α = .94, construct replicability, unidimensionality, and predictive evidence of validity (prediction of prospective help-seeking behavior) in adult sample |
| Mental Help Seeking Attitude Scale (MHSAS) | Hammer et al., (2018) | overall evaluation (i.e., positive versus negative) of seeking help from a mental health professional | My seeking help from a mental health professional in the next 3 months would be [bad/good]. | Time 1 | 9 | α = .93, test-retest reliability (r = .76), construct replicability, measurement equivalence/invariance (gender, past professional mental health help seeking, psychological distress), unidimensionality, content (per expert review), convergent (e.g., strong associations with public and self-stigma of seeking help), incremental (account for unique variance in intention beyond alternative attitude measures), and known-group evidence of validity (e.g., those who had previously sought mental health services reporting more positive attitudes than those who had not) in adult sample |
| Perceived Norm: Injunctive Scale (PN:IS) | Hammer, Wright, et al., (2024) | anticipated degree to which referents (i.e., important individuals and groups in one's life) would disapprove or approve of one's seeking help from a mental health professional | Most people who are important to me would want me to seek help from a mental health professional in the next 3 months. | Time 1 | 3 | α = .86, construct replicability, and unidimensionality in a sample of undergraduate engineering students |

| | | | | | | |
|---|---|---|---|---|---|---|
| Perceived Norm: Descriptive Scale (PN:DS) | Hammer, Wright, et al., (2024) | anticipated degree to which referents would, if they themselves had the mental health concern described in the vignette scenario, seek help from a mental health professional | Most people who are important to me would seek help from a mental health professional in the next 3 months. | Time 1 | 3 | α = .87, construct replicability, and unidimensionality in a sample of undergraduate engineering students |
| Personal Agency: Autonomy Scale (PA:AS) | Hammer, Wright, et al., (2024) | perceived degree of control one has over one's own help seeking from a mental health professional | My seeking help from a mental health professional in the next 3 months would be up to me. | Time 1 | 3 | α = .88, construct replicability, and unidimensionality in a sample of undergraduate engineering students |
| Personal Agency: Capacity Scale (PA:CS) | Hammer, Wright, et al., (2024) | perceived degree of confidence in one's ability to seek help from a mental health professional | I would be capable of seeking help from a mental health professional in the next 3 months. | Time 1 | 3 | α = .82, construct replicability, and unidimensionality in a sample of undergraduate engineering students |
| Prospective Help Seeking Behavior (PHSB) | Hammer & Spiker (2018) | retrospective report of whether one sought help from a mental health professional in the past 3 months | Did you seek help from mental health professional (e.g., psychologist, psychiatrist, social worker, therapist, counselor) in the last 3 months? | Time 2 (three months later) | 1 | n/a |
| Kessler Psychological Distress Scale (K6) | Kessler et al., (2002) | nonspecific depressive and anxiety symptoms in the past 30 days | During the past 30 days, about how often did you feel [nervous]? | Time 1 | 6 | α = .89, score of ≥ 5 is the optimal lower threshold cut point indicative of moderate or greater psychological distress that warrants intervention and provides "a balance between sensitivity (.76) and specificity (.75) with an overall classification accuracy of .74" (p. 95, Prochaska et al., 2012). |

*Note*. IBM-HS-Q = Integrated Behavioral Model of Mental Health Help Seeking Questionnaire. The PHSB asks respondents to give a "yes", "no" or "prefer not to answer" response to the following question asked on the follow-up Time 2 survey: "Did you seek help from a mental health professional (e.g., psychologist, psychiatrist, social worker, therapist, counselor) in the last 3 months? "Prefer not to answer" responses were recoded as missing data such that this became a binary variable (no = 0, yes = 1) suitable for use as a dependent variable in binary logistic regression. The K6 uses a 5-point Likert-type scale ranging from 1 (None of the time) to 5 (All of the time). Online Resource 3 provides scaling information for the MHSIS, MHSAS, PN:IS, PN:DS, PA:AS, and PA:CS.

**Table 3**

*Sample demographics*

| Demographic | *n* | % | Demographic | *n* | % |
|---|---|---|---|---|---|
| **Gender** | | | **Education** | | |
| Women | 382 | 64.0% | Graduate or professional degree | 219 | 36.7% |
| Men | 195 | 32.7% | Four-year degree | 211 | 35.3% |
| Cisgender | 48 | 8.0% | Two-year degree | 52 | 8.7% |
| Nonbinary | 14 | 2.3% | Some college but no degree | 85 | 14.2% |
| Transgender | 9 | 1.5% | High school diploma or GED | 27 | 4.5% |
| Genderqueer | 6 | 1.0% | Less than high school | 1 | 0.2% |
| Agender | 5 | 0.8% | No response | 2 | 0.3% |
| Gender fluid | 1 | 0.2% | **Employment** | | |
| Indigenous/other culturally specified gender minority (e.g., two-spirit, hijra) | 1 | 0.2% | Full-time | 282 | 47.2% |
| No response | 7 | 1.2% | Part-time | 62 | 10.4% |
| **Sexual Orientation** | | | Student | 45 | 7.5% |
| Straight or Heterosexual | 469 | 78.6% | Homemaker or stay-at-home parent | 21 | 3.5% |
| Bisexual | 47 | 7.9% | Unemployed and looking for work | 24 | 4.0% |
| Gay | 39 | 6.5% | Retired or disability leave | 124 | 20.8% |
| Asexual or Aromantic | 18 | 3.0% | Other | 36 | 6.0% |
| Pansexual | 14 | 2.3% | No response | 3 | 0.5% |
| Queer | 15 | 2.5% | **Annual Household Income** | | |
| Lesbian | 12 | 2.0% | Less than $25,000 | 81 | 13.6% |
| Preferred to self-describe | 1 | 0.2% | $25,000 to $34,999 | 54 | 9.0% |
| No response | 9 | 1.5% | $35,000 to $49,999 | 74 | 12.4% |
| **Ethnicity** | | | $50,000 to $74,999 | 92 | 15.4% |
| White | 268 | 44.9% | $75,000 to $99,999 | 71 | 11.9% |
| Black or African American | 125 | 20.9% | $100,000 to $149,999 | 98 | 16.4% |
| Latino/a/x/e or Hispanic | 102 | 17.1% | $150,000 or more | 83 | 13.9% |

| | | |
|---|---|---|
| Biracial or Multiracial | 69 | 11.6% |
| Asian or Asian American | 88 | 14.7% |
| American Indian, Native American, or Alaska Native | 26 | 4.4% |
| Jewish | 19 | 3.2% |
| Arab or Arab American | 9 | 1.5% |
| Pacific Islander or Native Hawaiian | 1 | 0.2% |
| No response | 6 | 1.0% |
| **Residential Area** | | |
| Suburban | 299 | 50.1% |
| Urban | 207 | 34.7% |
| Rural | 88 | 14.7% |
| No response | 3 | 0.5% |
| **Region of Residence** | | |
| South | 242 | 40.5% |
| Midwest | 134 | 22.4% |
| West | 113 | 18.9% |
| Northeast | 101 | 16.9% |
| No response | 7 | 1.2% |
| No response | 64 | 10.7% |
| **Mental Health Status** | | |
| Moderate-or-greater mental health distress | 331 | 55.4% |
| Self-identified as having a current mental health concern | 309 | 51.8% |
| Met moderate psychological distress threshold but did not self-identify as having a current mental health concern | 43 | 8.3% |
| **Mental Health Help-Seeking** | | |
| Never sought help | 131 | 21.9% |
| Sought help before 18 | 87 | 14.6% |
| Sought help after 18 | 374 | 62.6% |
| Currently seeking help | 75 | 12.6% |
| **Relationship Status** | | |
| Married or in a civil union | 242 | 40.5% |
| Single | 166 | 27.8% |
| Dating | 67 | 11.2% |
| Cohabiting | 44 | 7.4% |
| Separated or divorced | 37 | 6.2% |
| Engaged | 21 | 3.5% |
| Widowed | 16 | 2.7% |
| No response | 4 | 0.7% |

*Note*. Percentages may not sum to exactly 100% due to "select all that apply" option.

**Table 4**

*Standardized Factor (Pattern) Loadings for Confirmatory Factor Analysis Models (CFA) and Exploratory Structural Equation Model (ESEM) and Descriptive Statistics*

| Item | 6-factor CFA | 6-factor ESEM | | | | | |
|---|---|---|---|---|---|---|---|
| | | MHSIS | MHSAS | PN:IS | PN:DS | PA:AS | PA:CS |
| MHSIS 1 | **.876** | **.734** | .132 | .082 | -.025 | .023 | .016 |
| MHSIS 2 | **.869** | **.672** | .143 | .035 | .035 | .023 | .104 |
| MHSIS 3 | **.913** | **.826** | .026 | .042 | .041 | .051 | .068 |
| MHSAS 1 | **.878** | -.038 | **.922** | .046 | -.050 | -.001 | -.028 |
| MHSAS 2 | **.810** | .295 | **.517** | .156 | -.019 | .041 | -.039 |
| MHSAS 3 | **.822** | -.108 | **.869** | .112 | -.026 | .097 | -.076 |
| MHSAS 4 | **.837** | -.084 | **.899** | -.055 | .043 | -.035 | .063 |
| MHSAS 5 | **.841** | -.093 | **.901** | .055 | -.052 | .000 | .020 |
| MHSAS 6 | **.801** | -.074 | **.887** | -.093 | .003 | .020 | .032 |
| MHSAS 7 | **.797** | .010 | **.836** | -.104 | .073 | -.011 | -.051 |
| MHSAS 8 | **.811** | .089 | **.737** | -.065 | .052 | -.116 | .120 |
| MHSAS 9 | **.792** | .281 | **.575** | .014 | .009 | .020 | -.047 |
| PN:IS 1 | **.815** | -.042 | .013 | **.910** | -.030 | -.028 | .004 |
| PN:IS 2 | **.572** | .229 | .006 | **.302** | .189 | -.077 | .097 |
| PN:IS 3 | **.822** | .011 | .027 | **.725** | .086 | .038 | -.040 |
| PN:DS 1 | **.864** | .045 | -.030 | -.052 | **.930** | .027 | -.052 |
| PN:DS 2 | **.836** | -.061 | .047 | .135 | **.725** | .042 | .023 |
| PN:DS 3 | **.795** | -.043 | .022 | .021 | **.781** | -.037 | .037 |
| PA:AS 1 | **.852** | .005 | .058 | -.027 | -.020 | **.849** | -.040 |
| PA:AS 2 | **.764** | -.073 | -.024 | .068 | -.013 | **.632** | **.277** |
| PA:AS 3 | **.877** | .070 | -.032 | -.052 | .052 | **.945** | -.093 |
| PA:CS 1 | **.835** | .116 | .111 | -.039 | .009 | .041 | **.702** |
| PA:CS 2 | **.778** | -.069 | -.037 | .047 | .020 | .058 | **.817** |
| PA:CS 3 | **.814** | .074 | .000 | .000 | -.003 | .036 | **.760** |
| *M* | | 4.471 | 4.773 | 4.359 | 3.846 | 5.398 | 4.779 |

| | | | | | | |
|---|---|---|---|---|---|---|
| *SD* | 1.325 | 0.997 | 1.173 | 1.174 | 0.891 | 1.162 |

Note. MHSIS = Mental Help Seeking Intention Scale, MHSAS = Mental Help Seeking Attitude Scale, PN:IS = Perceived Norm: Injunctive Scale, PN:DS = Perceived Norm: Descriptive Scale, PA:AS: Personal Agency: Autonomy Scale, PA:CS = Personal Agency: Capacity Scale, CFA = Confirmatory Factor Analysis, ESEM = Exploratory Structural Equation Model. Coefficients in the 6-factor CFA column represent the standardized loadings of those items on their intended factor. **Bolded** coefficients indicate intended and statistically significant loadings. Underlined coefficients in the 6-factor ESEM columns indicate instances where an item demonstrated a lower primary loading, or higher cross-loading, than ideal.

**Figure 1**

*Alignment of the Integrated Behavioral Model of Mental Health Help-Seeking Questionnaire (IBM-HS-Q) with the IBM-HS Theoretical Framework*

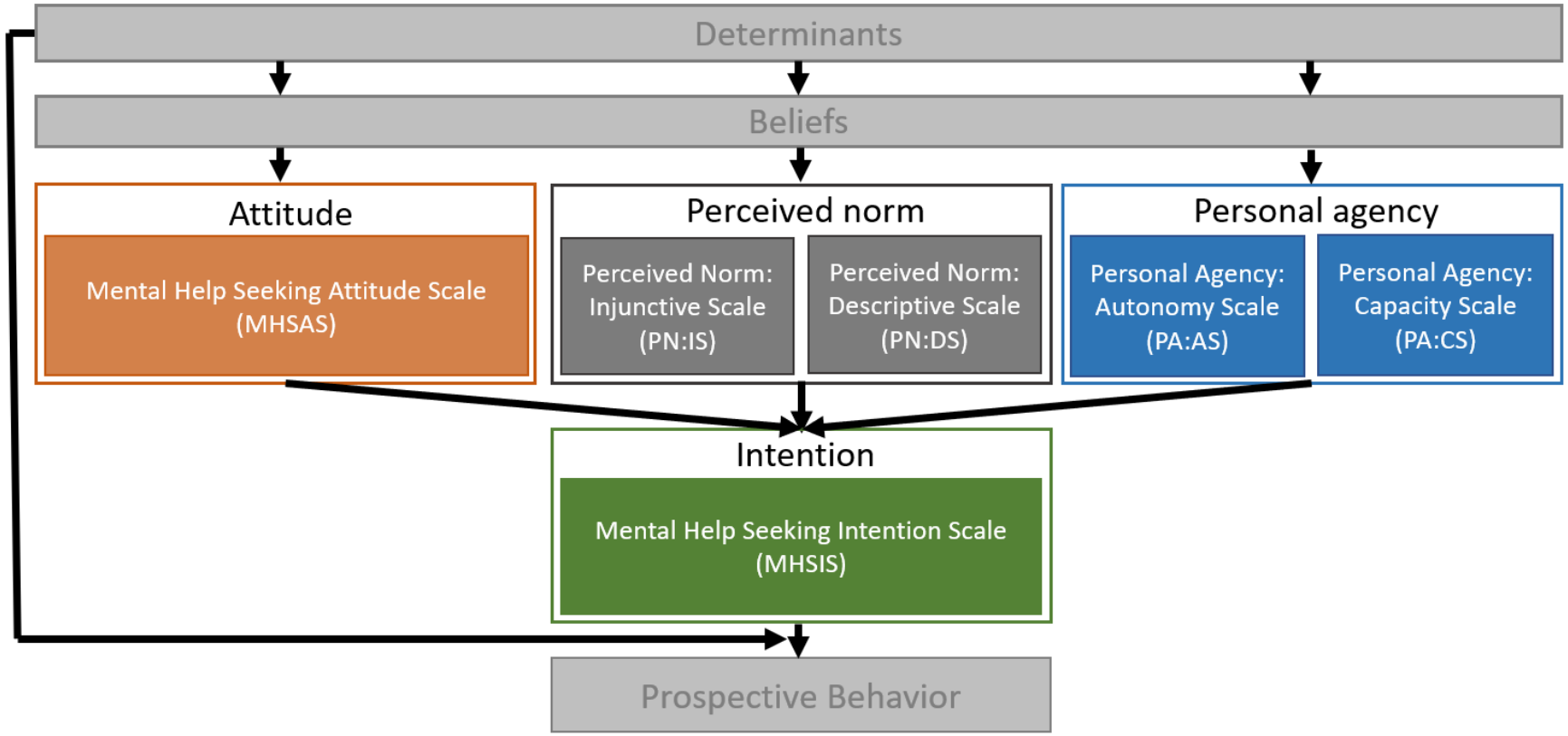
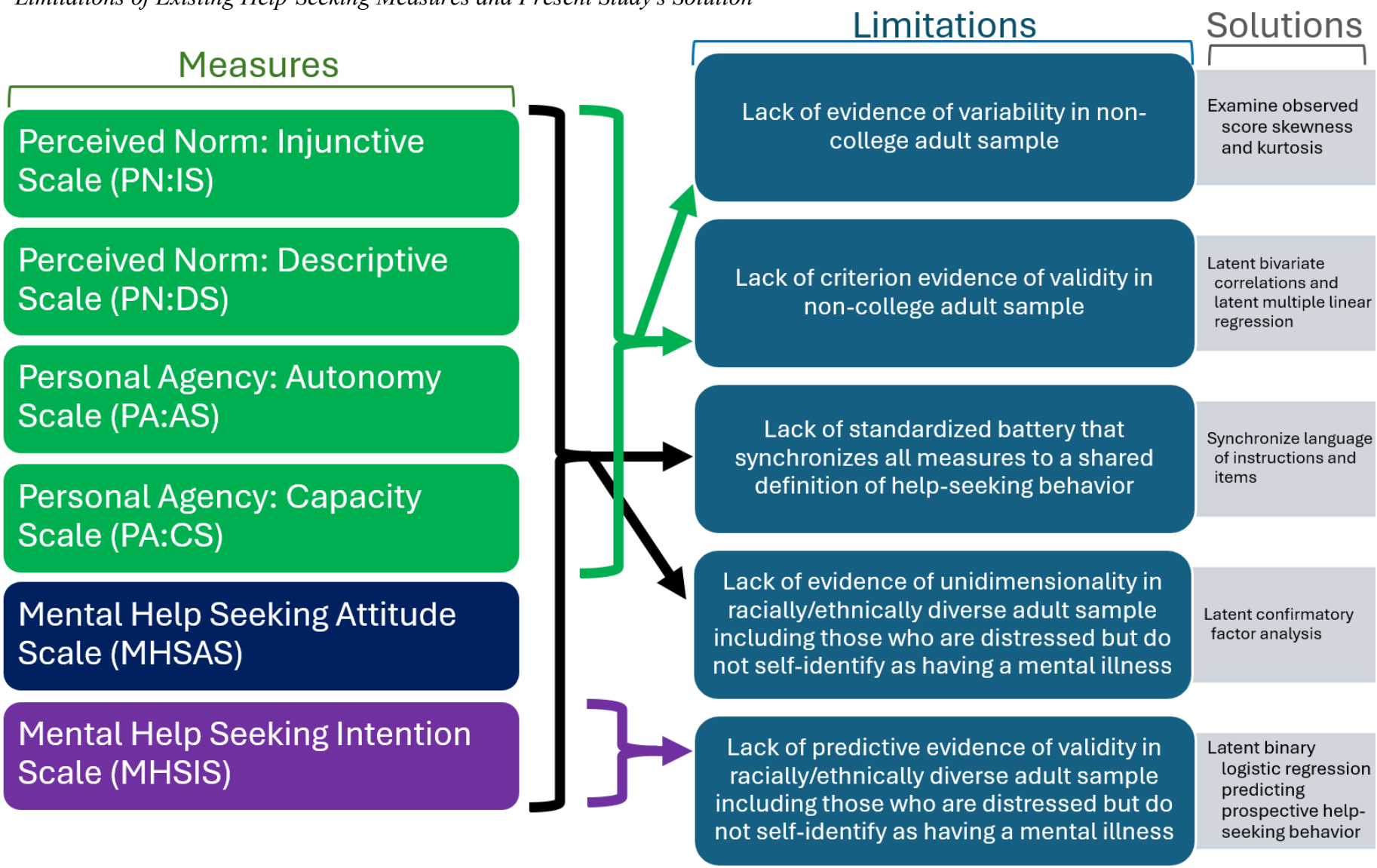


**Figure 2**

*Limitations of Existing Help-Seeking Measures and Present Study's Solution*



**Author contributions**

Joseph Hammer contributed to study conception and design, material preparation, and data collection. Joseph Hammer, David Dueber, and Michael Toland contributed to data analysis. All authors contributed to, read, and approved the final manuscript.

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**Data availability**

Study data is available from the Open Science Framework repository at https://doi.org/10.17605/OSF.IO/M5FWZ

**Declarations**

**Ethical approval**

Ethical approval was obtained from the University of Kentucky Office of Research Integrity (Reference #: 85059 and Reference #: 85558).

**Consent to participate and for Publication**

Participants gave written consent for use of and publication of their de-identified aggregate data. The University of Kentucky Office of ResearchIntegrity authorized a waiver of documentation of informed consent.

**Conflict of interest**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article. We have no known conflicts of interest to disclose.

**Supplementary Information**

The typeset online version of this article (found at https://link.springer.com/article/10.1007/s12144-026-09132-3) contains a link to the supplementary material for this article (https://static-content.springer.com/esm/art%3A10.1007%2Fs12144-026-09132-3/MediaObjects/12144_2026_9132_MOESM1_ESM.docx).