

Title: Development of the Help-Seeker Stereotype Scale

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Abstract

People's mental image of a person who performs a behavior predicts their willingness to engage in that behavior. In particular, negative images of an individual who seeks mental health services may be an important barrier to seeking help. Therefore, over the course of five studies, the authors developed and examined evidence for the reliability and validity of the Help-Seeker Stereotype Scale (HSSS), which is designed to measure the strength of respondents' endorsement of negative stereotypes (e.g., unstable, needy, incompetent) about people who seek help from a psychologist. Using independent samples of students and community members, exploratory and confirmatory analysis in Studies 1 ($N = 587$), 2 ($N = 594$), and 3 ($N = 353$) revealed that the 12-item HSSS reflects a single common source of variance. In Study 4 ($N = 223$), the HSSS total score was found to correlate in expected ways with four theoretically-related constructs: mental illness stereotype endorsement ($r = .51$), public stigma of seeking help ($r = .20$), stereotype application/harm ($r = .37$), and attitudes toward seeking professional psychological help ($r = -.25$), providing convergent evidence of validity. Likewise, the HSSS total score accounted for unique variance (10%) in the self-stigma of seeking help beyond the variance accounted for by public stigma of seeking help (11%), providing initial incremental evidence of validity. Study 5 ($N = 150$) found support for the HSSS' four-week test-retest reliability ($ICC [2,k] = .88$).

Key words: help seeking, treatment utilization, stereotype endorsement, stigma, scale development

Development of the Help-Seeker Stereotype Scale

Two thirds of those struggling with psychological disorders receive no professional help in a given year (Wang et al., 2007). To reduce this “service gap” (Kohn, Saxena, Levav, & Saraceno, 2004), it is necessary to identify the key factors that influence professional psychological help-seeking behavior so that prevention and intervention efforts designed to increase mental health service utilization can be enhanced. In this paper, we focus on help seeking from psychologists. While a variety of structural (e.g., cost, access; Mojtabai, 2005; Sareen et al., 2007), contextual (e.g., gender roles, cultural expectations; Vogel, Heimerdinger-Edwards, Hammer, & Hubbard, 2011), and individual (e.g., perceived need; Edlund, Unutzer, & Curran, 2006; Vogel & Wester, 2003) factors have been studied, the most cited reason people avoid mental health services is stigma (Corrigan, 2004).

Stigma is the perception of being flawed because of a socially unacceptable personal characteristic (Blaine, 2000). Greater mental illness stigma has been linked with decreased initial intention to seek therapy (Cooper, Corrigan, & Watson, 2003), decreased recognition of mental health problems (Alvidrez, Snowden, & Kaiser, 2008), and, once in therapy, to decreased compliance with therapeutic interventions (Fung, Tsang, Corrigan, Lam, & Cheung, 2007), missed appointments (Vega, Rodriguez, & Ang, 2010), and early termination of treatment (Sirey et al., 2001). Mental illness stigma has also been linked to decreased well-being such as lowered self-esteem (Link, Struening, Neese-Todd, Asmussen, & Phelan, 2001), depression (Manos, Rusch, Kanter, & Clifford, 2009), greater feelings of shame, and fewer social interactions (Kranke, Floersch, Townsend, & Munson, 2009).

Corrigan and colleagues (Corrigan, Watson, & Barr, 2006) proposed the progressive model of self-stigma to explain these findings. Self-stigma is the reduction of self-esteem that

stems from self-identifying as a socially unacceptable person (Corrigan, 2004). The model has four steps: awareness, endorsement, application, and harm (see top four boxes of Figure 1).

Stereotype *awareness* is the idea that those who grow up in a cultural context in which people with mental illness are stigmatized gradually become aware of the publicly held stereotypes of mental illness. For some individuals, awareness of these stereotypes leads to stereotype *endorsement*, in which they come to believe that negative stereotypes about people with mental illness are true. In the third step, individuals who identify as having a mental illness come to believe that these stereotypes *apply* to themselves. In the fourth and final step, the belief that these stereotypes apply to them leads to diminished self-esteem and self-worth (i.e., *harm*).

According to this model, the self-stigma of mental illness begins with a person's *endorsement* of mental illness stereotypes, making this a particularly salient target for prevention efforts by clinicians and researchers.

Corrigan and colleagues (2006) created an instrument to assess mental illness stereotype endorsement. As a result, greater stereotype endorsement has been linked with more negative attitudes towards seeking treatment (Coppens et al., 2013; Cooper et al., 2003), lesser likelihood of perceiving a need for professional help when suffering from a mental illness (Schomerus et al., 2012), lower use of treatment (Eisenberg, Downs, Golberstein, & Zivin, 2009), and poorer treatment adherence (Fung, Tsang, & Corrigan, 2008). Furthermore, researchers have started to develop interventions to reduce mental illness stereotype endorsement (e.g., Corrigan, Watson, Warpinski, & Gracia, 2004).

However, empirical research has recently established that there are multiple types of stigma that may impair treatment seeking. Specifically, the stigma of seeking help has been found to be parallel to—and independent from—the stigma of mental illness as well as a unique

predictor of help-seeking attitudes and intentions (Tucker et al., 2013). Tucker and colleagues found that (a) the self-stigma of mental illness and the self-stigma of seeking help formed related but independent factors and (b) the self-stigma of seeking help predicted unique variance in attitudes toward and intentions to seek psychological help beyond the self-stigma of mental illness. Thus, the authors asserted the need to examine models in which both types of stigma influence self-worth and willingness to engage with mental health services.

While the presence of these unique stigmas has been identified, researchers have not examined whether models such as Corrigan and colleagues' (2006) progressive model of self-stigma hold for the stigma of seeking help in the same fashion as they do for the stigma of mental illness. The progressive model, if adapted to the help-seeking stigma context, would posit that *awareness* of the negative stereotypes of someone who seeks help (e.g., they are pitiful) is a necessary pre-requisite to help-seeker stereotype *endorsement*, *application*, and then *harm* (see bottom four boxes of Figure 1). Corrigan's progressive model has introduced a valuable theoretical framework that has organized and galvanized subsequent stigma research: the seminal 2006 paper has 499 Google Scholar citations as of this writing. Given the promise of this model and the parallel but independent structure of the stigmas of mental illness and help seeking, the progressive model of self-stigma may hold utility for conceptualizing and studying the self-stigma of seeking help. However, the utility of this translated model cannot be tested until instrumentation exists to capture all four facets of the model in this novel domain. Whereas some measures exist that may assess aspects of the model (i.e., awareness [Komiya, Goode, & Sherrod, 2000]; application and harm [Vogel, Wade, & Haake, 2006]), no help-seeker stereotype endorsement measure yet exists.

This is a notable omission, as the self-stigma of seeking help has demonstrated stronger

ties with help-seeking intentions than the self-stigma of mental illness (Lannin et al., 2015). As a result, the endorsement of help-seeker stereotypes may act as a more salient barrier to seeking help than the endorsement of mental illness stereotypes. However, this is a bold assertion that requires stronger empirical testing. Given limited resources, it is important that interventions designed to increase help seeking target what matters most, whether that be mental illness stereotype endorsement, help seeker stereotype endorsement, or both. This question cannot be answered until an instrument assessing help seeker stereotype endorsement is developed. Therefore, the aim of this investigation was to develop the Help-Seeker Stereotype Scale (HSSS), which measures the strength of respondents' endorsement of negative stereotypes about people who seek help from a psychologist.

The Present Investigation

The HSSS was developed over five studies. Study 1 included instrument development and initial exploration of the HSSS's factor structure. Study 2 involved confirmation of the HSSS's factor structure and examination of the HSSS' model-based reliability. Study 3 further explored the HSSS' factor structure and model-based reliability in a community adult sample. Study 4 examined convergent and incremental evidence for the validity of the HSSS total score. Study 5 tested the four-week test-retest reliability of the HSSS total score.

Study 1: Instrument Development and Initial Exploratory Factor Analysis

Study 1 involved the development of an item pool, examination of the factor structure of the HSSS using Exploratory Factor Analysis (EFA), and selection of items for the HSSS.

Method

Instrument development. According to the progressive model of self-stigma (Corrigan et al., 2006), individuals who endorse negative mental illness stereotypes and come to believe

that these stereotypes apply to themselves will experience diminished self-esteem. It follows that an instrument designed to assess stereotype endorsement must assess negative stereotypes that have the potential to diminish self-esteem. Thus, we defined the construct of help-seeker stereotype endorsement as the strength of respondents' endorsement of negative, self-esteem harming stereotypes about people who seek help from a psychologist.

To identify the construct's content domain, we reviewed the published literature that (a) empirically assessed research participants' negative perceptions of individuals who seek professional psychological help (e.g., Nunnally & Kittros, 1958; Sibicky & Dovidio, 1986; Timlin-Scalera, Ponterotto, Blumberg & Jackson, 2003) and/or (b) focused on the stigma surrounding the act of seeking professional psychological help (e.g., Corrigan, 2004; Schomerus, Matschinger, & Angermeyer, 2009; Vogel et al., 2006). In addition, undergraduate students ($N = 71$) and adults from a community sample ($N = 107$) were asked to write down several characteristics they or those they know might use to describe people who seek help from a psychologist. Each participant generated an average of 5 items. Drawing upon these sources, the authors selected a set of 47 items that represented the unique aspects and characteristics identified from the different sources (5 from literature, 36 from pilot samples, 6 from both) that represented negative, self-esteem harming stereotypes of help seekers.

Twenty additional university students reviewed the comprehensibility and readability of the instructions and items. Their feedback indicated that the instructions were clear and comprehensible. Six items (inferior, irresponsible, neurotic, stoic, submissive, weak-willed) that were rated as unfamiliar by at least 10% of these pilot participants were removed. Next, we asked six experts who have published in the area of stigma of seeking help to evaluate the clarity of the HSSS's instructions and content validity of the items. The definition of the construct was

provided and the experts were asked to rate each item on a scale ranging from 1 (*does not fit at all*) to 5 (*fits very well*) on how well it fits the stereotypes of people who seek help from a psychologist. Seven items (detached, inexperienced, lazy, morally weak, paranoid, pessimistic, odd) that achieved a mean score of less than three were removed. Lastly, to verify that the stereotypes embedded in each of the items has the potential to diminish respondents' self-esteem, we asked 25 additional university students to indicate the extent to which their self-esteem would decrease if they came to believe that they were accurately described by the stereotype embedded in each item, using a 1 (*not at all*) to 5 (*a very great extent*) scale. Four items (e.g., feminine, indecisive, vulnerable, weird) that had a mean score of less than three (i.e., items that would not consistently reduce self-esteem across respondents) were removed. This item vetting process resulted in a revised item pool of 30 items, which were administered to Study 1 participants.

Participants, measures, and procedures. Study 1 participants ($N = 587$) were recruited via an email to all registered fourth-year students at a large, Midwestern university. Participants confidentially completed the survey online, which was described as a study of the factors influencing opinions about seeking help. The survey consisted of the HSSS instructions and items rated on a 1 (*Not at all*) to 7 (*Very much*) Likert-type scale (see Appendix), as well as demographic questions. Participants were not compensated. Demographics for all samples are provided in Table 1.

Results

Initial Exploratory Factor Analysis. SPSS (Version 20) was used to conduct a series of EFAs to explore the initial factor structure of the instrument. We first conducted an EFA using principal axis factor (PAF) extraction and direct oblimin (oblique) rotation. One thousand random Parallel Analysis data sets were then computed. Eigenvalues for the first two factors

were higher in the actual data set (i.e., 16.52, 1.92, 1.15) than in the parallel analysis (i.e., 1.44, 1.40, 1.35). These results and the scree plot supported a two-factor solution.

Approximate simple structure is demonstrated when each factor is composed of several (i.e., ≥ 3) items that load $\geq .50$ and $\leq .90$ on that factor and load $< .32$ on the other factors (Netemeyer, 2003, p. 125; Worthington & Whittaker, 2006). Examination of the pattern coefficients (see Table 2) revealed that 15 items loaded on the first factor and seven items on the second factor based on the above item retention criteria. The first factor accounted for 55.06% of the initial variance and the second factor accounted for 6.39% of the initial variance, for a total of 61.45%. The first factor consisted of adjectives denoting a deficient character (e.g., cowardly, untrustworthy, inadequate) while the second factor consisted of adjectives denoting emotional instability (e.g., insecure, not in control of his/her emotions, unstable). Use of varimax (orthogonal) rotation resulted in the same pattern of item loadings. In order to create a measure that minimizes participant burden and provides adequate coverage of the content domain of the two factors, we retained the six highest-loading items for each factor that met item retention criteria (Swanson & Holton, 2005). It should be noted that an ad hoc 22-item version retaining all items meeting retention criteria was found to correlate .99 with the final 12-item version of the HSSS.

A new EFA using PAF extraction and direct oblimin (oblique) rotation was conducted on this set of 12 items. The first factor accounted for 55.40% of the initial variance and the second factor accounted for 9.80% of the initial variance, for a total of 65.21% cumulative variance accounted for. All items loaded on their respective factors and met item retention criteria. The first factor was labeled Deficient ($\alpha = .90$; $M = 2.08$, $SD = 1.12$) and the second factor was labeled Unstable ($\alpha = .88$; $M = 3.54$, $SD = 1.33$). Table 3 presents the two factors and their

respective items, factor loadings, initial communality estimates, corrected item-total correlations, means, and standard deviations. The mean and standard deviation of the HSSS total score was 2.81 and 1.14, respectively. The final version of the instrument is provided in the Appendix. A Pearson product-moment correlation indicated that the two factors correlated at .71 ($p < .001$). This strong correlation between the two factors suggests that while two factors are present, a bifactor model may best account for HSSS' factor structure. This was examined in Study 2.

Study 2: Exploratory and Confirmatory Factor Analysis

Study 2 used a series of Confirmatory Factor Analyses (CFAs) on an independent sample to confirm factor structure of the HSSS (Worthington & Whittaker, 2006). Four competing measurement models (i.e., one-factor, two-factor orthogonal, two-factor oblique, bifactor) were tested. We tested a bifactor model to assess the possibility of a single general factor that reflects the common variance of all items beyond the variance accounted for by the two subscales (Reise, 2012). To specify the bifactor model of the HSSS, the six Deficient items were assigned to load on a Deficient factor and the six Unstable items were assigned to load on a Unstable factor. All 12 items were also assigned to load on a help-seeker stereotype endorsement "general" factor. The covariation between all three factors (general, deficient, unstable) was set to zero (i.e., the three factors were orthogonal). In other words, each item was allowed to load on both a general factor and its respective group factor, which allows researchers to identify how much reliable variance is captured by the general factor versus the group factors. "The general factor represents the conceptually broad 'target' construct an instrument was designed to measure, and the group factors represent more conceptually narrow subdomain construct" (p. 668; Reise, 2012). A significant advantage of using a bifactor model and follow-up model-based reliability estimates is that these complementary procedures allow researchers to identify whether

calculating the instrument's total score (i.e., the general factor) and/or subscale scores (i.e., the group factors) is valid. Bifactor analyses and model-based reliability estimates demonstrate whether the HSSS total score and subscale scores are distinct and reliable, two necessary attributes of a valid total score (American Education Research Association [AERA], American Psychological Association [APA], & National Council on Measurement in Education [NCME], 2014).

Method

Participants, measures, and procedures. Participants ($N = 594$) were recruited from a large, Midwestern University and compensated with course credit. Participants confidentially completed the survey online, which consisted of the HSSS and demographic items (see Table 1).

Results

Confirmatory factor analysis (CFA). To examine the factor structure of the HSSS, a series of CFAs using Full Information Maximum Likelihood (FIML) estimation in MPLUS (Version 6.11) was conducted. Mplus' MLR option for maximum likelihood estimation was used, which calculates a corrected/scaled chi-square test statistic (S-B χ^2 ; Satorra & Bentler, 1988). Model fit was evaluated using the Satorra-Bentler scaled chi-square goodness-of-fit test (S-B χ^2), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI) and Standard Root Mean Square Residual (SRMR) (Hu & Bentler, 1999; Weston & Gore, 2006). According to Weston and Gore (2006), the criteria for fit are: CFI and TLI $> .95$ for good fit and $> .90$ for acceptable fit; and RMSEA $< .06$ for good fit and $< .10$ for acceptable fit; and SRMR $< .08$ for good fit and $< .10$ for acceptable fit. The one-factor model, two-factor orthogonal model, and two-factor oblique model were all nested within the bifactor model. Thus, scaled chi-square difference tests ($\Delta S-R\chi^2$) and Bayesian information

criterion (BIC) values were used to compare the fit of each model. A BIC value difference exceeding 10 provides strong evidence of model fit difference (Kass & Raftery, 1995); the model with the lower BIC value is considered to have superior model fit.

Only the bifactor model (S-R χ^2 [42] = 204.00, $p < .001$; RMSEA = .08 [90% CI of .07, .09]; CFI = .95; TLI = .92 SRMR = .04) demonstrated acceptable fit. Fit for the other models was as follows: one-factor (S-R χ^2 [54] = 585.85, $p < .001$; RMSEA = .13 [90% CI of .12, .14]; CFI = .83; TLI = .79; SRMR = .07), two-factor orthogonal (S-R χ^2 [54] = 767.26, $p < .001$; RMSEA = .15 [90% CI of .14, .16]; CFI = .77; TLI = .72; SRMR = .30), and two-factor oblique (S-R χ^2 [53] = 476.68, $p < .001$; RMSEA = .12 [90% CI of .11, .13]; CFI = .87; TLI = .83 SRMR = .07). Scaled chi-square difference tests and examination of BIC value difference revealed that the bifactor model fit better than the: (a) one-factor model, Δ S-R χ^2 (12) = 270.87, $p < .001$, Δ BIC = 492.55; (b) two-factor orthogonal model, Δ S-R χ^2 (12) = 420.56, $p < .001$, Δ BIC = 699.31; and (c) two-factor oblique model, Δ S-R χ^2 (11) = 204.11, $p < .001$, Δ BIC = 325.88. The item loadings for the bifactor model are displayed in Table 4. Descriptive statistics for the HSSS were: total score ($\alpha = .92$; $M = 3.28$, $SD = 1.23$), Deficient ($\alpha = .92$; $M = 2.53$, $SD = 1.36$), and Unstable ($\alpha = .83$; $M = 4.04$, $SD = 1.30$).

Model-based internal consistency. To determine whether it is justified to calculate and interpret total and/or subscale scores for the HSSS, it is necessary to determine if the general factor (i.e., the total score), Deficient factor, and/or Unstable factor independently account for sufficient reliable variance in their constituent items to warrant interpretation. The coefficient omega hierarchical (ω_H ; McDonald, 1999) quantifies this form of model-based reliability when the data in question are consistent with a bifactor structure. The coefficient can range from 0 (no reliability) to 1 (perfect reliability), much like Cronbach's alpha. If ω_H is adequate, the HSSS

total score “predominantly reflects a single common source even when the data are multidimensional” (Reise, 2012, p. 689). Similarly, the coefficient omega subscale (ω_S) is a version of ω_H that estimates the reliability for a given subscale while controlling (i.e., partialling out) the part of the reliability due to the general factor. If ω_S is adequate for a given HSSS subscale, the subscale score for that subscale can be treated as a reliable indicator of the construct embodied by that subscale.

The value of $\omega_H = .87$ for the general HSSS factor suggested that calculation and interpretation of the HSSS total score is warranted. In turn, the value of $\omega_S = .002$ for the Deficient subscale and $\omega_S = .07$ for the Unstable subscale indicates low reliability of these subscale factors. When we look at the proportion of subscale score variance that is uniquely due to the subscale factor after controlling for the general factor, we find that the Deficient subscale’s unique reliability is .01 and the Unstable subscale’s unique reliability is .25. This further suggests that each subscale score’s reliability is significantly inflated by the general factor and that interpreting each subscale separately would be misleading. Thus, the HSSS appears to reflect a single common source of variance despite the presence of some multidimensionality. Therefore, only the HSSS total score—an internally consistent measure of general help-seeker stereotype endorsement—should be calculated and interpreted in future studies.

Study 3: Confirmatory Factor Analysis and Reliability among Community Members

Given the importance of studying help-seeker stereotype endorsement beyond college student populations, Study 3 further examined the HSSS’ factor structure and model-based reliability in a community adult sample.

Method

Participants, measurements, and procedures. Participants ($N = 353$) were collected

using Amazon's Mechanical Turk (MTurk) web service. Research suggests that Mturk participants are more demographically diverse than standard Internet and American college samples and provide data that has comparable reliability and validity to data collected from paper surveys and laboratory experiments (Buhrmester, Kwang, & Gosling, 2011). Participants indicated informed consent and then completed the HSSS and demographics (see Table 1). Similar to other researchers using Mturk (Mason & Suri, 2012), participants were compensated a nominal amount (12 cents).

Results

Confirmatory factor analysis (CFA). The same CFA procedures conducted in Study 2 were repeated for Study 3. As in Study 2, only the bifactor model (S-R χ^2 [42] = 123.12, $p < .001$; RMSEA = .07 [90% CI of .06, .09]; CFI = .96; TLI = .94; SRMR = .04) demonstrated an acceptable degree of fit. Fit for the other models was as follows: one-factor (S-R χ^2 [54] = 548.35, $p < .001$; RMSEA = .16 [90% CI of .15, .17]; CFI = .77; TLI = .72 SRMR = .09), two-factor orthogonal (S-R χ^2 [54] = 461.86, $p < .001$; RMSEA = .15 [90% CI of .13, .16]; CFI = .81; TLI = .77 SRMR = .29), and two-factor oblique (S-R χ^2 [53] = 316.73, $p < .001$; RMSEA = .12 [90% CI of .11, .13]; CFI = .88; TLI = .85 SRMR = .08).

Scaled chi-square difference tests and examination of BIC value difference revealed that the bifactor model fit better than the: (a) one-factor model, $\Delta S-R\chi^2$ (12) = 354.77, $p < .001$, $\Delta BIC = 480.01$; (b) two-factor orthogonal model, $\Delta S-R\chi^2$ (12) = 314.68, $p < .001$, $\Delta BIC = 348.57$; and (c) two-factor oblique model, $\Delta S-R\chi^2$ (11) = 175.79, $p < .001$, $\Delta BIC = 178.80$. In summary, the bifactor model had the best fit to this community sample data. The item loadings for the bifactor model are displayed in Table 4. Descriptive statistics for the HSSS total score were as follows: $\alpha = .93$; $M = 3.46$, $SD = 1.15$.

Model-based internal consistency. To verify findings from Study 2, we conducted the same model based reliability analyses on this community sample data. Results once again confirmed that the total score ($\omega_H = .83$) but not the Deficient ($\omega_S = .11$) nor Unstable ($\omega_U = .01$) subscales demonstrate sufficient reliability to be interpreted. Accordingly, Studies 4 and 5 utilized only the HSSS total score to operationalize the construct.

Study 4: Convergent and Incremental Evidence of Validity

Study 4 examined convergent and incremental evidence of validity for the HSSS total score by investigating the degree to which the direction and strength of associations between the HSSS total score and related constructs aligned with theoretical expectations and extant empirical research. As previously noted, the HSSS is primarily grounded in the theoretical model of Corrigan and colleagues (2006). This theory posits the existence of four constructs, each of which should correlate most strongly with adjacent constructs in the causal chain (see bottom four boxes in Figure 1). Consistent with this, extant research on this theoretical model in the mental illness context using Corrigan and colleagues (2006) Self-Stigma of Mental Illness Scale (SSMIS) has found small (i.e., r 's = .11 to .21 for awareness \rightarrow endorsement) to moderate (i.e., r 's = .39 to .55 for endorsement \rightarrow application/harm) relationships between the constructs (see Corrigan et al., 2006; Corrigan, Rafacz, & Rusch, 2011). Similarly, mental illness stereotype endorsement has typically demonstrated small to moderate inverse correlations with constructs directly predictive of help-seeking intentions and behavior (i.e., r 's = -.21 to -.40 for attitudes toward seeking professional psychological help; Brown et al., 2010; Coppens et al., 2013; Loya, Reddy, & Hinshaw, 2010). Therefore, we would expect small to moderate positive relationships between the HSSS and concepts related to awareness of stereotypes of help seeking (e.g., awareness of public stigma associated with seeking help), application/harm of help-seeking

stereotypes (e.g., self-stigmatization associated with seeking help), and constructs predictive of help seeking (i.e., attitudes towards seeking help). Finally, we would also expect a moderate positive relationships with the concept of stereotype endorsement but focused on mental illness (i.e., endorsement of stereotypes of mental illness).

Incremental Validity

According to the progressive model of help seeker self-stigma (see bottom four boxes of Figure 1), stereotype awareness (i.e., public stigma of seeking help) ultimately leads to application and harm (i.e., internalized as self-stigma of seeking help) through stereotype endorsement. However, while a number of studies have examined this link for mental illness stereotypes and shown a relationship between awareness of help-seeking public stigma and its internalization (Vogel, Wade, & Aschman, 2009; Vogel, Bitman, Hammer, & Wade, 2013), no study has examined whether help seeker stereotype endorsement plays a role in this process. Examination of the HSSS's the ability to account for additional variance in predicting application/harm beyond the variance accounted for by awareness of help-seeking public stigma is needed to demonstrate incremental validity of the HSSS total score and support of the progressive model of help seeker self-stigma theory. Specifically, incremental evidence of validity would be demonstrated if the HSSS total score was found to account for unique variance in application/harm (i.e., self-stigma of seeking help) beyond the variance accounted for by stereotype awareness (i.e., public stigma of seeking help).

Method

Participants and procedures. Participants ($N = 223$) were recruited using the same procedures as Studies 1 and 2. After indicating their informed consent, participants completed survey measures and demographics (see Table 1).

Measures.

Help-Seeker Stereotype Scale (HSSS). The 12-item HSSS was designed to measure the strength of respondents' endorsement of negative, self-esteem harming stereotypes about people who seek help from a psychologist. Items are answered on a 7-point scale, from 1 (*not at all*) to 7 (*very much*), with higher scores indicating stronger stereotype endorsement. The internal consistency of the HSSS was .92 (per Cronbach alpha) and .83 (per Omega Hierarchical) in the present sample, while the mean was 3.38 ($SD = 1.15$).

Public Stigma of Seeking Help. The 5-item Social Stigma of Receiving Psychological Help scale (SSRPH; Komiya, Good, & Sherod, 2000) assesses perceived *awareness* of the larger societal stigmas associated of seeking help. An example item is "People will see a person in a less favorable way if they come to know that he/she has seen a psychologist." Participants respond using a 4-point Likert scale from 1 (*strongly disagree*) to 4 (*strongly agree*), with higher scores indicating greater public stigma. The SSRPH has demonstrated convergent validity through correlations with the Attitudes Towards Seeking Professional Psychological Help Scale ($r = -.40$; Komiya et al., 2000). The SSRPH has demonstrated internal consistency ($\alpha = .71$) and had an internal consistency of .75 in the current sample.

Self-Stigma of Seeking Help. The 10-item Self-stigma of Seeking Help scale (SSOSH; Vogel et al., 2006) was used to measure *application/harm* (i.e., the degree participants feel their self-esteem would be threatened) of seeking professional psychological help. An example item is "I would feel inadequate if I went to a therapist for psychological help." Participants respond using a 5-point scale 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores indicating greater self-stigma. Five items are reverse-coded. The SSOSH demonstrated concurrent validity through correlations with attitudes toward counseling ($r = -.63$), intentions to seek counseling (r

= -.38), and the public stigma of seeking help ($r = .48$; Vogel et al., 2006). The SSOSH has demonstrated test-retest reliability over a period of 2 months ($\alpha = .72$) and internal consistency ($\alpha = .89$), and had an internal consistency of .89 in the current sample.

Attitudes Toward Seeking Professional Psychological Help. The 10-item Attitudes Towards Seeking Professional Psychological Help Scale (ATSPPH; Fischer & Farina, 1995) assesses attitudes toward seeking professional psychological help. An example item is “The idea of talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts.” Participants respond using a 4-point scale ranging from 0 (*disagree*) to 3 (*agree*), with higher scores indicating more positive attitudes toward seeking help. The ATSPPH has demonstrated concurrent validity through associations with intentions to seek help ($r = .50$; Vogel, Wade, & Hackler, 2007) and past psychological help seeking ($r = .39$; Fischer & Farina, 1995). The ATSPPH has demonstrated internal consistency ($\alpha = .84$), and had an internal consistency of .82 in the current sample.

Mental Illness Stereotype Endorsement. The 10-item stereotype endorsement subscale of the Self-Stigma of Mental Illness Scale (SSMIS-SE; Corrigan et al., 2006) assesses degree of endorsement of stereotypes about people with mental illness. An example item is “I think most persons with mental illness are to blame for their problems.” Participants respond using a 9-point scale from 1 (*I strongly disagree*) to 9 (*I strongly agree*), with higher scores indicating greater mental illness stereotype endorsement. The stereotypes assessed were adapted from the Devaluation-Discrimination subscale of Link’s (1982) perceived stigma measure. The stereotype endorsement subscale has demonstrated concurrent validity through associations with self-concurrence ($r = .55$) and self-esteem decrement ($r = .47$). The stereotype endorsement subscale has demonstrated internal consistency ($\alpha = .72$) and test-retest reliability ($r = .68$), and

had an internal consistency of .91 in the current sample.

Results

Preliminary analyses. Men ($M = 3.48$, $SD = 1.21$) and women ($M = 3.31$, $SD = 1.10$) did not significantly differ on the HSSS, $t(215) = 1.11$, $p = .27$. Those who had previously sought help from a mental health professional ($M = 3.23$, $SD = 1.24$) and those who had never sought help ($M = 3.45$, $SD = 1.09$) did not significantly differ on the HSSS, $t(209) = 1.32$, $p = .19$.

Convergent evidence of validity. To investigate convergent evidence of validity for the HSSS total score, bivariate Pearson correlations between the HSSS total score and each of the theoretically-related measures were conducted. The HSSS total score demonstrated the expected small to moderate positive correlations with concepts related to awareness of stereotypes of help seeking (e.g., awareness of public stigma associated with seeking help; $r = .20$, $p = .004$), application/harm of help-seeking stereotypes (e.g., self-stigmatization associated with seeking help; $r = .37$, $p < .001$), and constructs predictive of help seeking (i.e., attitudes towards seeking help; $r = -.25$, $p = .001$). The HSSS total score also demonstrated the expected moderate positive relationships with the concept of stereotype endorsement but focused on mental illness (i.e., endorsement of stereotypes of mental illness; $r = .51$, $p < .001$). These four findings provide convergent evidence of validity for the HSSS total score.

Incremental evidence of validity. To investigate the incremental evidence of validity for the HSSS total score, a hierarchical linear regression analysis was conducted wherein public stigma of seeking help (awareness) was entered at Step 1, the HSSS (endorsement) was entered at Step 2, and self-stigma of seeking help (application/harm) was entered as the criterion variable. In Step 1, public stigma of seeking help ($\beta = .33$, $p < .001$) explained 11% of the

variance in self-stigma of seeking help. In Step 2, the HSSS ($\beta = .32, p < .001$) explained an additional 10% of the variance in self-stigma of seeking help, providing initial evidence of incremental validity for the HSSS total score ($\Delta R^2 = .10, p < .001$).

Study 5: Test-Retest Reliability

Study 5 examined the Help-Seeker Stereotype Scale's (HSSS) 4-week test-retest reliability (i.e., temporal stability).

Method

Participants, measures, and procedures. Participants ($N = 150$) were recruited using the same procedures as Studies 2 and 4. Participants completed the survey items at Time 1 and four weeks later at Time 2. Participants were compensated with course credit each time they participated. Demographics are provided in Table 1. In the present study, the internal consistency of the HSSS was .92 at Time 1 and .94 at Time 2.

Results

Test-Retest Reliability. In support of the test-retest reliability of the HSSS, the Pearson zero-order correlation between participants' Time 1 and Time 2 scores was .78 and the average measures intraclass correlation coefficient (2,k) was .88. Furthermore, a paired-samples t-test suggested the absence of a significant mean difference, $t(149) = .31, p = .76$, between participants' Time 1 ($M = 3.01, SD = 1.11$) and Time 2 ($M = 2.99, SD = 1.18$) scores.

General Discussion

The purpose of the present investigation was to develop the Help-Seeker Stereotype Scale (HSSS), an instrument designed to measure the strength of respondents' endorsement of negative stereotypes about people who seek help from a psychologist. Results across five studies provide initial support for the reliability and validity of the HSSS total score across college and

community samples. Correlations with four stigma and help-seeking related constructs suggest that the construct assessed by the HSSS relates to other key constructs in theoretically-expected ways, providing convergent evidence of the validity of the HSSS total score. In addition, stereotype endorsement (operationalized by the HSSS total score) accounted for unique variance in application/harm beyond the variance accounted for by stereotype awareness, providing initial incremental evidence of the validity of the HSSS total score. This finding suggests that the incorporation of the stereotype endorsement construct into our theoretical understanding of the internalization link between public and self-stigma of seeking help is worth further verification and hints at the promise of adapting Corrigan and colleagues (2006) progressive model of self-stigma to the help seeking stigma context (see Implications for Research section below).

Importantly, the results across studies suggest that the HSSS total score may be considered an internally consistent measure of the construct of help-seeker stereotype endorsement. The Deficient and Unstable subscales scores represent narrower subdomains of the construct that do not account for sufficient reliable variance to warrant interpretation. This finding of one larger construct with narrower subdomains that do not warrant interpretation is a common result of studies that subject instruments to bifactor modeling (e.g., Brouwer, Meijer, Zevalkink, 2012; Gignac & Watkins, 2013) and has been shown to apply to well-validated instruments (e.g., Beck Depression Inventory-II; Wechsler Adult Intelligence Scale-IV). Thus, as with these instruments, only the HSSS total score should be used in future research.

Addressing Limitations through Future Research

The psychometric strengths of the HSSS outlined above should be considered in light of the limitations of the present investigation. Four of these studies relied on majority-Caucasian samples drawn from a university population. Though Study 3 provided empirical support for the

HSSS within a community adult sample, further examination of the cross-cultural reliability and validity of the HSSS among diverse groups (e.g., race/ethnicity, inpatient) is necessary. This is particularly true, given that the self-stigma of seeking help—of which stereotype endorsement is the first step—has been found to vary across cultures (e.g., Vogel et al., 2013).

Future studies might also further examine how use of mental health services may influence help seeker stereotype endorsement. While we did not find differences in the HSSS across those who used services and those who did not in Study 4, this was the only study to assess previous use of services. Additional examination is warranted, given past research demonstrating the effect of service use on perceptions of stigma (Wade, Post, Cornish, Vogel, & Tucker, 2011). Similarly, assessing level of contact with others who have used services could be important as stigma tends to decrease with level of contact (Corrigan, 2004). It also may be true that endorsement of stereotypes about help seeking is more salient to people currently experiencing mental health problems. However, because the present studies did not assess participant mental health, the potential influence of mental health on **participants** responses is not yet known. In addition, as with all cross-sectional research, the correlations reported in Study 4 do not offer evidence regarding causality. For this reason, experimental (e.g., in which participants in the experimental condition are primed with help-seeker stereotypes) and longitudinal (e.g., examination of the internalization of public stigma into self-stigma via stereotype endorsement) research is encouraged to gain a clearer understanding of the causal relationships between stereotype endorsement and other theoretically relevant constructs.

Another limitation may be the positive skew of the HSSS. Participants' mean scores on the final version of the HSSS ranged from 2.81 to 3.46 across the five samples, lower than the midpoint of 4 on the HSSS' response scale (i.e., 1 [*not at all*] to 7 [*very much*]). However, while

this positive skew is less than ideal from a measurement perspective, it suggests that the populations we sampled from may see these negative stereotypical attributes as only somewhat descriptive of help seekers, and is consistent with an established measure of mental illness stereotype endorsement ($M = 30$ on a 10 to 90 score range; Corrigan et al., 2011). Had we administered the HSSS to a sample primarily composed of individuals who experience strong self-stigma of seeking help, we would anticipate a more normal distribution of scores.

Furthermore, there are both positive and negative stereotypes of help seekers, held by some individuals and not others. The HSSS captures certain negative stereotypes that may inhibit some individuals' use of services. However, there certainly exist other stereotypes and other reasons that may influence help seeking, which are themselves worth future investigation. We did not create an instrument that directly assesses each of the four steps (e.g., awareness, endorsement, application, harm) of the model due to presence of other widely used instruments that already (at least partially) assess the other steps (e.g., SSRPH, SSOSH). However, there may be utility in adapting the HSSS to capture the three other steps, allowing further testing of the progressive model (see Implications for Research below). Finally, the HSSS was developed to assess stereotype endorsement regarding seeking help from psychologists, specifically, rather than from mental health professionals more generally. Counselors, social workers, and psychiatrists also provide mental health services, and the HSSS may be less appropriate for assessing stereotypes associated with these other sources of professional help. It may be worthwhile to develop and test an adaptation of the HSSS that uses the more inclusive term "mental health professional" in the instructions, in lieu of the term "psychologist."

Implications for Research

Results of the current study suggest that help-seeker stereotype endorsement is related to

various help seeking and stigma-related constructs. For example, the HSSS demonstrated a negative association with attitudes toward seeking professional psychological help. This finding is consistent with the previous research on the self-stigma of seeking help, which has been found to be inversely related with attitudes towards seeking help (Vogel et al., 2006; Tucker et al., 2013). The present data suggest that help-seeker stereotype endorsement may contribute to our understanding of potential barriers to help seeking. However, future research is needed to determine whether the HSSS is an independent, additive, or interactive predictor of key help-seeking outcomes.

Results also indicate that help-seeker stereotype endorsement correlates with both stereotype awareness (i.e., public stigma of seeking help) and a combined measure of stereotype application and harm to self-esteem (i.e., the Self-Stigma of Seeking Help scale), in line with the theoretical tenets of Corrigan and colleagues' (2006) progressive model of self-stigma. These findings suggest further study of the utility of the progressive model in the context of help-seeking stigma is warranted. The next step would be to directly test the applicability of the larger model identified by Corrigan and colleagues (2006) to help-seeking self-stigma, specifically. The HSSS will contribute to this test by operationalizing help-seeker stereotype endorsement and serving as the template from which parallel subscales for the other three steps of the model can be created.

We also encourage future research on the reliability and validity of the HSSS. This can include investigations of the HSSS' ability to predict future help-seeking attitudes and behavior, as well as the measurement invariance of the HSSS total score across racial/ethnic groups. In addition, because 52% of those who seek help for mental health problems in the past 12 months obtain help from general medical professionals (Wang et al., 2007), there may be utility

in developing a parallel instrument to capture stereotypes associated with this help seeking source. Stereotypes about seeking help from physicians could differ from the stereotypes captured by the HSSS due to various factors (e.g., perceptions of psychopharmacology).

Implications for Prevention and Practice

The present data provides initial support for the progressive model of self-stigma (Corrigan et al., 2006). As such, reducing endorsement of negative stereotypes about help seekers may help prevent some people who have mental health concerns (and hold these negative stereotypes) from avoiding treatment, for fear of applying these degrading stereotypes to themselves and experiencing decreased self-esteem as a result. If this finding is upheld in future research, future interventions to reduce stereotype endorsement may be important. Researchers may also be interested in examining the benefits of administering the HSSS during clinical intakes to determine the degree to which a given client negatively stereotypes help seekers. Understanding these stigmatized perceptions even for current clients may help to reduce self-stigma and increase retention and treatment adherence (Fung et al., 2007; Wade et al., 2011). For example, the counselor could directly explore in session how the client's belief that help seekers are "pitiful" or "selfish" has impacted the client's view of him or herself, and explore ways of helping the client to challenge this maladaptive belief.

Conclusion

Results from this investigation's five studies provide initial support for the reliability and validity of the HSSS total score. The ability to assess help seeker stereotype endorsement can facilitate future insight into the influence of stereotype endorsement on help-seeking outcomes, the validity of the progressive model of self-stigma in the help-seeking context, and the utility of assessing the favorability of respondents' mental image of a help seeker to predict willingness to

seek help (Hammer & Vogel, 2013). It is hoped that additional research into these topics will inform future prevention and intervention efforts aimed at increasing the willingness of people with mental illness to seek professional psychological help.

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Table 1

Participant Demographics for Studies 1 - 5

Characteristic	Study 1		Study 2		Study 3		Study 4		Study 5	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Gender										
Male	283	48.1	195	32.9	168	47.6	103	45.8	65	43.3
Female	301	51.2	399	67.2	180	51.0	121	53.8	85	56.7
Other	0	0.0	0	0.0	0	0.0	1	0.4	0	0.0
Did not respond	1	0.2	0	0.0	5	1.4	0	0.0	0	0.0
Race										
Asian American or Pacific Islander	34	5.8	24	4.1	23	6.5	9	4.0	5	3.3
Black or African-American	33	5.6	19	3.2	15	4.2	4	1.8	2	1.3
Latino/a or Hispanic	22	3.7	13	2.2	8	2.3	6	2.7	5	3.3
Multiracial	22	3.7	8	1.4	18	5.1	9	4.0	2	1.3
Non-Hispanic White	476	81.0	499	84.0	282	79.9	186	82.7	132	88.0
Other	N/A	N/A	9	1.5	0	0.0	11	4.9	0	0.0
International student	N/A	N/A	21	3.6	N/A	N/A	N/A	N/A	3	2.0
Did not respond	1	0.2	1	0.2	0	0.0	0	0.0	1	0.7
Year										
First year student	0	0.0	301	50.7	N/A	N/A	107	47.6	92	61.3

Sophomore	0	0.0	165	27.8	N/A	N/A	68	30.2	31	20.7
Junior	0	0.0	82	13.8	N/A	N/A	18	8.0	13	8.7
Senior	587	100.0	44	7.5	N/A	N/A	26	11.6	13	8.7
Other	0	0.0	1	0.2	N/A	N/A	6	2.7	0	0.0
Did not respond	0	0.0	1	0.2	N/A	N/A	0	0.0	1	0.7
Total <i>N</i>	587		594		353		225		150	

Note. N/A = this response option was not available to participants in this study.

Table 2

Factor Loadings for Two-Factor Exploratory Factor Analysis

	Factor	
	1	2
Worthless	.99	-.25
A failure	.95	-.16
Pathetic	.92	-.10
Cowardly	.78	.02
Untrustworthy	.77	-.03
Inadequate	.75	.05
Selfish	.73	.00
Incompetent	.73	.12
Pitiful	.73	.07
Insane	.72	.04
Ignorant	.71	.02
Crazy	.67	.10
Incapable	.67	.18
Unreliable	.62	.19
Weak	.60	.27
Whiny	.58	.26
Lacks willpower	.56	.29
Self-centered	.55	.15
Powerless	.47	.34
Attention-seeking	.44	.34
Out of control	.40	.39
Emotionally-unstable	-.08	.91
Insecure	-.06	.80
Not in control of his/her emotions	.04	.78

Unstable	.10	.71
Dependent	.08	.56
Needy	.31	.52
Oversensitive	.31	.51
Incapable of solving his/her own problems	.26	.50
Helpless	.38	.40

Note: Results of Exploratory Factor Analysis using principal axis factor extraction with oblique rotation (direct oblimin) when two factors were specified for extraction. $N = 587$. Bold indicates the strongest factor loadings for each item that met established item retention criteria.

Table 3

Items, Factor Loadings, Initial Communality Estimates, Corrected Item-Total Correlations, Means, and Standard Deviations for the Initial Version of the Help Seeker Stereotype Scale

Study 1 (N = 587)						
Item	F1: Deficient	F2: Unstable	<i>h</i> ²	Item- total <i>r</i>	<i>M</i>	<i>SD</i>
Cowardly	.82	-.02	.59	.76	2.00	1.34
Pitiful	.79	.02	.59	.75	2.14	1.41
Untrustworthy	.77	-.04	.51	.70	1.94	1.26
Incompetent	.76	.08	.63	.77	2.20	1.43
Inadequate	.76	.03	.57	.73	2.14	1.41
Selfish	.71	.00	.49	.67	2.05	1.36
Not in control of his/her emotions	-.04	.83	.56	.73	3.82	1.71
Insecure	-.10	.83	.49	.69	4.00	1.75
Unstable	.06	.73	.55	.71	3.50	1.67
Dependent	.04	.59	.35	.58	3.58	1.59
Needy	.29	.53	.56	.71	3.09	1.66
Oversensitive	.30	.51	.53	.68	3.26	1.77

Note: Results of Exploratory Factor Analyses using principal axis factor extraction with oblique rotation (direct oblimin). Bold indicates the strongest factor loadings for each item that met established item retention criteria.

Table 4

Confirmatory Factor Analysis Loadings for the Help Seeker Stereotype Scale

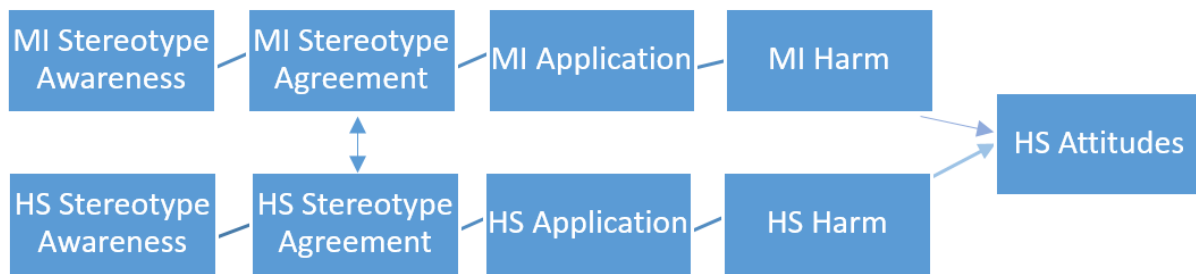
Parameter	Study 2 (N = 594)			Study 3 (N = 353)		
	Unstandardized	SE	Standardized	Unstandardized	SE	Standardized
Deficient factor						
Cowardly	1.00	†	.08	1.00	†	.61*
Pitiful	-1.92	4.09	-.14	.58	.09	.35*
Untrustworthy	4.42	5.73	.37*	.85	.12	.59*
Incompetent	-2.25	4.63	-.16	.69	.09	.43*
Inadequate	-.26	2.18	-.02	.65	.08	.38*
Selfish	4.30	7.38	.37*	.90	.11	.64*
Unstable factor						
Not in control of his/her emotions	1.00	†	.68*	1.00	†	.34*
Insecure	.59	.10	.44*	.95	.14	.33*
Unstable	.97	.13	.68*	1.93	.43	.65*
Dependent	.24	.06	.04	-.32	.24	-.10
Needy	.06	.08	.17*	-.54	.35	-.16*
Oversensitive	.32	.06	.20*	-.15	.24	-.04
General factor						
Cowardly	1.00	†	.82*	1.00	†	.58*
Pitiful	1.02	.06	.80*	1.27	.10	.73*
Untrustworthy	.88	.05	.79*	.75	.07	.51*
Incompetent	1.04	.06	.81*	1.11	.09	.67*
Inadequate	1.04	.04	.83*	1.22	.09	.69*
Selfish	.86	.06	.81*	.82	.06	.56*
Not in control of his/her emotions	.72	.06	.54*	1.20	.16	.75*

Insecure	.53	.06	.44*	1.05	.15	.68*
Unstable	.65	.06	.51*	1.24	.18	.78*
Dependent	.88	.05	.48*	1.03	.14	.59*
Needy	.63	.05	.69*	1.48	.16	.82*
Oversensitive	1.02	.05	.72*	1.48	.13	.79*

† Not tested for statistical significance because these values were scaling constants.

* Significant at $p < .001$

Figure 1. The Progressive Theoretical Model of Self-Stigmas.



Appendix

The Help-Seeker Stereotype Scale (HSSS)

We are interested in your ideas about typical members of a particular group. For example, we all have ideas about what typical movie stars are like or what the typical grandmother is like. When asked if we could describe one of these images, we might say that we think the typical movie star is pretty or rich, or that the typical grandmother is sweet and frail. We are not saying that all movie stars or all grandmothers are exactly alike, but rather that many of them share certain characteristics.

Take a moment to imagine the typical person who seeks help from a psychologist. To what extent does each of the following characteristics describe the typical person who seeks help from a psychologist?

1 (*Not at all*) – 2 – 3 – 4 – 5 – 6 – 7 (*Very much*)

Insecure

Pitiful

Unstable

Incompetent

Not in control of his/her emotions

Selfish

Untrustworthy

Needy

Oversensitive

Inadequate

Cowardly

Dependent