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Self-Stigma in Substance Abuse: Development of a New Measure

Jason B. Luoma, Ph.D.,

Portland Psychotherapy Clinic, Research, and Training Center, 1830 NE Grand Ave., Portland, OR 97211

Richard H. Nobles, Ph.D.,

Portland Psychotherapy Clinic, Research, and Training Center, 1830 NE Grand Ave., Portland, OR 97211

Chad E. Drake, Ph.D.,

Portland Psychotherapy Clinic, Research, and Training Center, 1830 NE Grand Ave., Portland, OR 97211

Steven C. Hayes, Ph.D.,

University of Nevada, Reno, 1664 N. Virginia St., University of Nevada, Reno, Department of Psychology/296, Reno, NV 89557

Alyssa O’Hair, M.A.,

University of Nevada, Reno, 1664 N. Virginia St., University of Nevada, Reno, Department of Psychology/296, Reno, NV 89557

Lindsay Fletcher, Ph.D., and

University of Nevada, Reno, 1664 N. Virginia St., University of Nevada, Reno, Department of Psychology/296, Reno, NV 89557

Barbara S. Kohlenberg, Ph.D.

University of Nevada School of Medicine, Department of Psychiatry and Behavioral Sciences, Mail Stop 0354, Reno, NV 89557-0354

Abstract

Little attention has been paid to the examination and measurement of self-stigma in substance misuse. This paper aims to fill this gap by reporting on the development of a new scale to measure self-stigma experienced by people who are misusing substances, the Substance Abuse Self-Stigma Scale. Content validity and item refinement occurred through an iterative process involving a literature search, focus groups, and expert judges. Psychometric properties were examined in a cross-sectional study of individuals ($n = 352$) receiving treatment for substance misuse. Factor analyses resulted in a 40-item measure with self devaluation, fear of enacted stigma, stigma avoidance, and values disengagement subscales. The measure showed a strong factor structure and good reliability and validity overall, though the values disengagement subscale showed a mixed pattern. Results are discussed in terms of their implications for studies of stigma impact and intervention.

Corresponding author: Jason B. Luoma, Ph.D., Portland Psychotherapy Clinic, Research, & Training Center, PC, 1830 NE Grand Ave., Portland, OR 97211, jbluoma@gmail.com, Phone: 503.281.4852, Fax: 503.281.4852.

Jason Luoma, Ph.D., is director of the Portland Psychotherapy Clinic, Research, & Training Center in Portland, Oregon. Dr. Luoma conducts research on stigma, shame, substance misuse, and dissemination of evidence-based therapies. He also maintains a small clinical practice and conducts training around the world in Acceptance and Commitment Therapy.

Keywords

stigma; substance misuse; psychometric; measure development

Stigma refers to a social process in which a perceived attribute marks an individual to be socially sanctioned and devalued (Luoma, 2010). Stigma may be divided into at least two domains: public stigma and self-stigma (Corrigan, 2002). Public stigma refers to the reaction the general public has toward the stigmatized group and includes stereotypes, judgments, and discrimination. Self-stigma refers to the self-devaluation and fear of enacted stigma resulting from identification with a stigmatized group that serves as a barrier to the pursuit of valued life goals (Luoma et al., 2008). Studies of individuals with serious mental illness and co-occurring disorders (Link and Phelan, 2006) have shown that self-stigma is associated with delays in treatment seeking or avoidance of treatment (Fung et al., 2008; Livingston and Boyd, 2010), diminished self-esteem/self-efficacy (Corrigan et al., 2006), increased mental health symptoms (Ritsher and Phelan, 2004), and lower quality of life (Rosenfield, 1997).

Data on self-stigma in addiction are sparse, and few measures exist to examine this construct (Luoma et al., 2010). Interventions for self-stigma in substance dependence have begun to be evaluated (Luoma et al., 2008; Luoma et al., in press), but the lack of self-stigma measures has limited progress.

A Functional Contextual Theory of Stigma

Our efforts to understand stereotyping and stigma are based on a modern behavior-analytic theory of language and cognition called Relational Frame Theory (RFT; Hayes et al., 2001). According to RFT, language and cognition are based on the learned ability to relate events and thereby change the function of those events. Certain categories, when applied to an individual by the perceiver, tend to dominate over other possible ways of responding to that individual. In the case of substance misuse, the types of categories (i.e., stereotypes) that tend to dominate are extremely pejorative and negative (Crisp et al, 2000). The result is enacted stigma, wherein those who are not misusing substances tend to respond to those identified as abusing substances in terms of those rigid categories. For a person misusing substances, these pejorative categories will not necessarily seem to apply to the self until the person comes to see him or herself as part of the conceptual group. When this change in self-categorization occurs, those pejorative categories begin to have their effects, resulting in *self-stigma*.

Self-stigma involves two types of cognitive content: 1) self-devaluation, which reflects internalized stereotypes and judgments (Ritsher et al., 2003; Corrigan, 2002), and 2) fear of being the target of enacted stigma, for example in the form of loss of housing opportunities (Cunningham et al., 1993; Luoma et al., 2007). Both aspects of self-stigma have been shown to be prevalent in people with stigmatized conditions (Luoma et al., 2007; Scambler, 1998; Taylor and Cert, 2001). The effect of self-stigma is not simply based on the frequency, intensity, or situational specificity of corresponding cognitive content, but also on how people relate to these thoughts (Hayes et al., 1999). Specifically, people do not just *have* stigmatizing thoughts and feelings, they try to suppress them, work to avoid them, or attempt to overcome them. They also believe them, act on them, or argue with them.

Experiential Avoidance and Self-Stigma

One socially encouraged way of relating to difficult and painful thoughts and feelings is experiential avoidance – the attempt to reduce, avoid, or escape difficult emotions, thoughts,

or sensations, even when avoiding these experiences creates harm (Hayes et al., 2004). Research suggests that experiential avoidance is broadly problematic and contributes to many behavioral problems such as substance misuse, depression, anxiety, psychosis, burnout, and adjustment to chronic medical conditions (for reviews, see Chawla and Ostafin, 2007; Hayes et al., 2006). Experiential avoidance of stigma-related thoughts and feelings may create difficulties for those misusing substances. Research on stereotype threat shows that when a person who identifies with a stigmatized group enters a situation with perceived potential for devaluation based on this identity (Steele, 1997; Steele et al., 2002), he or she typically adopts avoidance-focused goals (Brodish and Devine, 2009; Quinn et al., 2004) and engages in thought suppression (Schmader et al., 2008), which ultimately interferes with optimal performance. Paradoxically, this strategy may serve to exacerbate self-devaluation and fear of enacted stigma (Smart and Wegner, 1999; Wenzlaff and Wegner, 2000). People misusing substances tend to engage in secrecy and social withdrawal to avoid rejection from others, which exacerbates the negative psychosocial outcomes associated with substance dependence (Ahern et al., 2007; Luoma, 2010; Rüsçh et al., 2006). Similarly, people tend to cope with the fear of enacted stigma by withdrawing from or discounting the importance of the life domains associated with stereotypes (Major et al., 1998), which can lead to disengagement from such areas as treatment seeking (Livingston and Boyd, 2010) or searching for employment (Stuart, 2004).

In summary, a functional contextual model identifies four components of self-stigma. Firstly, people who identify with the stigmatized group internalize pejorative stereotypes, resulting in self-devaluation. Second, they fear encountering enacted stigma. Third, they tend to respond to these first two types of cognitive content in a problematic manner, most prominently through experiential avoidance. Fourth, this pattern of responding can interfere with the persons' ability to pursue valued life goals. This paper outlines the development of a new measure containing four hypothesized subscales focused on these four components. The first study describes our development of the initial item pool, while the second study investigates the measure's psychometric properties.

Method

The study proceeded following approval from the University of Nevada, Reno Institutional Review Board, and all participants provided informed consent.

Study 1: Content Validity and Item Refinement

Identification of domains of stigma—A literature review resulted in an initial list of common stereotypes associated with addiction in the United States. This was refined with input from three focus groups of addictions treatment patients and two groups of addictions treatment professionals. The ten content domains we believed most succinctly captured the range of stereotypes were identified (see Table 1). Concealment was conceptualized as part of experiential avoidance and therefore included as part of that subscale, leaving nine domains for which items were generated.

Development of initial item pool—To generate the initial item pool, we acquired a cross-section of self-report instruments that measured aspects of stigma, self-stigma, self-esteem, depression, stigma awareness, shame, and experiential avoidance. Several hundred items were generated to reflect four hypothesized subscales: 1) frequency of self devaluing thoughts and feelings, 2) fears of enacted stigma, 3) experiential avoidance of stigmatizing thoughts and feelings and enacted stigma, and 4) disengagement from values due to stigma. For each subscale, several items were created to reflect each of the nine domains. Three judges (J. L., A. R., and a clinical psychology graduate student) rated each item for quality

(defined as the degree of readability and lack of socio-cultural bias, on a scale ranging from 1 “poor” to 4 “excellent”) and fit (defined as the degree to which each item reflected the content the scale was intended to measure on a scale from 1 “poor” to 4 “excellent”). Items and their ratings were reviewed in a meeting with all three judges. Items with low ratings were either removed or rewritten to be more understandable. The goal was to retain several items for each domain in each subscale to make sure items could be dropped during psychometric analyses to be conducted in Study 2. The result was a 128-item scale that was given to a pilot group of 17 individuals at the same residential addictions treatment program as in Study 2. Participants (both men and women) were approached during group meetings, provided a flyer about the study, and told where the initial assessment would occur. The assessment was conducted in groups. Participant demographics were not obtained. Participants were asked to note any items that they found hard to read or that they did not like. Scale completion was followed by a structured focus group intended to elicit further reactions to the pilot measure. Next, each item, along with judge and participant feedback, was reviewed in a group meeting (with the first author and two graduate students). A consensus process resulted in weaker items either being removed or rewritten with the goal of retaining at least two items for each content area. The result was a revised 74-item scale with four hypothesized subscales. This *Substance Abuse Self-Stigma Scale* (SASSS) was piloted in study 2.

Study 2: Validation Sample

Participants—Three hundred fifty-two patients (210 men, 141 women, 1 unidentified) with an average age of 31.1 years ($SD = 10.2$, range 18–63) who were receiving residential ($n = 29$) or outpatient ($n = 323$) substance abuse treatment at a mostly publicly-funded treatment center participated. Treatment at this center was eclectic, with a central focus on 12-step participation. Regarding race, 4% ($n = 14$) identified as American Indian/Alaskan Native, .9% ($n = 3$), as Asian/Pacific Islander, 4.3% ($n = 15$) as Black/African American, 80.4% ($n = 283$) as White, 6.5% ($n = 23$) as other, and 4% ($n = 14$) provided no response. For ethnicity, 7.4% ($n = 26$) identified as Mexican, 7.4% ($n = 13$) as Other Hispanic, 41.8% ($n = 147$) as Not of Hispanic Origin, and 46.3% ($n = 163$) gave no response. For marital status, 49.4% ($n = 174$) identified as never married, 11.4% ($n = 40$) as married, 10.8% ($n = 38$) as separated, 23.6% ($n = 83$) as divorced, 2.6% ($n = 9$) as widowed, and 2.3% ($n = 8$) gave no response.

Participants reported an average of 1.2 episodes of previous treatment ($n = 342$, $SD = 1.7$). Reports of substance use included 82.4% ($n = 290$) using alcohol for an average of 12.3 years ($SD = 9.6$), 81.3% ($n = 286$) using marijuana for an average of 12.0 years ($SD = 9.3$), 49.4% ($n = 174$) using hallucinogens for an average of 6.9 years ($SD = 7.6$), 12.5% ($n = 44$) using inhalants for an average of 6.9 years ($SD = 7.6$), 78.4% ($n = 276$) using methamphetamine for an average of 9.6 years ($SD = 7.3$), 48.9% ($n = 172$) using cocaine for an average of 5.9 years ($SD = 6.7$), 10.8% ($n = 38$) using heroin for an average of 6.4 years ($SD = 7.9$), 19.3% ($n = 68$) using opiates for an average of 6.7 years ($SD = 6.8$), 9.9% ($n = 35$) using methadone for an average of 3.3 years ($SD = 3.7$), 12.5% ($n = 44$) using barbiturates for an average of 5.6 years ($SD = 5.8$), 14.2% ($n = 50$) using benzodiazepines for an average of 5.9 years ($SD = 5.3$), and 74.2% ($n = 261$) using other substances (mostly cigarettes) for an average of 15.1 years ($SD = 9.3$).

Procedure—Over a six-month period, staff arrived at the conclusion of treatment groups and asked for volunteers to participate in study of “the ways that stigma and shame may apply to people in treatment for substance use.” Volunteers were led to another room where they were introduced to the study, provided informed consent, and completed the questionnaire packet. Participation took about one hour and reimbursement was a \$10

department store gift card. In an attempt to increase the validity of reporting, participants were informed that their answers would not be shared with treatment staff.

Measures—Current sample internal consistency is reported at the start of each measure description. As part of the initial item pool generation, dozens of related measures were collected. For study 2, we reviewed those measures to identify measures of stigma, shame, stigma-related concealment, substance-related experiential avoidance, and psychological flexibility.

Substance Abuse Self-Stigma Scale (SASSS) item pool: The item pool for the SASSS contained 74 items divided into three sections. Section one, designed to measure self-devaluation, contained 16 items rated on a 1 (never or almost never) to 5 (very often) scale. Section two, designed to measure fear of enacted stigma, contained 18 items rated on a 1 (few people [0–20 percent]) to 5 (almost everyone [80–100 percent]) scale. Section three contained 40 items rated on a 1 (never or almost never true) to 5 (always or almost always true) scale designed to measure stigma avoidance and values disengagement.

Internalized shame: The Internalized Shame Scale (ISS; $\alpha = .96$; Cook, 1996) is a 24-item questionnaire that assesses shame-related thoughts and feelings. The original instrument contains response options on a 0 (never) to 4 (almost always) scale. Due to administrator error, the present study used a seven-point scale ranging from 1 (never) to 7 (always). The measure has shown good psychometric properties in past studies (Cook, 1996).

Internalized stigma: The Internalized Stigma of Substance Abuse scale (ISSA; $\alpha = .92$) is an adaptation of the Internalized Stigma of Mental Illness scale (Ritsher et al., 2003) and measures subjective experience of stigma related to substance abuse. This adapted measure has not been studied, though the original measure obtained good psychometric properties. The scale consists of 29 items, with higher scores indicating higher stigma.

Psychological flexibility: The Acceptance and Action Questionnaire (AAQ; $\alpha = .40$; Hayes et al., 2004) is a nine-item self-report measure of psychological flexibility and experiential avoidance that has shown good reliability and validity in scores of previous studies. High scores represent high psychological flexibility. This measure obtained a low internal consistency in the current sample ($\alpha = .40$) and thus results with this measure must be interpreted with caution.

Psychological flexibility for substance abusers: The Acceptance and Action Questionnaire – Substance Abuse (AAQ-SA; Luoma et al., 2011) is an 18-item scale designed to measure psychological flexibility in substance misusing populations and has preliminary evidence for good psychometric properties using the same sample as in this manuscript (Luoma et al., 2011). It is comprised of two subscales – a nine-item scale assessing an individual’s capacity to accept substance-related memories and urges (defused acceptance) and a nine-item scale assessing commitment to sobriety and behaving consistently with values (values commitment). Higher scores represent higher psychological flexibility. Internal consistency in the current sample for the total scale, defused acceptance subscale, and values commitment subscale were .85, .84, and .82, respectively.

Social support: The Multidimensional Scale of Perceived Social Support (MSPSS; $\alpha = .90$; Zimet et al., 1990) is a 12-item questionnaire assessing one’s perception of social support from family, friends, and a significant other, with high scores indicating poor social support. This scale has well established reliability and validity (Zimet et al., 1990).

Self-esteem: The Rosenberg Self-Esteem Scale (RSES; $\alpha = .88$; Rosenberg, 1965) is a commonly used (e.g., Blascovich and Tomaka, 1991) 10-item measure of global self-esteem. The use of this scale is well established in the literature (e.g., Blascovich and Tomaka, 1991).

Self-concealment: The Self Concealment Scale (SCS; $\alpha = .90$; Larson and Chastain, 1990) is a 10-item measure of a general tendency to hide distressing or negative personal information, with higher scores indicating higher self concealment. This scale has shown good reliability and validity in previous studies (Larson and Chastain, 1990).

Stigma-related rejection: The Stigma-Related Rejection Scale (SRS; $\alpha = .82$; Luoma et al., 2007) is a nine-item survey of ongoing experiences of personal rejection related to enacted stigma adapted from a measure originally used in a mentally ill sample (Wahl, 1999). Higher scores indicate higher rejection.

Perceived stigma: The Perceived Stigma of Addiction Scale (PSAS; $\alpha = .71$; Luoma et al., 2010) is an eight-item questionnaire measuring perceptions of the prevalence of stigmatizing beliefs toward substance use. Higher scores indicate perceptions of more frequent negative attitudes toward addiction. A previous study suggested the scale has good face validity, construct validity, and adequate internal consistency (Luoma et al., 2010).

Stigma-related secrecy: A nine-item scale measuring a tendency to conceal a history of problems with drugs or alcohol was adapted from a measure originally used in a mentally ill sample (SRS; $\alpha = .88$; Link et al., 2002). Higher scores indicate higher levels of secrecy.

Stigma-related withdrawal: An eight-item scale measuring a tendency to withdraw from or avoid others who do not share a history of addiction was adapted from a measure originally used in a mentally ill sample (SRW; $\alpha = .65$; Link et al., 2002). Higher scores indicate higher levels of withdrawal. The relatively low internal consistency for this measure should be considered in interpreting results.

Active coping with stigma: A seven-item scale was created to measure the tendency to cope with stigma through educating others or challenging stigmatizing behavior. Items were modified from an instrument used to address stigma toward mental illness ($\alpha = .81$; Link et al., 2002). Higher scores indicate higher levels of active coping.

To reduce assessment burden, two different questionnaire packets were created, each containing a subset of the measures. Both packets included the SASSS ($n = 352$), AAQ-SA ($n = 344$), AAQ ($n = 342$), PSAS ($n = 347$), SRS ($n = 347$), SRW ($n = 347$), and the measure of active coping with stigma ($n = 345$). One packet included the ISS ($n = 161$), ISSA ($n = 157$), SCS ($n = 158$). The other contained the RSES ($n = 182$), MSPSS ($n = 180$), and SRS ($n = 185$). The administration order of these two packets was not specified to research assistants and therefore the order of administration was not systematic.

Results

Data analyses began with examining all individual item distributions on the SASSS. No items were extremely skewed or kurtotic.

Section 1: Self-Devaluation

As anticipated, a scree plot in a principle components factor analysis (Cortina, 1993) confirmed that items from the self-devaluation section loaded on a single factor. As

recommended in Clark and Watson (1995), we examined the intercorrelation matrix and found mostly moderate correlations ($r = .15-.5$) after removing three items that were highly intercorrelated and one item with very low inter-item correlations. If a pair of items within a single content area (see Table 1) included one item with a notably higher item-total correlation, it too was removed to avoid redundancy; this eliminated two more items. The resulting 10-item subscale measured all content areas (see Table 2) except “incompetence” and included two items representing shame.

Section 2: Fear of Enacted Stigma

The 18 items in this section were hypothesized to represent a single factor, as confirmed by a scree plot in a principle components factor analysis. Inter-item correlations ranged between $r = .15-.6$. On theoretical grounds, we attempted to retain at least one item for each content domain. Two items found to have low commonalities were also slightly skewed and were removed. Items within a single content area that had notably higher item-total correlations were removed. The result was a nine-item scale that retained one item for each domain (see Table 2).

Section 3: Stigma Avoidance and Values Disengagement

The 40 items from section four intended to measure stigma avoidance and values disengagement were subject to a series of principle components factor analyses, with oblique and orthogonal rotations. Results were generally the same across the different methods of extraction with, based on the scree plot, a two-factor or possibly a very weak four-factor solution. The third and fourth factors were not interpretable, so a two-factor solution was chosen. The two factors showed a low correlation with each other, $r(339) = .33$ and thus Varimax rotation was used. Examining the rotated solutions, we removed items until all items loaded above .4 on their principle component and below .3 on the second component. Two items were removed due to low item-total correlations. This resulted in a 20-item factor we named Stigma Avoidance and a second 11-item factor that we named Values Disengagement (see Table 3). In order to improve interpretability, all the items on the Values Disengagement scale were reverse scored such that higher scores indicated greater stigma.

Exploratory Factor Analysis of the Complete Scale

In order to create more discrete subscales, we ran a principal components factor analysis with Varimax rotation that included the 48 items from the four subscales. Examination of the scree plot indicated a clear four-factor solution. Eight items were removed for failure to load above .4 on the primary factor and less than .4 on other factors. The result was the final forty-item scale shown in Tables 2 and 3. The scale has four factors that accounted for 43% of the variance with little item overlap.

Structural Equation Modeling to Assess Possible Method Variance in Section 3

Although results from the exploratory factor analysis suggested the presence of a two-factor solution in section 3 of the scale, we noted that items loading on the Values Disengagement subscale were worded positively (e.g., “I can set a direction for my life even if I feel hopeless”) and items loading on the Stigma Avoidance factor were worded negatively (e.g., “I avoid situations that make me feel different.”). Thus, we reasoned that that the two-factor solution found for Section 3 could be due to method variance related to item wording valence. A series of structural equations models were conducted, using AMOS Version 17 using maximum likelihood estimation, to examine whether a two-factor model was superior to a single-factor model with a method factor (see Table 5). Data were checked for missing values, which ranged from 0% to 2.9% across variables. Most (89%) cases were complete.

Data were imputed using an expectation-maximization (EM) algorithm. Individual items met assumptions of univariate normality, but the assumption of multivariate normality for the items was violated as indicated by a significant Mardia's multivariate kurtosis index (25.11, $p < .001$). Thus, model fit was examined using a chi-square statistic utilizing bootstrap adjusted p values (Bollen and Stine, 1993). The p values were generated from 2000 bootstrapped samples.

We first ran a series of models comparing a single-factor model, a two-factor model, a single-factor model with a method effect related to negatively worded items, and a single-factor model with a method effect due to positively-worded items. As expected in light of the results of the exploratory factor analysis, model fit for the single-factor model (Model 1) was unacceptable, $\chi^2(230) = 1032.53$, $p < .001$; RMSEA = .10; SRMR = .11; CFI = .62. In Model 2, all 23 items served as indicators of a single latent factor and the 13 negatively worded items as indicators of a method variance latent factor. The fit of Model 2 was improved over Model 1, but still not optimal, $\chi^2(217) = 508.59$, $p < .001$; RMSEA = .06; SRMR = .06; CFI = .86. However, after examining the modification indices for the model, we decided to allow two sets of item error variances to covary (error variances for items 25 and 26 and for items 36 and 38). These covariances made conceptual sense, as the paired items were similarly worded. The model fit for the model with adjusted error covariances was improved, $\chi^2(215) = 422.78$, $p < .001$; RMSEA = .05; SRMR = .05; CFI = .90. The error covariances were significant, $r_s = -.40$ and $.27$ for items 7 and 8 and 18 and 20, respectively. Error covariances were estimated in subsequent model examinations. In model 3, all 23 items served as indicators of a single latent factor, and the 10 positively worded items served as indicators for a method variance latent factor. Fit for this model was significantly improved over Model 1 and was comparable to Model 2, $\chi^2(215) = 406.04$, $p < .001$; RMSEA = .05; SRMR = .05; CFI = .91; error covariance $r_s = -.38$ and $.28$. Model 4 tested the two-factor model where the 10 items from the Values Disengagement scale served as indicators of a latent factor and the 13 items from the Stigma Avoidance scale served as indicators of a second latent factor. Considering the correlation between these two factors discussed earlier, a covariance between the latent factors was also estimated. This model was an improvement over Model 1 and similar to Models 2 and 3, $\chi^2(227) = 443.18$, $p < .001$; RMSEA = .05 [CI]; SRMR = .06; CFI = .90; error covariance $r_s = -.40$ and $.28$.

As the model fit for the single-factor models with method variance and two-factor model were similar, we decided to conduct additional analyses. To further evaluate method variance, we needed to introduce a variable strongly related to stigma-related psychological flexibility but weakly related to method effects (cf., Hazlett-Stevens et al., 2004). A measure of substance misuse related psychological flexibility, the AAQ-SA, was selected for this purpose. The AAQ-SA was evaluated in another study (Luoma et al., 2010) and has a nearly equal number of positively and negatively worded items. Support for presence of a method factor would be obtained if the overall latent factor measuring stigma avoidance is predictive of psychological flexibility and if the method factor is *not* predictive of psychological flexibility. In contrast, support for the two-factor model would be found if *both* latent factors are predictive of general psychological flexibility. Three more models were run with error covariances as in the previous paragraph (see Table 4 and Figure 1). For Model 5, a single-factor model with negatively worded method variance, model fit was marginally acceptable, $\chi^2(236) = 475.51$, $p < .001$; RMSEA = .05 [CI]; SRMR = .05; CFI = .89. Both the overall factor and method factor were significant predictors of AAQ-SA scores. The factors accounted for 20% of the variance in AAQ-SA scores. For Model 6, the single-factor model with positively worded method variance, model fit was also marginally acceptable, $\chi^2(239) = 457.71$, $p < .001$; RMSEA = .05 [CI]; SRMR = .05; CFI = .90. As with the negatively worded method variance model, both the overall and method factors significantly predicted AAQ-SA scores. The factors accounted for 20% of the variance in AAQ-SA scores. For

Model 7, the two-factor model, model fit was also marginally acceptable, $\chi^2(249) = 531.18$, $p < .001$; RMSEA = .06 [CI]; SRMR = .06; CFI = .87. The factors accounted for 16% of the variance in AAQ scores. Importantly, both the stigma avoidance and values disengagement constructs significantly predicted AAQ-SA scores. In total, results are consistent with a two-factor interpretation for section 3. Thus, in the remainder of the manuscript, we will continue to describe results for all four subscales.

Internal Consistency

Self-Devaluation (8 items; $\alpha = .82$), Fear of Enacted Stigma (9 items; $\alpha = .88$), Stigma Avoidance (13 items; $\alpha = .86$), Values Disengagement (10 items; $\alpha = .82$), and the full scale (40 items; $\alpha = .86$) obtained acceptable levels of internal consistency.

Relationships with Demographics

One-way ANOVAs examining differences between demographic groups on full-scale scores were not significant for marital status and race ($p > .05$). T-tests examining these differences were non-significant for ethnicity (i.e., Hispanic vs. Non-Hispanic), sex, or age ($p > .05$).

Criterion Validity

We expected that those failing to maintain abstinence while participating in an abstinence oriented treatment program would experience increased self-devaluation, fear of being judged by others, and ongoing avoidance of both. As the majority of the sample endorsed no substance usage in the last 30 days ($n = 265$), we used a t-test to compare participants reporting no usage in the last 30 days to those reporting any days of usage. Results were significant for Self-Devaluation, $t(325) = 2.152$, $p < .032$, Fear of Enacted Stigma, $t(324) = 2.573$, $p < .011$, Stigma Avoidance, $t(319) = 3.158$, $p < .002$, and the full scale, $t(316) = 3.080$, $p < .002$, such that SASSS scores were always lower, indicating less difficulty with self-stigma, among the group reporting no substance usage in the last 30 days (Self-Devaluation $M = 19.80$, $SD = 6.34$; Fear of Enacted Stigma $M = 21.02$, $SD = 7.39$; Stigma Avoidance $M = 32.57$, $SD = 9.92$) compared to the group reporting usage ($M = 21.77$, $SD = 6.99$; $M = 23.77$, $SD = 8.42$; $M = 36.96$, $SD = 9.47$). Only the Values Disengagement subscale was not different between groups, $p > .242$.

Convergent and Discriminant Validity

Table 5 contains correlations obtained between the SASSS and the measures reported above. The subscales measuring self-devaluation, fear of enacted stigma, and stigma avoidance were all moderately intercorrelated, while the values disengagement scale was less correlated with all three other SASSS subscales and total score (Table 5).

Self-devaluation was highly correlated with internalized shame, internalized stigma, and self esteem (negatively), all of which focus heavily on global evaluations of oneself. Slightly lower correlations were observed with the substance-specific and general measures of experiential avoidance. This moderate correlation is expected, as measures of experiential avoidance typically have moderate correlations with measures of negative affect and self-judgment (Hayes et al., 2004). The only measure that was not correlated with self-devaluation was the values commitment subscale of the AAQ-SA.

Fear of enacted stigma was moderately correlated with stigma-related rejection, internalized shame, internalized stigma, and self devaluation. As expected, fear of enacted stigma was more highly related to scales measuring perceptions of stigma from others, such as the perceived stigma scale and the stigma-related rejection scale, than was self-devaluation.

Stigma avoidance was most highly correlated with internalized stigma and internalized shame. Moderate correlations were also found with self-esteem, stigma-related rejection, defused acceptance on the AAQ-SA, and psychological flexibility on the AAQ-SA.

Values disengagement was most highly correlated with the values commitment subscale of the AAQ-SA and overall substance-related psychological flexibility, which are similar to the values disengagement construct. The third strongest correlation was with self-esteem, suggesting that this subscale might be influenced by the person's overall self evaluation. In general, values disengagement had lower correlations with other measures than the other three subscales. Unexpectedly, while higher values disengagement predicted more stigma-related secrecy, it predicted lower levels of stigma-related withdrawal, a finding that might reflect a relationship between values disengagement and disengagement from the recovery community.

Comparing subscales 3 and 4, the stigma avoidance subscale generally correlated more highly with measures of negative or unpleasant psychological experiences such as internalized shame, as well as avoidance-related measures. In contrast, values disengagement generally correlated more highly with measures of goal-focused action (i.e., the values commitment subscale of the AAQ-SA and active coping with stigma).

Discussion

A project was initiated to develop a self-report measure of self-stigma based on a psychological flexibility model (Masuda et al., 2009). Factor analyses led to the development of a 40-item instrument with four discrete subscales, three of which (self devaluation, fear of enacted stigma, and stigma avoidance) demonstrated good internal consistency, a reliable factor structure, and predicted correlations with established measures. A fourth subscale, values disengagement, had a mixed pattern of discriminant, criterion, and convergent validity. SASSS total scores correlated with measures of internalized stigma and internalized shame but not so strongly as to suggest that they measure the same construct.

The self-devaluation subscale showed its highest correlations with measures of negative affect and self-judgment, whereas the fear of enacted stigma subscale had its highest correlations with measures relating to public stigma (i.e., perceived stigma and stigma-related rejection). Scores on both of these subscales were higher among those participants reporting ongoing substance use compared to those who reported being sober for at least 30 days.

The stigma avoidance subscale had its highest correlations with other measures of internalized stigma. The stigma avoidance scale also showed moderate (i.e., non-redundant) correlations with other measures of experiential avoidance in other domains. Those participants reporting more recent substance use scored higher on the stigma avoidance subscale.

While the values disengagement subscale had good internal consistency, it generally had lower correlations with the other subscales and convergent validity measures. It was also the one subscale that did not differ between those with and without ongoing substance abuse. The values disengagement subscale did correlate moderately with measures of values commitment, overall substance-related psychological flexibility, goal-focused action, and active coping with stigma.

One possible explanation for the relatively poor performance of values disengagement scale is an item-wording effect. Specifically, all items in the stigma avoidance subscale were negatively worded, whereas all items in the values disengagement subscale were positively

worded. A series of structural equation models suggested that separate stigma avoidance and values disengagement subscales was the superior explanation. While analyses suggest that the values disengagement scale is not simply a method artifact due to differences in item valence, further research is needed to better understand the reliability and validity of this subscale.

The relatively low correlation between overall SASSS scores and perceived stigma provide further support to the idea that perceived stigma and self-stigma are not the same construct (Luoma et al., 2010). People in a stigmatized group can be aware of the judgment of others while not necessarily internalizing those ideas. Moderate correlations between the SASSS and internalized shame support the idea that shame is a core component of the self-devaluation found in self-stigma. It seems likely that those who experience high levels of self-stigma are likely to experience high levels of shame, however, shame occurs in many contexts outside stigma and there may be some in this sample who feel ashamed of themselves for other reasons than their substance use difficulties. SASSS total scores were also moderately correlated with another measure of internalized stigma that was adapted from an existing measure of internalized stigma in mental illness. This might be expected as both measures target roughly the same domain, but are based on differing theoretical models that led to their construction. However, as the psychometric properties of the measure of internalized stigma are not established, caution should be taken in interpreting those results.

Limitations of this study include the lack of longitudinal data or a separate sample for a confirmatory factor analyses. Our sample consisted of those who had already overcome the stigma associated with seeking treatment and, therefore, it is possible that our measure may perform differently for those who are not in treatment. Some of the measures included in this study were either newly created or adapted from existing other measures and therefore weaken their ability to establish convergent validity. The measure of psychological flexibility included in the study had a poor internal consistency and its results should be interpreted with caution. Participant reports of substance use were not verified via testing, rates of participation were not recorded, and the two separate assessment packets in study 2 were not systematically administered. The lack of measures of anxiety, depression, or severity of addiction weakened our ability to establish the discriminant validity of the SASSS compared to more general measures of psychopathology. Future studies of the SASSS should include these measures, as well as consider amount of time in treatment.

Another limitation of the SASSS is that in order to respond coherently to it, the respondent must recognize him or herself as someone with a “problem with substances.” Those who are objectively abusing or dependent on drugs or alcohol but do not see themselves as “having a problem with substances” are likely to think this measure does not apply to them. Thus, this measure should only be used with people who have self-identified as having a problem with alcohol or drugs. For example, this measure could be used with a sample of people who are seeking treatment and have self-identified as having a problem with alcohol or drugs. However, for those who are substance dependent or abusing, but do not see themselves as having a problem, a new measure development process would be needed from the item level on up.

While there is a robust literature on stigma in general, research on the impact of stigma in addiction settings is limited (Luoma, 2010). Part of the difficulty may be due to a lack of validated measures of stigma toward and in this population. We hope that the availability of this new measure will help spur research on the impact of self-stigma and aid in the development of interventions for self-stigma in addictions settings.

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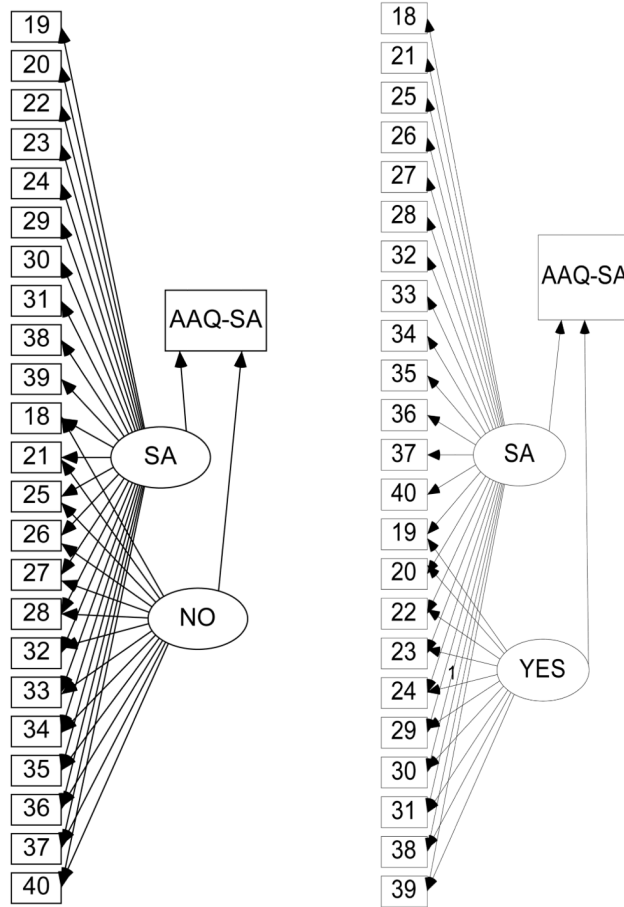
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Model 5: Single-factor Model,
No-Saying Method Effect, and
AAQ-SA

Model 6: Single-factor Model,
Yes-Saying Method Effect, and
AAQ-SA

Model 7: Two-Factor
and AAQ-SA



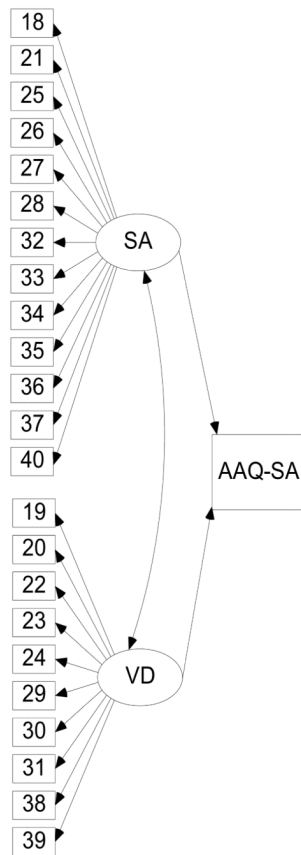


Figure 1.
Structural Equation Models 5–6 for Section 3 of the SASSS.

Table 1

Common Stereotypes Identified as Applicable to Substance Misusers

	Stereotype	Description
1	Difference\Alienation	Substance abusers are different, separated, set apart, strange, difficult to understand, or alien.
2	Devaluation	Substance abusers are losers, failures in life, disappointments, or generally inadequate as human beings.
3	Moral weakness	Substance abusers are indecent, sinners, immoral, dishonorable, have poor character, or are disreputable, morally weak, and lack virtue.
4	Lack of willpower or work ethic	Substance abusers are weak-willed, lack self-control, and are lazy.
5	Hopelessness\helplessness	Substance abusers are unlikely to recover and their future is bleak.
6	Incompetence	Substance abusers are incompetent, inept, and generally ineffective in their lives.
7	Blameworthy	Substance abusers are to blame for their difficulties and worthy of contempt.
8	Violent\unreliable	Substance abusers are easy to anger, often violent, erratic in their behavior, and generally untrustworthy.
9	Shame	Substance abusers are bad and shameful people.
10	Concealment	Substance abusers are often secretive and work hard to conceal their problematic behavior.

Table 2
Results of Principal Components Factor Analysis with Varimax Rotation of Final Scale

Item	Description	Component loadings			
		1	2	3	4
Section 1: Self devaluation					
1	<i>I have the thought that a major reason for my problems with substances is my own poor character.</i>			.481	
2	<i>I have the thought that I should be ashamed of myself.</i>			.784	
3	<i>I have the thought that I deserve the bad things that have happened to me.</i>			.736	
4	<i>I have the thought that I can't be trusted.</i>			.476	
5	<i>I feel inferior to people who have never had a problem with substances.</i>	.317		.585	
6	<i>I feel out of place in the world because of my problems with substances.</i>	.310	.339	.566	
7	<i>I have the thought that I've permanently screwed up my life by using drugs.</i>	.313	.310	.428	
8	<i>I feel ashamed of myself.</i>			.669	
Section 2: Fear of enacted stigma					
9	<i>People think I'm worthless if they know about my substance use history.</i>		.697		
10	<i>People around me will always suspect I have returned to using substances.</i>		.702		
11	<i>People without a substance use history could never really understand me.</i>		.535		
12	<i>A job interviewer wouldn't hire me if I mentioned my substance history in a job interview.</i>		.652		
13	<i>If someone were to find out about my history of substance use, they would expect me to be weak-willed.</i>		.746		
14	<i>People would be scared of me if they knew about my substance abuse history.</i>		.700		
15	<i>If someone were to find out about my history of substance use, they would doubt my character.</i>		.792		
16	<i>People will think I have little talent or skill if they know about my substance history.</i>		.698		
17	<i>People think the bad things that have happened to me are my fault.</i>		.635		

Note: Only loadings above .3 are presented above.

Table 3
Continued Results of Principal Components Factor Analysis with Varimax Rotation of Final Scale

Item	Description	Component loadings			
		1	2	3	4
Section 3: Stigma avoidance and values disengagement					
Stigma Avoidance Subscale					
18	I would choose to avoid someone who seemed interested in my friendship if I knew they had never used substances.		.469		
21	When I feel incompetent at something I want to do, I stop trying.		.479		
25	I put a lot of effort into hiding my substance use history.		.597		
26	I avoid doing things where I would be blamed if it didn't work out.		.510		
27	I wouldn't try to fill roles that required a person of character.		.554		
28	Shame gets in the way of how I want to live my life.		.532	.395	
32	I would lie to people in my life about my substance use if I were sure they would never find out.		.456		
33	I avoid situations where another person might have to depend on me.		.536		
34	I avoid situations that make me feel different.		.548		
35	I can't stand feeling like the bad things that happen to me are my fault.		.546		
36	I would willingly sacrifice important things in my life to feel like I fit in.		.511		
37	Blaming myself for my substance abuse history gets in the way of my success.		.541		
40	I would willingly sacrifice important life goals if that meant I could feel better about myself.		.602		
Values Disengagement Subscale					
19	I do things that are good for me, even if I feel like I don't deserve it.		.575		
20	If something is important to me, I keep doing it, even if I feel incompetent.		.609		
22	I am getting on with the business of living, no matter how guilty I feel.		.654		
23	I'm willing to be in situations where I might feel different from others.		.592		
24	I am open about my substance use history with most people.		.436	-.310	
29	I pursue important goals in life, even when I fear I might not follow through.		.598		
30	I can set a direction for my life even if I feel hopeless.		.692		
31	Even if I knew the employer didn't like to hire people in recovery, I would still apply for a job if it interested me.		.586		
38	I can set a course in my life and stick to it, even when I feel like I'm a bad person.		.651		
39	If I didn't have a job, I would still look for one, even if it felt hopeless.		.611		

Note: Only loadings above .3 are presented above. Item numbers reflect the order of presentation on the paper-and-pencil assessment form.

Table 4

Standardized Factor Loadings for Structural Equation Statistics for Models 5–7

Item/Relationship	Model 5: No Bias Model			Model 6: Yes Bias Model			Model 7: Two-Factor Model			
	SA	No Bias	β	SA	Yes Bias	β	SA	VD	r	β
1	.28	.41		.49	--		.49	--		
2	-.51	--		-.21	.47		--	.51		
3	-.49	--		-.03	.54		--	.51		
4	-.30	.44		.54	--		.52	--		
5	-.68	--		-.29	.61		--	.67		
6	-.54	--		-.24	.49		--	.55		
7	-.46	--		-.26	.40		--	.46		
8	.16	.53		.56	--		.54	--		
9	.18	.47		.50	--		.51	--		
10	.25	.52		.57	--		.58	--		
11	.28	.63		.69	--		.69	--		
12	-.58	--		-.17	.56		--	.59		
13	-.72	--		-.31	.65		--	.72		
14	-.54	--		-.33	.44		--	.53		
15	.18	.51		.55	--		.54	--		
16	.25	.49		.55	--		.55	--		
17	.30	.59		.67	--		.66	--		
18	.14	.51		.52	--		.53	--		
19	.24	.56		.61	--		.61	--		
20	.17	.51		.52	--		.53	--		
21	-.57	--		-.14	.56		--	.57		
22	-.53	--		-.27	.45		--	.52		
23	.19	.46		.49	--		.49	--		
SA→AAQ-SA Method factor			-.36			-.38				-.30*
→AAQ-SA VD→AAQ-SA			-.26			.23				

Table 5

Correlation Matrix of SASSS with Other Measures

	Self-Devaluation	Fear of Enacted Stigma	Stigma Avoidance	Values Disengagement	SASSS Total
Self-Devaluation (Scale 1)	1.00 (347)	.50** (346)	.57** (341)	.16* (345)	.73** (338)
Fear of Enacted Stigma (Scale 2)		1.00 (346)	.58** (340)	.13 (344)	.76** (338)
Stigma Avoidance (Scale 3)			1.00 (341)	.33** (339)	.88** (338)
Values Disengagement (Scale 4)				1.00 (345)	.54** (338)
SASSS Total					1.00 (338)
Active coping with stigma	.22** (345)	.10 (344)	-.06 (339)	-.37** (343)	-.04 (336)
Perceived stigma (PSAS)	.19* (331)	.37** (330)	.27** (330)	.17** (327)	.34** (324)
Stigma-related secrecy	.29** (347)	.34** (346)	.48** (341)	.21* (345)	.46** (338)
Stigma-related withdrawal	.29** (347)	.23** (346)	.32** (341)	-.16* (345)	.24** (338)
Internalized shame (ISS)	.52** (161)	.42** (161)	.62** (160)	.39** (159)	.66** (158)
Internalized stigma (ISSA)	.50** (157)	.49** (157)	.65** (156)	.36** (155)	.67** (154)
Psychological flexibility (AAQ)	-.43** (342)	-.32** (341)	-.50** (337)	-.25** (340)	-.51** (334)
Self-concealment (SCS)	.29** (158)	.30** (158)	.32** (157)	.12 (156)	.34** (155)
Self-esteem (RSES)	-.45** (182)	-.28** (181)	-.57** (177)	-.49** (182)	-.62** (176)
Social support (MSPSS)	.17 (180)	.26** (179)	.25* (176)	.03 (180)	.23* (175)
Stigma related rejection (SRS)	.41** (185)	.49** (184)	.58** (180)	.21* (185)	.58** (179)
Values commitment (AAQ-SA)	-.05 (296)	-.05 (296)	-.27** (293)	-.59** (294)	-.33** (291)
Defused acceptance (AAQ-SA)	-.45** (291)	-.38** (290)	-.55** (288)	-.21** (290)	-.55** (286)
Psychological flexibility for substance abuse (AAQ-SA)	-.35** (274)	-.30** (274)	-.57** (271)	-.55** (273)	-.61** (270)

Note: Numbers represent the correlation with sample size in parentheses.

* $p < .01$,

** $p < .001$