

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/334691650>

# Risk factors for self-stigma among incarcerated women with alcohol use disorder.

Article in *Stigma and Health* · July 2019

DOI: 10.1037/sah0000182

CITATIONS

0

READS

23

7 authors, including:



**Michael Stein**

Alpert Medical School - Brown University

272 PUBLICATIONS 6,229 CITATIONS

SEE PROFILE



**Maji Hailemariam**

Michigan State University

34 PUBLICATIONS 286 CITATIONS

SEE PROFILE



**Yael Chatav Schonbrun**

Alpert Medical School - Brown University

39 PUBLICATIONS 430 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Mentoring And Peer Support (MAPS) Study [View project](#)



Migration and resettlement [View project](#)

# Risk Factors for Self-Stigma Among Incarcerated Women With Alcohol Use Disorder

Kelly E. Moore  
East Tennessee State University

Michael D. Stein  
Butler Hospital, Providence, Rhode Island, and Boston  
University School of Public Health

Megan E. Kurth  
Butler Hospital, Providence, Rhode Island

Lindsey Stevens  
Brown University Medical School

Maji Hailemariam  
Michigan State University

Yael C. Schonbrun  
Butler Hospital, Providence, Rhode Island and Brown University  
Medical School

Jennifer E. Johnson  
Michigan State University

Alcohol use disorder (AUD) is a highly stigmatized condition, often associated with negative stereotypes such as being morally weak, incompetent, unpredictable, and aggressive. People with AUD are at risk of experiencing self-stigma, a social-cognitive experience in which people think others hold negative stereotypes about them, expect to be treated unfairly, and/or believe that negative stereotypes are personally accurate. Women in the criminal justice system with AUD in particular are at risk of experiencing self-stigma because of intersecting sources of disadvantage. Given that self-stigma can lead to treatment avoidance and dropout, it is important to understand risk factors for self-stigma to inform prevention and intervention efforts in the justice system. Incarcerated women with AUD ( $n = 185$ ) completed measures of alcohol self-stigma as well as a variety of theoretically relevant risk factors including sociodemographics, baseline levels of stress and depression, and alcohol-related factors (i.e., length of drinking history, frequency/amount of use, consequences of use, physician advice to stop, belief that legal involvement is related to alcohol use, alcohol-related charges, self-efficacy to quit, readiness for treatment, pressures to enter treatment, and factors that influence treatment) and other stigmatized conditions (drug use, exchanging sex, and homelessness). Results showed that experiencing more consequences of alcohol use, pressures to enter treatment, and perceived stress were associated with internalized stigma and anticipated/enacted stigma. This study begins to identify which incarcerated women with AUD are most at risk of experiencing self-stigma that may interfere with alcohol treatment.

*Keywords:* alcohol use disorder, self-stigma, internalized stigma, incarceration, women

Alcohol use disorder (AUD) is a stigmatized (i.e., socially undesirable) condition associated with pervasive negative stereotypes such as being dangerous, aggressive, short-tempered, blame-

worthy, irresponsible, unpredictable, weak-willed, lazy, and dependent on others (Birtel, Wood, & Kempa, 2017; Gibbs, Rae Olmsted, Brown, & Clinton-Sherrod, 2011; Lyu, Lee, & Bejerano,

This article was published Online First July 25, 2019.

Kelly E. Moore, Department of Psychology, East Tennessee State University; Michael D. Stein, Behavioral Medicine and Addictions Research, Butler Hospital, Providence, Rhode Island, and Department of Health Law, Policy & Management, Boston University School of Public Health; Megan E. Kurth, Behavioral Medicine and Addictions Research, Butler Hospital; Lindsey Stevens, Department of Psychiatry and Human Behavior, Brown University Medical School; Maji Hailemariam, Division of Public Health, College of Human Medicine, Michigan State University; Yael C. Schonbrun, Behavioral Medicine and Addictions Research, Butler Hospital, and Department of Psychiatry

and Human Behavior, Brown University Medical School; Jennifer E. Johnson, Division of Public Health, College of Human Medicine, Michigan State University.

This research was supported by the National Institute on Alcohol Abuse and Alcoholism under Grant R01AA021732 awarded to Michael D. Stein and L30DA044652 awarded to Kelly E. Moore by the National Institute on Drug Abuse.

Correspondence concerning this article should be addressed to Kelly E. Moore, Department of Psychology, East Tennessee State University, 420 Rogers-Stout Hall, P.O. Box 70649, Johnson City, TN 37614. E-mail: [mooreke2@etsu.edu](mailto:mooreke2@etsu.edu)

2017; Schomerus, 2013; Schomerus et al., 2014). People in stigmatized groups, including people with AUD, often perceive negative stereotypes about their group (i.e., perceived stigma), agree with negative stereotypes (i.e., stereotype agreement), fear and expect judgment or unfair treatment (i.e., anticipated stigma), and believe that negative stereotypes are personally accurate (i.e., internalized stigma). Broadly, these social–cognitive experiences are considered *self-stigma* (Brown et al., 2015; Corrigan, Watson, & Barr, 2006; Fortney et al., 2004), and each can have unique impacts on behavior (Corrigan et al., 2006; Moore, Stuewig, & Tangney, 2016).

Self-stigma is associated with depression, shame, hopelessness, low self-esteem, low social support, social avoidance, low self-efficacy to overcome stigma-related challenges, and avoidance of community institutions, including treatment settings (Birtel et al., 2017; Fortney et al., 2004; Gavriel-Fried & Rabayov, 2017; Lyu et al., 2017). In particular, internalized and anticipated stigma are often associated with less treatment-seeking (Chartier, Miller, Harris, & Caetano, 2016; Keyes et al., 2010; Oleski, Mota, Cox, & Sareen, 2010; Radcliffe & Stevens, 2008) as well as less engagement and retention in treatment (Ali, Teich, & Mutter, 2017; Britt, Jennings, Cheung, Pury, & Zinzow, 2015; Fung, Tsang, Corrigan, Lam, & Cheng, 2007; Kaushik, Kostaki, & Kyriakopoulos, 2016; Ociskova, Prasko, Latalova, Kamaradova, & Grambal, 2016). Given that AUD is one of the most prevalent and severe mental disorders (Schomerus, Corrigan, et al., 2011; Schomerus, Lucht, et al., 2011), and that alcohol self-stigma (i.e., embarrassment, fear of receiving treatment for alcohol use) has increased as a reason for not seeking treatment in the United States in the past 10 years (Chartier et al., 2016), it is critical to understand and prevent factors that increase risk for alcohol self-stigma to ensure that people with AUD seek and remain in treatment.

### Alcohol Self-Stigma Among Justice-Involved Women

Certain stigmatized individuals may be more at risk of experiencing self-stigma and, thus, more vulnerable to poor treatment outcomes. Intersectionality theory suggests that membership in multiple devalued groups can exacerbate the effects of stigma, meaning that individuals who have other stigmatized qualities (i.e., racial/ethnic or sexual minority status, gender, low socioeconomic status, criminal history, and mental illness) may be more vulnerable to experience self-stigma (Cole, 2009; Oexle & Corrigan, 2018). In addition to the presence of other devalued conditions, social and psychological problems as well as elements of the stigmatized condition (e.g., severity of criminal record) may increase risk for self-stigma (LeBel, 2012).

Although several studies have examined substance use self-stigma among community or psychiatric populations, there is less research on self-stigma among more marginalized, high-risk populations, such as those in the criminal justice system (van Olphen, Eliason, Freudenberg, & Barnes, 2009). Over 10 million people cycle through the criminal justice system each year in the United States (Zeng, 2018). Alcohol use can prompt justice system involvement via engagement in reckless behavior while intoxicated (e.g., assault, disorderly conduct, and driving under the influence; Greenfield, 1998). Studies show that around 36% of convicted offenders were under the influence of alcohol at the time of the offense (Greenfield, 1998); 25% of women and 40% of men on

probation reported being under the influence of alcohol at the time of the offense and 62% of them had participated in an alcohol treatment program previously (Greenfield, 1998). Thus, AUD is overrepresented in the criminal justice system. Less than a third of inmates who have drug or alcohol use disorders receive treatment (Bronson, Stroop, Zimmer, & Berzofsky, 2017). Further, people in the criminal justice system are subjected to stigma about incarceration and having a criminal record (LeBel, 2012; Moore et al., 2016; Pogorzelski, Wolff, Pan, & Blitz, 2005), are often members of multiple devalued groups (Brinkley-Rubinstein, 2015; Hartwell, 2004), and experience numerous psychological and social problems that interfere with adaptive functioning. As a result, it is important to examine alcohol self-stigma (i.e., one potential barrier to treatment entry) among people in the criminal justice system.

Women in the justice system may be especially at risk of self-stigma and its consequences. Justice-involved women are more likely than men and women in the community to have histories of trauma and mental health problems (Kulesza et al., 2016). In addition, women of color and those with a lower social economic status may be targeted by disciplinary policies (Racine, Bell, Zizzo, & Green, 2015), which may increase their risk of internalizing negative stereotypes related to substance use. Furthermore, women with AUD in the justice system may engage in other stigmatized behaviors or be part of other devalued groups such as being homeless, exchanging sex for substances or money, or using illegal drugs; the intersection of such stigmatized conditions may provide further challenges to their self-concept. Indeed, perceived and internalized stigma about alcohol use are more common in women than men (Crisafulli, 2016; Fortney et al., 2004), and female inmates report higher levels of alcohol use than males at the time of their index offense (Greenfield, 1998).

### Risk Factors for Alcohol Self-Stigma

Consistent with intersectionality theory, research among psychiatric and community populations demonstrates that several devalued demographic factors are associated with substance use self-stigma (Brown et al., 2015; Fortney et al., 2004; Lyu et al., 2017; de Silveira et al., 2018). Higher levels of self-stigma related to alcohol/crack use (i.e., measured as perceived stigma, stereotype agreement, alienation and social withdrawal because of stigma, and perceived inability to overcome stigma) are found in racial/ethnic minorities who have lower educational attainment (de Silveira et al., 2018). Substance use self-stigma (i.e., internalized stigma, anticipated stigma) is also higher among people who are unemployed (Brown et al., 2015; de Silveira et al., 2018). Research is mixed with regard to gender differences in substance use self-stigma, with some studies showing no differences (Brown et al., 2015; de Silveira et al., 2018). However, among people receiving treatment for alcohol/crack use, women have been found to have higher levels of substance use self-stigma compared with men (de Silveira et al., 2018).

There are several behavioral, psychological, and social problems found to be associated with substance use self-stigma. Less perceived social support, more severe depression, lower self-esteem, and more frequent and severe substance use are associated with perceived stigma about substance use (Birtel et al., 2017) as well as anticipated and internalized stigma about substance use (Brown et al., 2015; Lyu et al., 2017; Smith, Earnshaw, Copen-

haber, & Cunningham, 2016). In psychiatric/community populations, internalized stigma specific to alcohol use is higher among individuals with more depression symptoms, a longer history of problems with alcohol, who have lower self-efficacy to refuse alcohol, who have been voluntarily hospitalized, who have had at least 21 hospitalizations in their life for alcohol-related reasons, and do not perceive their friends and family as being supportive (Lyu et al., 2017; Schomerus, Corrigan, et al., 2011).

### Present Study

Alcohol self-stigma has traditionally been examined among people with AUD in primary care or alcohol treatment settings, but has not been examined quantitatively among women in the criminal justice system who have many intersecting devalued characteristics and other risk factors that could prompt alcohol self-stigma and subsequent treatment failures. It is unclear whether previously examined factors are associated with alcohol self-stigma among this uniquely marginalized population. Further, there may be additional risk factors for alcohol self-stigma among incarcerated women, such as the degree to which alcohol is perceived to cause legal problems, the presence of alcohol-related charges, or the presence of other stigmatized conditions. This study examined a comprehensive set of risk factors, including sociodemographics (i.e., age, race, education level, or income), psychological factors (i.e., stress, depression), alcohol-related factors (i.e., longer history of and more severe alcohol use, more consequences of use, viewing alcohol as related to legal involvement, presence of an alcohol-related charge, physician advice to stop drinking, lower self-efficacy to quit, more readiness to enter treatment, more pressures to enter treatment, or more factors that influence treatment completion), and other stigmatized conditions (i.e., drug use, sex trading, and homelessness) that may be associated with four distinct aspects of alcohol self-stigma among incarcerated women. These aspects included perceived stigma (specifically about alcohol use treatment, referred to as “perceived stigma about treatment”), agreement with common stereotypes about people with alcohol problems (i.e., “stereotype agreement”), acceptance of negative stereotypes as personally accurate (i.e., “internalized stigma”), and fear of being treated unfairly or prior experience with unfair treatment because of alcohol use (i.e., “anticipated/enacted stigma”).

We hypothesized that the more disadvantaged women were (with regard to sociodemographics, psychological symptoms, alcohol-related factors, and other stigmatized conditions), the more self-stigma they would report, particularly internalized and anticipated/enacted stigma. Perceived stigma, which develops over the course of one’s lifetime and is not directly focused on the self, is often predicted by factors that are less relevant to the stigmatized condition, such as sociodemographics or psychological functioning. In contrast, internalized and anticipated/enacted stigma, which are self-focused, are often predicted by factors directly related to the stigmatized condition, which in this case would be alcohol-related.

### Method

#### Participants and Procedure

Data were drawn from the baseline assessment of an ongoing randomized controlled trial (RCT) that evaluates the effectiveness

of promoting linkage to 12-step self-help groups to reduce alcohol use among women with AUD exiting the justice system (Johnson et al., 2017). The sample includes incarcerated women in pretrial detention (Mean days incarcerated = 12.0,  $SD = 10.5$ ), which means they had just been incarcerated and were awaiting trial to determine their sentence. Eligible participants were enrolled from May, 2014 to October 2016 and: (a) were in the participating jail and either unsentenced or serving very short sentences (expected to be released in the next 2 months); (b) were at least 18 years old; (c) lived within 20 miles of our research offices and planned to remain in the area for the next 6 months; (d) met 3 or more *Diagnostic and Statistical Manual of Mental Disorders-Fifth Edition (DSM-5)* criteria for AUD in the last 90 days; (e) did not expect to attend residential alcohol or drug treatment upon release; and (f) spoke English. Research staff were able to access the jail 4 hr per weekday and met with participants in two private rooms. Researchers attempted to screen all women shortly after their intake at the jail. Potential participants were informed that: (a) a decision not to participate in the research will have no impact on their legal status or sentence; (b) the study has a Certificate of Confidentiality; and (c) no information provided during the study will be shared with any criminal justice system staff. The study protocol was reviewed and approved by the Institutional Review Board for the protection of human subjects in research, and complied with the special protections pertaining to behavioral research involving prisoners (Office of Human Research Protections, 2005). Research staff approached 340 women for the RCT, and 5 refused to be screened, leaving 335 screened of whom 185 were consented, enrolled, and completed the baseline assessment, comprising the sample analyzed in this study.

### Measures

**Alcohol self-stigma.** Alcohol self-stigma was assessed with an adapted 17-item version of the depression self-stigma questionnaire (Kanter, Rusch, & Brondino, 2008). The scale contains four subscales capturing different aspects of self-stigma: perceived stigma about treatment (four items; “People will see a person in a less favorable way if they come to know that he/she received treatment for alcohol use,”  $\alpha = .812$ ), stereotype agreement (four items; “Other people with alcohol use are morally weak,”  $\alpha = .731$ ), internalized stigma (four items; “Others view me as unable to handle responsibility because I use alcohol,”  $\alpha = .875$ ), and anticipated/enacted stigma (five items; “Some people who know I use alcohol have grown more distant” and “Since starting alcohol I worry about people discriminating against me,”  $\alpha = .841$ ). In addition, a single item that best captures the affective component of internalized stigma (i.e., “People’s attitudes about alcohol make me feel worse about myself”) was isolated as a separate subscale, as such shame-related elements of internalized stigma have been considered especially problematic for functioning and, therefore, may have unique risk factors. Items are rated on an ordered categorical scale ranging from 1 = *completely disagree* to 7 = *completely agree*.

**Sociodemographic factors.** We assessed several demographics via self-report, including age, race/ethnicity (i.e., Caucasian/White vs. racial/ethnic minority), years of education completed, and legal income in the past year (i.e., <\$10k, \$10k to \$19,999,

\$20k to \$29,999, \$30k to \$39,999, \$40k to \$49,999, \$50k to \$59,999, \$60k to \$69,999, \$70k or more).

**Baseline psychological distress.** We assessed baseline depression using three-items from the 12 item Short-Form Health Survey (Ware, Kosinski, & Keller, 1996) that capture depression symptoms in the past 4 weeks (e.g., “Have you felt downhearted and blue?”); responses were rated on a scale of 0 (*none of the time*) to 5 (*all of the time*;  $\alpha = .611$ ). Baseline stress was assessed using the four-item Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983; e.g., “In the last month, how often have you felt that you were unable to control the important things in your life?”). Responses were rated on a scale of 0 (*never*) to 4 (*very often*).

**Alcohol-related factors.** We assessed several factors specific to alcohol use. We had five measures of alcohol use severity. First, participants were asked to specify the number of months they “had a problem with drinking.” Second, preincarceration alcohol use was assessed using the Timeline Followback (TLFB) calendar-based interview (Ehrman & Robbins, 1994; Miller, Tonigan, & Longabaugh, 1995; Sobell & Sobell, 1992) at the baseline assessment point (in jail). The TLFB is a reliable and valid method for assessing alcohol use (Johnson & Zlotnick, 2008; Stein, Charuvastra, Anderson, Sobota, & Friedmann, 2002; Zlotnick, Johnson, & Najavits, 2009). Participants answered the following question as part of the TLFB calendar interview: “In the two weeks prior to your arrest, how much alcohol did you drink each day?” and then discussed each day of the week to prompt recall. One standard drink was defined as one beer, one 5-ounce glass of wine, or 1.5 ounces of hard liquor. As a measure of total alcohol consumption, we calculated the average number of drinks consumed on each of the 14 days before jail admission. Third, we assessed consequences of alcohol use using the 15-item Short Inventory of Problems (SIP-2R; Miller et al., 1995), adapted from the Drinking Inventory of Consequences (Miller et al., 1995). The SIP has five subscales; physical, social, intrapersonal, interpersonal, and impulse control consequences; responses are rated on a scale from 1 (*never*) to 3 (*daily or almost daily*) and were summed to create a total scale score. An example item is “I have failed to do what is expected of me because of my drinking.” Versions of the SIP have been shown to be reliable and valid for people with alcohol use problems (Bender, Griffin, Gallop, & Weiss, 2007; Kiluk, Dreifuss, Weiss, Morgenstern, & Carroll, 2013) and the  $\alpha$  in this sample was 0.929. Fourth, participants were asked, “Has a doctor or other health care professional ever told you that you had problem with drinking?”; responses were rated yes or no. Fifth, if participants currently reported having been charged with possession of alcohol in an open container, minor possession of alcohol, or driving while intoxicated they were coded as having an alcohol-related charge.

We used two measures to assess participants’ thoughts about modifying their alcohol use. First, self-efficacy for alcohol cessation was assessed using the following item,

How successful do you expect to be in quitting using alcohol at this time? Responses were rated on a 1 to 10 scale where 1 reflected a low expectation of success and 10 reflected a high expectation of success.

Second, select scales from the Circumstances, Motivation, and Readiness (CMR; De Leon, Melnick, Kressel, & Jainchill, 1994)

measure were used to assess readiness for treatment, external pressures to enter treatment, and factors that influence treatment completion. The CMR has 18 items and four subscales, three of which were examined herein; circumstances one capturing external pressures to enter treatment (e.g., “I am sure that my family will not let me live at home if I do not get treatment for my alcohol use,”  $\alpha = .643$ ), circumstances two capturing factors that interfere with treatment completion (e.g., “I am worried that I will have serious money problems if I get treatment for my alcohol use,”  $\alpha = .487$ ), and readiness to enter treatment (e.g., “I’ll do whatever I have to do to get my life straightened out,”  $\alpha = .860$ ). A single item from the circumstances one scale (i.e., “I am sure that I would go to jail if I didn’t enter treatment”) was removed and analyzed separately because of its unique relevance to incarcerated women. Responses were rated on a Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). This measure has been shown to be reliable and valid in several studies (De Leon, Melnick, & Kressel, 1997; De Leon et al., 2000).

**Other stigmatized conditions.** We assessed engagement in sexual trading using the item: “In the past 3 months, have you had sex to receive money, drugs, clothes, food, transport, a place to stay, or other things from anyone other than your main sexual partner?” Responses were yes or no. We assessed homelessness before incarceration by asking participants where they slept in the past 3 months; if they reported sleeping on the streets or in a shelter, they were coded as having experienced homelessness. We assessed drug use before incarceration by asking participants whether they used any drugs in the past 90 days including cannabis, opiates, cocaine, hallucinogens, amphetamines, sedatives, heroin, or methadone or buprenorphine (i.e., which indicates prior opioid use); endorsement of any drug was coded as 1.

## Analysis Plan

We present descriptive statistics to summarize characteristics of the sample and bivariate correlations to illustrate the associations between demographic, psychological, alcohol-related, and other stigmatized condition risk factors with each self-stigma subscale and the one internalized stigma item (see Table 1). Because we were interested in analyzing a comprehensive set of variables that may predict alcohol self-stigma, we first ran bivariate correlations among variables of interest to explore associations between risk factors and alcohol self-stigma scales. To reduce the number of variables being analyzed (i.e., and minimize multicollinearity), variables nonsignificant ( $p > .05$ ) at the bivariate level for each stigma subscale (see Table 2) were not included in multivariate analyses. We then used blocked multivariate linear regression models with categories of predictors. Predictors were grouped conceptually, and predictors that were significant at the bivariate level were entered as follows: sociodemographics (i.e., age, race/ethnicity, education level, and income) in Block 1 and baseline psychological distress (i.e., stress, depression) in Block 2. Alcohol-related factors capturing severity (i.e., number of months with an alcohol problem, frequency/amount of use before incarceration, self-reported consequences of alcohol use, physician-identified alcohol problem, and the presence of an alcohol-related charge), readiness to modify use (i.e., self-efficacy to quit, readiness for treatment, pressures to enter treatment, and factors that influence treatment completion) were entered in Block 3, and other stigma-

Table 1  
Background Characteristics ( $n = 185$ )

Study variables	$n$ (%)	Mean ( $\pm SD$ )	Median	Range
Sociodemographics				
Age		35.93 ( $\pm 9.92$ )	34	18–68
Non-Latino White (yes)	121 (65.4%)			
Education (years)		11.79 ( $\pm 2.23$ )	12	7–21
Income <sup>a</sup>		1.56 ( $\pm 1.11$ )	1	1–8
Baseline psychological distress				
Depression		2.02 ( $\pm 1.08$ )	2	0–5
Stress		1.66 ( $\pm .89$ )	1.8	0–3
Alcohol-related factors				
Months with alcohol problem		152 ( $\pm 134.0$ )	120	1–564
Mean drinks per day before incarceration		7.49 ( $\pm 6.48$ )	5.78	.13–30.6
Short Inventory of Problems		1.98 ( $\pm .77$ )	2.13	0–3
Physician advice (yes)	113 (61.1%)			
Sees alcohol use as related to legal involvement (yes)		3.52 ( $\pm 1.43$ )	4.00	1–5
Alcohol related charge	14 (7.6%)			
Self-efficacy to quit		7.81 ( $\pm 2.07$ )	8.00	1–10
CMR readiness		3.71 ( $\pm .86$ )	3.71	1–5
CMR external pressures to enter treatment		3.23 ( $\pm 1.07$ )	3.33	1–5
CMR factors that interfere with treatment completion		3.82 ( $\pm .82$ )	4.00	1–5
Other stigmatized conditions				
Exchanged sex last 3-months (yes)	36 (19.5%)			
Homelessness last 3-months (yes)	21 (11.4%)			
Drug use last 3-months (yes)	102 (55.1%)			

Note. CMR = Circumstances, Motivation, and Readiness.

<sup>a</sup> Ordered response ranging from 1 “< \$10,000” to 8 “\$70,000 or more.” About 68.9% reported an income < \$10,000 in the last year.

tized conditions (i.e., trading sex, homelessness, and drug use) were entered in Block 4. We used  $\chi^2$  statistics for the full model and each block to assess fit, and examined variance explained in self-stigma scale outcomes. We examined tolerance levels to assess multicollinearity among predictors.

## Results

Bivariate correlations are displayed in Table 2. Only sociodemographic factors were associated with the subscale capturing perceived stigma about treatment: incarcerated women who were older, more educated, and had higher income perceived more stigma about treatment for alcohol use. No risk factors were significantly associated with the stereotype agreement subscale. Being more educated and reporting more stress, in addition to some alcohol severity factors (i.e., more self-reported consequences of alcohol use, having been told by a physician to stop drinking, and believing that legal involvement is related to one's alcohol use) were associated with the internalized stigma subscale, the single item reflecting the belief that other people or you personally think you are inferior because of alcohol use, and anticipated/enacted stigma (i.e., experience/anticipation of being treated unfairly). In addition, having a longer history of a drinking problem and drinking more before incarceration were associated with internalized stigma (subscale only). With regard to thoughts about modifying alcohol use, greater readiness for treatment as well as more external pressures to enter treatment were associated with internalized stigma (subscale and 1 item) and anticipated/enacted stigma. Having exchanged sex and using drugs in the past 3 months were associated with internalized stigma (subscale only).

Bivariate significant associations were entered into multivariate regression models predicting each self-stigma subscale outcome (except stereotype agreement, which was not associated with any risk factors at the bivariate level). Tolerance levels were in the acceptable range (i.e., <.80) and did not suggest problems with multicollinearity. Results of each multivariate regression are displayed in Table 3. Only more education and higher income were risk factors for perceiving stigma about alcohol treatment, and these factors explained 7.3% of the variance in perceived stigma about treatment. More baseline stress was a risk factor for internalized stigma (subscale), anticipated/enacted stigma, and the single internalized stigma item. The only risk factor that significantly predicted the internalized stigma (subscale) above and beyond sociodemographics and baseline psychological distress (8.9% of total variance explained) was reporting more external pressures to enter treatment. After adding alcohol-related risk factors, a total of 29.8% of the variance in the internalized stigma subscale was explained. Reporting more problems associated with alcohol use was also a risk factor for the single internalized stigma item, above sociodemographics and baseline distress, which resulted in a total of 7.8% of the variance being explained in this item. All risk factors explained a total of 17.3% of the variance in the single internalized stigma item. With regard to anticipated or enacted stigma, reporting more consequences of alcohol use on the Short Inventory of Problems, and reporting more external pressures to enter alcohol treatment were risk factors above and beyond sociodemographics and baseline psychological distress. Block 1 and 2 risk factors explained 12.9% of the variance in anticipated/enacted stigma, and the addition of Block 3 explained a total of 32.9% of the variance. Other stigmatized behaviors or conditions

Table 2  
Product-Moment Correlations of Risk Factors With Alcohol Self-Stigma Subscales ( $n = 185$ )

Study variables	Alcohol self-stigma subscales				
	Perceived stigma about treatment	Stereotype agreement	Internalized stigma	Anticipated/enacted stigma	Internalized stigma-1 item <sup>a</sup>
<b>Sociodemographics</b>					
Age	.18*	.14	.18*	.14	.03
Non-Latino White (yes)	-.07	-.12	.08	.01	.02
Education (years)	.21**	.01	.23**	.16*	.18*
Income	.18*	.00	.14	.03	.07
<b>Baseline psychological distress</b>					
Depression	.09	.06	-.15*	-.08	-.08
Stress	-.02	-.07	.20**	.22**	.18*
<b>Alcohol-related factors</b>					
Months with alcohol problem <sup>b</sup>	-.03	.01	.18*	.09	.02
Mean drinks per day before incarceration <sup>b</sup>	-.03	.07	.17*	.09	.05
Short Inventory of Problems	.13	.12	.44***	.41***	.33***
Physician advice (yes)	.10	.07	.29***	.34***	.22**
Sees alcohol use as related to legal involvement (yes)	.00	-.00	.37***	.27***	.25***
Alcohol related charge	.05	-.01	.06	-.02	-.01
Self-efficacy to quit	-.05	-.06	-.03	.04	.08
CMR readiness	-.06	-.01	.31***	.27***	.26***
CMR external pressures to enter treatment	.09	.09	.43***	.30***	.27***
CMR factors that influence treatment completion	-.03	-.03	-.13	-.08	-.10
<b>Other stigmatized conditions</b>					
Exchanged sex last 3 months (yes)	.11	.07	.22**	.13	.07
Homelessness last 3-months (yes)	.07	.03	.13	.03	-.03
Drug use last 3-months (yes)	-.02	-.00	.15*	.05	-.01

Note. CMR = Circumstances, Motivation, and Readiness.

<sup>a</sup> One item representing internalized stigma was isolated as a separate outcome in analyses: "People's attitudes about alcohol make me feel worse about myself." <sup>b</sup> Log transformed.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

(drug use, homelessness, and sex trading) were not predictors of stigma in multivariate analyses.

## Discussion

This study examined a comprehensive set of risk factors and their association with distinct components of alcohol self-stigma among a marginalized population of incarcerated women with AUD. Drawing from intersectionality theory, we hypothesized that disadvantage in the form of sociodemographics, psychological symptoms, alcohol-related risk factors, and other stigmatized conditions would increase risk for self-stigma. Our hypotheses were partially supported.

### Perceived Stigma About Alcohol Treatment

Contrary to our predictions, women who were more educated and in a higher income bracket had greater risk of perceived stigma about treatment. Though this appears inconsistent with intersectionality theory, this finding is consistent with some studies of substance use stigma (Luoma et al., 2007). People with multiple sources of social disadvantage may perceive less stigma because of the stigmatized behavior being more accepted in their environment. In contrast, stigmatized individuals may perceive more stigma when they are in institutions of higher education, "formal" or high-paying jobs, or other environments wherein exposure to the stigmatized behavior is less common (Apel & Sweeten, 2010; Copenhaver, Edwards-Willey, & Byers, 2007). Notably, perceived

stigma is not considered to be universally harmful; views about the self (i.e., in the form of anticipated or internalized stigma) are often viewed as more proximal and, thus, relevant to treatment-seeking behavior (Corrigan et al., 2006; Earnshaw, Bogart, Dovidio, & Williams, 2013). However, perceived stigma about treatment is described as a reason for not seeking needed substance use treatment among higher income, insured populations, whereas the numerous logistic and other barriers to treatment access are often more pressing among underserved, low-income populations (Ali et al., 2017).

### Anticipated or Enacted and Internalized Stigma

Several risk factors were related to anticipated/enacted stigma (i.e., experiences of rejection, worries about future unfair treatment because of alcohol use) and internalized stigma (i.e., belief that others look down on you, looking down on yourself as a result of alcohol use) among incarcerated women. At the bivariate level, women who reported more physiological, psychological, social and other problems as a result of their alcohol use, recognized alcohol as a factor in their legal involvement, had received a physician's advice to stop drinking, reported higher readiness to enter treatment, perceived more external pressures to enter treatment, and had other stigmatized conditions (i.e., drug use, sex trading, and homelessness) were more likely to endorse internalized and anticipated/enacted stigma. Interestingly, many of these risk factors (i.e., problem recognition, readiness for treatment, and physician advice) may be desirable attributes in promoting abstinence.

Table 3

*Multiple Linear Regressions of Alcohol Self-Stigma Subscales on Sociodemographics, Psychological Distress, and Alcohol-Related Factors (n = 185)*

Regression models	Alcohol self-stigma subscales			
	Perceived stigma about treatment b (SE)	Internalized stigma b (SE)	Anticipated/enacted stigma b (SE)	Internalized stigma-1 item b (SE)
Block 1: Sociodemographics				
Age	.06 (.04)	.010* (.05)	.68*** (.21)	
Non-Latino White (yes)				
Education (years)	.41* (.19)	.60* (.21)		.16** (.06)
Income	.73** (.37)			
Block 2: Baseline psychological distress				
Depression		-.59 (.44)		
Stress		1.39** (.52)	1.36** (.52)	.50** (.16)
Block 3: Alcohol-related factors				
Months with alcohol problem		.93 (.60)		
Mean drinks per day before incarceration		-.00 (.31)		
Short Inventory of Problems		1.38 (.91)	2.03* (.81)	.55* (.26)
Physician advice (yes)		1.47 (.91)	1.57 (.95)	.32 (.32)
Return to jail if continued use (yes)		.16 (.49)	.09 (.45)	.05 (.15)
Alcohol related charge				
Self-efficacy to quit				
CMR readiness		.19 (.65)	.21 (.65)	-.05 (.23)
CMR external pressures to enter treatment		1.31* (.66)	1.26* (.63)	.19 (.21)
CMR factors that influence treatment completion				
Block 4: Other stigmatized conditions				
Exchange sex last 3-months (yes)		2.24 (1.16)		
Homelessness last 3-months (yes)				
Drug use last 3-months (yes)		.40 (.94)		

Note. CMR = Circumstances, Motivation, and Readiness.

\*  $p < .05$ . \*\*  $p < .01$ .

nence and help-seeking behavior. Consistent with prior research and theory, physician advice or intensified need or readiness to seek treatment may also solidify the personal application of official labels, such as alcoholic, that can be harmful to the self-concept (Link, Cullen, Struening, Shrout, & Dohrenwend, 1989). In particular, external pressures (e.g., family, legal) to enter alcohol treatment emerged as a significant predictor of the internalized stigma subscale in multivariate models. Research on substance use stigma demonstrates that one of the primary sources of stigma for individuals with substance use problems is family. Individuals with substance use problems frequently report concealing their substance use from their family to avoid embarrassment and judgment (Earnshaw et al., 2013; Luoma et al., 2007), 75% report that their families endorse negative stereotypes and would treat them unfairly if they knew about their substance use (Ahern, Stuber, & Galea, 2007), and many report that their family members who are aware of their substance use do not trust them (Earnshaw et al., 2013). Legal pressures (e.g., mandated treatment, suspension of driver's license, incarceration, and probation) are another primary source of stigma that has the potential to influence one's self-concept. People with substance use disorders often report that they are viewed as "criminals" by justice system staff (Brinkley-Rubinstein, 2015). Family and legal pressures are both typically associated with substance use treatment entry (Weisner & Matzger, 2002) and, interestingly, these external pressures were not significantly associated with perceived stigma about treatment in this study. Women with AUD may agree with these external pressures that treatment is important and beneficial, and yet these

pressures may still contribute to feelings of low self-worth and shame (i.e., internalized stigma). It may be that people with AUD enter treatment, but experience shame and avoidance in the context of treatment, which may interfere with their ability to trust treatment providers and engage in or benefit from treatment. Our results suggest that family members, legal system authorities, or health care professionals' pressuring individuals with AUD to enter alcohol treatment, despite the good intentions, may have unintended consequences for women's self-concept.

Recognizing more consequences of alcohol use (i.e., physical, psychological, interpersonal, legal, and financial) predicted anticipated/enacted stigma and the single internalized stigma item that captured feeling worse about one's self because of stigma. Studies have demonstrated that more "severe" stigmatized behavior (e.g., injection drug use as opposed to other drug use, violent criminal history as opposed to nonviolent) is associated with higher levels of perceived, enacted, and anticipated stigma (LeBel, 2012; Luoma et al., 2007). Because such behaviors are associated with more negative stereotypes, individuals who engage in them are more likely to form negative expectancies about future interactions with community members, believing stereotypes are personally accurate, and are more at risk of experiencing negative psychological and behavioral consequences of internalized stigma such as shame, depression, and social withdrawal.

Incarcerated women who had higher baseline levels of stress were at risk of internalized and anticipated and enacted stigma. Legal system involvement is often identified as a major source of stress, and this finding makes sense; women who had more stress-



ful circumstances and felt less capable of coping with their circumstances before incarceration may also feel less capable of overcoming stigma-related stressors. Alternatively, it may be that past stigma-related stressors such as feeling judged by family or community members or being fired or not hired because of alcohol use resulting in incarceration may contribute to perceived stress, partly explaining this association; prospective research would be necessary to clarify the direction of this relationship.

### Limitations

This study has both strengths and limitations. Strengths include a large ( $n = 185$ ) dataset reflecting an understudied and high-risk population (jailed women with diagnosed AUD) and a multifaceted assessment of self-stigma. First, while our sample allows an examination of this unique perspective of incarcerated women, we included no comparison, nonincarcerated cohort of people with AUD to test the wide variety of variables we examined here for their association with alcohol self-stigma. Second, there is little heterogeneity in quantity or frequency measures of alcohol use in this long-term, heavy-drinking sample. Third, the study was cross-sectional, and while we document historical factors associated with self-stigma, we could not determine whether this self-stigma will relent or increase after release from jail. Similarly, our analyses did not allow us to determine the direction of association, how much self-stigma was a result or cause of factors such as stress or depression. Moreover, some of the alcohol-related factors (e.g., Short Inventory of Problems) included items that had conceptual overlap with self-stigma, possibly inflating the association (though the strongest correlation between the SIP and self-stigma scales was 0.44, suggesting distinct constructs). Fourth, our study participants were female jail inmates, therefore, findings of this study may not be generalizable to other justice-involved populations (e.g., prison inmates, who often commit more stigmatized offenses and serve longer sentences) or to men, as there are previously established gender differences in AUD (Nolen-Hoeksema & Hilt, 2006). Along these lines, we did not assess for self-stigma related to criminal justice system involvement, which may be an important variable to include in future research (Moore et al., 2016). Finally, we attempted to analyze the most parsimonious multivariate models possible by excluding variables that were not significantly associated with self-stigma at the bivariate level, but multivariate models still included numerous variables that may have increased the risk that we would find a significant association by chance. Additional studies should be conducted to replicate these relationships.

### Treatment Implications

This study has several treatment implications. Research suggests that internalized and anticipated stigma in particular are most often linked to treatment avoidance and disengagement (Britt et al., 2015; Kaushik et al., 2016). Indeed, in community populations, people with AUD who perceive more stigma are less likely to seek professional substance use treatment (Keyes et al., 2010). Women with AUD who are incarcerated (whether for substance- or non-substance-related reasons), and who have high levels of stress, legal or family pressures to enter treatment, and consequences of alcohol use are at risk of experiencing internalized and anticipated/

enacted stigma that can later impact their treatment engagement and adjustment. To prevent self-stigma among incarcerated individuals who are often mandated to receive treatment, legal systems could facilitate warm handoffs and coordinated care with treatment providers, and family members could support their loved ones in receiving treatment and be active participants in their treatment (e.g., Community Reinforcement and Family Training; Kirby et al., 1999). Attempts to reduce internalized and anticipated stigma cognitions and expectancies, the associated affective states (e.g., shame, anxiety), and the behavioral consequences (e.g., avoidance) among incarcerated individuals with AUD may help further facilitate treatment engagement and success. There are interventions aimed at reducing self-stigma associated with substance use (Luoma, Kohlenberg, Hayes, Bunting, & Rye, 2008), but they are rarely if ever implemented in the justice system. There is a need for these treatments specifically for criminal justice populations and settings.

### References

- Ahern, J., Stuber, J., & Galea, S. (2007). Stigma, discrimination and the health of illicit drug users. *Drug and Alcohol Dependence*, *88*, 188–196. <http://dx.doi.org/10.1016/j.drugalcdep.2006.10.014>
- Ali, M. M., Teich, J. L., & Mutter, R. (2017). Reasons for not seeking substance use disorder treatment: Variations by health insurance coverage. *The Journal of Behavioral Health Services & Research*, *44*, 63–74. <http://dx.doi.org/10.1007/s11414-016-9538-3>
- Apel, R., & Sweeten, G. (2010). The impact of incarceration on employment during the transition to adulthood. *Social Problems*, *57*, 448–479. <http://dx.doi.org/10.1525/sp.2010.57.3.448>
- Bender, R. E., Griffin, M. L., Gallop, R. J., & Weiss, R. D. (2007). Assessing negative consequences in patients with substance use and bipolar disorders: Psychometric properties of the Short Inventory of Problems (SIP). *The American Journal on Addictions*, *16*, 503–509. <http://dx.doi.org/10.1080/10550490701641058>
- Birtel, M. D., Wood, L., & Kempa, N. J. (2017). Stigma and social support in substance abuse: Implications for mental health and well-being. *Psychiatry Research*, *252*, 1–8. <http://dx.doi.org/10.1016/j.psychres.2017.01.097>
- Brinkley-Rubinstein, L. (2015). Understanding the effects of multiple stigmas among formerly incarcerated HIV-positive African American men. *AIDS Education and Prevention*, *27*, 167–179. <http://dx.doi.org/10.1521/aeap.2015.27.2.167>
- Britt, T. W., Jennings, K. S., Cheung, J. H., Pury, C. L., & Zinzow, H. M. (2015). The role of different stigma perceptions in treatment seeking and dropout among active duty military personnel. *Psychiatric Rehabilitation Journal*, *38*, 142–149. <http://dx.doi.org/10.1037/prj0000120>
- Bronson, J., Stroop, J., Zimmer, S., & Berzofsky, M. (2017). *Drug use, dependence, and abuse among state prisoners and jail inmates, 2007–2009*. Washington, DC: Bureau of Justice Statistics.
- Brown, S. A., Kramer, K., Lewno, B., Dumas, L., Sacchetti, G., & Powell, E. (2015). Correlates of self-stigma among individuals with substance use problems. *International Journal of Mental Health and Addiction*, *13*, 687–698. <http://dx.doi.org/10.1007/s11469-015-9559-9>
- Chartier, K. G., Miller, K., Harris, T. R., & Caetano, R. (2016). A 10-year study of factors associated with alcohol treatment use and non-use in a U.S. population sample. *Drug and Alcohol Dependence*, *160*, 205–211. <http://dx.doi.org/10.1016/j.drugalcdep.2016.01.005>
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, *24*, 385–396. <http://dx.doi.org/10.2307/2136404>
- Cole, E. R. (2009). Intersectionality and research in psychology. *American Psychologist*, *64*, 170–180. <http://dx.doi.org/10.1037/a0014564>

- Copenhaver, A., Edwards-Willey, T., & Byers, B. D. (2007). Journeys in social stigma: The lives of formerly incarcerated felons in higher education. *Journal of Correctional Education, 58*, 268–283.
- Corrigan, P. W., Watson, A. C., & Barr, L. (2006). The self-stigma of mental illness: Implications for self-esteem and self-efficacy. *Journal of Social and Clinical Psychology, 25*, 875–884. <http://dx.doi.org/10.1521/jscp.2006.25.8.875>
- Crisafulli, M. A. (2016). *Problem recognition among individuals with alcohol-related legal offenses: The impact of personal and perceived stigma*. ProQuest Dissertations Publishing. University of Maryland, Baltimore County, Maryland.
- De Leon, G., Melnick, G., & Kressel, D. (1997). Motivation and readiness for therapeutic community treatment among cocaine and other drug abusers. *The American Journal of Drug and Alcohol Abuse, 23*, 169–189. <http://dx.doi.org/10.3109/00952999709040940>
- De Leon, G., Melnick, G., Kressel, D., & Jainchill, N. (1994). Circumstances, motivation, readiness, and suitability (the CMRS scales): Predicting retention in therapeutic community treatment. *The American Journal of Drug and Alcohol Abuse, 20*, 495–515. <http://dx.doi.org/10.3109/00952999409109186>
- De Leon, G., Melnick, G., Thomas, G., Kressel, D., & Wexler, H. K. (2000). Motivation for treatment in a prison-based therapeutic community. *The American Journal of Drug and Alcohol Abuse, 26*, 33–46. <http://dx.doi.org/10.1081/ADA-100100589>
- de Silveira, P. S., Casela, A. L., Monteiro, É. P., Ferreira, G. C., de Freitas, J. V., & Machado, N. M. (2018). Psychosocial understanding of self-stigma among people who seek treatment for drug addiction. *Stigma and Health, 3*, 42–52. <http://dx.doi.org/10.1037/sah0000069>
- Earnshaw, V. A., Bogart, L. M., Dovidio, J. F., & Williams, D. R. (2013). Stigma and racial/ethnic HIV disparities: Moving toward resilience. *American Psychologist, 68*, 225–236. <http://dx.doi.org/10.1037/a0032705>
- Ehrman, R. N., & Robbins, S. J. (1994). Reliability and validity of 6-month timeline reports of cocaine and heroin use in a methadone population. *Journal of Consulting and Clinical Psychology, 62*, 843–850. <http://dx.doi.org/10.1037/0022-006X.62.4.843>
- Fortney, J., Mukherjee, S., Curran, G., Fortney, S., Han, X., & Booth, B. M. (2004). Factors associated with perceived stigma for alcohol use and treatment among at-risk drinkers. *The Journal of Behavioral Health Services & Research, 31*, 418–429. <http://dx.doi.org/10.1007/BF02287693>
- Fung, K. M., Tsang, H. W. H., Corrigan, P. W., Lam, C. S., & Cheng, W. M. (2007). Measuring self-stigma of mental illness in China and its implications for recovery. *International Journal of Social Psychiatry, 53*, 408–418. <http://dx.doi.org/10.1177/0020764007078342>
- Gavriel-Fried, B., & Rabayov, T. (2017). Similarities and differences between individual seeking treatment for gambling problems vs. alcohol and substance use problems in relation to progressive model of self-stigma. *Frontiers in Psychology, 8*, 957. <http://dx.doi.org/10.3389/fpsyg.2017.00957>
- Gibbs, D. A., Rae Olmsted, K. L., Brown, J. M., & Clinton-Sherrod, M. (2011). Dynamics of stigma for alcohol and mental health treatment among army soldiers. *Military Psychology, 23*, 36–51. <http://dx.doi.org/10.1080/08995605.2011.534409>
- Greenfield, L. A. (1998). *Alcohol and crime: An analysis of national data on the prevalence of alcohol involvement in crime*. Washington, DC: Bureau of Justice Statistics.
- Hartwell, S. (2004). Triple stigma: Persons with mental illness and substance abuse problems in the criminal justice system. *Criminal Justice Policy Review, 15*, 84–99.
- Johnson, J. E., Schonbrun, Y. C., Anderson, B., Kurth, M., Timko, C., & Stein, M. (2017). Study protocol: Community links to establish alcohol recovery (CLEAR) for women leaving jail. *Contemporary Clinical Trials, 55*, 39–46.
- Johnson, J. E., & Zlotnick, C. (2008). A pilot study of group interpersonal psychotherapy for depression in substance-abusing female prisoners. *Journal of Substance Abuse Treatment, 34*, 371–377. <http://dx.doi.org/10.1016/j.jsat.2007.05.010>
- Kanter, J. W., Rusch, L. C., & Brondino, M. J. (2008). Depression self-stigma: A new measure and preliminary findings. *The Journal of Nervous and Mental Disease, 196*, 663–670.
- Kaushik, A., Kostaki, E., & Kyriakopoulos, M. (2016). The stigma of mental illness in children and adolescents: A systematic review. *Psychiatry Research, 243*, 469–494. <http://dx.doi.org/10.1016/j.psychres.2016.04.042>
- Keyes, K. M., Hatzenbuehler, M. L., McLaughlin, K. A., Link, B., Olfson, M., Grant, B. F., & Hasin, D. (2010). Stigma and treatment for alcohol disorders in the United States. *American Journal of Epidemiology, 172*, 1364–1372. <http://dx.doi.org/10.1093/aje/kwq304>
- Kiluk, B. D., Dreffuss, J. A., Weiss, R. D., Morgenstern, J., & Carroll, K. M. (2013). The Short Inventory of Problems - revised (SIP-R): Psychometric properties within a large, diverse sample of substance use disorder treatment seekers. *Psychology of Addictive Behaviors, 27*, 307–314. <http://dx.doi.org/10.1037/a0028445>
- Kirby, K. C., Marlowe, D. B., Festinger, D. S., Garvey, K. A., & La Monaca, V. (1999). Community reinforcement training for family and significant others of drug abusers: A unilateral intervention to increase treatment entry of drug users. *Drug and Alcohol Dependence, 56*, 85–96. [http://dx.doi.org/10.1016/S0376-8716\(99\)00022-8](http://dx.doi.org/10.1016/S0376-8716(99)00022-8)
- Kulesza, M., Matsuda, M., Ramirez, J. J., Werntz, A. J., Teachman, B. A., & Lindgren, K. P. (2016). Towards greater understanding of addiction stigma: Intersectionality with race/ethnicity and gender. *Drug and Alcohol Dependence, 169*, 85–91.
- LeBel, T. P. (2012). Invisible Stripes? Formerly incarcerated persons' perceptions of stigma. *Deviant Behavior, 33*, 89–107. <http://dx.doi.org/10.1080/01639625.2010.538365>
- Link, B. G., Cullen, F. T., Struening, E., Shrout, P. E., & Dohrenwend, B. P. (1989). A modified labeling theory approach to mental disorders: An empirical assessment. *American Sociological Review, 54*, 400–423. <http://dx.doi.org/10.2307/2095613>
- Luoma, J. B., Kohlenberg, B. S., Hayes, S. C., Bunting, K., & Rye, A. K. (2008). Reducing self-stigma in substance abuse through acceptance and commitment therapy: Model, manual development, and pilot outcomes. *Addiction Research & Theory, 16*, 149–165. <http://dx.doi.org/10.1080/16066350701850295>
- Luoma, J. B., Twohig, M. P., Waltz, T., Hayes, S. C., Roget, N., Padilla, M., & Fisher, G. (2007). An investigation of stigma in individuals receiving treatment for substance abuse. *Addictive Behaviors, 32*, 1331–1346. <http://dx.doi.org/10.1016/j.addbeh.2006.09.008>
- Lyu, K. Y., Lee, K., & Bejerano, I. L. (2017). Factors related to internalization of stigma for alcohol dependence among Korean men. *Social Behavior and Personality: An International Journal, 45*, 127–142. <http://dx.doi.org/10.2224/sbp.5328>
- Miller, W. R., Tonigan, J. S., & Longabaugh, R. (1995). The drinker inventory of consequences (DrInC). *Project MATCH Monograph Series, 4*, 319–322.
- Moore, K. E., Stuewig, J. B., & Tangney, J. P. (2016). The effect of stigma on criminal offenders' functioning: A longitudinal mediational model. *Deviant Behavior, 37*, 196–218. <http://dx.doi.org/10.1080/01639625.2014.1004035>
- Nolen-Hoeksema, S., & Hilt, L. (2006). Possible contributors to the gender differences in alcohol use and problems. *Journal of General Psychology, 133*, 357–374. <http://dx.doi.org/10.3200/GENP.133.4.357-374>
- Ociskova, M., Prasko, J., Latalova, K., Kamaradova, D., & Grambal, A. (2016). Psychological factors and treatment effectiveness in resistant anxiety disorders in highly comorbid inpatients. *Neuropsychiatric Disease and Treatment, 12*, 1539–1551. <http://dx.doi.org/10.2147/NDT.S104301>

- Oexle, N., & Corrigan, P. W. (2018). Understanding mental illness stigma toward persons with multiple stigmatized conditions: Implications of intersectionality theory. *Psychiatric Services, 69*, 587–589. <http://dx.doi.org/10.1176/appi.ps.201700312>
- Office of Human Research Protections. (2005). *Code of federal regulations: Part 46 protection of human subjects*. U.S. department of health and human services. Retrieved from <https://www.hhs.gov/ohrp/regulations-and-policy/regulations/45-cfr-46/index.html>
- Oleski, J., Mota, N., Cox, B. J., & Sareen, J. (2010). Perceived need for care, help seeking, and perceived barriers to care for alcohol use disorders in a national sample. *Psychiatric Services, 61*, 1223–1231. <http://dx.doi.org/10.1176/ps.2010.61.12.1223>
- Pogorzelski, W., Wolff, N., Pan, K. Y., & Blitz, C. L. (2005). Behavioral health problems, ex-offender reentry policies, and the “Second Chance Act”. *American Journal of Public Health, 95*, 1718–1724. <http://dx.doi.org/10.2105/AJPH.2005.065805>
- Racine, E., Bell, E., Zizzo, N., & Green, C. (2015). Public discourse on the biology of alcohol addiction: Implications for stigma, self-control, essentialism, and coercive policies in pregnancy. *Neuroethics, 8*, 177–186. <http://dx.doi.org/10.1007/s12152-014-9228-x>
- Radcliffe, P., & Stevens, A. (2008). Are drug treatment services only for ‘thieving junkie scumbags’? Drug users and the management of stigmatized identities. *Social Science & Medicine, 67*, 1065–1073. <http://dx.doi.org/10.1016/j.socscimed.2008.06.004>
- Schomerus, G. (2013). The stigma of alcohol and other substance abuse. In P. W. Corrigan (Ed.), *The stigma of disease and disability: Understanding causes, and overcoming injustices* (pp. 57–72). Washington, DC: American Psychological Association.
- Schomerus, G., Corrigan, P. W., Klauer, T., Kuwert, P., Freyberger, H. J., & Lucht, M. (2011). Self-stigma in alcohol dependence: Consequences for drinking-refusal self-efficacy. *Drug and Alcohol Dependence, 114*, 12–17. <http://dx.doi.org/10.1016/j.drugalcdep.2010.08.013>
- Schomerus, G., Lucht, M., Holzinger, A., Matschinger, H., Carta, M. G., & Angermeyer, M. C. (2011). The stigma of alcohol dependence compared with other mental disorders: A review of population studies. *Alcohol and Alcoholism, 46*, 105–112. <http://dx.doi.org/10.1093/alcalc/agq089>
- Schomerus, G., Matschinger, H., Lucht, M. J., & Angermeyer, M. C. (2014). Changes in the perception of alcohol-related stigma in Germany over the last two decades. *Drug and Alcohol Dependence, 143*, 225–231. <http://dx.doi.org/10.1016/j.drugalcdep.2014.07.033>
- Smith, L. R., Earnshaw, V. A., Copenhaver, M. M., & Cunningham, C. O. (2016). Substance use stigma: Reliability and validity of a theory-based scale for substance-using populations. *Drug and Alcohol Dependence, 162*, 34–43. <http://dx.doi.org/10.1016/j.drugalcdep.2016.02.019>
- Sobell, L., & Sobell, M. (1992). Timeline follow-back for alcohol consumption. *PsychTESTS Dataset*. <http://dx.doi.org/10.1037/t06202-000>
- Stein, M. D., Charuvastra, A., Anderson, B., Sobota, M., & Friedmann, P. D. (2002). Alcohol and HIV risk taking among intravenous drug users. *Addictive Behaviors, 27*, 727–736. [http://dx.doi.org/10.1016/S0306-4603\(01\)00205-2](http://dx.doi.org/10.1016/S0306-4603(01)00205-2)
- van Olphen, J., Eliason, M. J., Freudenberg, N., & Barnes, M. (2009). Nowhere to go: How stigma limits the options of female drug users after release from jail. *Substance Abuse Treatment, Prevention, and Policy, 4*, 10. <http://dx.doi.org/10.1186/1747-597X-4-10>
- Ware, J., Jr., Kosinski, M., & Keller, S. D. (1996). A 12-Item Short-Form Health Survey: Construction of scales and preliminary tests of reliability and validity. *Medical Care, 34*, 220–233. <http://dx.doi.org/10.1097/00005650-199603000-00003>
- Weisner, C., & Matzger, H. (2002). A prospective study of the factors influencing entry to alcohol and drug treatment. *The Journal of Behavioral Health Services & Research, 29*, 126–137. <http://dx.doi.org/10.1007/BF02287699>
- Zeng, Z. (2018). *Jail inmates in 2016*. Washington, DC: Bureau of Justice Statistics.
- Zlotnick, C., Johnson, J., & Najavits, L. M. (2009). Randomized controlled pilot study of cognitive-behavioral therapy in a sample of incarcerated women with substance use disorder and PTSD. *Behavior Therapy, 40*, 325–336. <http://dx.doi.org/10.1016/j.beth.2008.09.004>

Received October 30, 2018

Revision received March 13, 2019

Accepted April 17, 2019 ■