Self-Stigma, Identity, and Co-Occurring Disorders

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ABSTRACT

Background: A four stage regressive model that links public stigma to self-stigma is applied to mental illness and substance use disorder. We assess this four stage model in those with co-occurring disorders versus those who have mental illness or substance use disorder alone.

Method: 366 people who self-identified as having either a mental illness or co-occurring mental illness with substance use disorder were recruited from MTurk and completed measures on identity and self-stigma.

Results: Higher group identity predicted lower self-stigma in those with mental illness while this effect was not present for participants with co-occurring disorders. Limitations include that this study only looked at mental illness identity for those with both mental illness and substance use disorder; sample limitations are also discussed.

Conclusions: Those with co-occurring disorders may identify more with certain groups over others.

SELF-STIGMA, IDENTITY, AND CO-OCCURRING DISORDERS

Public stigma consists of the egregious stereotypical beliefs of the general populace about a stigmatized group (perceived stigma) leading to prejudice (e.g., negative emotional reaction like disdain) and discrimination (e.g., loss of life opportunities in such areas as education, employment, independent living and relationships) (1). People from the stigmatized group who internalize corresponding stereotypes may self-stigmatize, or accept the harmful beliefs (2). A four stage regressive model ties public to self-stigma: aware, agree, apply, which leads to harm (3). We apply it here to mental illness. People living with mental health conditions who are **aware** of group stereotypes – "People with mental illness (MI) are dangerous." – show perceived stigma (4). Those who **agree** with the stereotype – "That's right. I think people with mental illness are dangerous." – exhibit public stigma. Self-stigma only occurs when individuals living with the condition **apply** the stereotype to themselves: "I'm a person with mental illness so I'm dangerous." Lastly, people are **harmed** by stereotypes when applying its causes diminishes self-esteem: "I think I'm a bad person when I realize I am a person with mental illness who is dangerous." The harm of self-stigma can lead to a "why try" effect – Why should I try to get a job; someone like me is not worthy of it?" – which undermines rehabilitation goals to get back to work or live independently which in turn worsens quality of life and psychological wellbeing (5, 6).

The regressive model of self-stigma is well validated for adults with serious mental illness (MI) showing research participants with lived experience who acknowledge great harm from self-stigma show diminished recovery, empowerment, self-efficacy, and self-esteem (6, 7). More recently, it has been tested on people with substance use disorder (8). The four step model has also been validated for people with co-occurring serious mental illness and substance use disorders (SUD). One within-group study examined how the four stages of self-stigma varied by stereotypes related to mental illness versus substance use disorder in a sample of U.S. veterans with DSM-IV-TR, Axis I diagnoses of serious mental illness plus concurrent substance use or dependence (9). Results showed participants were more likely to view aware and agree for SUD stereotypes significantly worse than for MI stereotypes. No differences were found in self-stigma apply or harm.

This paper seeks to further understand the four stages of self-stigma in those with co-occurring disorders by contrasting their responses to those who report mental illness alone. Results of Harnish et al. (9) suggest ste-

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reotypes of SUD lead to more negative awareness and agreement of those stereotypes. The question here is how the addition of a SUD intensifies the self-stigma of a person with mental illness in terms of the MI stereotypes. An additive effect might suggest those who have both types of stigmatized conditions would show worse scores across the four self-stigma stages related to mental illness. We seek to generalize findings beyond veterans or people engaged in the service system per se by recruiting people from the general population.

An important moderator of diagnostic experience on self-stigma stage is identity, the degree to which people with mental illness recognize their membership in the stigmatized group called "mentally ill" (10). Identity can be defined as the self-statements one makes about oneself that may include membership in the group labeled with mental illness. Identity is a more complex construct than the somewhat neutral idea of disease awareness; the degree to which people admit their mental illness is disabling (11). Identity as measured here includes items that represent strong ties and solidarity with the "group," thereby suggesting a positive or resilient factor that may diminish self-stigma (12). Hence, this study includes a measure of identity with the MI group expecting to show those with stronger identity demonstrate diminished self-stigma. We hypothesize that participants with co-occurring disorders will display higher levels of self-stigma across the four stages. Furthermore, identity being our moderator, the more a person identities with being a person with mental illness, the lower their self-stigma will be.

METHODS

Adults from the "general" population were solicited to participate in this study using Mechanical Turk (MTurk), a crowdsourcing internet marketplace network that, among other things, is used to solicit participants for social science research. More than 100,000 workers from the U.S. are registered with MTurk (13). Research is mixed regarding the degree to which demographics of MTurk workers match the U.S. population (14-16), though this is less of a problem for studies like the current one, which are more concerned about internal validity to test hypotheses. Studies have also shown MTurk to yield better data quality than other crowd sourcing platforms (17). A solicitation was posted on MTurk requesting workers to participate in a 15-minute survey "examining labels for people who have a mental illness or substance

use disorder (addiction to substances)." Consistent with our commitment to pay MTurk participants minimum wage, workers completing this 15-minute task were reimbursed $1.70. We have been able to use MTurk samples elsewhere to successfully recruit people who self-report serious mental illness and/or SUD.

Four hundred MTurk workers responded to the solicitation and were assessed for eligibility. One concern about online surveys is research participants who demonstrate insufficient effort responding (18) by failing to fully attend to the task. As in similar research, the MTurk survey included validity questions meant to exclude people in this group who were not attending well; e.g., "Please select number 5 for your answer below." We also excluded people whose time on task was below minimal cutoff (3 minutes after viewing vignette) to complete the survey competently. As a result, 366 of 400 MTurk workers provided useable data.

Our goal was to recruit people with MI or MI+SUD who were not necessarily identified through the service system but still met somewhat conservative criteria for either group membership. Previously, we have used self-report answers (yes or no) to whether the respondent previously was prescribed medication for mental illness or was diagnosed (19). Until relatively recently, medication prescriptions were not common components for treatment of SUD (20); diagnosis, however, is more apparently an indicator of serious MI or SUD and hence used to imply self-reported group membership. Two hundred and eighteen (76.0%) respondents reported previous diagnosis for mental illness (the MI group). Sixty-nine (24.0%) in the sample reported an additional diagnosis for substance use disorder and became the MI+SUD group.

Prior to beginning the survey, prospective research participants were informed of study goals and methods and asked for an electronic signature before proceeding. The study was fully reviewed and approved by the IRB at the Illinois Institute of Technology. After consenting to participate, survey respondents answered items about demographics. Participants were exposed to consent form, measures and conditions through Qualtrics, an online self-administered survey platform. Overall, the sample was 33.5 years of age on average (SD=9.4) and 39.6% female. The sample self-reported largely as white (79.7%) though also included 10.6% African/African American and 8.4% Asian/Asian American. About 8.7% of the sample reported being Latino/Latina. The overall sample was 86.3% heterosexual and 11.2% LGB. Participants were mostly single (46.7%) or married/

partnered (25.1%) though 7.7% reported being divorced or widowed. Educational achievement varied, with 70.2% reporting some college or more. In terms of employment, 59% were working full time and 21.3% part time. Incomes varied with 55.7% of participants reporting annual income less than $49,000. Previous research has shown significant correlations between self-stigma and age (with higher age suggesting more self-stigma [21]), gender (females self-stigmatize more than males [22]), and ethnicity (non-white self-stigmatize more than white [22]). Hence, demographics are included in analyses herein as control variables.

Research participants then completed measures of the four stages of MI self-stigma and MI identity. Self-stigma was assessed using the Self-Stigma of Mental Illness Scale (23) to which participants respond to items on a 9-point agreement scale (9=strongly agree). For example, "I think the public believes most persons with mental illness will not recover or get better." Findings from several studies on the 40-item SSMIS-SF have supported the reliability, factor structure, stage relationship, and construct validity of the SSMIS-SF (24). A short form (20 item) of the measures (SSMIS-SF-SF) was developed and tested on four separate groups yielding similar validity and reliability scores (23). The short form was used in this study. Internal consistency of responses for participants in this study were satisfactory (aware, α=.79; agree, α=.83; apply, α=.77; harm, α=.86).

Research participants also completed the identity with mental illness scale (IDMI) (25). Research participants responded to five items on a 7-point agreement scale (7=completely agree); e.g., "I feel a strong sense of solidarity with the group of people with mental illness." The five items are added into a single overall score with higher scores representing more MI identity. The IDMI has been shown to have good reliability and validity for samples of people with serious mental illness (12). Internal consistency of the IDMI for participants in our study was satisfactory (α=.92).

DATA ANALYSES

Distributions of data were reviewed and transformed as needed. Missing data will be examined and imputed if appropriate. Inferential statistics will test MI versus MI_SUD differences in demographics. Pearson product moment correlations will then examine associations between each of the four SSMIS-SF subscales and demographics, diagnosis, MI identity, and interaction of diagnosis and identity. Finally, simultaneous multiple regressions will be exam-

ined to determine independence of variables found to be associated with SSMIS-SF subscales.

RESULTS

Differences in demographics for the MI and MI+SUD samples are summarized in Table 1. Significant differences were found across the two groups for overall gender and education. The MI group was split between males and females (45.4% female) while the MI+SUD group was mostly males (24.6% female). The MI group was also more educated with 88.6% reporting at least some college versus 78.2% in the MI+SUD group.

Pearson product moment correlations between the four subscales of the SSMIS-SF and demographics thought to be associated with self-stigma are summarized in the top rows of Table 2. Only one of these 12 was found to be significant and hence needs to be interpreted cautiously; i.e., people from non-white ethnic groups were more likely to agree with the stigma of mental illness.

Pearson product moment correlations representing relationships between SSMIS-SF scales and MI identity are also summarized in Table 2. Interestingly, people who identified more with mental illness were significantly more

Table 1. *Demographic differences between those who self-report diagnosis of mental illness (MI) or mental illness plus substance use disorder (MI+SUD).*

VARIABLE	MI (n=218)	MI+SUD (n=69)	differences
Age	M=35.8 SD=9.6	M=35.5 SD=9.4	$F_{(1,286)}$=0.05 p=.818
Gender % female	45.4%	24.6%	$\chi^2(4)$=12.18 p=.016
Race African American European American Hispanic Other	12.4% 80.3% 9.6% 9.8%	10.1% 84.1% 4.3% 8.6%	$\chi^2(10)$=4.124 p=.942
Education high school diploma or less some college or more	11.4% 88.6%	21.7% 78.2%	$\chi^2(1)$=4.42 p=.036
Marital status single married, separated/divorced, widow	44.7% 30.8%	50.7% 30.4%	$\chi^2(1)$=0.23 p=.632
Self-stigma: Aware	M=33.5 SD=6.48	M=31.6 SD=7.55	$F_{(1,286)}$=4.23 p<.05
Self-stigma: Agree	M=15.4 SD=6.74	M=17.1 SD=8.03	$F_{(1,286)}$=2.88 p<.10
Self-stigma: Apply	M=12.6 SD=6.13	M=15.1 SD=8.34	$F_{(1,286)}$=4.23 p<.01
Self-stigma: Harm	M12.4 SD=7.77	M=15.0 SD=9.64	$F_{(1,286)}$=4.23 p<.05

Table 2. *Correlations between the four self-stigma constructs and selected demographics, diagnosis (MI or MI+SUD), mental illness identity, and interactions*

Correlates	Self-Stigma			
	Aware	Agree	Apply	Harm
Age	.07	-.02	-.10	-.10
Gender	-.10	.05	.06	.01
Ethnicity (White vs nonwhite)	-.01	-.15*	-.10	-.05
Mental Illness Identity (IDMI)	.16*	-.14*	-.05	.01
MI or MI+SUD diagnosis	.12*	-.10***	-.16*	-.13*
MI X IDMI	.19**	-.16*	-.15*	-.11*
MI+SUD X IDMI	-.10	.08	.15*	.13*

Note. *p<.05, **p<.01, ***p<.10

aware of stigma; i.e., they were more sensitive to public stigma. However, high identity was negatively associated with agreeing with that stigma. This difference in direction is also evident in diagnoses. People who self-reported MI diagnosis alone compared to the MI+SUD group were more aware of stigma but less likely to apply the stigma of mental illness to one's self or report harm due to self-stigma. The negative relationship between agree with stigma and MI self-report was described by a nonsignificant trend. This difference in direction is even more pronounced when examining SSMIS-SF subscales and interactions between group self-report and identity. In particular, results found more pronounced positive associations of the MI self-report and identity interaction with self-stigma awareness. Conversely, the interaction was significantly less associated with agree, apply and harm. Notably different findings emerged when examining SSMIS-SF associations with the interaction between identity and the MI+SUD group. This time the interaction led to significant, positive relationships with apply and harm.

Table 3 summarizes findings from the simultaneous regression with each of the SMISS subscales as dependent variables and independent variables being those with significant positive indices in Table 2. Separate regressions were completed for identity interactions with

MI versus with MI+SUD self-report. R for each of the eight equations was significant (.20 < R < .24) though effect sizes were small (.04 < R² < .06). As a result, relationships between independent variables and SSMIS-SF subscales were also small. The top half of Table 3 shows the interaction between MI self-report and identity to be significantly associated with each of the four SSMIS-SF scales in the expected direction, though two of these associations, aware of and agree with stigma, are only nonsignificant trends. Note that the ethnicity of the respondent was also a significant correlate of stigma agree; the relationship between mental illness identity and stigma harm was described by a nonsignificant trend.

A different picture emerged when the interaction between MI+SUD self-report and identity was entered as an independent variable (c.f., the bottom half of Figure 3). In no case did MI+SUD and identity interactions account for significant variance in the SSMIS-SF scales. Demographics (age) was the only correlation to emerge for stigma apply and harm, albeit as a nonsignificant trend.

DISCUSSION

This paper sought to further understand the four stages of self-stigma in those with co-occurring disorders by comparing their responses to those who report mental illness alone. Identity was measured as a moderator to self-stigma levels. Interestingly, those who identify posi-

Table 3. *Regressions for identity interactions for those with MI versus with MI+SUD self-report*

Independent Variables	SELF-STIGMA							
	Aware		Agree		Apply		Harm	
	beta	signif?	beta	signif?	beta	signif?	beta	signif?
Gender	-.03		-.01		-.01		-.05	
Age	.07		-.01		-.10		-.10	
Ethnicity (White/NonWhite)	-.01		-.15	<.05	-.09		-.04	
MI diagnosis	.07		-.08		.03		.07	
Mental Illness Identity (IDMI)	.08		-.01		.03		.11	<.10
MI X IDMI	.12	<.10	-.12	<.10	-.20	<.01	-.21	<.01
Regression Summary	R=.23* R²=.05		R=.23* R²=.05		R=.23* R²=.05		R=.22* R²=.05	
Gender	-.03		-.01		.00		-.04	
Age	.07		-.01		-.10	<.10	-.11	<.10
Ethnicity (White/NonWhite)	-.01		-.16	<.01	-.09		-.05	
MI + SUD diagnosis	.16	<.05	-.14	<.05	-.06		-.02	
Mental Illness Identity (IDMI)	.00		.07		.01		-.09	
MI+SUD X IDMI	-.02		.05		-.03		-.03	
Regression Summary	R=.21* R²=.04		R=.24* R²=.06		R=.24* R²=.06		R=.20* R²=.04	

tively with the MI group were more aware of stereotypes about their group and seemed to better perceive negative beliefs about people with mental illness. However, positively identifying with the group of people with mental illness actually seemed to be a protective factor against public stigma; those reporting higher group membership showing diminished agreement with stigmatizing stereotypes. Even more, the interaction showed awareness of stereotypes did not convert to greater self-stigma application or harm. Ethnicity was also a significant factor for agree stigma, displaying that non-whites tend to self-stigmatize more than whites.

In contrast, those with co-occurring MI+SUD did not see the same trend as those with MI alone: identity had no interaction with the four stages of self-stigma. Those with both mental illness and substance use disorder were similarly more aware of, but agreed less to, the stigma of mental illness although identity interactions were not a factor of this pattern. Those with co-occurring disorders may identify more with one group over the other depending on their experiences. This study only looked at mental illness identity for those with MI+SUD.

This study is consistent with others in finding that positive group membership is a buffer to self-stigma (26). This effect was not evident in those with co-occurring disorders, a topic that needs to be explored more thoroughly in future literature. Conversely, as Thoits (27) observed, one way of coping with adversity in a social role is to de-emphasize the importance of the stigmatized identity. Although this proves to be another protective factor, the current study looked at positive aspects of group membership and the effect it has on self-stigma. Future literature should look into the different aspects of identity, both positive and negative, and how this effects the individual.

There are several limitations to this study. Associations and effect sizes were often low and sometimes marginal, clearly requiring replication of findings on future groups. These future studies need to consider representativeness of the samples. Researchers are not ready to assert that MTurk samples are representative of the populations from which they are drawn. Moreover, we asserted membership in MI or MI+SUD group based on self-report of prior diagnosis for MI and/or SUD. While this strategy has been supported in other studies (19), future research needs to specifically validate self-reported group by independent measure of MI versus MI+SUD status. There were limitations in our group identities as well. MI and MI+SUD were looked at in terms of MI identity only. Furthermore, those with SUD alone were also excluded from the study

and could be a group used in future identity research. Also, certain demographics of this sample, age and ethnicity were associated with self-stigma stages, a finding supported by other research. Studies need to continue to make sense of the role of demographics in self-stigma.

Hypotheses in this study focused on positive identity, the degree, for example, that research participants expressed solidarity with the indexed group. This does not mean all identity leads to protective factors. Those who are aware of their status without the positive sense of solidarity might feel ashamed of this affiliation and hence experience worse self-stigma. Future research needs to determine whether this difference is supported. Severity of a mental illness diagnosis was also not measured and could contribute to differing levels of self-stigma. This is especially true if the diagnosis generally differs between those with MI+SUD and those with MI alone.

Moreover, the four stages of self-stigma used within this study may act as discrete categories and not necessarily build upon the previous stage. Research must be done to further understand the relationship of these four stages. Additionally, self-stigma due to MI stereotype was the dependent variable, not MI. Research clearly shows stereotypes about people with SUDs differ (e.g., "people with SUD are morally bad and likely criminals") and seem to be more socially acceptable than those for people with mental illness (28, 29). Future research needs to determine how personal endorsement of SUD identity and self-stigma influences relationships between the two sets of constructs.

IMPLICATIONS

Additional support of these findings may have implications for interventions that seek to diminish the self-stigma experienced by people with MI or MI+SUD. Strategies that promote positive identity may undermine stigma-self application and harm. Strategic disclosure of one's MI or SUD history may be one way to enhance positive identity (30). Honest, Open, Proud (HOP) is a three-session program that helps people with lived experience consider the pros and cons of disclosure and relatively safe ways to come out should that person decide to do so. Two randomized controlled trials of adults with MI have shown HOP participants demonstrate reduced self-stigma (31, 32). Future research needs to determine whether adaptations of HOP will benefit those with MI+SUD.

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