

Self-stigma in PTSD: Prevalence and correlates

Kelsey A. Bonfils ^a, Paul H. Lysaker ^{b,c*}, Philip Yanos ^d, Alysia Siegel ^e, Bethany L. Leonhardt ^c,
Alison V. James ^f, Beth Brustuen ^e, Brandi Luedtke ^g, Louanne W. Davis ^{b,c}

Author Note

^a Psychology Department, Indiana University-Purdue University Indianapolis, Indianapolis, IN, USA

^b Psychiatry Department, Richard L. Roudebush VA Medical Center, Indianapolis, IN, USA

^c Psychiatry Department, Indiana University School of Medicine, Indianapolis, IN, USA

^d Psychology Department, John Jay College of Criminal Justice, City University of New York, New York, NY, USA

^e School of Psychological Sciences, University of Indianapolis, Indianapolis, IN, USA

^f Department of Psychology, San Francisco VA Medical Center, San Francisco, CA, USA

^g Department of Psychology, Carl T. Hayden VA Medical Center, Phoenix, AZ, USA

Correspondence concerning this article should be addressed to Paul H. Lysaker, Roudebush VA Medical Center 1481 West 10th St., Indianapolis, IN 46202. Email: plysaker@iupui.edu

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Highlights

- Self-stigma is the internalization of negative stereotypes about mental illnesses
- We know much about self-stigma in schizophrenia, but little about its presence in PTSD
- We compared a PTSD sample (n=46) to a schizophrenia sample (n=82) on self-stigma
- Results suggest a significant level of self-stigma exists among veterans with PTSD
- Self-stigma had an effect on PTSD and commonly comorbid symptoms, like depression

ACCEPTED MANUSCRIPT

Abstract

Self-stigma is the internalization of negative societal stereotypes about those with mental illnesses. While self-stigma has been carefully characterized in severe mental disorders, like schizophrenia, the field has yet to examine the prevalence and correlates of self-stigma in post-traumatic stress disorder (PTSD). Thus, we assessed self-stigma in veterans diagnosed with PTSD and compared with veterans with schizophrenia. We further examined associations between PTSD, depressive symptoms and self-stigma in the PTSD sample. Data came from two larger studies of people with PTSD ($n=46$) and schizophrenia-spectrum disorders ($n=82$). All participants completed the Internalized Stigma of Mental Illness Scale (ISMIS). Results revealed that people with schizophrenia report more experiences of discrimination as a result of stigma than do those with PTSD, but that diagnostic groups did not differ for other subscales. In the PTSD group, feelings of alienation positively correlated with PTSD and depressive symptoms; other subscales positively correlated with depressive symptoms only. Taken together, results suggest a significant level of self-stigma exists among veterans with PTSD, and that self-stigma has an effect on PTSD and commonly comorbid symptoms, like depression. Future work should investigate whether current self-stigma interventions for other groups could be applicable for those with PTSD.

Keywords: Self-stigma, PTSD, schizophrenia, depression, discrimination

1. Introduction

Stigma has been historically defined as having two interconnected manifestations: public stigma, which includes negative stereotypic beliefs held by members of society about individuals diagnosed with a mental illness, and self-stigma, which refers to the internalization or incorporation of those beliefs into a person's identity, diminishing their self-esteem and self-efficacy (Corrigan et al., 2006b; Ritsher et al., 2003). Self-stigma becomes a problem not just when a person with mental illness becomes *aware* of stereotypes held by the public, but rather when they begin to *agree* with those stereotypes (Corrigan et al., 2006b). To date, research has focused on self-stigma in some of the most disabling psychiatric conditions, such as schizophrenia. Self-stigma is prevalent in schizophrenia and related to a range of outcomes, including poorer quality of life (Corrigan et al., 2006a; Corrigan et al., 2006b; Livingston and Boyd, 2010; Mashiach-Eizenberg et al., 2013; Yanos et al., 2008), low self-esteem and reduced sense of meaning in life (Ehrlich-Ben Or et al., 2013; Hasson-Ohayon et al., 2012; Lysaker et al., 2008), and prospective levels of emotional discomfort (Lysaker et al., 2007).

Research comparing the extent to which self-stigma is experienced has tended to find that it occurs more commonly among people with psychotic disorders than those with mood disorders (e.g., Brohan et al., 2010; Brohan et al., 2011). Further, studies find significant levels of self-stigma in those with substance use disorders (Brown et al., 2015; Luoma et al., 2008; Schomerus et al., 2011). While less research has been conducted examining self-stigma in post-traumatic stress disorder (PTSD), a few studies have begun this work (Dickstein et al., 2010; Harris et al., 2015; Keane et al., 2013; Mittal et al., 2013). Furthermore, a number of studies have examined the effects of public or perceived stigma. Considering adults exposed to trauma, research has found that higher levels of stigma are related to poorer outcomes, including greater levels of

depressive and PTSD symptoms (Deitz et al., 2015; Gonzalez et al., 2016; Kira et al., 2014; Wright et al., 2014). Further, stigma may negatively contribute to outcomes in this group, as a number of studies indicate that fear of stigma may contribute to hesitancy to seek support and treatment (Britt et al., 2008; Brown and Bruce, 2016; Fox et al., 2015; Pless Kaiser et al., 2016; Stecker et al., 2007; Stecker et al., 2013).

While the literature on self-stigma in PTSD is still in its early stages, it is likely that self-stigma is of particular importance in Veterans with PTSD. Indeed, Veterans experience high levels of stigma for seeking help (Sharp et al., 2015), which may in turn affect self-stigma, leading to reduced treatment-seeking and heightened dropout (Britt et al., 2015). Furthermore, military populations are unique in that they tend to endorse masculine norms at a higher rate than the general population (Robinson Kurpius and Lucart, 2000). Heightened masculinity is related to greater self-stigma, which in turn leads to decreased help-seeking in the general population (Vogel et al., 2011). Thus, understanding levels and implications of self-stigma in military populations is a complex undertaking.

One area that remains unclear is whether adults with PTSD experience similar levels of self-stigma to traditionally highly-stigmatized groups, such as adults with schizophrenia, and to what extent self-stigma is related to the clinical features of PTSD and treatment outcomes. Understanding the relative severity and correlates of self-stigma is important for several reasons. First, considering our knowledge of self-stigma's impact on quality of life and symptoms in other groups, examining levels of self-stigma in PTSD could inform how prevalent problematic experiences of self-stigma are in this diagnostic group. Second, understanding the correlates of self-stigma in PTSD will inform the relative importance of self-stigma to clinical presentation and clarify whether it should be a prominent treatment target for those with PTSD. Lastly, as the

research on self-stigma is more advanced for other psychiatric disorders, such as schizophrenia, the field has seen the development of several interventions aimed at alleviating experiences of self-stigma. Understanding the severity and correlates of self-stigma in PTSD will help inform the potential adaptation of existing interventions for use with this group if self-stigma rises to problematic levels.

To begin to clarify these questions, we assessed self-stigma in veterans diagnosed with PTSD and compared with levels of self-stigma reported by veterans with schizophrenia. Our research questions were: 1) Do patients with PTSD report different levels of self-stigma than patients with schizophrenia, and 2) Are levels of self-stigma related to symptom severity in PTSD? We anticipated that levels of alienation, stereotype endorsement, and social withdrawal would be equivalent between groups on the basis of work suggesting significant social withdrawal and isolation in PTSD (Blais and Renshaw, 2013; Blais et al., 2014). We further anticipated that the schizophrenia group would report experiencing more discrimination, given that the symptoms of this group tend to be more identifiable by members of the public, while also reporting being less able to reject stigma, given findings linking cognitive deficits seen in schizophrenia to reduced ability to resist stigma (Nabors et al., 2014). We secondly examined whether PTSD symptom severity and depression scores were linked to greater levels of self-stigma. We predicted, as in research on other psychiatric groups, that higher levels of self-stigma would predict elevations in emotional distress among adults with PTSD.

2. Method

2.1. Participants

Data for this investigation were pulled from two samples collected as part of larger treatment studies of Veterans. For this study, ‘Veteran’ refers to any person who served in the

military and is eligible to receive healthcare services from the VA. All Veterans were recruited from a Midwestern VAMC in Indianapolis, IN.

2.1.1. PTSD sample

Forty-one (89.1%) male and five (10.9%) female veterans participated in a larger study of the effects of a mindfulness-based adaptation of Cognitive Behavioral Conjoint Therapy (CBCT) for PTSD. Participants had a mean age of 38.8 years ($SD = 10.3$) and an average of 14.39 years ($SD = 1.8$) of education. Most people in this sample identified themselves as Caucasian (40, 87.0%). Participants were recruited from outpatient psychiatry clinics serving OIF/OEF/OND Veterans and were eligible if they received outpatient treatment services, had a confirmed PTSD diagnosis indicated by a total score of 45 or greater on the Clinician Administered PTSD Scale for DSM-IV (CAPS; Blake et al., 1995), had no psychotropic medication changes within the past month, and had a partner willing to participate. Veterans who had severe relationship aggression within the past year, current suicidal/homicidal intent, significant cognitive impairment, current substance dependence, psychosis or bipolar disorder, or self-injury within the past six months were excluded.

2.1.2. Schizophrenia sample

Seventy-eight male (95.1%) and four female (4.9%) veterans participated in a randomized controlled trial to examine the effects of cognitive remediation on employment outcomes for those with schizophrenia-spectrum disorders. Participants in this sample had a mean age of 49.7 ($SD = 10.7$) and an average of 12.8 ($SD = 2.2$) years of education. They were also mostly Caucasian (35, 42.7%) or African-American (46, 56.1%). Veterans were eligible to participate in this study if they had a DSM-IV confirmed diagnosis of schizophrenia (56, 69.1%) or schizoaffective (25, 30.9%) disorder. They were further required to be in a post-acute phase of

illness, as defined by having no changes in their housing or medication in the past 30 days.

Veterans who had active substance dependence or a documented intellectual disability at any point in time were excluded.

2.2. Instruments

2.2.1. Internalized Stigma of Mental Illness Scale

The ISMIS (Ritsher and Phelan, 2004) is a 29-item self-report measure of self-stigma. Items are rated on a scale from 0-3 (0 = *strongly disagree*; 1 = *disagree*; 2 = *agree*; 3 = *strongly agree*). The ISMIS is a common measure of self-stigma and has been used previously in samples of people with mental illness (c.f. Boyd et al., 2014). It yields four subscale scores: Alienation, Stereotype Endorsement, Discrimination Experience, and Social Withdrawal. The Alienation subscale assesses the experience of feeling that one is not a part of society ($\alpha = 0.73$). The Stereotype Endorsement subscale measures how much participants agree with common stereotypes about those with severe mental illnesses (e.g., that people with mental illnesses are violent; $\alpha = 0.72$). Discrimination Experience assesses how participants believe others treat them as it relates to their mental illness (e.g., being ignored or taken less seriously because they are mentally ill; $\alpha = .80$). Of note, the Discrimination Experience subscale aligns more closely with measurement of the experience of public stigma than with measurement of self-stigma. The Social Withdrawal subscale measures how much participants' mental illnesses have negatively impacted their interactions in social relationships (e.g., feeling they cannot talk about themselves for fear of burdening others, isolating from social interactions; $\alpha = .81$). A fifth score, Stigma Resistance, assesses participants' abilities to resist the effects of self-stigma. All items on the Stigma Resistance subscale are reverse-coded. Of note, internal consistency for the Stigma Resistance subscale was low ($\alpha = .43$), so results pertaining to this scale should be

interpreted with caution. Subscale scores included in the analyses were calculated by averaging items that compose each scale, producing scores for each subscale on a range of 0-3. Higher scores suggest more impactful experiences of self-stigma.

2.2.2. Clinician Administered PTSD Scale

The CAPS (Blake et al., 1995), is a structured clinical interview that assesses the Diagnostic and Statistical Manual of Mental Disorders, fourth edition (APA, 1994), PTSD symptomatology and PTSD diagnostic status (as indicated by a total severity score of 45 or greater in this study). The CAPS assesses for the presence of the 17 core PTSD symptoms within the past month. Frequency and intensity of symptoms are each scored on a scale ranging from zero to four. Items are then added together to provide a total symptom severity score ranging from 0 to 136. CAPS assessors had the equivalent of a master's or doctoral degree in psychology. For the purposes of this study, total scores were used in the analyses. The CAPS has consistently demonstrated excellent psychometric properties and is considered the gold-standard in PTSD assessment (Weathers et al., 2001).

2.2.3. Beck Depression Inventory 2nd edition

The BDI-II is a 21-item self-report measure of depressive symptoms experienced over the past two weeks. Each item is rated on a 4-point scale ranging from 0 to 3, producing a total score ranging from 0 to 63. The BDI-II possesses adequate reliability and validity for clinical purposes with high test-retest reliability reported by Beck and colleagues (1996).

2.3. Procedure

Each of the parent studies received approval from the local institutional review board. For the PTSD sample, after participants provided informed consent, inclusion and exclusion criteria were evaluated and the CAPS was administered. Next, participants completed a battery of

additional measures for the parent study, including the ISMIS and the BDI-II. For the schizophrenia sample, participants provided informed consent prior to assessment of inclusion and exclusion criteria and diagnostic evaluation. They then underwent a battery of measures for the parent study, including the ISMIS. In both studies, research assistants were trained to administer all relevant measures and reached adequate levels of reliability.

2.4. Analyses

Analyses were conducted in five steps. First, descriptive statistics were conducted on demographic variables as well as ISMIS scores. Second, we calculated how many participants had significant levels of self-stigma on each of the ISMIS subscales as defined by an average item score of 1.5 or greater (on a scale of 0-3) for each subscale. A cutoff of 1.5 is commonly used with the ISMIS to represent elevated internalized stigma (e.g., see Brohan et al., 2010; Ritsher and Phelan, 2004; West et al., 2011). Third, we compared the rates of significant levels of self-stigma between groups using chi-square analyses. Fourth, in order to compare rates of significant levels of self-stigma while controlling for age and education, we conducted multiple regression analyses. Chi-square analyses and multiple regressions were repeated for each ISMIS subscale. Lastly, in the PTSD group, we examined correlations between ISMIS scores and PTSD and depression symptoms using Pearson's r .

3. Results

Age and years of education were found to differ between diagnostic groups. Those with PTSD reported being younger than those in the schizophrenia sample ($t(126)=-5.62, p<0.001$) and having more years of education ($t(126)=4.30, p<0.001$).

As shown in Table 1, chi-square analyses revealed a significant difference between groups for only the Stigma Discrimination ISMIS subscale, indicating that significantly more

participants in the schizophrenia group reached the cutoff score for experiencing discrimination as a result of stigma than in the PTSD group. Specifically, 47.6% of the schizophrenia group reported a mean item score of 1.5 or higher for the discrimination subscale, while only 17.4% of the PTSD group reached this threshold. Groups did not differ on numbers that reached cutoff scores for other ISMIS subscales.

As shown in Table 2, multiple regressions controlling for age and education found that diagnostic group significantly predicted only the Discrimination Experience score. In the Discrimination Experience model, diagnosis was a significant predictor such that, holding age and education constant, having a diagnosis of schizophrenia is on average associated with an increase in ISMIS Discrimination Experience score of 0.44. Age and education were not significantly predictive in this model.

As shown in Table 3, correlations between ISMIS subscales and symptom inventories revealed the ISMIS Alienation subscale significantly correlated with total CAPS scores such that heightened feelings of alienation as a result of self-stigma were related to heightened PTSD symptom severity, on the order of a medium effect size. For depression, all ISMIS subscales except Discrimination Experience (i.e., Alienation, Stereotype Endorsement, Social Withdrawal, and Stigma Resistance) exhibited significant, positive correlations with the BDI-II total score, suggesting heightened self-stigma, and inability to resist that stigma, is associated with increased depression in adults with PTSD.

4. Discussion

The goal of the present study was to examine how levels of self-stigma among adults with PTSD were similar to or different from adults with schizophrenia, a disorder for which levels of self-stigma have been more comprehensively characterized. As predicted, we found that

veterans with PTSD did not differ from veterans with schizophrenia in their likelihood to report meaningful levels (i.e., mean scores of 1.5 or higher) on the Alienation, Stereotype Endorsement, and Social Withdrawal subscales, suggesting similar problematic feelings of isolation, internalization of stereotypes about mental illness, and reduction of fulfilling social relationships as seen in those with schizophrenia. Further, those with PTSD were significantly less likely to report meaningful levels of Discrimination Experience (i.e., experience of public stigma) than those with schizophrenia, suggesting those with PTSD have fewer experiences in which they feel others treat them differently because they have a mental illness. Against expectations, we did not find significant differences for the Stigma Resistance subscale, suggesting that those with PTSD and those with schizophrenia may be equally able to resist the harmful effects of public stigma (though alpha was low for this subscale, heightening the possibility of type II error). These findings held up in regression analyses controlling for age and education, where diagnosis significantly predicted levels of Discrimination Experience, but not other subscales. This finding suggests people with schizophrenia-spectrum disorders feel the effects of public stigma more acutely than those with PTSD. Lastly, we found that feeling as though one does not belong in society was associated with heightened PTSD and depression symptoms in the PTSD group, and that endorsement of stereotypes, social withdrawal, and lack of ability to resist stigma were associated with heightened depression. These findings suggest an important role for stigma-oriented interventions in those diagnosed with PTSD.

While the cross-sectional nature of the study prevents us from drawing causal conclusions, results pose several speculations for future research. First, our results indicate that people with PTSD report comparable levels of self-stigma on all subscales of the ISMIS but one. This pattern of findings suggests that people with PTSD experience a significant amount of self-

stigma, on the order of that experienced by those with schizophrenia-spectrum disorders, a diagnostic group often associated with substantial symptomatology and disability. However, this experience of stigma may be largely internal, as veterans with PTSD in our sample reported significantly fewer actual experiences of being stereotyped by members of the public.

Second, our results indicate that feelings of self-stigma impact symptoms for those with PTSD, but that depressive symptoms may be most affected. A feeling that one is not part of society is associated in our sample with both elevated PTSD and depressive symptoms, while other subscales were related to depressive symptoms, but not PTSD symptoms. This is in line with past literature indicating an association between perceived stigma and depression in active-duty military (Wright et al., 2014). Although experiences of self-stigma may be more selectively related to primary PTSD symptoms than they are to depressive symptoms, depression is very commonly comorbid with PTSD, and some have even posited that post-traumatic stress may be the cause of depressive disorders in those with this comorbidity (Stander et al., 2014). Thus, it is possible that both depressive symptomatology and experiences of self-stigma are downstream effects of PTSD. However, it is important to acknowledge that we did not assess for comorbid depressive diagnoses, but rather collected self-report data on current depressive symptomatology. Thus, our results may not inform the importance of self-stigma for those with confirmed comorbid diagnoses of PTSD and depression. Further, there are rival hypotheses regarding the implications of our data that cannot be ruled out, such as the possibility that depressive symptoms may have a more causal role in self-stigma experiences. Future work should attempt to clarify the source of self-stigma in those with PTSD and whether it is independent from comorbid depressive symptomatology.

A major implication of the present study's findings is that interventions targeting self-stigma, which are often offered to individuals with schizophrenia-spectrum disorders or other severe and persistent mental illnesses (Yanos et al., 2015), should also be offered to persons with PTSD. Some interventions have been developed specifically to target public or perceived stigma for Veterans with PTSD, such as stigma-reduction training (Hurtado et al., 2015) and digital storytelling through the website *AboutFace* (Bunnell et al., 2017). However, to our knowledge, no interventions for PTSD currently exist that target self-stigma, specifically. Interventions targeting self-stigma may be especially relevant among Veterans, as returning soldiers often experience identity conflict upon reintegration into civilian life that can be exacerbated by PTSD and other mental distress (Smith and True, 2014). The possibility of adapting existing interventions targeting self-stigma, such as a Narrative Enhancement and Cognitive Therapy or Ending Self-Stigma (see (Yanos et al., 2015) for an overview), for Veterans with PTSD should be explored. Alternatively, adapting interventions targeting perceived stigma for PTSD to include self-stigma may also be a valuable path to pursue.

There were some unexpected findings. First, we expected that those with PTSD would be more able to resist stigma than those with schizophrenia, but our results showed no significant difference between groups for this variable. This is surprising, as the metacognitive deficits often experienced by people with schizophrenia have been shown to negatively impact the ability to resist stigma (Nabors et al., 2014), and people with PTSD do not show similar metacognitive deficits (Lysaker et al., 2015). Of importance, alpha was low for the Stigma Resistance subscale. Low internal consistency on measures suggests an increased amount of "noise" in the measurement, resulting in higher risk of type II error. It is possible that with a stronger measure of stigma resistance, we may have been able to detect significant differences. New measures of

stigma resistance have been published in recent years (e.g., see Firmin et al., 2017); future research would benefit from using these instead of the Stigma Resistance subscale on the ISMIS, which displays consistently low internal consistency (Boyd et al., 2014). Alternatively, if our finding does not represent a type II error, results may suggest that the ability to resist stigma is relatively independent of metacognitive capabilities in those with PTSD. Indeed, other factors may have a stronger influence on stigma resistance in PTSD; for example, in our sample of veterans, military culture could potentially impact the ability to resist stigma such that PTSD is seen more as a personal weakness preventing one from completing one's duties (Sharp et al., 2015). In light of heightened masculine norms seen in the military (Robinson Kurpius and Lucart, 2000), it may be more difficult to resist the effects of self-stigma for this group. As with all unexpected findings, these interpretations should be taken as speculative at best and subject for future research, especially undertaken with stronger measures of stigma resistance.

Our study had several limitations. The study was cross-sectional, precluding causal interpretations, and our samples were limited; the PTSD sample in particular was small, reducing generalizability, and had low numbers reaching the cut-off for some subscales on the ISMIS. Our sample size was modest overall and research is needed with larger and more diverse samples to further mitigate the risk of type II errors. Further, several variables were not assessed that could have further informed results, such as comorbid diagnoses or factors associated with PTSD severity, like trauma severity and social support. We also had only one self-report measure of self-stigma. Additionally, the sample is relatively homogenous in regards to military history, gender, and geographic region, limiting the generalizability of findings. It may be, for example, that different levels of self-stigma will be found in predominantly female or non-veteran samples. Similarly, as participants in this study were all OEF/OIF/OND Veterans, future

research should examine the effects of military era on experiences of self-stigma and influencing factors. Lastly, it is possible that PTSD and schizophrenia samples differed in symptom severity; this was not assessed or controlled here as symptoms were measured differently between groups, but future studies may consider attempting to control for severity or disability if possible.

With replication, results may have important implications for treatment and future research. Taken together, results suggest people with PTSD experience generally comparable levels of self-stigma as those with schizophrenia, indicating this group may benefit from self-stigma-oriented interventions. Results also highlight the importance of understanding factors that promote self-stigma in this group and point to the need for additional research on self-stigma in PTSD and how it interacts with depressive symptomatology. Other factors that may influence self-stigma in PTSD and could be the focus of future study include metacognition, which has been linked to stigma resistance in schizophrenia (Nabors et al., 2014), as well as social support.

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Table 1

Descriptive results & chi-square comparisons

ISMIS Subscale	PTSD M(SD) (n=46)	Number reporting 1.5 or higher	Schizophrenia M(SD) (n=82)	Number reporting 1.5 or higher	χ^2	<i>p</i>
Alienation	1.48(0.51)	27 (58.7%)	1.37(0.68)	40 (48.8%)	1.16	0.281
Stereotype Endorsement	0.87(0.43)	2 (4.3%)	0.95(0.50)	10 (12.2%)	2.14	0.144
Discrimination Experience	1.00(0.52)	8 (17.4%)	1.48(0.71)	39 (47.6%)	11.54	0.001
Social Withdrawal	1.53(0.59)	27 (58.7%)	1.44(0.71)	47 (57.3%)	0.02	0.880
Stigma Resistance	1.17(0.38)	9 (19.6%)	1.07(0.46)	10 (12.2%)	1.27	0.260

Table 2

Multiple regression results

Variable	Coefficient	SE	<i>t</i>	<i>p</i>
Alienation: $R^2 = 0.04$, $F = 1.63$, $p = 0.185$				
Intercept	2.06	0.44	4.64	<0.001
Age	-0.01	0.01	-1.89	0.062
Education	-0.01	0.03	-0.49	0.629
Diagnosis	-0.03	0.14	-0.22	0.829
Stereotype Endorsement: $R^2=0.05$, $F = 2.36$, $p = 0.075$				
Intercept	1.61	0.34	4.79	<0.001
Age	-0.01	0.00	-1.88	0.062
Education	-0.03	0.02	-1.53	0.129
Diagnosis	0.12	0.10	1.13	0.263
Discrimination Experience: $R^2=0.14$, $F = 6.55$, $p < 0.001$				
Intercept	1.89	0.46	4.11	<0.001
Age	-0.01	0.01	-0.87	0.389
Education	-0.05	0.03	-1.73	0.086
Diagnosis	0.44	0.14	3.15	0.002
Social Withdrawal: $R^2=0.03$, $F = 1.29$, $p = 0.282$				
Intercept	2.29	0.48	4.83	<0.001
Age	-0.01	0.01	-1.45	0.149
Education	-0.03	0.03	-1.07	0.289
Diagnosis	-0.05	0.15	-0.32	0.747
Stigma Resistance: $R^2=0.02$, $F = 0.61$, $p = 0.610$				
Intercept	1.31	0.31	4.17	<0.001
Age	0.00	0.00	-0.58	0.562
Education	0.00	0.02	-0.21	0.833
Diagnosis	-0.08	0.10	-0.83	0.407

Note. For Diagnosis, PTSD was 0, and schizophrenia was 1.

Table 3

	ISMI- Alienation	ISMI- Stereotype Endorsement	ISMI- Discrimination Experience	ISMI- Social Withdrawal	ISMI- Stigma Resistance	TOTAL PTSD score	BDI total
ISMI- Alienation	1						
ISMI- Stereotype Endorsement	0.552**	1					
ISMI- Discrimination Experience	0.657**	0.531**	1				
ISMI- Social Withdrawal	0.612**	0.567**	0.703**	1			
ISMI-Stigma Resistance	0.483**	0.481**	0.339*	0.325*	1		
TOTAL PTSD score	0.349*	0.204	0.221	0.203	0.178	1	
BDI total	0.325*	0.294*	0.183	0.309*	0.311*	0.330*	1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).