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The role of metacognitive self-reflectivity in emotional awareness and subjective indices of recovery in schizophrenia

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Abstract

Emotional awareness deficits in people with schizophrenia have been linked to poorer objective outcomes, but, no work has investigated the relationship between emotional awareness and subjective recovery indices or metacognitive self-reflectivity. We hypothesized that increased emotional awareness would be associated with greater self-esteem, hope, and self-reflectivity and that self-reflectivity would moderate links between emotional awareness and self-esteem and hope -- such that significant relationships would only be observed at lower levels of self-reflectivity. Participants were 56 people with schizophrenia-spectrum disorders. Correlations revealed that better emotional awareness was significantly associated with increased self-esteem and hope but not self-reflectivity. Self-reflectivity moderated the relationship between emotional awareness and self-esteem but not hope. Overall, findings suggest that emotional awareness may affect self-esteem for those low in self-reflectivity, but other factors may be important for those with greater self-reflectivity. Results emphasize the importance of interventions tailored to enhance self-reflective capacity in clients with schizophrenia.

Keywords

emotional awareness; self-esteem; metacognition; schizophrenia

Emotion regulation refers to the processes involved in monitoring, evaluating, and altering emotions in order to maintain optimum functioning and achieve one's goals (Thompson, 1994) and consists of several domains, such as awareness and understanding of emotions,

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accepting emotions, controlling negative emotions and their impact on behavior, and using emotions to appropriately respond in varied situations (Gratz et al., 2004). Deficits in emotion regulation appear across many disorders, including schizophrenia (O'Driscoll et al., 2014), where emotion regulation is an area of increasing interest. Studies examining emotion regulation in people with schizophrenia have revealed deficits in global emotion regulation (e.g., Kimhy et al., 2012) and in the use of adaptive emotion regulatory strategies (e.g., Kimhy et al., 2012; van der Meer et al., 2009).

In addition to global and strategy-specific studies, schizophrenia research has begun to investigate specific domains of emotion regulation. One domain of interest in emotion regulation for people with schizophrenia is emotional awareness, or the ongoing monitoring and evaluation of one's own emotional state (Thompson et al., 1996). In schizophrenia research, lack of emotional awareness is often subsumed under the concept of alexithymia, a term referring to problems with identifying, describing, and communicating emotions, differentiating emotions from bodily experience, and experiencing emotional fantasy (Sifneos, 1973; Sifneos et al., 1977). A number of studies have shown people with schizophrenia demonstrate alexithymia or deficits in the area of emotional awareness (Cedro et al., 2001; Kubota et al., 2011; Lincoln et al., 2014; Van't Wout et al., 2007; Yu et al., 2011). These deficits have been linked to objective outcomes, such as poorer social support and relationship quality (Kimhy et al., 2012), reduced independent living (Tabak et al., 2015), and increased symptoms including depressed mood and delusions (D'Antonio et al., 2015).

Though research has started to investigate objective outcomes, no work to our knowledge has yet investigated how more subjective elements of recovery are related to emotional awareness. This is problematic, as models of recovery created from consumer accounts highlight the importance of subjective psychological constructs in promoting or obtaining recovery as opposed to reduction of symptoms or return to prior functioning (Andresen et al., 2003). Further, objective outcomes and subjective indices of recovery may not display high inter-correlations (Roe et al., 2011), emphasizing the importance of examining the relationship between subjective indices of recovery and emotional awareness to gain a broader picture of how emotional awareness impacts people with schizophrenia. Two subjective indices of particular importance to recovery are self-esteem and hope. It is possible that emotional awareness is necessary to develop greater levels of self-esteem and hope; in other words, people with schizophrenia may need to be able to recognize and describe their own emotional states in order to foster these more subjective elements of recovery. However, the relationship may be more complex, as additional variables may impact or moderate the relationship. In this study, we explored the possibility that emotional awareness is necessary, but not sufficient, for self-esteem and hope. More specifically, we expected that the impact of emotional awareness is dependent on at least one element of metacognition – self-reflectivity.

The term metacognition was originally used in the education literature (Flavell, 1979) but has since evolved to encompass a spectrum of psychological functions. Indeed, metacognition has been used to describe reflections about more discrete mental experiences, such as specific thoughts and feelings, to more synthetic acts where an array of intentions,

thoughts, feelings, and connections between events are constantly evolving into integrated representations of self and others (Lysaker et al., 2013; Semerari et al., 2003). Of note, metacognition has been linked to emotion regulation through the concept of “mentalized affectivity” – a psychodynamic term which can be understood to refer to the simultaneous awareness and experience of an emotion, which can allow appropriate attribution of emotional meaning to a given experience (Fonagy et al., 2004). Thus, metacognition is thought to be important for emotional awareness.

While metacognition is commonly understood to encompass four domains (self-reflectivity, awareness of the other, decentration, and mastery; (Lysaker et al., 2005), the metacognitive domain of self-reflectivity might particularly impact the relationship between emotional awareness and hope or self-esteem. Self-reflectivity refers generally to the ability to understand one's own mind (Lysaker et al., 2010), but self-reflectivity is broader than just emotional awareness, incorporating awareness and integration of a range of mental representations. At the most basic level, self-reflectivity implies one has awareness that one has mental experiences of any kind. Higher levels of self-reflectivity imply that one can identify and distinguish between different types of mental experiences (i.e., thought, a memory, a dream), and only at highest levels of self-reflectivity can one describe those mental states and distinguish cognitive from emotional elements (Lysaker et al., 2007a). Further, in contrast to emotional awareness, self-reflectivity involves the identification of emotional patterns over time and understanding the relationships between thoughts, emotions, and intentions across different experiences (Lysaker et al., 2014). Indeed, higher levels of self-reflectivity go beyond emotional identification, enabling individuals to integrate their sense of mental experiences in a meaningful and coherent narrative (Semerari et al., 2003). We may expect people with higher levels of self-reflective capacity to rely less on more basic identification of emotional experience to bolster self-esteem and hope, instead finding self-esteem and hope through their ability to reflect and integrate past experiences into a broader life narrative. Thus, one hypothesis is that self-reflectivity moderates the associations between emotional awareness and self-esteem and hope, such that associations are only significant when self-reflectivity is low. Investigating this potential moderating relationship is of clinical importance, as results could point to varied treatment targets; for example, it may be important to target interventions to enhance metacognitive abilities in order to improve self-esteem and hope when emotional awareness is low.

To investigate these relationships, we collected data to assess emotional awareness, self-esteem, hope, and self-reflectivity in 56 individuals diagnosed with schizophrenia-spectrum disorders. First, we hypothesized that increased emotional awareness would be associated with greater self-esteem, hope, and self-reflectivity at the bivariate level. We also examined the correlations of emotional awareness, self-esteem, and hope with three additional metacognitive components – awareness of the other, decentration, and mastery. These analyses were considered exploratory. Second, we hypothesized a moderating role of self-reflectivity such that at lower levels of self-reflectivity, positive relationships between emotional awareness and self-esteem and hope remain significant, while at higher levels of self-reflectivity the relationships become non-significant.

Method

Participants

Participants were 56 individuals diagnosed with a schizophrenia-spectrum disorder, as confirmed by the Structured Clinical Interview for the Diagnostic Statistical Manual-IV (SCID; (First et al., 2002). Recruitment began in 2013; participants were receiving services from an outpatient psychiatry clinic of a Veterans' Affairs Medical Center or an urban community mental health center. Clients were eligible to participate if they had experienced no changes in medications and had not been hospitalized in the past month. Clients were excluded if they had substance dependence based on chart review; however, substance use or abuse did not exclude clients from the study.

Measures

Metacognition. The Metacognition Assessment Scale-Abbreviated (MAS-A; (Lysaker et al., 2005) is designed to assess metacognitive capacity. For this study, verbalizations were produced in response to interview questions from the Indiana Psychiatric Illness Interview (IPII; (Lysaker et al., 2002), a semi-structured interview designed to elicit information about how individuals view their lives and mental illnesses. The IPII was recorded and transcribed prior to being rated with the MAS-A, which produces a total and four domain scores: self-reflectivity, awareness of the minds of others, decentration, and mastery (Lysaker et al., 2010). For this study, the self-reflectivity domain score was primarily investigated, although for exploratory purposes, the other three domain scores were also examined in exploratory analyses. Higher scores in the self-reflectivity domain represent greater ability to think about one's own thoughts and emotions and to integrate them into an accurate understanding of one's life patterns; for the remaining metacognitive components measured by the scale, higher scores are reflective of greater metacognitive capacity. See Lysaker et al. (2005) for additional scoring information. Past evidence indicates the MAS-A has good validity (Lysaker et al., 2014), internal consistency (Lysaker et al., 2007a), and inter-rater reliability (Lysaker et al., 2010) in individuals with schizophrenia-spectrum disorders.

Emotion Regulation. The 36-item Difficulties in Emotion Regulation Scale (DERS; (Gratz et al., 2004) was designed to assess emotion regulation difficulties in a nuanced manner; the scale produces a total and six subscale scores: nonacceptance of emotional responses, difficulties engaging in goal-directed behavior, impulse control difficulties, lack of emotional awareness, limited access to emotion regulation strategies, and lack of emotional clarity. Across scales, higher scores indicate poorer emotion regulation. For this study, primary interest was in the 6-item lack of emotional awareness subscale. An example reverse-scored item on the subscale reads, "I pay attention to how I feel." Items are rated from 1, *almost never*, to 5, *almost always*. The DERS has shown evidence of good internal consistency, test-retest reliability, and construct validity in individuals diagnosed with psychotic disorders (Owens et al., 2013). Internal consistency in this sample was good for the total (alpha = .93) and lack of emotional awareness subscale (alpha = .77) scores.

Self-esteem. Self-reported self-esteem was measured with Rosenberg's 10-item self-esteem scale (Rosenberg, 1965). The items are summed to create a total score, with higher scores

reflecting better self-esteem. Items are rated as *strongly disagree, disagree, agree,* or *strongly agree*. An example item reads, “I feel that I have a number of good qualities.” This scale has been used successfully in individuals diagnosed with schizophrenia and other severe mental illnesses (e.g., Bonfils et al., 2015; Corrigan et al., 2006; Torrey et al., 2000; Yanos et al., 2008). Internal consistency of the Rosenberg self-esteem scale in this sample was strong (alpha = .89).

Hopelessness. The Beck Hopelessness Scale (BHS; (Beck et al., 1974) was used to assess hope. Twenty items are rated as true or false and summed to create a total score, where higher scores reflect hopelessness. An example item reads, “I don't expect to get what I really want.” The BHS has been used in samples of individuals with schizophrenia-spectrum disorders (Lysaker et al., 2007c; Lysaker et al., 2008) and displayed good internal consistency in this sample (alpha = .91).

Procedure

Data for this study came from a larger investigation of [removed for de-identification]. After providing informed consent, diagnoses were confirmed using the SCID-IV (First et al., 2002). Participants then completed baseline assessments with trained Master's-level research associates. Raters for the MAS-A were blind to all other testing. Only baseline (i.e., pre-intervention) assessments were used in the current investigation. All procedures were approved by the appropriate institutional review board.

Analyses

Analyses consisted of several steps. Descriptive statistics were first conducted to examine the demographic composition of the sample. Correlations were conducted between all variables using Pearson's *r*. Then, based in literature showing gender differences for emotional awareness (e.g., Boden et al., 2007), we statistically compared the four variables involved in the moderation models (self-reflectivity, emotional awareness, self-esteem, and hopelessness) on gender to ascertain if this variable should be controlled in more complex analyses. Finally, hypothesized moderation models were tested using the PROCESS macro (Hayes, 2013), which conducts ordinary least squares (OLS) regression analyses to test moderation. We first tested the hypothesis that self-reflectivity (M) moderates the relationship between emotional awareness (X) and self-esteem (Y) by testing the significance of the interaction term (XM) when added to a regression model predicting self-esteem. This regression model included positive and negative symptoms as covariates to ensure a rigorous test of moderation when controlling for psychotic disorder symptoms. If the interaction term was significant ($p < .05$) and significantly improved the regression model, self-reflectivity was considered to moderate the relationship between emotional awareness and self-esteem. This process was repeated to investigate the relationship between emotional awareness (X) and hopelessness (Y), again with self-reflectivity (M) as the moderator and positive and negative symptoms as covariates.

For both moderation models, if significant moderation was detected, two techniques were employed to probe the interaction. The pick-a-point approach (Rogosa, 1980) was utilized initially to enable visualization of any moderating relationships. In this procedure, values of

the moderator are chosen at which to graph the relationship between X and Y; plus and minus one standard deviation are common. The Johnson-Neyman technique (Bauer et al., 2005) was then used to identify the point(s) of the moderator at which the relationship between X and Y changes significance. The procedure may result in a single value of the moderator, indicating the relationship between the variables is significant in one direction from this point but not the other, or two values, indicating the relationship is significant only between (or outside) of these two values of the moderator (Hayes, 2013).

Results

Demographic and clinical characteristics can be seen in Table 1. Most participants were male and Black or White. Clinically, participants were non-acute and experiencing moderate levels of symptoms. Participants were generally middle-aged, and had first been hospitalized around age 24. Variables in the moderation models did not systematically differ based on gender for self-reflectivity ($t(53) = -0.51$, $p = .61$), emotional awareness ($t(54) = -0.94$, $p = .35$), self-esteem ($t(54) = 1.69$, $p = .10$), or hopelessness ($t(54) = 0.68$, $p = .50$); thus, gender was not included as a covariate in more complex analyses.

Means, standard deviations, and correlations among relevant variables are presented in Table 2. Poorer emotional awareness was significantly associated at the bivariate level with lower self-esteem and increased hopelessness. Self-reflectivity did not significantly correlate with emotional awareness, self-esteem, or hopelessness. In exploratory correlational analyses, emotional awareness significantly correlated with the metacognitive domain of mastery. Self-esteem significantly correlated with awareness of the other and mastery. Hopelessness was not correlated with any metacognitive component.

See results of moderation analyses in Table 3. In Model 1, self-esteem was significantly predicted by emotional awareness and by self-reflectivity; the interaction term significantly improved this estimation (F change (1, 49) = 3.94, p = .05), with the final model accounting for 39% of the variance in self-esteem. Moderation was present for the relationship between emotional awareness and self-esteem, such that when self-reflectivity is relatively higher, the relationship becomes non-significant. See Figure 1 for a graph of this interaction at ± 1 SD values of the moderator (results of the pick-a-point approach). The Johnson-Neyman technique indicated the relationship becomes non-significant when self-reflectivity is 5.35 or greater, in this sample representing participants .60 standard deviations above the mean and higher (20% of the sample).

Model 2, predicting hopelessness, also reached significance. However, no single predictor showed a significant main effect, and the interaction term was not significant, indicating self-reflectivity does not moderate the relationship between emotional awareness and hopelessness in this sample.

Discussion

This study is the first to our knowledge to investigate the intersection of emotional awareness, metacognitive self-reflectivity, and indices of subjective recovery. Our findings indicate an important role for self-reflective capacity in the relationship between emotional

awareness and self-esteem but not hopelessness. As hypothesized, for those low in self-reflectivity, greater emotional awareness predicted better self-esteem, but for those high in self-reflectivity, emotional awareness was no longer related to self-esteem, indicating those high in self-reflectivity may rely more on the meaning they attribute to emotional states within their life narrative than simple awareness of emotions in bolstering self-esteem. Against hypotheses, at the bivariate level, hopelessness was related to neither emotional awareness nor metacognitive self-reflectivity, and self-reflectivity did not play a moderating role in the relationship between emotional awareness and hopelessness.

The finding that self-reflectivity is not univariately correlated with emotional awareness is against expectations, as these two constructs should theoretically display a relationship of some magnitude. At the most basic level, the presence of self-reflectivity reflects the ability to know and understand one's own emotions, representing some overlap with the emotional awareness construct. A significant association may have been absent in our data for a number of reasons. First, metacognitive self-reflectivity is a more complex construct than emotional awareness. It could be that the more complex aspects of self-reflectivity, such as the ability to make meaning in life from the emotions one experiences, account for greater variance in that scale and act against a strong correlation with emotional awareness. A second explanation could be the measurement differences between the two constructs. Self-reflectivity was measured with an observer-rated scale, while emotional awareness was self-reported. It could be that participants did not perceive (or report) their own emotional awareness when asked in a self-report survey in the same way that their self-reflective capacities were reflected during the narrative interview. Finally, our sample is small, and low power may have negatively affected our ability to detect significance. However, with the relatively small magnitude of the correlation exhibited here, this explanation does not seem to account for the lack of relationship entirely. Regardless of the reason, future work may investigate in more depth the overlap between these constructs and how measurement may affect their association with one another.

We also conducted exploratory analyses examining the associations between metacognitive components and self-esteem, emotional awareness, and hopelessness. Increased metacognitive awareness of the other was associated with decreased self-esteem. This may be due to heightened awareness of the negative perceptions of others, especially for those who experience stigma as a result of their mental disorder. Heightened metacognitive mastery was associated with decreased emotional awareness and self-esteem. These relationships may be harder to understand – metacognitive mastery is thought to represent the ability to use one's interpretation of the self and others to take action to accomplish goals or cope with problematic emotions or other internal experiences (Lysaker et al., 2007a). With the ability to take effective action, we might have expected better self-esteem and emotional awareness. Future work should further examine associations with all metacognitive components to parse apart the importance of each component for emotional awareness, self-esteem, and hopelessness.

Moving to moderation models, both emotional awareness and metacognitive self-reflectivity displayed significant main effects in regression analyses. Within the model, emotional awareness no longer exerted significant influence on self-esteem when self-reflectivity was

moderate – reaching the level of 5.35. On the MAS-A, this level corresponds with the point at which the person is able to think about the changing nature of themselves and the world, and how their expectations, thoughts, and desires may not align with what is possible (Lysaker et al., 2005). This particular self-reflective ability seems important for self-esteem – it is at this stage of self-reflectivity that people may realize that some of what they thought or expected does not align with reality – i.e., what they wanted for themselves might not work out. Further, as one develops increased awareness of internal states, one may begin to identify, integrate, or internalize negative thoughts about the self, potentially leading to lower self-esteem. This aligns with the idea that recovery from schizophrenia, here represented by an increase in self-reflectivity, is accompanied by several challenges, including threats to one's previous identity and a loss of previous ways of making meaning from thoughts and experiences (Buck et al., 2013).

Our finding that those higher in self-reflectivity no longer get benefits in self-esteem from increased emotional awareness is parallel to the well-known insight paradox in schizophrenia, in which people with this disorder often display increased depression upon gaining greater insight into their illness (Lysaker et al., 2007b; Mintz et al., 2003). Some research has investigated moderators of this relationship, finding that perceptions of stigma toward schizophrenia and the internalization of stigmatizing views contribute to negative outcomes for people with greater insight, such as greater depression and reduced self-esteem, quality of life, and hope (Lysaker et al., 2007b; Staring et al., 2009). It seems likely that the relationship between self-reflectivity and self-esteem could function in a similar fashion, such that some moderating variables – such as stigma - impact the meaning made from broader life narratives, potentially later influencing subjective recovery outcomes like self-esteem. This idea is further supported by evidence linking increased self-reflectivity with better illness insight in people with schizophrenia (Lysaker et al., 2011). The sort of moderated relationship like that seen with insight and depression could explain the non-significance of the association between emotional awareness and self-esteem at high levels of self-reflectivity, in that additional variables untested here have more impact on self-esteem when higher self-reflective skill is available than when self-reflective skill is more limited.

Though analyses investigating self-esteem were consistent with hypotheses, and bivariate relationships revealed a significant correlation in the expected direction such that greater hopelessness was associated with poorer emotional awareness, we failed to find significant associations with hopelessness in moderation analyses. Though no work to our knowledge has investigated the associations between emotional awareness (or alexithymia) and hopelessness in schizophrenia, past work in clinical samples of people with depression (Izci et al., 2015), suicide attempters (Sayar et al., 2003), and adolescent females with disordered eating attitudes (Alpaslan et al., 2015) have found significant relationships between these constructs. It is likely that we were unable to detect a relationship of smaller magnitude between emotional awareness and hopelessness in regression analyses due to a relatively small sample size, as would be suggested by the trending significance of emotional awareness in the model predicting hopelessness ($p = .053$). However, our smaller sample cannot fully account for the lack of relationship between self-reflectivity and hopelessness or the lack of moderation by self-reflectivity. In terms of the relationship between self-

reflectivity and hopelessness, it may be that many in this sample are still struggling with integrating past narrative episodes and emotional experiences into a coherent life narrative and linking it with their view of the future. Alternatively, given that the current sample was engaged in treatment, it may that as participants are developing a more complex understanding of themselves, their therapist has helped them to overcome the potential loss of hope that can develop through increased awareness of one's sense of self (Buck et al., 2013). Future work could empirically examine the point at which past narratives start to become integrated with one's view of their future.

Results should be interpreted in light of some limitations. First and foremost, our sample was small, limiting our power to detect moderation and significant bivariate relationships. Second, although the sample was fairly represented in terms of gender and race, all participants were older and were involved in the treatment study. Results may differ in samples of people with schizophrenia who are younger or decline treatment. Finally, all data in this study were cross-sectional, limiting our ability to make causal interpretations. Future work should examine these constructs longitudinally to investigate any potential causal relationships.

Conclusions

Overall, our results highlight the importance of emotional awareness to the self-esteem of those low in self-reflectivity; clinicians may consider interventions aimed at increasing emotional awareness for clients struggling with low self-esteem. However, our results suggest that other factors may be more important for those high in self-reflectivity. Future work should examine how metacognitive capacities interact with other variables, such as stigma, and how these interactions impact self-esteem. Taken together, our results emphasize the importance of interventions tailored to the metacognitive capacity of clients with schizophrenia, such as Metacognitive Reflection and Insight Therapy (MERIT; Van Donkersgoed et al., 2014), and provide a useful conceptualization as to when more support may be needed from MERIT therapists (i.e., the level of self-reflectivity at which emotional awareness is no longer protective for self-esteem).

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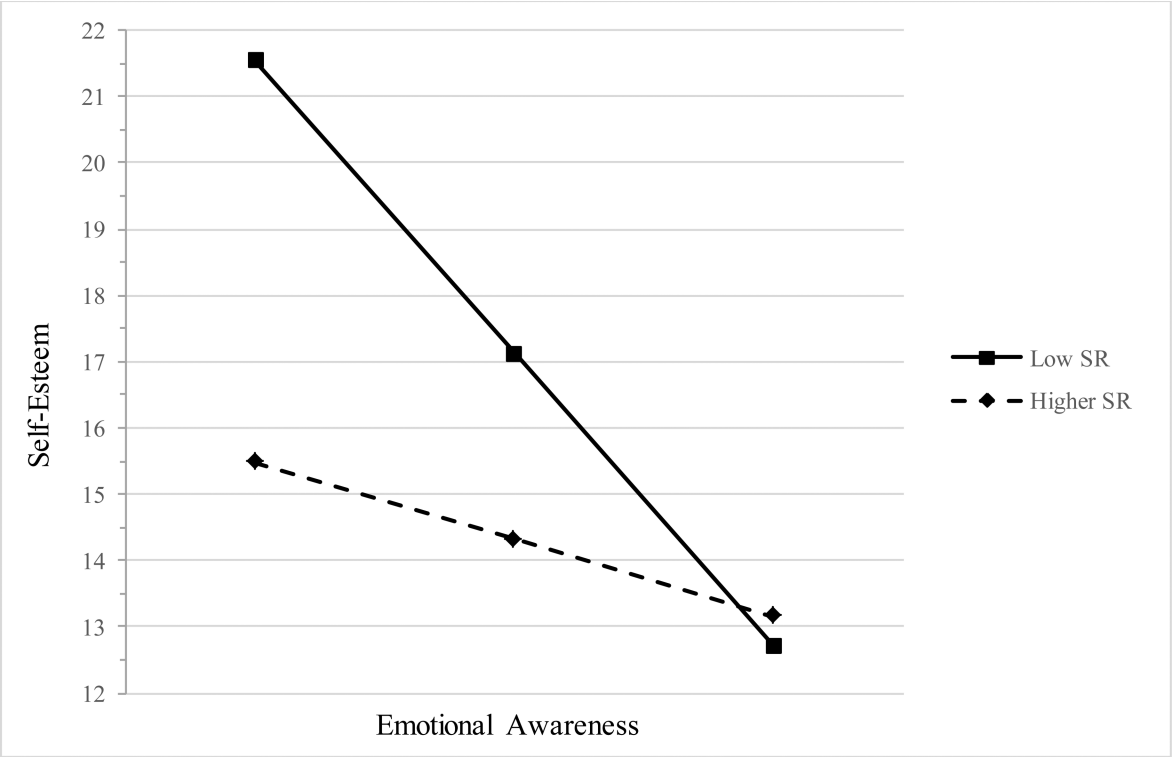

Figure 1.
Visualization of moderation by metacognitive self-reflectivity (SR) in the relationship between emotional awareness and self-esteem. Higher scores on the emotional awareness subscale reflect poorer emotional awareness.

Table 1

Demographic and clinical characteristics of the sample

	N (%)
Gender (male)	37 (66.1%)
Race	
Black	34 (60.7%)
White	21 (37.5%)
Other	1 (1.8%)
Age (Mean, SD)	51.5 (10.7)
Average years of completed school (Mean, SD)	11.9 (1.7)
Diagnosis	
Schizophrenia	41 (73.2%)
Schizoaffective disorder	15 (26.8%)
Age at first hospitalization (Mean, SD)	24.2 (9.1)
PANSS Scores	
Total	70.5 (13.0)
Positive	15.3 (4.2)
Negative	16.3 (5.8)

Table 2

Means, Standard Deviations, and Correlations

	Mean	SD	1	2	3	4	5	6	7
1. Self-reflectivity	4.41	1.56	1						
2. Awareness of the other	2.92	0.98	.69**	1					
3. Decentration	0.36	0.58	.67**	.58**	1				
4. Mastery	3.99	1.83	.59**	.47**	.42**	1			
5. Emotional awareness	14.64	5.05	.16	.12	.04	.35**	1		
6. Self-esteem	16.08	6.27	−.28*	−.33*	−.12	−.27*	−.52**	1	
7. Hopelessness	12.59	5.88	−.14	−.21	−.09	−.09	−.37**	.75**	1

Note.

For all metacognitive domains, higher scores indicate better metacognition. The maximum score for self-reflectivity is 9; for awareness of the other, it is 7; for decentration, it is 3; for mastery, it is 9. For self-esteem, higher scores indicated greater levels of the construct. For hopelessness, higher scores indicated less hopelessness (i.e., greater hope), and for emotional awareness, higher scores indicated poorer emotional awareness.

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

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

Table 3

Results of moderation analyses examining role of self-reflectivity.

Variable	Coefficient	SE	*t*	*p*
Model 1 (Self-esteem): $R^2 = .39$, $F = 6.23$, $p < 0.01$				
Intercept	44.28	7.15	6.19	<0.01
Self-Reflectivity	−3.79	1.55	−2.44	0.02
Emotional Awareness	−1.41	0.43	−3.29	<0.01
Interaction Term	0.19	0.10	1.98	0.05
PANSS Positive	−0.21	0.17	−1.20	0.24
PANSS Negative	−0.03	0.13	−0.25	0.80
Model 2 (Hopelessness): $R^2 = .23$, $F = 2.94$, $p = 0.02$				
Intercept	33.17	7.42	4.46	<0.01
Self-Reflectivity	−2.04	1.61	−1.27	0.21
Emotional Awareness	−0.81	0.44	−1.83	0.07
Interaction Term	0.10	0.10	1.03	0.31
PANSS Positive	−0.32	0.18	−1.79	0.08
PANSS Negative	−0.11	0.14	−0.76	0.45