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Symptoms of Depression and Anxiety Mediate the Relationship Between Self-Esteem and Paranoia

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Self-esteem has been implicated in the formation and maintenance of paranoia. Bentall and colleagues (1994) argue that in an attempt to defend against lowered self-esteem, individuals utilize external attributions for negative events, assigning malevolent intentions to others in the process. This theory predicts that self-esteem would be relatively intact in paranoid individuals. However, empirical findings regarding this relationship have been inconsistent, with some studies showing elevated self-esteem and others showing lowered self-esteem in individuals with paranoia (Bentall, et al. 2001). A possible explanation for this inconsistency is that self-esteem influences persecutory delusions indirectly (Freeman et al., 1998), and that the relationship between self-esteem and paranoia is largely determined by other mediating factors.

Freeman and colleagues (2002) present an alternative model of paranoia that would account for such a relationship. The model suggests that individuals who have preexisting negative beliefs about the self and identify as vulnerable, or “soft-targets” (Freeman et al., 1998) will likely suffer from anxiety and depression, and are more likely to develop persecutory beliefs that will be influenced by the cognitive components of these negative emotional states. Therefore, the model predicts that self-esteem (i.e. the systemic beliefs and attitudes one has about the self) affects paranoia largely through depressed and anxious symptomatology.

To examine whether symptoms of depression and anxiety mediate the relationship between self-esteem and paranoia, we conducted a cross-sectional investigation in which measures of self-esteem (SERS-SF: Self-Esteem Rating Scale-Short Form; 2006), symptoms of depression (BDI-2: Beck Depression Inventory-Second Edition; 1996), anxiety (BAI: Beck Anxiety Inventory; 1993), and paranoia (PS: Paranoia Scale; 1992) were administered to a large sample of people with schizophrenia or schizoaffective disorder. One hundred and ninety-four community-dwelling people with schizophrenia (n=128) or schizoaffective disorder (n=66) participated. The mean length of illness reported was 23.6 years (SD=14.5; range=1-63 years) and 59% of participants resided in assisted living facilities (“board and care”). The sample

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experienced moderate psychotic symptom severity (PANSS Total $M=66.1$, $SD=17.6$; Positive symptom score, $M=18.7$, $SD=6.4$; Negative symptom score, $M=15.1$, $SD=5.5$), moderate anxiety (BAI $M=15.9$, $SD=12.1$), and moderate depression (BDI-2 $M=17.5$, $SD=12.1$).

Path models were estimated using SAS®. Initially, a model that only evaluates the direct relationship between self-esteem and paranoia symptoms was tested (see Figure 1A). The R^2 from this model was .25, with lower self-esteem significantly associated with greater paranoia. Next, a model with mediators was tested (See Figure 1B). A greater proportion of variance was accounted for by the model with mediators ($R^2 = .36$). The models were compared by treating the Figure 1A model as nested within the Figure 1B model (i.e., the mediation paths in Figure 1B were constrained to zero). The fit for the model in Figure 1A, $\chi^2 = 206.92$, $df=5$, was worse than for the model in Figure 1B, $\chi^2 = 63.14$, $df=1$. This difference was significant, $\Delta\chi^2 = 143.78$, $\Delta df=4$, $p < .05$.

The direct effects in Figure 1B were all significant and in the predicted directions. Both depressive and anxiety symptoms were statistically significant mediators in the relationship between self-esteem and symptoms of paranoia. Examination of the standardized indirect effects suggested that the magnitude of the mediation effect was more substantial for depression than anxiety. Although a substantive and statistically significant direct effect of self-esteem on paranoia was still observed in the mediation model (Figure 1B), the strength of this relationship was reduced to half the strength found in the model without mediators (Figure 1A).

The results suggested that self-esteem is a risk factor for paranoia both directly, and indirectly, through its association with increased depression and anxiety. Therefore, individuals with psychosis and low self-esteem associated with depressive and anxiety symptoms, may be at risk for greater paranoid ideation. Greater paranoia in individuals with intact self-esteem should not be considered anomalous, because other risk factors like anxiety and depression might contribute to paranoia. Similarly, low self-esteem is less likely to be associated with greater paranoia, if low self-esteem does not lead to depression or anxiety. The current study adds to a growing scientific literature that highlights the importance of negative emotions in the formation and maintenance of paranoid ideation (Garety et al., 2005; Smith et al., 2006). Our findings suggest that in addition to focusing on prominent positive and negative symptoms of psychosis directly, clinicians could impact these symptoms indirectly by making use of evidence-based interventions for depression and anxiety.

Limitations of the study include the use of a cross-sectional design, which makes it difficult to make causal inferences. In addition, the Paranoia Scale is limited in that it taps the lower end of the paranoia continuum. Future studies should evaluate the effects of depressive and anxiety symptoms on paranoia longitudinally.

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Figure 1.

Path Analysis ($N=194$). Figure 1A depicts the simple model of self-esteem and paranoia Severity. Figure 1B depicts the expanded model that also includes depression and anxiety. Self-esteem = SERS-SF score; Depression = BDI-2 score; Anxiety = BAI score; Paranoia = PS score. $*P < .05$