

# Brief report

## Social cognition and subclinical paranoid ideation

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**Objective.** A number of cognitive biases have been identified relevant to persecutory thought (e.g. exaggerated self-serving bias). Moreover, findings of increased depressed mood in conjunction with high levels of self-esteem have contributed to theories of persecutory ideation (e.g. Bentall, Kinderman, Kaney, 1994). Using a nonclinical sample, the present study sought to expand upon previous research by examining the linear relationship between persecutory ideation and multiple clinical and social cognitive variables.

**Design.** A cross-sectional design was used. Correlational and multiple regression analyses were conducted.

**Method.** One hundred and ninety-three undergraduate students were administered a battery of questionnaires which assessed the following domains: Paranoid ideation, depression, social anxiety, self-monitoring, attributional style and self-esteem.

**Results.** Higher levels of paranoid ideation were significantly associated with greater depressed mood, social anxiety and avoidance, evaluation apprehension, self-monitoring and lower self-esteem. There were no significant associations between paranoid ideation and attributional biases.

**Conclusions.** These findings suggest that mood, anxiety and perceptions of the self are related to paranoid ideation in a nonclinical sample. These findings are tempered, however, by studying a nonclinical sample and the self-report measures of paranoid ideation that might be assessing multiple aspects of paranoid thought (e.g. ideas of reference).

A number of social-cognitive and clinical constructs have been implicated in paranoid

ideation. These include attention to public aspects of the self (Bodner & Mikulincer, 1998; see Smari, Stefansson, & Thorgilsson, 1994, for an exception), high social anxiety (Trower & Chadwick, 1995), exaggerated 'self-serving' and externalizing biases (Garety & Freeman, 1999; Kinderman & Bentall, 2000), greater depression (Bentall, Kinderman, & Kaney, 1994) and either high or low self-esteem (Bentall *et al.*, 1994; Freeman *et al.*, 1998). However, none of these constructs have been measured together, in the same study, to understand which are most strongly associated with paranoid ideation, especially that assessed on a continuum rather than in purely a categorical sense (Claridge, 1997; Peters, Joseph, & Garety, 1999).

The purpose of this study was to examine the relationship between multiple clinical and social-cognitive variables with paranoid ideation in a nonclinical sample. It was hypothesized that higher levels of paranoid ideation would be associated with: (i) higher levels of depressed mood and lower self-esteem; (ii) greater self-serving and externalizing biases; (iii) greater attention to the public aspects of behaviour; and, (iv) greater social anxiety.

## Methods

### *Participants*

Participants were 193 undergraduates (114 female) with an average age of 21.14 years ( $SD = 4.77$ ) and an average of 13.75 years of education ( $SD = 1.59$ ).

### *Measures*

The following domains (and measures) were included in the study: subclinical paranoid ideation (Paranoia Scale, PS; Fenigstein & Venable, 1992; SCID-II Personality Questionnaire Screen for Paranoid Personality Disorder, DSM-III-R version; Spitzer, Williams, Gibbon, & First, 1990); social anxiety (Brief Fear of Negative Evaluation Scale, BFNE; Leary, 1983; The Social Avoidance and Distress Scale, SAD; Watson & Friend, 1969); depression (Beck Depression Scale, BDI; Beck, Steer, & Garbin, 1988); self-esteem (the Rosenberg Self-Esteem Scale, RSES; Rosenberg, 1965); attributional style (The Internal, Personal, and Situational Attributions Questionnaire, IPSAQ; Kinderman & Bentall, 1996); and self-monitoring (self-monitoring Scale, SM; Snyder & Gangestad, 1986). All measures had good reliability ( $\alpha > .70$ ).

## Results

The descriptive statistics for the study measures are summarized in Table 1. Correlational analyses showed that greater paranoid ideation (as measured by the PS) was associated with: greater depression,  $r = .50$ ,  $p < .01$ , and lower self-esteem,  $r = -.42$ ,  $p < .01$  (Hypothesis 1); greater awareness of and tendency to alter the socially observable aspects of oneself ( $r = .36$ ,  $p < .01$ ) (Hypothesis 3); and greater social anxiety (brief FNE:  $r = .39$ ,  $p < .01$ ; SAD:  $r = .37$ ,  $p < .01$ ) (Hypothesis 4). Paranoid ideation was not associated with attributional style (i.e. SSB and EB) (both  $ps > .289$ ) (Hypothesis 2).

These analyses were repeated using paranoid ideation scores from the SCID-II screen. These results were virtually identical to that described above.<sup>1</sup>

To determine which clinical and social-cognitive variables best predict paranoid

<sup>1</sup> Details are available from the authors.

**Table 1.** Descriptive statistics for the Paranoia Scale (PS), SCID-II Paranoia Scores (SPS) and the clinical and social cognitive variables

Measure	<i>M</i>	SD	Actual range	Possible range
PS	39.20	12.72	20–94	20–100
SPS	3.09	1.99	0–7	0–7
BDI	8.79	7.90	0–47	0–63
RSES	32.38	5.61	10–40	10–40
EB	3.13	4.32	– 8 to 14	– 16 to 16
PB	0.62	0.26	0.00–1.00	0.00–1.00
SM	7.49	4.18	0–18	0–18
BFNE	35.92	10.21	15–60	12–60
SAD	7.59	7.19	0–28	0–28

BDI, Beck Depression Inventory; RSES, Rosenberg Self-Esteem Scale; EB, Externalizing Bias; PB, Personalizing Bias; SM, Self Monitoring; BFNE, Brief Fear of Negative Evaluation; SAD, Social Avoidance and Distress.

ideation, a stepwise multiple regression analysis was conducted with PS scores as the dependent variable. The resulting model was found to be significant ( $R = .61$ ,  $F(4,183) = 26.78$ ,  $p < .01$ ) and accounted for 37% of the variance in PS scores. The analyses revealed that higher depressed mood, greater self-monitoring and higher social avoidance and fear of negative evaluation were the best predictors of paranoid ideation, respectively. These findings were cross-validated using SCID-II Paranoid ideation scores and essentially replicated; the exception being that fear of negative evaluation no longer served as a significant predictor of paranoia ideation scores.<sup>2</sup>

## Discussion

The present investigation found that higher levels of paranoid ideation were associated with greater depressed mood, higher social anxiety and greater attention to public aspects of the self, as well as lower self-esteem. This latter finding supports the hypothesis that the relationship between self-esteem and paranoid ideation reflects normative rather than defensive processes (e.g. Freeman *et al.*, 1998). However, the findings did not support the hypothesized relationship between paranoid ideation and a greater self-serving bias (SSB). This finding is not entirely unexpected, however, given the presence of mixed support for the role of the SSB in those with paranoid delusions and/or other psychotic features (reviewed in Garety & Freeman, 1999). It is possible that the SSB (and the EB) may show a greater relationship between some forms of paranoid ideation rather than others. This issue might be especially pertinent to our study, which used a measure (PS) that has shown an inconsistent association with attributional style (Kinderman & Bentall, 1996, 1997) and which might be assessing various aspects of

<sup>2</sup> Details are available from the authors.

paranoia (e.g. ideas of reference) in addition to persecutory ideation (Freeman & Garety, 2000).<sup>3</sup>

This study has a few limitations. First, the use of a nonclinical sample clearly limits the conclusions to this sample, as the continuity of subclinical ideation with delusional belief is debatable and remains to be firmly established. Nonetheless, many of the observed results were consistent with those reported in clinical samples, leaving open the possibility that similar processes are involved in both persecutory ideation and delusions. Second, the findings should be replicated with a measure of nonclinical paranoia that is more suited for assessing persecutory beliefs (i.e. Peters *et al.*, 1999). However, a *post hoc* analysis suggests that the PS is tapping into persecutory beliefs and not just general paranoid ideation.<sup>4</sup> Finally, the study would have been strengthened had other important social-cognitive constructs been included, such as self-discrepancies and theory of mind (e.g. Kinderman & Bentall, 2000; Kinderman Dunbar, & Bentall, 1998).

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<sup>3</sup> Although the Paranoia Scale may be measuring other aspects of paranoia, in addition to persecutory ideation, it is important to note that the scale is highly internally consistent and that factor analysis has revealed the presence of a single factor (Fenigstein & Venable, 1992).

<sup>4</sup> We repeated the correlational analyses using items from the Paranoia Scale (PS) regarding harm from a persecutor with negative intent (Freeman & Garety, 2000). However, it should be noted that many items from the PS reflect the presence of past incidences of harm, not future harm, so not all the criteria from Freeman and Garety could be met. Having said this, the following items were selected from the PS (with their item numbers): (1) Someone has it in for me; (2) I sometimes feel as if I'm being followed; (3) I believe that I have often been punished without cause; (4) Some people have tried to steal my ideas and take credit for them; (5) My parents and family find more fault with me than they should; (11) I have often felt that strangers were looking at me critically; (14) I am sure I have been talked about behind my back; (17) People have said insulting and unkind things about me.

This abbreviated PS had an internal consistency of .79. Furthermore, its relationship with the study variables was virtually identical as that found for the full PS: BDI ( $r = .48$ ), externalizing bias ( $r = -.07$ ), personalizing bias ( $r = .06$ ), self-esteem ( $r = -.41$ ), FNE–social anxiety ( $r = .39$ ), SAD–social anxiety ( $r = .36$ ) and self-monitoring ( $r = .34$ ).

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