

Social anxiety disorder and shame cognitions in psychosis

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Background. Social anxiety disorder (SAD) is surprisingly prevalent among people with psychosis and exerts significant impact on social disability. The processes that underlie its development remain unclear. The aim of this study was to investigate the relationship between shame cognitions arising from a stigmatizing psychosis illness and perceived loss of social status in co-morbid SAD in psychosis.

Method. This was a cross-sectional study. A sample of individuals with SAD (with or without psychosis) was compared with a sample with psychosis only and healthy controls on shame proneness, shame cognitions linked to psychosis and perceived social status.

Results. Shame proneness ($p < 0.01$) and loss of social status ($p < 0.01$) were significantly elevated in those with SAD (with or without psychosis) compared to those with psychosis only and healthy controls. Individuals with psychosis and social anxiety expressed significantly greater levels of shame ($p < 0.05$), rejection ($p < 0.01$) and appraisals of entrapment ($p < 0.01$) linked to their diagnosis and associated stigma, compared to those without social anxiety.

Conclusions. These findings suggest that shame cognitions arising from a stigmatizing illness play a significant role in social anxiety in psychosis. Psychological interventions could be enhanced by taking into consideration these idiosyncratic shame appraisals when addressing symptoms of social anxiety and associated distress in psychosis. Further investigation into the content of shame cognitions and their role in motivating concealment of the stigmatized identity of being 'ill' is needed.

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Introduction

Social anxiety is among the most commonly reported and disabling of the co-morbidities in people with psychosis (Birchwood *et al.* 2007; Michail & Birchwood, 2009). The processes that underlie its development in psychosis remain unclear as there is no evidence that it is directly linked to psychosis-vulnerability or symptoms (Pallanti *et al.* 2004; Michail & Birchwood, 2009). In social anxiety in general, a developmental psychopathology framework has been adopted (Ollendick & Hirshfeld-Becker, 2002; Hayward *et al.* 2008) according to which there is evidence for continuity of social anxiety symptoms from childhood to adolescence and the involvement of multiple and interacting factors. Among the most

prominent of these are early temperamental and behavioural traits including behavioural inhibition, shyness, neuroticism and shame proneness, which have shown to increase susceptibility for the later development of social anxiety disorder (SAD) (Dalrymple & Herbert, 2007; Bienvenu *et al.* 2008; Schofield *et al.* 2009). Shame proneness in particular has received considerable attention in the literature, where its relationship with social anxiety has been theoretically and empirically validated (Buss, 1980; Averill *et al.* 2002; Mills, 2005).

Shame and social anxiety in non-psychosis

Shame is an emotion that affects the personal identity of the individual (Kaufman, 1993) and is triggered when the individual believes they hold qualities that are unattractive or unfavourable (e.g. having a mental illness) and could therefore lead to social rejection and loss of social status (Gilbert, 1998, 2000). Shame is seen as an involuntary submissive reaction in an attempt

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to defend oneself from being down-ranked and serves the function of inhibiting further attacks to the self and to one's social identity. Gilbert (1998) makes a distinction between internal and external shame. Internal shame refers to negative or critical perceptions the individual has about their own behaviour (self-evaluation); external shame relates to how one thinks others see oneself (usually in a negative way) and involves a social comparison process during which the individual becomes an object in the eyes of others.

Shame and social anxiety, although not similar, share some common underlying processes. One of these, according to Gilbert (1998, 2000), is fear of negative evaluation and rejection. A shame episode is similar to social anxiety to the extent that both are characterized by significant apprehension accompanied by heightened self-consciousness, fear of exposure and evaluative concerns (Gilbert & Trower, 1990; Fischer & Tangney, 1995). Based on this, Mills (2005) suggested that shame could be a vulnerability factor for the development of social anxiety through the shared process of self-consciousness. The use of safety behaviours has also been identified as a common process in shame and social anxiety (Gilbert, 1998, 2000). These are behaviours intended to minimize or prevent imminent threat resulting from situations that entail negative evaluation and rejection and can include avoiding eye contact, withdrawal from social interactions or showing signs of submissiveness to prevent a potential 'attack' to the self (Salkovskis, 1991). When encountered with social threats, safety behaviours are used in both shame and social anxiety as a way of minimizing the perceived danger and its consequences (e.g. being down-ranked or humiliated), thus 'saving' the self.

Shame and social anxiety in psychosis

In psychosis, developmental risk factors such as trauma, dysfunctional attachment relationships and emotional difficulties (Read & Argyle, 1999; Read *et al.* 2003; Janssen *et al.* 2004; Johnstone *et al.* 2005; Owens *et al.* 2005) are present during the prodrome phase and before symptom formation. The presence of these developmental risk factors has been suggested to predispose individuals to shame and increase sensitivity to 'put-downs' by others (Lutwark & Ferrari, 1997; Gross & Hansenn, 2000). For example, studies on attachment and dysfunctional parenting styles (Lutwark & Ferrari, 1997; Gross & Hansenn, 2000) have shown that early maladaptive attachment relationships and parental overcontrol and overprotection were related to the later development of shame proneness. Therefore, in individuals with psychosis it is proposed that

there is an established vulnerability to shame linked to early developmental anomalies. We have argued that shame proneness is likely to be catalysed by the stigma attached to the diagnosis of mental illness (Birchwood *et al.* 2007). Psychosis is considered as a highly stigmatized condition (Thornicroft *et al.* 2009) and, as with any type of social stigma, this can affect the social identity of the individual by suggesting qualities that deviate from the norm and are socially discrediting (Goffman, 1963). Individuals with psychosis are aware of the social stereotypes surrounding mental illness and some may even accept and endorse these (Hayward & Bright, 1997; Angermeyer & Matschinger, 2004). This internalization of stigma or self-stigma leads to increased shamefulness, particularly when individuals agree with the stigma and the associated negative responses (Corrigan & Watson, 2002*a,b*) and furthermore assume responsibility or engage in self-blame (Lewis, 1998). Self-blame is required to elicit feelings of shamefulness as a result of being stigmatized (Lewis, 1998). In individuals with psychosis, appraisals of shame and social unattractiveness are significant (Birchwood *et al.* 1993, 2000*a*) and lead to feelings of loss of social status, humiliation and entrapment (Rooke & Birchwood, 1998).

Therefore, we argue that psychotic individuals are developmentally vulnerable to shame and, in this context, receiving a diagnosis of mental illness makes the social stigma attached to mental illness difficult to resist and individuals can internalize and accept the stigma and the cultural stereotypes surrounding mental illness. This internalized stigma subsequently leads to increased shamefulness. However, the processes by which these appraisals of shame might contaminate social interaction in people with psychosis is not understood.

Aim of the study

The aim of this study was to examine the relationship between shame cognitions, shame proneness and perceived loss of social status in people with first-episode psychosis (FEP) and SAD. The following hypotheses were tested:

- (1) People with SAD (with or without psychosis) will report higher levels of shame proneness and lower perceived social status, compared to those with no social anxiety.
- (2) People with psychosis and SAD will hold stronger negative appraisals about psychosis in terms of (a) shame arising from the illness and perceived social rejection and (b) loss of social status, inability to escape the diagnosis and to control the illness, compared to those with psychosis alone.

Method

Sampling

Inclusion criteria

Four groups of participants aged between 16 and 35 years were sampled with: (a) non-psychotic SAD, (b) FEP, (c) FEP with SAD (FEP/SAD) and (d) healthy controls. All participants were assessed using the Schedules for Clinical Assessment in Neuropsychiatry (SCAN; WHO, 1999) by M.M. who received formal training[†] to criterion levels of reliability. Individuals in the SAD group were required to conform to ICD-10 (WHO, 1993) criteria for social anxiety (F40.1); and in the FEP group, to ICD-10 criteria for schizophrenia or related disorder (F20, 22, 23), in the absence of a primary diagnosis of organic disorder. An age-matched community sample with no psychiatric disorders was drawn from the general population and invited to take part in the study.

Recruitment

Participants with FEP were recruited from consecutive cases managed in the Early Intervention Service of Birmingham and Solihull Mental Health National Health Service (NHS) Foundation Trust, UK. The service manages all cases of FEP, age 14–35 years, in Birmingham. People with SAD were recruited through a self-help organization, Social Anxiety UK (www.social-anxiety.org.uk), and through local community mental health teams.

Assessments

Social anxiety

Two scales widely used together in the social phobia literature were administered. The Social Interaction Anxiety Scale (SIAS; Mattick & Clarke, 1998) is a 20-item scale measuring anxiety in interpersonal encounters. Using a cut-off score of 36, the SIAS has been demonstrated to discriminate between social anxiety, other anxiety disorders and community samples (Peters, 2000) with a sensitivity of 0.93 and positive predictive value (PPV) of 0.84. The Social Phobia Scale (SPS), designed to be administered alongside the SIAS, is used to detect and assess performance anxiety in situations where the individual fears they are being observed and scrutinized by others (e.g. carrying a tray across a cafeteria, eating/drinking in public).

Psychosis

The Positive and Negative Syndrome Scale (PANSS; Kay *et al.* 1987) includes scales of positive symptoms,

negative symptoms and general psychopathology and is used widely in schizophrenia research.

Cognitive appraisals of psychosis

The Personal Beliefs about Illness Questionnaire (PBIQ; Birchwood *et al.* 1993) measures patients' beliefs about their psychotic illness and its impact on their future goals and roles (loss), social status (shame), social marginalization (group fit) and the extent to which their illness is perceived to trap the individual, preventing them from asserting their aspired identity and role (entrapment). This measure has been widely used to study patients' adaptation to psychosis (Birchwood *et al.* 2000b) and has extensive psychometric validation including retest reliabilities of the scales from 0.77 to 1.0 and Cronbach's α from 0.68 to 0.77.

Shame

The Other as Shamer Scale (OAS; Goss *et al.* 1994) is an 18-item self-report scale that measures judgments about how the self is evaluated by others (e.g. 'I think that other people look down on me'). The frequency with which individuals share such feelings and experiences is rated on a five-point Likert scale (0–4). The OAS is a modification of the Internalized Shame Scale (ISS; Cook, 1993), which is used to assess self-evaluations (internal shame) and therefore covers trait shame. The OAS was developed to assess external shame, i.e. shame received by others (Goss *et al.* 1994). The scale was found to correlate highly with the ISS ($r=81$), indicating that the OAS can be used as a measure of shame proneness (trait shame) and moreover that shame involves both self and other evaluations (Goss *et al.* 1994). Cronbach's α was found to be 0.92 supporting its high internal consistency. It has been widely used in the literature (Gilbert, 2000; Birchwood *et al.* 2007).

Social status

The Social Comparison Scale (SCS; Gilbert & Allan, 1994) was designed to assess individuals' judgments of their rank/status and group fit. The scale includes six bipolar items: inferior–superior, less competent–more competent, likable–less likable, less reserved–more reserved, left out–accepted, different–same. The first five items are referred to as rank items and the sixth item, which measures the degree of perceived similarity with others, is called social comparison/group fit. Each item is rated on a 10-point scale according to how people perceive themselves in relation to their social others. Higher scores indicate higher perceived status. Cronbach's α for the rank

[†] The note appears after the main text.

Table 1. Demographic characteristics of participants

	FEP (no SAD) (<i>n</i> = 60)	FEP/SAD (<i>n</i> = 20)	SAD (<i>n</i> = 31)	Healthy community group (<i>n</i> = 24)
Sex				
Male	46	7	11	11
Female	14	13	20	13
Age (years), mean (s.d.)	24.6 (4.5)	24.4 (5.1)	27.6 (5)	24.2 (5)
Ethnic origin				
Afro-Caribbean	9	2	0	1
Asian	30	8	1	13
British White	11	7	29	10
British Black	10	2	1	0
Other	0	1	0	0
Education				
Dropped out of school	27	5	2	5
GSCE	9	5	8	1
A levels	17	7	12	2
Degree/HND	7	2	9	16
Occupation				
Employed	10	4	15	12
Unemployed	41	12	10	0
Student	8	3	4	11
Household	1	1	2	1
Marital status				
Single	50	17	20	17
Cohabiting	3	1	5	3
Married	6	1	6	3
Separated	1	1	0	1

s.d., Standard deviation; FEP, first-episode psychosis; SAD, social anxiety disorder.

scale was reported as 0.87, indicating good internal reliability (Gilbert & Allan, 1994), and the test-retest reliability over a 4-month period was 0.84 (Gilbert *et al.* 1995).

Results

The sample

Of the 84 patients with FEP who were approached to take part in this study, 80 (95.2%) consented. Twenty (25%) out of these 80 people with FEP received an ICD-10 diagnosis of social anxiety disorder (FEP/SAD) based on the SCAN. All 20 scored above the cut-off points on both the SIAS (>36) and the SPS (>26). An age-matched healthy control group (*n* = 24) was also recruited. Table 1 presents information on the demographic characteristics of the samples. The mean age of those in the SAD group was approximately 3 years more than those in the other groups. Both SAD groups showed a female excess whereas in the FEP (no SAD) group the expected male excess was observed.

χ^2 tests showed significant differences in ethnicity ($\chi^2_{12} = 59.7$, $p < 0.01$), education ($\chi^2_3 = 43.5$, $p < 0.01$) and occupation ($\chi^2_3 = 42.3$, $p < 0.01$) but not in marital status ($\chi^2_3 = 9.1$, N.S.). These differences reflect the expected higher functioning of the non-psychotic socially anxious participants. The main clinical characteristics of the sample are presented in Table 2. The two social anxiety groups with (FEP/SAD) and without psychosis (SAD) reported similar severity levels of social anxiety and avoidance (SIAS: $F_{1,49} = 2.55$, N.S., SPS: $F_{1,49} = 1.65$, N.S.). Similar levels of depression were also reported ($F_{1,49} = 0.26$, N.S.), with 64.5% of the SAD and 65% of the FEP/SAD groups shown to be at least moderately depressed (Michail & Birchwood, 2009). The two psychotic groups (with and without social anxiety) reported no significant differences in the overall occurrence of delusions ($F_{1,69} = 0.137$, N.S.), including delusions of grandiosity ($F_{1,69} = 0.76$, N.S.) and persecution ($F_{1,69} = 2.24$, N.S.); similarly, the level of hallucinations did not differ between the two groups ($F_{1,69} < 1$, N.S.).

Table 2. Clinical characteristics of the sample (means/s.d.)

	FEP (no SAD) (<i>n</i> =60)	FEP/SAD (<i>n</i> =20)	SAD (<i>n</i> =31)	Healthy community group (<i>n</i> =24)
Social anxiety				
SIAS	17.4 (10.5)	47.9 (9.8)	54 (15)	11.2 (6.7)
SPS	9.9 (9.1)	40.75 (13.7)	46.3 (15.9)	5.5 (4.5)
Depression				
CDSS	2.4 (3.6)	8.9 (6.4)	7.4 (4.5)	0.7 (1.2)
Positive psychotic symptoms				
PANSS				
Delusions	4.67 (2.0)	4.88 (2.9)		
Hallucinations	4.41 (1.5)	4.33 (2.0)		
Grandiosity	1.77 (1.5)	2.16 (1.8)		
Suspiciousness/persecution	3.67 (2.1)	4.55 (2.2)		

s.d., Standard deviation; FEP, first-episode psychosis; SAD, social anxiety disorder; SIAS, Social Interaction Anxiety Scale; SPS, Social Phobia Scale; CDSS, Calgary Depression Scale for Schizophrenia; PANSS, Positive and Negative Syndrome Scale.

Table 3. Mean scores (s.d.) of psychosis and social anxiety groups in the OAS and SCSrank

	Social anxiety present		Social anxiety absent	
	SAD (<i>n</i> =31)	FEP/SAD (<i>n</i> =20)	FEP (<i>n</i> =60)	Healthy community group (<i>n</i> =24)
OAS	37.7 (12.3)	43.4 (13.2)	16.2 (14.4)	11.7 (7.5)
SCSrank	22.2 (5.1)	24.9 (4.7)	29.9 (5.8)	31.2 (4.5)

s.d., Standard deviation; OAS, Other as Shamer Scale; SCS, Social Comparison Scale; SAD, social anxiety disorder; FEP, first-episode psychosis.

Hypothesis 1

(a) Shame proneness and social status

A 2 × 2 between-subjects multivariate analysis of variance (MANOVA) was performed with SAD (present, absent) and psychosis (present, absent) as independent variables and shame proneness (OAS) and social rank (SCSrank) as dependent variables (Table 3). The multivariate model was significant for SAD ($F_{2,130} = 71, p < 0.01$). In line with the hypothesis, people with SAD (with or without psychosis) reported significantly higher levels of shame proneness ($F_{1,135} = 123.1, p < 0.01$) and lower perceived social rank ($F_{1,135} = 49.6, p < 0.01$) compared to those without social anxiety. The social anxiety × psychosis group interaction did not reach significance ($p = 0.1$). The results also show that levels of shame proneness ($p = 0.41$) and social status ($p = 0.28$) were similar in the social anxiety groups with (FEP/SAD) versus without (SAD) psychosis. These findings indicate that

shame proneness and low perceived social status are features of social anxiety, irrespective of the presence of psychosis.

Hypothesis 2

(b) Shame and social rejection arising from psychosis

We tested whether individuals with psychosis and social anxiety experienced greater levels of shame and perceived social rejection arising from their mental illness and the associated stigma, compared to those with psychosis but without social anxiety. The multivariate test with the PBIQ shame and group fit as dependent variables showed that the overall model was significant ($F_{2,77} = 6.8, p < 0.05$). Univariate comparisons showed that PBIQ shame ($F_{1,79} = 8, p < 0.05$) and group fit ($F_{1,79} = 13.7, p < 0.01$) were each significantly higher in people with psychosis and social anxiety (FEP/SAD) compared to those with FEP alone (Table 4).

Table 4. Mean scores (s.d.) of FEP and FEP/SAD groups in the PBIQ and SCS

	FEP (n=60)	FEP/SAD (n=20)
PBIQ		
Shame	13.4 (3.3)	16.2 (4.9)
Group fit	9.9 (3)	13.1 (4.4)
Entrapment	12.6 (3.9)	16.7 (4.9)
Control	10.2 (3.3)	13.6 (4.8)
Loss	15.1 (3.5)	18.7 (5.7)
SCSrank	29.9 (5.8)	24.9 (4.7)

s.d., Standard deviation; FEP, first-episode psychosis; SAD, social anxiety disorder; PBIQ, Personal Beliefs about Illness Questionnaire; SCS, Social Comparison Scale.

Loss of social status, control and entrapment in social anxiety and psychosis

To examine whether people with psychosis and social anxiety perceived their psychotic illness to be more entrapping, less controllable and conferring lower social status, compared to those with psychosis alone, a MANOVA was calculated with PBIQ entrapment, control, loss of status and social role and SCS rank as dependent variables. The results show that the multivariate model was significant ($F_{4,75}=5.6, p<0.01$). Those with psychosis and SAD reported higher levels of PBIQ entrapment ($F_{1,79}=14.5, p<0.01$), loss of social goals ($F_{1,79}=12, p<0.01$), poorer illness control ($F_{1,79}=13.1, p<0.01$) and lower perceived social status ($F_{1,79}=12, p<0.01$), compared to those without SAD (Table 4).

Discussion

Shame proneness and social anxiety

The findings of this study show that, whether in the context of psychosis or not, shame cognitions are a feature of SAD. Shame proneness accompanied by perceived loss of social status was significantly elevated in those with social anxiety (with or without psychosis) compared to those without. Those with FEP and social anxiety expressed similarly high levels of vulnerability to shame as their counterparts without psychosis. The focus of and the triggers for this shame sensitivity, which seems to be present in both socially anxious psychotic and non-psychotic people, warrant further clarification. Is the content of the shame cognitions in co-morbid social anxiety and psychosis the same as in those with social anxiety alone? For example, does the diagnosis of psychosis and its associated stigma lead to fear of this being revealed and

seen by others as 'ill', 'mad' or 'schizophrenic' in social interactions? The results from the second hypothesis are significant in identifying the nature and underlying processes of these shame cognitions in social anxiety in psychosis.

Shame, social rejection and appraisals arising from psychosis

The FEP/SAD group expressed significantly greater negative appraisals arising from their stigmatizing illness compared to the FEP (no SAD) group alone. These appraisals involved: (a) shame and feelings of humiliation as a result of being diagnosed with a stigmatizing illness, accompanied by feelings of rejection by others in their social environment; and (b) appraisals of entrapment and loss of control over the illness. Perceived loss of social life goals and lowered social status were also significantly more prominent in the socially anxious psychotic group (FEP/SAD) compared to the non-socially anxious (FEP, no SAD).

The findings of this study are consistent with those of earlier studies (Gumley *et al.* 2004; Birchwood *et al.* 2007) reporting that dysfunctional appraisals held by socially anxious psychotic people were characterized by shamefulness, humiliation and perceived rejection by others.

These findings are the first to show that shameful thinking plays a significant role in social anxiety in psychosis, as it does in non-psychotic social anxiety. It is important to delineate how this operates in psychosis and how such shame promotes behaviours of avoidance and withdrawal leading to social anxiety. According to Gilbert (1992, 1997), shame arises from individuals and their behaviours, which are perceived to have an unattractive or socially undesirable quality. For example, being overweight, having an eating disorder or a physical disfigurement are all considered to confer shame and social rejection and are associated with significant stigma (Andrews, 1995, 1997; Thompson *et al.* 1999; Thompson & Kent, 2001; Swan & Andrews, 2003). To avoid these adverse consequences of shame, individuals may engage in behaviours of avoidance, concealment or withdrawal, which are considered to be the hallmarks of shame. In social anxiety, such behaviours prevent individuals from communicating their perceived as visible anxiety symptoms (e.g. sweating, blushing, shaking) and hence 'protect' them from being exposed to unfavourable evaluation; with the addition of psychosis, it is the diagnosis of mental illness that constitutes the unattractive quality and the social stigma attached to this. We have emphasized that this stigma is internalized and endorsed by people with psychosis who accept their 'schizophrenic' identity. This self-stigma

leads to increased shamefulness and fear of the illness being revealed to others because of the consequences of this discovery (e.g. social exclusion, marginalization). Hence it is predicted that people with psychosis will attempt to conceal their stigmatized identity to prevent or minimize this threat. Concealment operates as a safety behaviour that is suggested to serve two functions: (a) a preventive function whereby the aim is to avert or minimize the anticipated threat (i.e. discovery) and (b) a protective function to 'save' the individual from the consequences of such a social threat, for example being shamed, humiliated and rejected by others. However, any use of concealment as safety behaviour may be counterproductive as it can contaminate social interaction by promoting behaviours of submissiveness, avoidance and withdrawal in people with psychosis. The counterproductive use of such safety behaviours has received empirical support in studies of social anxiety (McManus *et al.* 2008). It is argued, therefore, that the use of concealment as a form of safety behaviour in socially anxious psychotic individuals will operate in an analogous way (i.e. to prevent discovery of the stigmatized identity) and may entail similar consequences.

Entrapment and social anxiety in psychosis

An important finding of this study concerns the significantly elevated levels of entrapment and loss of control over the illness reported in the socially anxious psychotic group compared to the non-socially anxious. The role of defeat and entrapment in psychopathology has attracted considerable attention in the literature (Gilbert & Allan, 1998; Taylor *et al.* 2009, 2010, 2011); however, their relationship to social anxiety remains unclear (Taylor *et al.* 2011). Entrapment refers to the desire to escape from a certain situation (e.g. mental illness) and the perception that all escape routes are blocked with no way forward or likelihood of improvement (Gilbert & Allan, 1998). External entrapment refers to entrapment by external circumstances or events and internal entrapment relates to entrapment within internally generated thoughts and feelings (Gilbert & Allan, 1998). According to Taylor *et al.* (2011), feeling defeated and trapped by a situation or an event could lead individuals to perceive themselves as inferior and subordinate compared to others, hence activating negative appraisals about the self. These dysfunctional self-beliefs increase the possibility of individuals appraising social situations, particularly those that might be evaluative in nature such as meeting new people, as potentially threatening and dangerous to their self-esteem and social status. Therefore, engaging in, or

even the anticipation of engaging in, such encounters could significantly increase levels of anxiety and distress.

In people with psychosis, the imminent threat refers to the discovery of the mental illness by others and the consequences entailed in terms of social rejection and exclusion. We suggest that feeling trapped by a stigmatized illness such as psychosis (external entrapment) and by internal thoughts and feelings of what the schizophrenic identity means for the individual and their place in the social hierarchy (internal entrapment) could trigger negative appraisals about the self (i.e. 'I am inferior compared to others because I cannot escape from my illness; I feel worthless and inadequate compared to others'). These negative self-appraisals may increase sensitivity to social situations where the perceived threat (i.e. the discovery of mental illness by others and fear of being socially ostracized) is present and imminent. This subsequently triggers anxiety and leads to behaviours aiming at mitigating the threat such as avoidance or withdrawal from social interactions and showing signs of submissiveness to prevent a potential 'attack' from others.

Methodological issues and limitations

This is the first study to undertake a detailed analysis of the role of shame in SAD in psychosis by directly comparing a psychotic with a non-psychotic socially anxious group.

This was a cross-sectional study and, although important links were revealed between shame cognitions, perceptions of social rank and social anxiety, causal relationships cannot be inferred. In our analyses of shame and negative appraisals resulting from psychosis, we did not test for the possible impact of concurrent depressed mood. Given, however, the significant phenomenological and developmental overlap between depression and social anxiety consistently reported in both epidemiological and clinical studies (Stein *et al.* 1990, 2001; Kessler *et al.* 1999; Wittchen *et al.* 1999), controlling for depression in analyses concerning negative appraisals of psychosis entails the risk of controlling for social anxiety itself as these are indivisible characteristics of social anxiety. This is supported by the significantly elevated levels of depression reported in those with social anxiety (with or without psychosis) compared to those with psychosis only (Michail & Birchwood, 2009). The interrelationship between depression and anxiety has received considerable attention; Shorter & Tyrer (2003), commenting on this overlap, have argued that the representation of depression and anxiety on the current diagnostic criteria as distinct clinical entities is

rarely seen in practice. Tyrer (2001) also questioned the sharp division between anxiety and depression in the diagnostic systems and suggested their unitary classification as nervousness or cothymia. Given, therefore, the endemic nature of depression and its significant overlap with social anxiety in our group, it would not be meaningful to statistically control for depressed mood.

Clinical implications

The findings of this study have significant implications for psychological interventions and treatments of symptoms of social anxiety and associated distress in psychosis. Cognitive behaviour therapy (CBT) is recommended for people with psychosis (NICE, 2009), but its focus and evaluation has revolved primarily around the reduction of psychotic symptoms, and not for co-morbid depression and social anxiety. Furthermore, psychological interventions such as CBT for the treatment of affective disorders developed for non-psychotic populations are proposed for the management of affective dysfunction when this is co-morbid in psychosis (Halperin *et al.* 2000; Kingsep *et al.* 2003). This could be problematic because, according to Tarrrier (2005), for such treatments to be effective, they would need to adapt to the specific nature of symptoms and difficulties experienced by people with psychosis. The findings of this study suggest that the 'conventional' CBT for social anxiety in psychosis could be considerably enhanced with an additional focus on shame and entrapment cognitions linked to psychosis and accompanying concealment behaviours, which are suggested to form part of the safety behaviour repertoire of socially anxious psychotic individuals. Safety behaviours are particularly problematic for people with SAD as they prevent disconfirmation of their unfounded beliefs (e.g. 'the only reason I didn't muddle my words is because I memorized what I was supposed to say') and, moreover, have the opposite from the desired effect; for example, avoid talking or eye contact during social interactions might come across as a socially inept behaviour. Research has provided empirical support for the role of safety behaviours in maintaining dysfunctional cognitive appraisals and also for the impact of reducing or dropping safety behaviours on symptoms of social anxiety and related appraisals (Wells *et al.* 1995; Kim, 2005). We predict that a randomized controlled trial testing the effectiveness of a CBT intervention in targeting shameful cognitions, alongside perceptions of entrapment, and reducing or eliminating concealment-linked behaviours would be effective in psychosis.

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Declaration of Interest

None.

Note

- ¹ The researcher attended a 5-day training course on SCAN at the University of Leicester. Reliability monitoring was conducted between SCAN trainees and trainers. PANSS training was provided by an official PANSS trainer at the Early Intervention Service, Birmingham and Solihull Mental Health Foundation Trust.

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