Doctoral Thesis

Is social anxiety co-morbid with psychosis the same as social anxiety as a primary diagnosis? An exploratory comparison of schemas, thoughts and social anxiety-related imagery.

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Submission date: 1st July 2010

Approved for late submission: 1st December 2010

Final submission date: 13th June 2011

Word count: 37, 037

Doctoral Programme in Clinical Psychology

University of East Anglia

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Abstract

Background

Social anxiety frequently occurs as a comorbid condition, with high rates reported among people with psychosis. Little is known about the nature of social anxiety in this population or whether current psychological theories apply, resulting in a lack of informed treatment for this debilitating condition.

Aims

This study aims to explore the nature of social anxiety with psychosis, specifically whether it can be considered to be qualitatively similar to social anxiety as a primary diagnosis.

Method

A group of 29 participants with social anxiety and co-morbid psychosis was compared with a group of 32 participants with social anxiety but no psychosis on measures of schema, thoughts, paranoia and imagery experienced in anxiety-provoking social situations. Mixed-method analyses were employed to compare the groups' responses on six set measures and a semi-structured interview.

Results

Both groups had participants who experienced images when socially anxious, with distorted images of themselves, their surroundings, and others appearing threatening. Both groups also experienced images in other sensory modalities. However, the social anxiety with psychosis (SAp) group also had images of being physically assaulted, or assaulting others. In addition, the SAp group scored significantly higher for negative-other schema and paranoia. Both groups scored similarly for levels of social anxiety-related cognitions; however, the SAn group scored significantly higher for fear of negative evaluation from others, and in template analysis had more themes related to this fear.

Conclusion

There were a number of similarities and differences between the groups, suggesting that a schema-based understanding of the development of social anxiety may be helpful in formulating and treating this condition. A new model is suggested, hypothesising two distinct pathways involved in the development of social anxiety, one based on negative-self schema, the other on negative-other schema. The clinical and theoretical implications are discussed.

1 Introduction

1.1 Overview

This introduction will first consider the nature of social anxiety, including its diagnostic criteria, models of its maintenance, and associated research into aspects of social anxiety (cognitions, beliefs, experienced imagery). It will then provide an overview of the nature of psychosis, its diagnostic criteria and models of its development and maintenance. It will also consider the psychotic symptom, paranoia, in more detail. This is due to the similarities in presentation between paranoia and social anxiety, which may implicate a key role for paranoia in social anxiety with psychosis. The introduction will then consider social anxiety that is co-morbid with psychosis: its rates and implications, and whether traditional models of social anxiety can be equally applied to this co-morbid social anxiety. Finally, the rationale for conducting further research comparing social anxiety that is co-morbid with psychosis with social anxiety as a primary diagnosis will be considered and the hypotheses for this study will be listed.

1.2 Search Strategy

A full literature search was conducted exploring research into social anxiety in psychosis (a full description of the search strategy is described in section 1.5.2.1, p. 39). For the remainder of the topics covered in the introduction, literature searches were also conducted using the databases MetaLib, Medline (Ovid), Medline (PubMed), PsychINFO, and Web of Science/ Knowledge (with the exception of the sections on diagnostic criteria, for which the two predominant manuals for diagnosis in Europe and America were used: The Diagnostic Statistical Manual – Fourth Edition (DSM-IV), and the International Classification of Mental and Behavioural Diseases: 10th Edition (ICD-10, World Health Organisation, 1992)). However, these were not exhaustive literature searches. The literature for these sections was selected to provide an overview of the current literature and theory concerning social anxiety and psychosis.

1.3 Social Anxiety Disorder

1.3.1 What is social anxiety disorder?

The Diagnostic Statistical Manual – Fourth Edition (DSM-IV, American Psychiatric Association, 1994) is commonly used in research studies to provide diagnostic criteria for specific conditions. Although it was not used to select inclusion criteria in this study, its definition of social anxiety disorder (also known as "social phobia") is useful in providing a thorough definition for this complex condition, which is to be the focus of this research. The following criteria must all be met for a diagnosis of social anxiety disorder or social phobia to be given, using the Diagnostic and Statistical Manual of Mental Disorders 4th ed., text revision (DSM-IV-TR), accessed from the website Psychiatry Online on 8th June 2011. This is direct quote, with references to children removed as they are not applicable to this study.

Diagnostic criteria for 300.23 Social Phobia.

A. A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others. The individual fears that he or she will act in a way (or show anxiety symptoms) that will be humiliating or embarrassing.

B. Exposure to the feared social situation almost invariably provokes anxiety, which may take the form of a situationally bound or situationally predisposed Panic Attack.

C. The person recognizes that their fear is excessive or unreasonable.

D. The feared social or performance situations are avoided, or else are endured with intense anxiety or distress.

E. The avoidance, anxious anticipation, or distress in the feared social or performance situation(s) interferes significantly with the person's normal routine, occupational (academic) functioning, or social activities or relationships, or there is a marked distressed about having the phobia.

F. In individuals under age 18 years, the duration is at least 6 months.

G. The fear or avoidance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition and is not better accounted for by another mental disorder (e.g., Panic Disorder, Separation Anxiety Disorder, Body Dysmorphic Disorder, a Pervasive Developmental Disorder, or Schizoid Personality Disorder).

H. If a general medical condition or another mental disorder is present, the fear in Criterion A is unrelated to it, e.g., the fear is not of Stuttering, trembling in Parkinson's disease, or exhibiting abnormal eating behaviour in Anorexia Nervosa. (American Psychiatric Association, n.d. para. 1).

The above information is useful in establishing basic knowledge about the diagnostic criteria of social anxiety disorder. However, it does not provide information on the in-vivo process of social anxiety. This information is vital when considering whether social anxiety co-morbid with psychosis is qualitatively similar to social anxiety as a primary diagnosis. Therefore, this study will now describe and discuss psychological models of social anxiety.

1.3.2 Psychological models of social anxiety disorder.

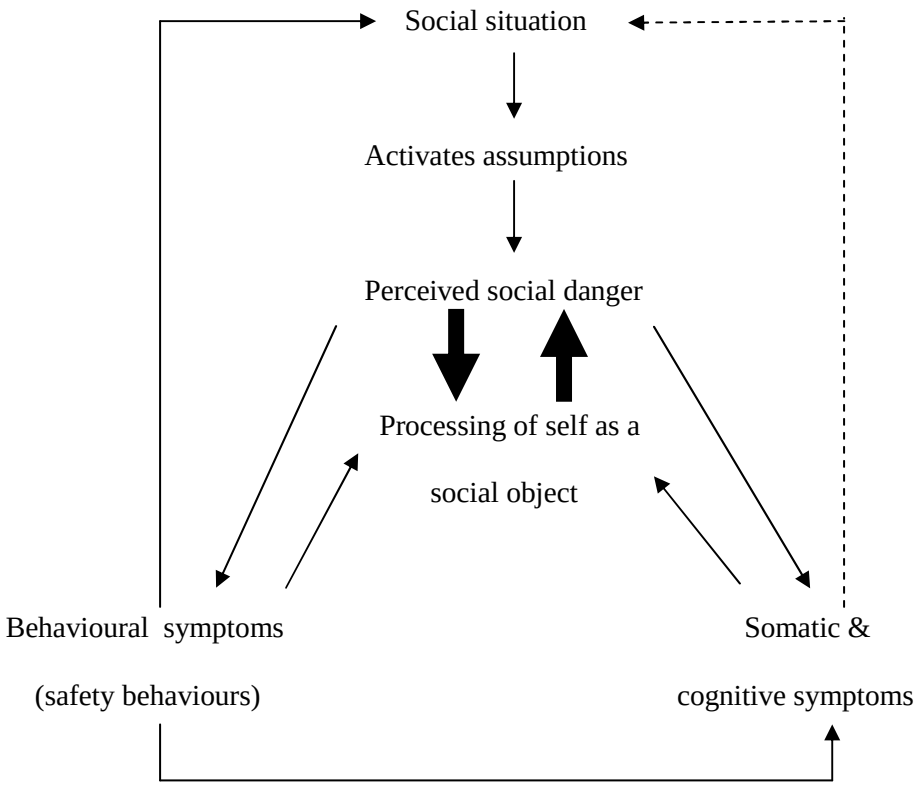
There are a number of hypothesised psychological models of social anxiety that attempt to explain the in-vivo process of social anxiety. Four of the key models, selected on the basis of journal type and response from other researchers (eliciting the most interest and further research, and which were published in peer-reviewed journals) will be discussed below. The models will be compared and similarities and differences will be considered.

1.3.2.1 Clark and Wells' (1995) cognitive model of social phobia.

Clark and Wells' Cognitive Model of Social Phobia is probably the best known social anxiety model and provides the theoretical basis for cognitive-behavioural therapy (CBT) for this condition. There is a body of evidence in support of this model since its

creation in 1995, both from research studies (eg. Wells, 2001) and from CBT for social phobia (eg. Wells & McMillan, 2004).

Figure 1. Clark and Wells' (1995) Cognitive Model of Social Phobia



Clark and Wells (1995) posit that the "…core of social phobia appears to be a strong desire to convey a particularly favourable impression of oneself to others and marked insecurity about ones' ability to do so" (p. 69). Figure 1 graphically represents Clark and Wells' model. The varying thickness of the lines indicates the strength of proposed association between the various aspects, ie. how people with social anxiety believe others see them has greater impact on their danger appraisal of the situation than the situation itself, or observation of others' responses. Clark and Wells (1995) have suggested that when those with social anxiety become concerned that they may fail to make their desired impression on others, their attention shifts to detailed observation and self-monitoring. They then use this internal information to construct a negative impression of their public self from the observer perspective, ie. see an image of themselves as they imagine other people see them.

Consequently, those with social anxiety have little access to information about how others behave towards them and will therefore be less aware of information indicating that others responded to them in a better way than they might have feared (Clark & Wells, 1995). This processing bias prevents individuals with social anxiety from collecting evidence against the perceived social danger, maintaining the cycle (Clark & Wells, 1995).

Clark and Wells' (1995) Model influenced the development of further in-vivo models, based on their cognitive-behavioural approach. Rapee and Heimberg (1997) created one such model, as did Hoffman (2007). Both these models will be considered below.

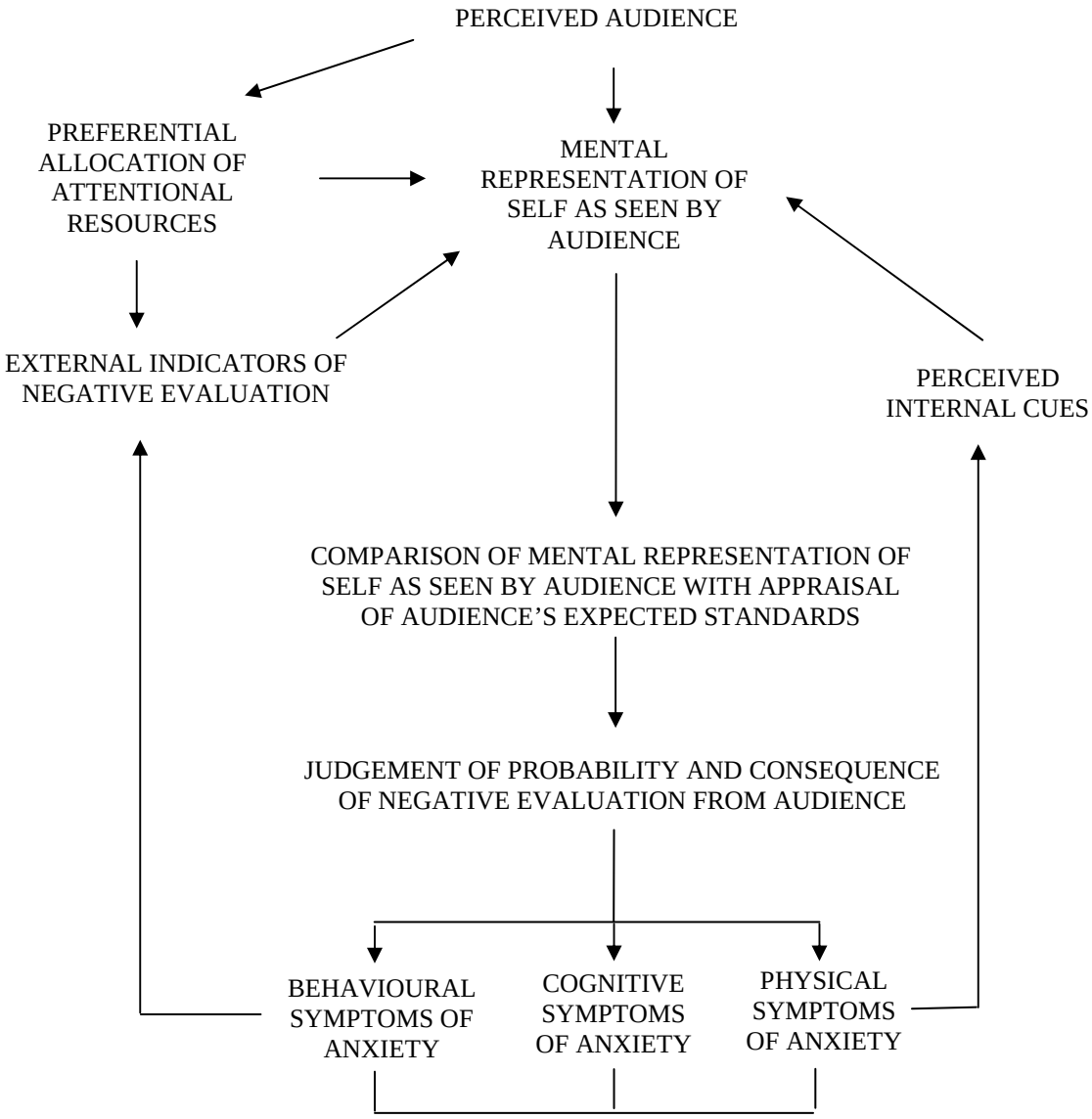
1.3.2.2 Rapee and Heimberg's (1997) Cognitive-behavioural model of social phobia.

Rapee and Heimberg's Cognitive-behavioural model of social phobia (1997, see Figure 2) also posits that a central component of social phobia maintenance is developing an image of oneself as if seen through the eyes of others (observer perspective) and thereby reducing the amount of attention focussed on receiving accurate external feedback. Rapee and Heimberg (1997) state the core of their model is that people who are socially anxious believe that having others judge you positively is fundamentally important. However, they also assume that others (the "audience") are likely to judge them critically.

Individuals with social anxiety develop a prediction about what the audience expects of them, and compare this with their mental self-image. This image is based on information from long-term memory as well as internal and external cues. Specific attention is directed towards the features which are relevant to the situation, and potentially negative (eg. internal cues of speaking unclearly and external cues of others frowning). The individual then evaluates to what extent their self-image is meeting the audience's expectation. The discrepancy between perceived expectation and perceived audience evaluation of "performance" determines the likelihood of negative evaluation from the audience, and consideration of the social consequences of such evaluation. Individuals with social anxiety are likely to perceive that they fall significantly short of audience

expectations. This increases symptoms of anxiety which are perceived as likely to cause further negative evaluation from the audience, maintaining the cycle.

Figure 2. Rapee and Heimberg's (1997) Cognitive-Behavioural Model of Anxiety in Social Phobia

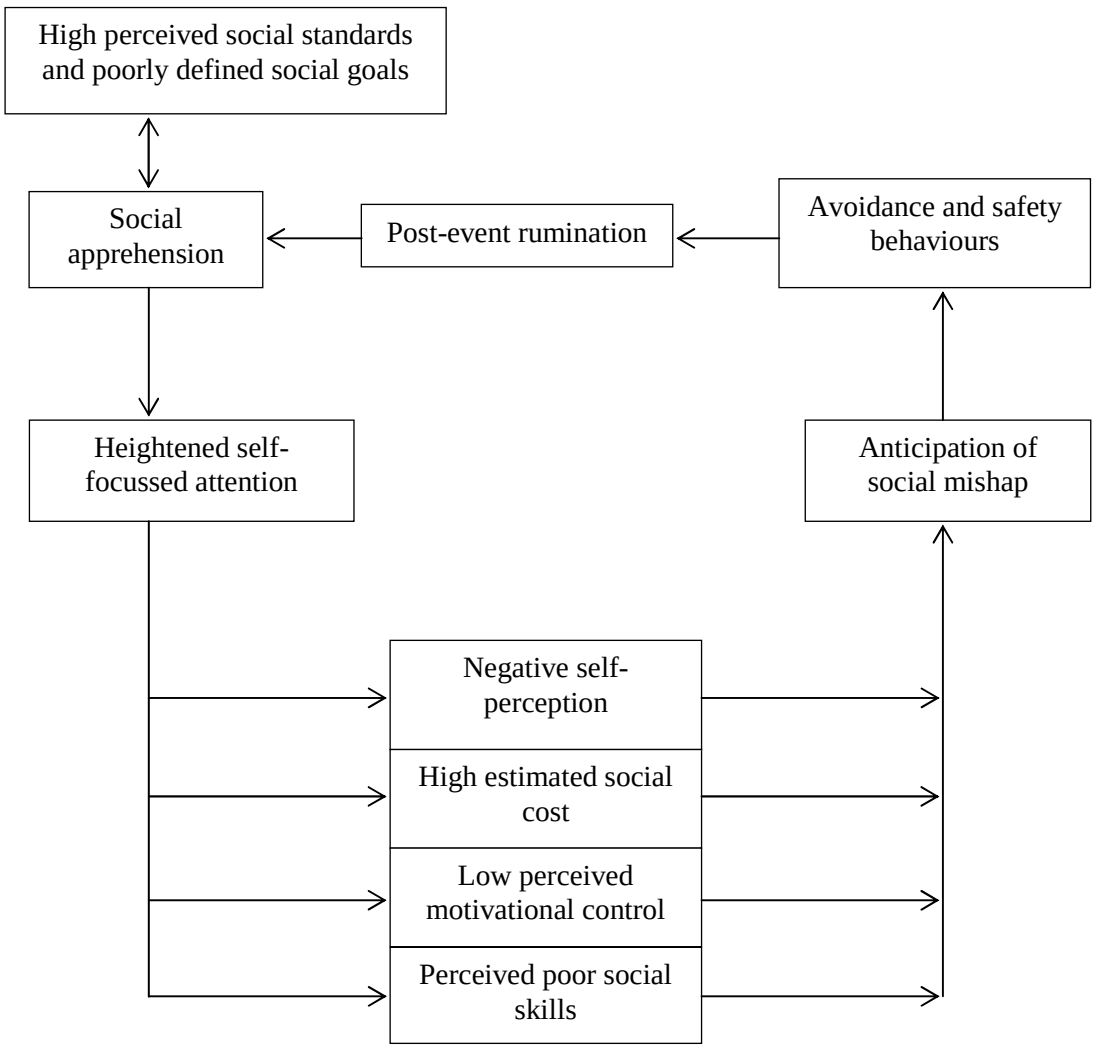


1.3.2.3 Hoffmann's (2007) Comprehensive and disorder-specific cognitive-behavioural model for social anxiety disorder.

The basis of Hoffmann's (2007) model (Figure 3, below) is that people with social anxiety perceive that social standards are very high, but also undefined. They strive to meet goals that are both unclear and excessively high, therefore ultimately unobtainable. They

doubt their ability to meet these goals (Leary, 2001), which further increases their social anxiety and self-monitoring (Clark &McManus, 2002; Heinrichs & Hofmann, 2001; Hirsch & Clark, 2004; Woody, 1996). This triggers further cognitive processes, in which the person exaggerates the possibility of a negative outcome to the social encounter, and overestimates the potential social costs (Foa, Franklin, Perry, & Herbert, 1996; Hofmann, 2004). They also perceive that they have little control over their anxiety and consequent behaviour (Hoffmann & Barlow, 2002) and hold a negative view of themselves as social objects, increasing their belief that they will not meet the standards required of them. The individual therefore engages in avoidance and safety behaviours (Wells et al., 1995), followed by ruminating on the event (Mellings & Alden, 2000; Rachmann, Grüter-Andrew, & Shafran 2000), which maintains the cycle.

Figure 3. Hoffmann's (2007) Comprehensive and disorder-specific CBT model for social anxiety disorder.



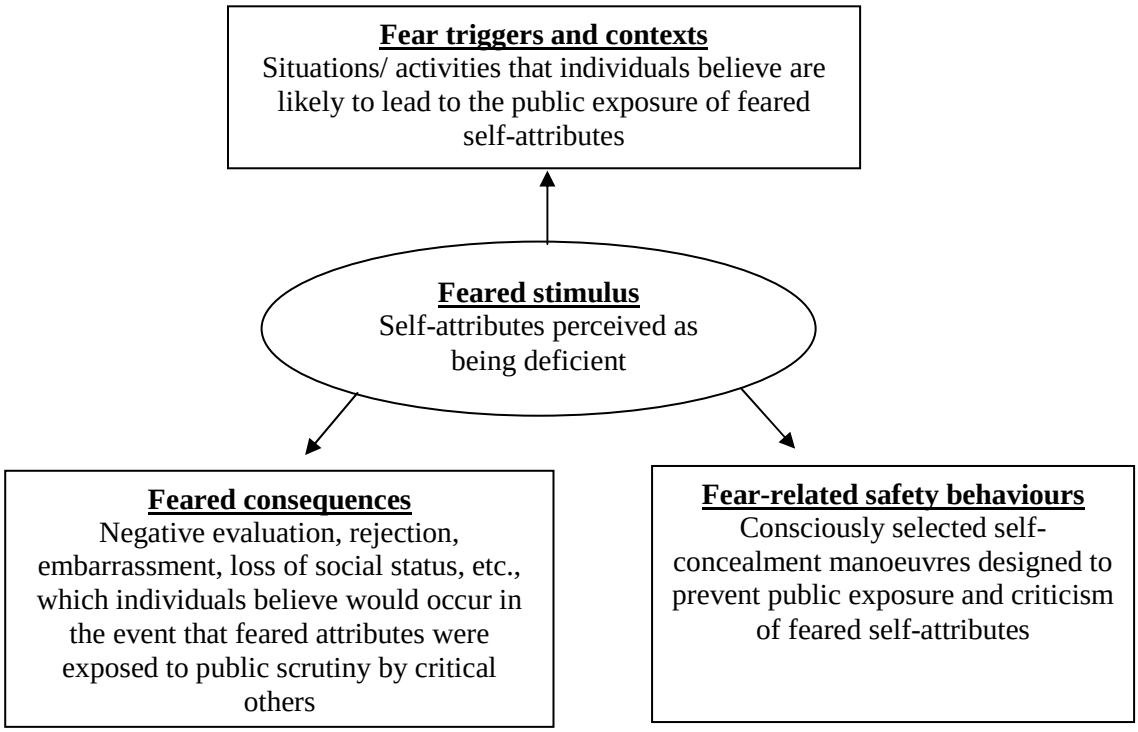
These two models appear very similar to Clark and Wells' (1995) model. Interestingly, all three appear interpersonal in nature (ie. the relationship between the individual and the audience), although in reality they are entirely individual, with the audiences' responses being a perception within the mind of the individual. Therefore, these models are entirely self-contained, relying only on the continued negative expectation of the individual rather than actual negative appraisal from others to maintain the cycle. This self-focussed attention, and subsequent inability to look for evidence that does not confirm an individual's expectations, is a key element in all three models.

These models are very specific about the nature of the threat anticipated by people with social anxiety (ie. the threat of negative evaluation from others). All three models can be used therapeutically to help an individual challenge this threat assumption. However, Moscovitch (2009) argues that, in the interest of being person-centred, a model of social anxiety that is to be used therapeutically should not make assumptions about the types of fears that are central to social anxiety. His proposed therapeutic model will now be considered.

1.3.2.4 Moscovitch's (2009) proposed model of the feared stimulus and functionally related clinical sequelae in social anxiety.

Moscovitch proposes the following clinical model (Figure 4, below), in which the "feared stimulus" is the focus of therapy rather than simply increasing exposure to social situations (which forms a key element of CBT for social anxiety). Moscovitch (2009) suggests that the feared stimulus cannot be generalised to all people who are socially anxious, as it can with other anxiety disorders (eg. the feared object in specific phobias, the fear of going "crazy", losing control or having a heart attack in panic disorder), but rather reflects the person's own perception of their specific attributes which they believe to be deficient or contrary to societal expectations or norms.

Figure 4. Moscovitch's (2009) Proposed model of the feared stimulus and functionally related clinical sequelae in social anxiety.



1.3.2.5 Overview and critique of models.

All the above models appear similar in their conceptions of social anxiety, all focussing on threat appraisal and beliefs about the self and others. All have at their core a belief of inferiority in comparison to others. This belief is focussed specifically on an inability to meet the perceived standards for social behaviour of those around them. Also central to all the models is the belief that others will see this inferiority and judge the individual harshly, possibly resulting in the removal of social support and position. The models imply that this belief is less likely to be accurate, and is due to cognitive biases in interpretation of data (ie. as an individual expects others to be critical s/he will experience them in this way, in spite of evidence to the contrary); indeed, CBT for social anxiety is often based on this assumption, asking the individual to test out its accuracy through behavioural experiments. All the models hypothesise that this belief (accurate or not) leads

to avoidance and safety behaviours, which prevent the individual testing their expectations, maintaining their beliefs.

Clark and Wells (1995) and Rapee and Heimberg (1997) also include in their models that individuals with social anxiety create a mental image of themselves, based on their negative self-beliefs and beliefs about how others see them. This image is then compared negatively to images of others, and is a key component of inferiority beliefs. Moscovitch (2009) and Hoffman (2007) also include negative comparison to others as central, although they are not explicit about the form this takes. It is important to note the situation-specific nature of these models: although the implication is that negative self-beliefs will always be present, the associated assumptions will only be activated when faced with a social situation that is perceived as threatening.

This introduction will now consider the symptoms of social anxiety that seem common in all the above models: beliefs about the self or others, cognitions or thoughts that bring these beliefs to mind, and threat appraisal. The threat appraisal section will focus on the imagery experienced by people with social anxiety, to establish differences in the expected direction of the threat: self-focussed (expecting the threat to be their own inability to meet social expectations), in which images are focussed on the individual, or other-focussed (expecting the threat to come from others), in which images are focussed on the people surrounding the individual. Research and theory in each of these areas will now be considered.

1.3.3 Research and theory exploring symptoms of social anxiety disorder

1.3.3.1 Beliefs

Wells (1997) identifies that the beliefs (or schemas) of people with social anxiety play a key role in the development and maintenance of the condition. These beliefs can be about the person themselves (eg. that they are incapable of performing effectively in social situations) or about other people (eg. that others will judge them harshly and consequently reject them) (Wells, 1997). Clark and Wells (1995) posit that these strongly-held ("core")

beliefs (also known as "maladaptive schemas" – Young, 1990) influence the conditional assumptions of the person with social anxiety (eg. "If I show I'm anxious people will think I'm incompetent", Wells, 1997, p. 172), and also form the basis for rigid rules for social performance to try to prevent rejection (eg. "I must always sound fluid and intelligent", Wells, 1997, p. 172). These conditional assumptions and rules can influence a situation to bias it towards confirming the person's core beliefs (eg. by making the person behave in a way that is perceived as odd, or by setting a standard that is impossible to achieve resulting in perceived failure), or bias the interpretation of the individual to perceive failure (ie. because of expecting failure, an individual is more likely to recognise information that is concordant with failure than information that challenges this expectation - Beck, 1967; Beck & Clark, 1997; Beck & Emery, 1985). These biases are likely to prevent the individual from trying alternative ways of behaving that might challenge their beliefs.

Wenzel (2004) investigated schema content related to threat in a group of individuals with social phobia, compared to a non-clinical control group. Participants were asked to create scripts (ordered sequences of events) for two social or evaluative situations. Based on cognitive theories of anxiety (eg. Beck & Emery, 1985, Wells, 1997), Wenzel hypothesised that the scripts of the socially phobic group should contain more references to threat, anxiety symptoms and inability to cope. Participants in the social phobia group referred more often to symptoms of negative affect (eg. identifying that they would feel nervous at a party). Wenzel also judged the tone of participants in the social phobia group to be generally more negative than the tone of the non-socially phobic group, particularly in the evaluative condition. Wenzel (2004) states that the results of her study are indicative of underlying maladaptive schemas. However, a flaw of the study is that it was not able to directly explore schemas or their content, and affect was rated by the author and her colleagues rather than using a validated measure. Additionally, sample sizes were too small to conduct statistical analyses of significant differences between the groups.

Coles, Turk, Heimberg and Fresco (2001) explored attributions in 30 individuals with social phobia compared with 24 non-anxious controls when recalling memories of low, medium and high anxiety social situations. They found that the socially phobic participants' attributions for their performance became more internal, stable and global as the anxiety level of the situation increased, while the attributions of the controls showed the opposite pattern. This suggests that, while people who experience social anxiety do have negative-self schemas, these are only activated when they are in anxiety-provoking situations. Coles et al. (2001) also explored mental imagery experienced by their groups. This is discussed below, along with an appraisal of this study.

Pinto-Gouveia, Castilho, Galhard and Cunha (2006) explored maladaptive schema in individuals with social phobia more directly, by comparing individuals with social phobia, other anxiety disorders and non-clinical controls on responses to the Young Schema Questionnaire (YSQ, Young & Brown, 1989). The YSQ (123-item version) was used to assess the presence of 13 early maladaptive schemas (emotional deprivation, guilt/failure, social undesirability/ defectiveness, mistrust/ abuse, unrelenting standards, fear of losing self-control, dependence, entitlement/ insufficient limits, alienation, social isolation/ abandonment, vulnerability to harm and illness, subjugation/ lack of individuation, and shame) in each of these groups. Pinto-Gouveia et al. (2006) found statistically significant differences between the groups for all 13 schemas. The socially phobic group scored significantly higher than the non-clinical group for all schemas apart from 'unrelenting standards'. This group also scored higher than the other anxiety group for the following schemas: emotional deprivation, guilt/failure, social undesirability/ defectiveness, mistrust/ abuse, dependence, social isolation/ alienation, subjugation/ lack of individuation and shame. No significant differences between the clinical groups were found for the unrelenting standards, fear of losing self-control, entitlement/ insufficient limits, abandonment, and vulnerability to harm/ illness schemas.

The authors conclude that their study adds support to the cognitive theory of social phobia (Clark & Wells, 1995), as their social anxiety group scored higher than normal controls and participants with other anxieties for early maladaptive schemas relating to a perception of the self as a failure, socially defective and undesirable, and socially isolated. They also state that their results suggest the schemas of people with social anxiety are dominated by the themes emotional deprivation, mistrust/ abuse, shame and subjugation (Pinto-Gouveia et al., 2006), and that individuals with social anxiety have a wider range of dysfunctional beliefs than individuals with panic disorder or obsessive-compulsive disorder (who made up their 'other anxiety' group). The 'other anxiety' group was made up of two specific types of anxiety disorder, and so might have been more accurately assessed as two separate groups. However, this does not detract from the results of the social anxiety group, which seem to support the hypotheses of the models discussed above, citing the role of negative beliefs about the self and others in information processing and subsequent anxiety and behaviour.

1.3.3.2 Cognitions

Wells (1997) identifies three different types of cognitions that are common in people with anxiety disorders: negative automatic thoughts (rapid negative thoughts that can occur outside of immediate awareness – Beck, Emery & Greenberg, 1985), worries and obsessions. Borkovec and colleagues (1983) describe worry as a chain of thoughts aimed at problem solving, which are accompanied by feelings of distress or anxiety. Borkovec et al. (1983) state that worry is predominantly a verbal process, in contrast to negative automatic thoughts, which Wells (1997) states can occur in both verbal form and as images. Obsessions can occur as urges or impulses as well as thoughts, are of a shorter duration than worries and are often experienced as alien and senseless (Wells, 1997), whereas negative automatic thoughts and worries are usually recognised as ego-syntonic.

Cognitions which are commonly experienced by people with social anxiety have been identified. Watson and Friend (1969) identified that fear of negative evaluation from

others makes people likely to try harder to make a good impression in social situations, and is commonly associated with social anxiety. They developed the Fear of Negative Evaluation Scale (1969), a 30-item true-false scale, which has been used to indicate the presence of cognitions associated with social anxiety. Leary (1983) developed a shorter version of this scale (the Brief Fear of Negative Evaluations Scale, FNEB), which asks people to rate how characteristic twelve statements are of them. These statements are both of fear of negative evaluation (eg. "I am frequently afraid of other people noticing my shortcomings", "I am usually worried about what kind of impression I make", "I often worry that I will do or say the wrong things") and of lack of fear of negative evaluation (eg. "I am unconcerned even if I know people are forming an unfavourable impression of me", "If I know someone is judging me, it has little effect on me"). The FNEB is now commonly used when assessing social anxiety.

Wells, Stopa and Clark (1993) created the Social Cognitions Questionnaire (SCQ), which lists common thoughts that people with social anxiety can experience, to identify cognitions associated with social anxiety in addition to fear of negative evaluation. Wells, Clark, Stopa and Papageorgiou (presentation at the Association for Advancement of Behavior Therapy Annual Convention, New Orleans, 16-19 November, 2000) identified three dimensions of thought they believed to be key to social anxiety, based on clinical experience, empirical (eg. Stopa & Clark, 1993) and theoretical work. These were: fear of negative evaluation by others, negative self-evaluation and fear of showing signs of anxiety/ performance failure. Cognitions identified through clinical and empirical work as being common amongst those with social anxiety were included in the original 33-item questionnaire, which was administered to students. Scree Testing of the subsequent results revealed three factors: 1) Negative self-beliefs (eg. "I am foolish"); 2) fear of performance failure (eg. "I will babble or talk funny"); 3) fear of negative evaluation (eg. "People will stare at me"). The scale was revised by deleting/ adding items based on factor loadings, creating the final 22-item measure.

This final measure was piloted on a non-clinical sample, following which a 2-factor solution was identified: Factor 1: Negative self-beliefs/ fear of negative evaluation, and Factor 2: Negative thoughts about showing anxiety/ performance failure. This measure showed factor inter-correlation of .51, with internal consistency Alphas of .93 (Factor 1), .84 (Factor 2) and .93 (full scale). The SCQ was found to be significantly correlated (p <.001) with other measures of social anxiety (the Fear of Negative Evaluation Scale (FNES, Watson and Friend, 1969), the Social Avoidance and Distress Scale (SAD, Watson and Friend, 1969), and the State-Trait Anxiety Inventory (STAI – Trait version, Spielberger, 1983). Factor 1 was shown to distinguish between socially phobic patients and panic disorder patients/ non-patients (Wells et al., 2000).

1.3.3.3 Imagery

Clark and Wells' (1995) cognitive model of social phobia hypothesises that individuals with social anxiety experience themselves as a social object. This processing seems to predominantly take the form of experiencing spontaneous self-focussed images, which have been explored in detail in a number of studies described below.

Hackmann, Surawy and Clark (1998) used a semi-structured interview to explore the frequency and content of spontaneously occurring images during episodes of social anxiety. They compared 30 individuals with social phobia with 24 non-clinical controls who were matched for age, sex and education level. The participants with social phobia gave significantly higher frequency ratings than controls for spontaneously occurring images (77% compared with 47%; $\chi^2 = 5.7, p<.01$). Significantly more individuals with social phobia than controls were judged to have a clear image (66.6% for the social phobia group, 29.2% for the non-clinical group; $\chi^2 = 4.1$, p <.05), the socially phobic participants were more likely to see in an observer perspective (t = 4.9, p <.001) and their images were more likely to be perceived as negative compared with the control group (t = 4.0, p <.001). Most of the participants acknowledged that, with hindsight, the image/ impression they had when socially anxious was at least somewhat distorted from reality. Hackmann, Surawy and Clark

(1998) conclude that negative self-images contribute to the maintenance of social phobia, so treatment should focus on decreasing the frequency and negative content of such images. This study highlights the propensity for people with social anxiety to experience observer-focussed, negatively distorted images of themselves as they fear they appear. However, while the results appear statistically significant in terms of group differences, the sample size was small and the groups were uneven.

Wells, Clark and Ahmad (1998) also compared a group of individuals with social phobia with a group of non-clinical controls (12 people per group), testing the hypothesis that people with social phobia were more likely to recall social situations from an observer perspective. Participants were asked to recall and imagine a recent social situation and a recent non-social situation. They were then asked if their predominant impression was of self-observation or as if from their own eyes (field perspective). Participants then rated the degree of observer/ field perspective on a 7-point scale from -3 ("entirely looking out through my eyes") to +3 ("entirely observing myself from an external point of view"). The same procedure was followed for the non-social situation. Mean scores for the socially phobic group were +1.8 for the social memory and -1.2 for the non-social memory, whereas the control group scored -0.8 and -0.6 for the social and non-social memory respectively.

The authors conducted t-tests between groups and reported that the differences were statically significant for the social situation ($p < .001$), but not the non-social situation ($p = .58$). These results indicated that people with social phobia are more likely to remember social situations from an observer perspective than they are non-social situations, whereas those without social anxiety are more likely to remember both social and non-social situations from a mixture of observer and field perspectives. The authors suggest this indicates that when people with social phobia ruminate after social experiences (based on Clark & Wells' 1995 model of social phobia), their self-focus means that they will be less likely to notice information from others that challenges their anxiety that they did not make a good impression.

This study relied on the respondents rating their image perspectives, a concept that is unlikely to have been previously considered and which could potentially lead to confusion and inaccurate results. However, as both groups performed this same task, results should be comparable.

In addition to exploring attributions in their socially phobic participants compared with their non-clinical control group (described above), Coles et al. (2001) explored perspective for mental imagery when recalling memories of low, medium and high anxiety social situations. Using a semi-structured interview, the authors asked participants to rate examples of social situations as causing low, medium or high levels of anxiety. Participants were then asked to imagine the last time they had been in each situation as clearly as they could, then rate the perspective and clarity of the image using a scale. Finally, participants were asked to complete a self-report questionnaire, rating how well they came across in the situation they recalled, how nervous they were in the situation, when it occurred, and how anxiety provoking (low, medium or high) it was. The authors found that approximately half of the participants with social phobia took a field perspective and half took an observer perspective in high social anxiety situations. This was a significantly larger proportion than the non-clinical group ($p = .05$). None of the participants took an observer perspective in low or medium social anxiety situations, which suggests that image perspective is related to anxiety level.

Relating this to the cognitive models of social anxiety adds support to the hypothesis that individuals with social anxiety associate higher levels of anxiety with deficits in their own social performance, and therefore focus more on themselves in an attempt to monitor and improve their behaviour. Combined with these authors' results in their exploration of attributions in people with social anxiety (that as anxiety levels increase they are more likely to make internal, global and stable attributions about their own poor performance, discussed above), Cole and colleagues' (2001) research further indicates that social anxiety and its corresponding beliefs and behaviours are situation-specific, rather than

global. Again, sample sizes were small. However, the study had the advantage of asking the participants to rate the level of anxiety each situation produced, ensuring that they were exploring significant levels of social anxiety.

Wells and Papageorgiou (1999) set out to examine perspective taking in social phobia and other phobias. They tested Clark and Wells' (1995) prediction that individuals with social phobia experience observer perspective imagery for anxiety-provoking situations but not for neutral situations, whereas participants with other phobias who do not engage in processing of the social self should experience a field perspective for social and neutral images. Participants consisted of an agoraphobia group (perceived as being similar to social phobia as social evaluative concerns have been shown to be a feature of negative appraisals made by agoraphobics – Chambless & Graceley, 1989; Turner, McCanna & Beidel, 1987), a blood/ injury phobia group (thought not to be characterised by social evaluative concerns) and a socially phobic group. The groups each had 12 age and sex matched participants. The authors predicted that the socially phobic group would show strong observer perspective for images of anxiety-provoking social situations, that the agoraphobic group would show observer perspective to a lesser extent and that the blood/ injury phobics would just show field perspective imagery.

A 7-point scale was used (-3 = entirely looking through my eyes, +3 = entirely observing myself from an external point of view); participants were asked to recall and imagine a recent anxiety-provoking social situation and a neutral situation and asked to rate that memory for perspective on the scale. For the neutral situation, the socially phobic and blood/injury phobic groups both reported a predominantly field perspective whereas the agoraphobic group reported a statistically significant predominantly observer perspective. For the social situation, the social phobic and agoraphobic groups reported predominantly observer perspective whereas the blood/injury phobic group reported predominantly field perspective.

The group of people with social phobia scored significantly higher for observer perspective in the social situation than all the other groups, and were the only group to have a statistically significant shift in scores between the two conditions ($Z = -3.01$, $p < .003$). This study therefore indicated that individuals with agoraphobia experience observer perspective images for the majority of situations (perhaps because they are constantly anxious about appraisals from others) whereas individuals with social phobia only tend to experience observer perspective when in anxiety-provoking social situations, indicating that when not in such situations they are less likely to be concerned about appraisals from others. This also supports the above cognitive models of social anxiety, which identify that a trigger (a social situation perceived as threatening) is needed to activate maladaptive schemas and corresponding emotional and behavioural responses. Again, participant numbers were too small to have suitably-powered statistical analysis. However, the results for the social phobia group are concordant with those of other studies exploring image perspective in social phobia.

In a study exploring negative self-imagery, Alfano, Beidel and Turner (2008) compared self-imagery in adolescent groups both with and without social phobia. The social phobia group was asked to complete a number of social tasks (role-plays with other adolescents and reading aloud). The non-phobic participants were asked to complete these social tasks while imagining themselves in a specific historical social situation where they had felt embarrassed or anxious. They then completed further social tasks while holding in mind a positive image of themselves. A third group of non-phobic adolescents completed the social tasks without using imagery. Analysis revealed that the social anxiety group experienced significantly more anxiety during the tasks than the non-phobic groups. No significant differences in anxiety were found between the negative and positive self-image social tasks, or between the two non-phobic groups. However, those in the imagery group reported significantly fewer thoughts during the tasks than the other two groups, which the authors suggest was due to the images taking up their concentration. The authors suggest that

the fact the socially anxious group did not report this decrease in cognitions may indicate that adolescents do not tend to experience negative self-images in the same way many socially anxious adults have been shown to. However, it may be that the act of creating and purposely holding an image requires far more concentration than an intrusive image does, which could also account for this difference.

The nature of images in social phobia has been further explored by Hackmann, Clark & McManus (2000), who used a semi-structured interview to explore whether images in social phobia are recurrent across a range of situations, if they are linked to early memories and if they are multi-sensory. Twenty-two post-treatment socially phobic therapy clients participated, and were asked to focus on memories from before treatment. They were asked whether they recalled any images from the memory, what they could see/smell/taste/feel in the memory, whether the memory was a clear image, what emotions they are feeling in the image, what is happening in the image, what happened immediately before the image (or led up to it), and what the image meant about themselves, others and the world. They were also asked whether having such images was a regular occurrence, when such images were first experienced and when in their life they first had the sort of emotions, sensations and thoughts reflected in the image.

Participants were then asked if they had a particular memory which seemed closely linked to their recurrent image and were asked the same questions about this memory before rating on a 0-100 point scale the degree to which the recurrent image and memory appeared to be similar in sensory and interpersonal content. Participants were asked how old they were at the time of the remembered event, whether they had been anxious in social situations before the event and whether the event made their anxiety worse/ better or unchanged. Participants were also asked if they tended to recall this incident once they developed social phobia. An experienced clinical psychologist then rated the participant's descriptions of the image and memory on a 7-point emotional valence rating scale.

One hundred percent of participants reported having an image. Of these, 87% were visual, with 74% reporting additional sensory modalities (bodily sensations and sounds). The remaining 13% did not report a visual image but recalled unusual body sensations/ perceptions (eg. sweating, feeling smaller/ fatter). Ninety-six percent reported a particular memory that they felt was closely linked to the recurrent image; all of these memories were perceived negatively. The mean rating of similarity in interpersonal content between images and memories was 68%, with the authors commenting that the images appeared to correspond to the abstracted essence of the memory (ie. the central aspect of both image and memory was a negative impression of the observable self). Fifty-seven percent of participants said that they were not anxious in social situations before the event in the memory, and 77% said the event definitely increased their anxiety in social situations.

The authors conclude that early unpleasant social experiences may result in individuals with social phobia developing a negative, observer perspective image of their social selves that is repeatedly activated in subsequent anxiety-provoking interactions and fails to update with new experiences. The authors suggest that three factors may contribute to this inability: Firstly, avoidance of social situations, which prevents those with social anxiety from gathering evidence contrary to their self-image; secondly, maintaining self-focussed attention rather than being open to positive evidence from others; and thirdly, generally receiving positive feedback about their social performance verbally, rather than in a medium which might impact on their self-image (eg. through viewing an accurate image of themselves on video).

In a follow-up to this study, Wild, Hackmann and Clark (2008) conducted a treatment pilot for rescripting the early memories linked to negative self-images in 11 individuals with social phobia. They found that one session of memory rescripting produced significant within-session change in the perceived meaning of the traumatic memory, the associated distress and the amount of anxiety experienced when participants imagined participating in their two most feared social situations. One week after memory rescripting,

participants reported that their spontaneously occurring images were less vivid and distressing. There was also a significant drop in participants' scores on the Fear of Negative Evaluation Scale (FNE – Watson & Friend, 1969). These results support their original findings, and contribute to the literature for therapeutic interventions for social anxiety.

1.3.4 Summary of social anxiety section.

The above section describes the current understanding, from a psychological perspective, of social anxiety. It considers hypothetical models of social anxiety and theories and research investigating and supporting these models, to establish an understanding of the nature of social anxiety. It has identified three core aspects to the experience of social anxiety (based on research and theory): 1) having core beliefs (or schemas) that you are socially inept and vulnerable to aggressive, abusive or superior others, which can cause cognitive biases in favour of identifying only information that seems to support these beliefs; 2) experiencing related thoughts that are triggered by social situations (or in anticipation of them), which cause anxiety and impede social performance; and 3) becoming very focussed on anticipated threat. This threat focus is often in the form of an observer-perspective distorted self-image of the individual as s/he fears others are seeing him/her. However, it can also be externally focussed on the surroundings, particularly the surrounding people. The literature also suggests that these factors are situation-specific: schemas, behaviour and threat-focus only become activated in the presence of perceived social threat.

This introduction will now consider the second aspect of the study: psychosis. It will explore the diagnosis and nature of psychotic symptoms, then consider rates of, and existing research into, social anxiety co-morbid with psychosis.

1.4 Psychosis

1.4.1 What is psychosis?

In order to provide a definition of psychosis, the International Classification of Diseases – 10th Edition (ICD-10, 1992) will be used instead of the DSM-IV. This is because the ICD-10 provides a more detailed overview of the various symptoms that can be present

in psychosis than the DSM-IV. ICD-10 (1992) includes the following groups of symptoms as part of a "psychotic state". At least one of symptoms (a) to (d), or two of symptoms (e) to (h), must be present for a minimum of one month for a diagnosis of Schizophrenia (direct quote):

(a) thought echo, thought insertion / withdrawal / broadcasting;

(b) delusions of control, influence, or passivity, clearly referred to body or limb movements or specific thoughts, actions or sensations; delusional perception;

(c) hallucinatory voices giving a running commentary on the patient's behaviour, or discussing the patient among themselves, or other types of hallucinatory voices coming from some part of the body;

(d) persistent delusions of other kinds that are culturally inappropriate and completely impossible, such as religious or political identity, or superhuman powers and abilities (e.g. being able to control the weather, or being in communication with aliens from another world);

(e) persistent hallucinations in any modality, when accompanied either by fleeting or half-formed delusions without clear affective content, or by persistent over-valued ideas, or when occurring every day for weeks or months on end;

(f) breaks or interpolations in the train of thought, resulting in incoherence or irrelevant speech, or neologisms;

(g) catatonic behaviour, such as excitement, posturing, or waxy flexibility, negativism, mutism, and stupor;

(h) "negative" symptoms such as marked apathy, paucity of speech, and blunting or incongruity of emotional responses, usually resulting in social withdrawal and lowering of social performance; it must be clear that these are not due to depression or to neuroleptic medication;

(i) a significant and consistent change in the overall quality of some aspects or personal behaviour, manifest as loss of interest, aimlessness, idleness, a self-absorbed attitude, and social withdrawal (pp. 87-88).

As can be seen from the information above, psychotic symptoms are varied and can be present either alone or co-morbid with other mental disorders. A number of models have been suggested for the development and maintenance of psychotic symptoms, which will now be introduced and appraised. These models fall into two categories: biopsychosocial (which consider the factors involved in the development and maintenance of psychosis) and cognitive (which consider the specific psychological processes that are hypothesised to occur in positive psychotic symptoms, such as hallucinations and delusions).

1.4.2 Models of psychosis.

1.4.2.1 Vulnerability-stress models.

Vulnerability-stress models (also known as biopsychosocial models) can provide a flexible and useful way of understanding the development of psychosis. They do not pre-judge the issue of biological vulnerability to psychosis and include a role for psychological and social factors (Fowler, Garety & Kuipers, 1995). There are a number of such models (eg. Zubin & Spring, 1977; Strauss & Carpenter, 1981; Nuechterlein, 1987; Ciompi, 1988; Perris, 1989), which summarise several of the factors that are likely to increase vulnerability to psychosis, trigger its occurrence and influence its aetiology (Fowler at al., 1995). These factors will now be considered.

1.4.2.1.1 Factors that increase vulnerability to psychosis.

Vulnerability-stress models cite biological and physiological factors as possible causes of vulnerability to psychosis. These include genetic make-up, intrauterine environment, birth trauma, viruses and head injuries (Fowler et al., 1995). Environmental factors, such as physical or interpersonal deprivation in childhood, may also heighten vulnerability (Fowler et al., 1995). Psychological factors (eg. interpretation of the meaning of such experiences, like a sense of being unwanted or different or fragile), are also likely to

influence vulnerability (Ciompi, 1988; Perris, 1989; Fowler et al., 1995), perhaps by affecting behaviour (eg. social withdrawal, interpersonal difficulties, which may leave someone without the resources to "check out" their concerns or unusual experiences with someone else before they reach psychotic levels – French & Morrison, 2004).

1.4.2.1.2 Factors which can trigger psychosis.

Vulnerability-stress models posit that vulnerability alone does not cause psychosis. Exposure to additional stressors, either biological (eg. drug abuse) or psychological, is needed to trigger a psychotic episode (eg. Strauss & Carpenter, 1981). Psychological stressors include major life events (eg. moving house, starting a new job, bereavement, leaving home), ongoing environmental influences (eg. critical or intrusive relationships with significant others), or existential conflicts or concerns (eg. a sense of purposelessness, fear of death, fear of the responsibility of freedom, feelings of not belonging) (Warner, 1985; Fowler et al., 1995).

1.4.2.1.3 Factors that can contribute to the development of chronic psychotic illness.

According to Strauss and Carpenter (1981), a number of factors may influence the course of psychosis from a single discrete episode to a chronic illness. Once an initial psychotic episode has been triggered, the same trigger stresses, as well as additional ones, may continue to influence the individual. Additional stresses might include perceived threats to the individual's sense of self-worth (eg. isolation, social stigma), or a lack of support or criticism from others. Conversely, perceived successes such as maintaining friendships and the support of others may positively influence the aetiology of psychosis (Fowler et al., 1995).

1.4.2.1.4 Appraisal of biopsychosocial theories of the development of psychosis.

The above summarises theories, clinical experience and research from a number of researchers (eg. Zubin & Spring, 1977; Strauss & Carpenter, 1981; Nuechterlein, 1987; Ciompi, 1988; Perris, 1989; summarised by Fowler et al., 1995). While there is no clear

evidence of specific genetic factors increasing vulnerability to psychosis, a number of research studies have indicated that the risk of developing psychosis increases significantly if a family member has this diagnosis (rates of developing psychosis have been as high as 50% for research participants with a first-degree relative having psychosis – Hollis, 1999). While the 'nature-nurture' query (ie. are similarities in relatives due to genetics or upbringing) will continue to be present in the absence of large-scale separated twin studies (Hirsch & Weinberger, 2003), biopsychosocial theories embrace this by stating that environmental factors during early life can also increase vulnerability to psychosis. It has been well established, again through both research and clinical experience (eg. Strauss & Carpenter, 1981), that stressful life events are usually precursors for a psychotic episode, and that continued stress is likely to maintain an episode (eg. Warner, 1985).

Biopsychosocial models have a strong research base and are flexible (ie. genetic factors and/or environmental factors may increase vulnerability to psychosis). However, they do not specifically explore the psychological processes that may lead to the development and maintenance of specific psychotic symptoms. The negative symptoms of psychosis (eg. anhedonia, poverty of speech) are categorised by the absence of normal human behaviour or experience, and are often hypothesised to be biologically-based (eg. Trandon & Greden, 1989; Buchanan, Carpenter, Kirkpatrick, Bryant & Bustillo, 1995). Perhaps for this reason, to this author's knowledge there are no current psychological models of the development and maintenance of negative psychotic symptoms. However, there are models hypothesising the specific psychological processes involved in the development and maintenance of positive psychotic symptoms (eg. hallucinations, delusions). Two such models (Garety, Kuipers, Fowler, Freeman, & Bebbington, 2001; and Morrison, 2001) will now be considered. Both are based on cognitive theory, which allows comparison of these models and the cognitive models of social anxiety considered above.

1.4.2.2 Models of positive psychotic symptoms.

1.4.2.2.1 Garety, Kuipers, Fowler, Freeman, and Bebbington's (2001) Cognitive model of the positive symptoms of psychosis.

Garety et al. (2001) created a model to describe the cognitive processes they hypothesised lead to the formation and maintenance of hallucinations and delusions. They begin by describing the biopsychosocial factors thought to make an individual vulnerable to psychosis, including biological factors, adverse life events, negative environments, drug abuse and periods of isolation. The authors suggest that such traumatic influences are thought to frequently influence the development of negative core beliefs (or schema) about themselves, other people and the world. In turn, these schemas can influence low self-esteem and depression (both of which have been found to be common in people with psychosis – Birchwood, Meaden, Trower, Gilbert & Plaistow, 2000; Fowler, Garety & Kuipers, 1998). They also note that the onset of psychotic symptoms is often associated with emotional changes, and disruptions in attention, perception or judgement. Garety et al. (2001) suggest two routes to the development of hallucinations and delusions: firstly through cognitive and affective changes, secondly through affective disturbance only.

When psychotic symptoms develop through cognitive and affective changes, an event triggers a disruption of cognitive processes in a person with a vulnerability to psychosis (Garety & Hemsley, 1994), leading to anomalous conscious experiences (eg. heightened perception, actions experienced as unintended). Hemsley (1993) posits that this may occur by cognitive disruption weakening the mechanism that regulates the influence of stored memories on current perceptions, leading to ambiguous, unstructured sensory input and a subsequent intrusion from stored memory material into the consciousness. Another way of conceptualising this cognitive dysfunction was proposed by Frith (1992), who suggested that recently developed difficulties with the self-monitoring of intentions and actions might lead people at risk of developing psychosis to not recognise their own intentions to act, and therefore experience them as "alien".

At this point, however, these experiences are not psychotic symptoms. Garety et al. (2001) suggest that a number of further processes combine to turn these unusual experiences into psychotic experiences. First, emotional changes in response to the triggering event and anomalous experiences feed-back into the processing of the anomalous experience, influencing its content (eg. guilt about losing a job and shame about hearing a voice might contribute to the voice developing a critical content telling the person he is useless). These strong emotional responses to the anomalous experiences endow them with apparent significance for the person, triggering a search for an explanation of their cause. Biased conscious appraisal processes then lead the person to attribute these distressing, apparently alien, intrusions to an external force (Garety & Freeman, 1999). Social isolation contributes to the acceptance of the psychotic appraisal by preventing the person from accessing different, more normalising explanations (White, Bebbington, Pearson, Johnson, & Ellis, 2000). Psychosis is considered to be occurring when the individual appraises experiences as externally caused and personally significant.

Garety et al. (2001) posit a second, less common, route to delusions in psychosis is through negative affect caused by distressing life events. This activates biased appraisal processes and maladaptive self/ other schemas, resulting in an externalising appraisal (ie. a delusion) for the event or affect. Such delusions may therefore occur independently of hallucinations and other psychotic symptoms.

Garety et al. (2001) suggest that a number of different factors may maintain the psychotic appraisal, even in the presence of apparently contradictory evidence. First, biased cognitive processes (eg. jumping to conclusions biases, an externalising attributional style, poor social understanding or theory of mind, a lack of belief flexibility and normal belief confirmation bias) thought to be key in the development of psychotic experiences, and themselves maintained by social isolation, may also maintain psychotic beliefs. Second, dysfunctional schemas and current adverse social environments are likely to cause continued distress and low self-esteem, as well as influencing and seemingly confirming the psychotic

beliefs in some cases (eg. a schema that someone is useless is apparently confirmed when they lose their job; a voice calling them useless is therefore believed as correct). Unsupportive, or family environments with high levels of expressed emotion, as well as social marginalisation, are thought to contribute to negative schemas, which then contribute to treatment resistance and a vulnerability to relapse (Garety et al., 2001).

Third, negative emotions (such as depression) are thought to maintain psychotic appraisals. Birchwood and Iqbal (1998) have found that residual hallucinatory and delusional experiences are more common in people with psychosis who are also depressed. They propose that it is feelings of hopelessness and helplessness which contribute to the symptom maintenance. Garety et al. (2001) suggest that three information processing bias processes traditionally associated with anxiety maintenance may also be key in maintaining psychotic symptoms: safety-behaviours (which prevent disconfirmatory evidence from being sought), meta-cognitive beliefs (eg. beliefs concerning the uncontrollability of one's thoughts may increase the distress caused by the psychotic experiences), and negative emotional experiences will drive a search for meaning and appear to confirm catastrophic interpretations (eg. it must be really bad or else why would I feel like this?").

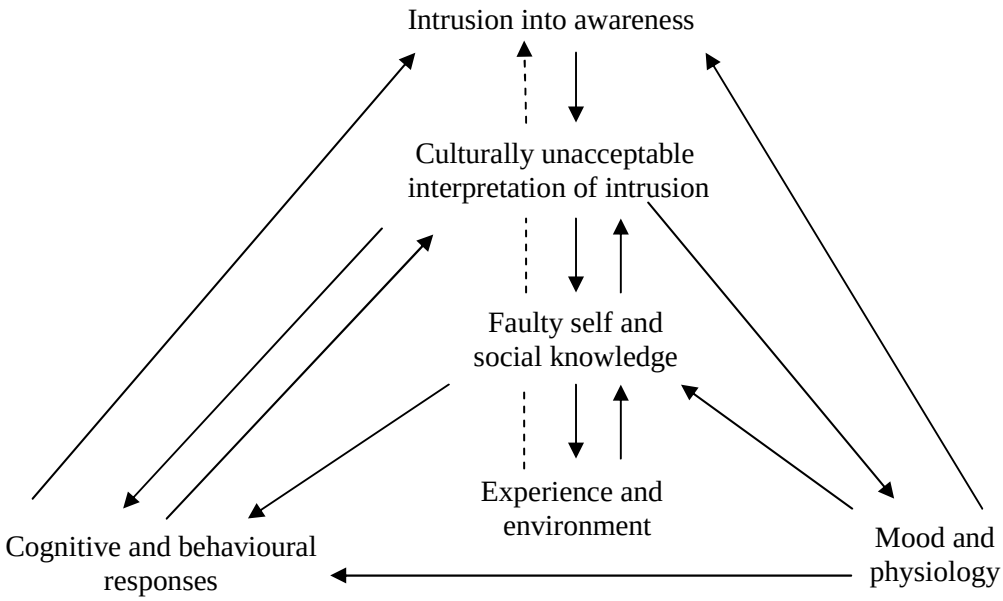
Finally, Garety et al. (2001) suggest that secondary appraisal of the experience of psychosis itself can be key in psychosis maintenance. For example, beliefs concerning the power or positivity of the psychotic experience may influence engagement with treatment. Stigmatising and humiliating appraisals of having psychosis may also contribute to depression, further maintaining psychosis as discussed above.

1.4.2.2.2 Morrison's (2001) Cognitive model of psychosis.

An alternative cognitive model for psychosis (Figure 5, below) was developed by Morrison (2001) to help explain the onset and development of psychotic symptoms, as well as to inform cognitive treatment interventions. He also designed it to be applicable to individuals at risk of psychosis. The model focuses on the interpretations people can make about intrusions (ie. internal or external experiences); if this interpretation is deemed

culturally unacceptable, someone may be deemed to be having psychotic experiences. French, Morrison, Walford, Knight and Bentall (2001) posit that this difficulty generating culturally acceptable explanations may be due to a lack of supportive social relationships with whom to discuss and normalise experiences. French and Morrison (2004) explain that Morrison's (2001) model suggests that similar processes are involved in the development of psychotic disorders as in non-psychotic disorders, citing Wells and Matthew's (1994) Self-Regulatory Executive Function (S-REF) model of emotional dysfunction, which implicates faulty self and social knowledge as central to emotional difficulties.

Figure 5. Morrison's (2001) Cognitive Model of Psychosis



Morrison's (2001) model also suggests that unhelpful cognitive responses (eg. selective attention and dysfunctional strategies to control thoughts) and behavioural responses (eg. safety behaviours and avoidance) contribute to the maintenance of distress and psychotic interpretations.

1.4.2.2.3 Overview and appraisal of the cognitive models for positive psychotic symptoms and comparison to cognitive models for social anxiety.

The above cognitive models of psychosis could be considered complementary to each other, resulting in similar hypotheses. While Garety and colleagues' (2001) model contains more detail about the hypothesised development of psychotic symptoms (based on the biopsychosocial model) both the above cognitive models cite the interpretation of experiences as being key in the development of positive psychotic symptoms. It is important to note that, according to Garety et al. (2001) an unusual experience, such as hearing a voice, can only be classified as a psychotic symptom if it is externally attributed and considered to have personal experience. Morrison (2001) also has the criterion that a symptom must have a culturally unacceptable interpretation made of its origin and meaning to be considered psychotic. Similarly to the cognitive models of social anxiety, these interpretations are hypothesised to develop as the result of maladaptive schemas. Also similar to the cognitive models of social anxiety is the maintenance factor of social isolation, resulting from the belief that others are threatening, which prevents the individual from testing the validity of their interpretations.

These models highlight certain hypothesised similarities between psychosis and social anxiety. A psychotic symptom that seems to share similar developmental and maintenance factors with social anxiety is paranoia. It therefore seems worthwhile considering this psychotic symptom in more detail, particularly its potential relevance to social anxiety in psychosis.

1.4.3 Paranoia.

1.4.3.1 Types of paranoia.

Freeman et al. (2005) investigated paranoia in a non-clinical sample. They suggested a hierarchy of symptoms within paranoia, with mild social evaluative concerns at the bottom, ideas of social reference in the middle, and persecutory delusional beliefs at the top. Persecutory delusions and ideas of social reference were considered to be the main

symptoms in psychotic paranoia, and have also been found to be strongly related to each other (Startup & Startup, 2005; Freeman et al., 2005b). Persecutory delusions and ideas of social reference will now be considered in more detail.

1.4.3.1.1 Persecutory delusions.

In order to create a definition of persecutory delusions, Freeman and Garety (2000) proposed that to be classified as a persecutory delusion, the following criteria must be met: the individual must believe that they are being (or will be) subjected to harm, with the harm being committed purposefully by a persecutor. There have been a number of theories of the development and maintenance of persecutory delusions. Bentall, Kinderman, and Kaney (1994) suggested that persecutory delusions can develop as a way of accounting for differences between a person's ideals and actual self-beliefs. This is aided by a tendency to attribute negative events to external (ie. not themselves), global (concerning all aspects of their life) and stable (will remain present) forces. This allows the person to blame others rather than themselves, protecting self-esteem. This attributional model of paranoia was modified in 2001 (Bentall, Corcoran, Howard, Blackwood, & Kinderman), following a number of studies which indicated that people with persecutory delusions could have either levels of self-esteem that were similar to non-clinical controls, or low self-esteem. The authors hypothesised an "attribution - self-representation cycle", a dynamic process in which causal attributions and self-representations interact to trigger persecutory delusions.

An alternative theory for persecutory delusions has been suggested by Trower and Chadwick (1995), who classify such beliefs as either "poor me" or "bad me". They hypothesise "poor me" paranoia (a tendency to "blame others, to see others as bad, and to see themselves as victims" - Trower & Chadwick, 1995, p. 265) is based on an "insecure self" in need of much reassurance and approval from others, possibly related to an anxious-insecure attachment style (Trower & Chadwick, 1995). Conversely, individuals experiencing "bad me" paranoia (who "tend to blame themselves and see themselves as bad, and view others as justifiably punishing them" - Trower & Chadwick, 1995, p. 265) have an

"alienated, engulfed self" (Trower & Chadwick, 1995, p.265) and tend to relate to others on the basis of an avoidant attachment style, constantly fearing and expecting criticism and trying to avoid it.

A further model of persecutory delusions was created by Freeman, Garety, Kuipers, Fowler, and Bebbington (2002), who related their Cognitive Model of the Positive Symptoms of Psychosis (see above) to persecutory delusions. They state that a key maintaining factor for both anxiety symptoms and persecutory delusions appears to be the belief that the individual is under threat; therefore, cognitive cycles of anxiety maintenance (discussed above) are also likely to be implicated in the maintenance of persecutory delusions. Freeman et al. (2002) hypothesised that persecutory delusions develop as an attempt to make sense of unusual or distressing stimuli (eg. hallucinations, emotions, or experiences influenced by cognitive biases associated with psychosis), and draw on prior beliefs about the person, the world and others. The authors state that persecutory delusions are likely to develop if a person believes they are either vulnerable (Freeman et al, 1998) or bad, deserving punishment (Trower & Chadwick, 1995), or if they believe others are dangerous or threatening (based on past experiences – Freeman et al., 2002). They posit that high levels of pre-existing anxiety are likely to be especially implicated in the formation of persecutory delusions, the cognitive components of the expectation of danger being key.

All three of the above models highlight that persecutory beliefs can be perceived as functional, providing protection against either core negative beliefs (by avoidance of social interactions that could potentially confirm beliefs or by believing that they are being appropriately punished – and perhaps thereby absolved) or damage to self-esteem (by believing that they are important enough to be targeted, or that anything negative that happens to them is due to persecution from others). They can also be perceived as understandable in this context of self-protection: an attempt to make sense of unusual or distressing experiences (whether psychotic, such as hallucinations, or actual, such as a perception of being ignored).

1.4.3.1.2 Delusions of social reference.

Historically, delusions of social reference have often been considered part of persecutory delusions (Startup & Startup, 2005). However, some researchers have stated that they are fundamentally different to persecutory delusions (although they may still be related to, or on a continuum with, them), and should, therefore, be acknowledged as distinct symptoms of paranoia. Freeman and Garety (2000) have stated that ideas of social reference do not contain the element of threat that is implicit in persecutory delusions. Other authors have acknowledged that ideas of reference can occur independently of persecutory delusions in other conditions, such as body dysmorphic disorder (Philips, McElroy, Keck, Pope, & Hudson, 1993), or as isolated delusions (Startup & Startup, 2005).

The term "delusions of reference" refers to a belief that there is a personal significance to a wide range of neutral events (Gelder, Gath & Mayou, 1989). Startup and Startup (2005) explored the nature of these beliefs in more detail, and separated ideas of social reference into two themes: ideas of being watched and talked about ("observation" theme) and ideas that information is being communicated to you through subterfuge (eg. through hints or double-meanings – "communication" theme). They identified the "observation" theme as being particularly associated with persecutory delusions and hallucinatory experiences.

1.4.3.2 Development and maintenance of paranoid thoughts.

For both persecutory delusions and social ideas of reference, thoughts of a paranoid nature have been found to occur frequently in the context of negative affect (eg. anxiety and low mood) and stressful life events (Freeman et al., 2008a). Studies have shown that general anxiety is associated with paranoid thoughts (eg. Martin & Penn, 2001; Johns et al., 2004) and persecutory delusions (eg. Freeman & Garety, 1999; Startup, Freeman, & Garety, 2007); it has been proposed that anxiety makes an individual more likely to make a threat appraisal of a situation, resulting in a paranoid interpretation (Freeman et al., 2008b). Similarly, experiences, such as hallucinations, have also been shown to make an individual more likely

to make paranoid appraisals (Freeman et al., 2008a). Paranoid thoughts are hypothesised to become tenaciously held beliefs to a delusional intensity when an individual also has accompanying biases in cognitive reasoning (eg. "jumping to conclusions", which reduces the amount of data sought and gathered - Garety & Freeman, 1999; Van Dael et al. 2006). Social factors, such as isolation (which prevents testing ideas for accuracy with others) and trauma (which contributes to negative core beliefs about the world and others, making paranoid beliefs more likely), are thought to maintain paranoid beliefs (Freeman et al., 2008a).

1.4.3.3 Paranoia in the general population.

While studies have shown that symptoms of paranoia are particularly common among people with psychosis (at least 50% of cases – Startorius et al., 1986; Cutting, 1997), paranoid thoughts have also been found to occur in at least 10-15% of the general population (Freeman, 2007; Green et al., 2008). Freeman et al. (2005) reported that up to 52% of a large non-clinical sample identified experiencing at least one paranoid thought weekly, and in a study using virtual reality to measure paranoia in a non-clinical population, Freeman et al. (2008b) identified over 40% of their sample experienced paranoid thoughts.

Paranoia in non-clinical groups can sometimes be referred to as schizotypal (psychosis-like) paranoia. Schizotypal symptoms are considered to be symptoms that are similar to psychosis but that are commonly present in the general population, and therefore may be considered to be less severe than psychotic symptoms. Schizotypy and the hierarchy of paranoia (Freeman et al., 2005b, above) can be considered on a continuum between normal experiences and psychotic experiences which cause significant distress (Freeman et al., 2008b).

As can be seen, the similarities between paranoia and social anxiety are marked: their hypothesised development (both thought to be founded in maladaptive beliefs that bias data gathering), their symptoms (both characterised by thoughts of threat from others) and

the corresponding emotions (both are associated with anxiety and low mood) are all comparable. It therefore seems appropriate to consider their relationship in more detail.

1.4.3.4 The relationship between social anxiety and paranoia.

Researchers have theorised that paranoia shares similar underlying processes with social anxiety (eg. Freeman et al., 2005a,b, who hypothesised that paranoia builds on anxieties that are common in social anxiety, such as fear of rejection). However, many have maintained that paranoia and social anxiety are distinct phenomena that are not always co-morbid (eg. Freeman et al., 2008a; Michail & Birchwood, 2009). In a study of 200 non-clinical participants exploring persecutory ideation and social anxiety in a virtual reality environment, Freeman et al. (2008a) found that 59 people had paranoia and social anxiety, 36 people had paranoia without social anxiety and 12 people had social anxiety without paranoia.

The researchers found that positive self-belief had a significant negative effect on both social anxiety and paranoia (ie. higher self-belief scores corresponded with lower scores for paranoia and social anxiety), whereas anomalous experiences were associated with higher scores for paranoia and lower scores for social anxiety. Anomalous experiences included a range of perceptual experiences, from mild (eg. food or drink tasting stronger than usual) to severe (psychotic experiences). However, causal relationships were not explored. Family loneliness increased the odds of social anxiety but had no effect on paranoia. For the rest of the study variables (general anxiety, worry, catastrophic thinking, positive beliefs about others, negative beliefs about self and others, interpersonal sensitivity, depression, cognitive flexibility, jumping to conclusions, romantic and social loneliness, social support, support satisfaction, trauma and illicit drug use) no differences between the groups were identified. The authors conclude that paranoia can be perceived as a type of anxious fear and that, therefore, treatments that have been found to be effective for anxiety (suitably modified) should also be efficacious for people experiencing paranoia. They also highlight the potential benefit of working directly with symptoms (ie. paranoid thoughts) rather than

with a diagnosis (eg. schizophrenia), predominantly because of the stigma associated with a diagnosis of schizophrenia.

This study produced interesting results that can influence the understanding of the relationship between social anxiety and paranoia. However, it is important to note the limitations of the study: primarily, the use of multiple hypotheses testing which increases the chance of Type 1 errors. This suggests that the significant identified differences between paranoia and social anxiety should be interpreted cautiously. However, as the authors point out, their findings are broadly consistent with other studies and the theoretical understanding of paranoia. The relationship between social anxiety and paranoia in people with psychosis will be discussed in more detail below.

This introduction will now consider the co-morbid condition of social anxiety in people with psychosis. This will include its prevalence and implications, and whether it is qualitatively similar to primary diagnosis social anxiety.

1.5 Social Anxiety in Individuals with Psychosis

1.5.1 Rates and implications.

A large number of studies have reported high rates of social anxiety in the psychotic population, from 13% to 36% (Bermanzohn et al., 2000; Cassano et al., 1999; Cosoff and Hafner, 1998; Kendler et al., 1995; Pallanti et al., 2004; Michail & Birchwood, 2009). However, as social anxiety is generally considered to be of secondary seriousness to psychosis it will often remain untreated (Cosoff, 1998; Kingsep, Nathan & Castle, 2003; Tarrier, 2005), causing an additional burden on those with psychosis which can seriously impact on their quality of life (Braga, Mendlowicz, Marrocos, & Figueira, 2005). **S**ocial anxiety can remain present after the florid psychotic symptoms have resolved, impeding and restricting the individual for months or even years (Michail & Birchwood, 2009).

Birchwood (2003) describes how social anxiety and depression in psychosis may arise from three overlapping processes: pre-psychosis, arising from anomalies of childhood and adolescent development (triggered by an emerging psychosis, childhood trauma or both),

those that are intrinsic to psychosis (during psychosis), and those that are a psychological reaction to psychosis and to being a "patient" (post-psychosis). Birchwood (2003) also states that CBT for psychosis and neuropleptic treatment have not shown any consistent effect on co-morbid emotional disorders, and suggests that future treatments for those with psychosis and emotional disorders should also focus on these emotional disorders, their development and psychological origins.

As social anxiety has been shown to be common in those with psychosis or post-psychosis, further investigation into its nature with a view to adapting treatment, seems prudent. As CBT, based on Clark and Wells' (1995) Cognitive Model of Social Phobia, has been found to be effective at treating social anxiety when it is a primary diagnosis, ascertaining whether social anxiety in psychosis fits this model - and is therefore likely to respond successfully to generic CBT for social anxiety - appears appropriate. The above comparisons between cognitive psychological models of social anxiety and psychosis, identifying that both hypothesise a key role for maladaptive schemas, negative thoughts, strong negative emotions and corresponding impediments on behaviour often resulting in social isolation, suggest that similar CBT treatments should be effective for both conditions. However, as psychotic delusions are characterised by tenaciously held beliefs that may be harder to challenge than beliefs associated with social anxiety (Fowler, Garety, & Kuipers, 1995), it may be that when both psychosis and social anxiety are present together the strength of belief in social anxiety-associated schemas may be harder to treat using basic CBT for social anxiety. This may be especially true if high levels of paranoia are associated with social anxiety with psychosis. An exploration of the extent to which social anxiety with psychosis is similar to general social anxiety is therefore implicated.

1.5.2 To what extent is social anxiety with psychosis qualitatively similar to social anxiety as a primary diagnosis?

A review of the current literature was conducted to explore if social anxiety that is co-morbid with psychosis appears to be symptomatically similar to social anxiety not co-morbid with psychosis.

1.5.2.1 Search strategy.

Articles were identified by searching the computerised databases MetaLib, Medline (Ovid), Medline (PubMed), PsychINFO, and Web of Science/ Knowledge, using the subject search terms "social anxiety" OR "social phobia" AND "psychosis" OR "schizophrenia" (for more detail, see Table 1 below for specific search terms and number of papers found). All available years were examined. Abstracts and articles were assessed to determine which articles were appropriate for inclusion. The search was supplemented by following up references listed in relevant papers. Articles were excluded if they were not in peer reviewed journals or research studies (ie. unpublished theses or literature reviews – although information in literature reviews was used to check that there were no additional articles that should be included), or if they did not contain pertinent information for this study (ie. wrong client group or topic).

The features identified in the cognitive models of social anxiety reviewed above were used as a basis for this review, considering whether the following aspects of social anxiety are also present in social anxiety with psychosis: assumptions, based on schema, leading to perceived social danger; the processing of the self as a social object (in terms of seeing self-focussed images); the use of safety behaviours; and associated somatic and cognitive symptoms. This introduction will then consider the literature in terms of the specific relationship between psychotic symptoms and social anxiety when present co- morbidly, and finally discuss the success of trials of CBT for social anxiety with people who have social anxiety and a diagnosis of psychosis.

Table 1:
How papers were identified: search terms and number found

Search terms	Number of papers identified	Number not in peer-reviewed journals/ not research studies	Number not appropriate (wrong client group/ topic)	Number appropriate but already identified through previous search	Number appropriate for inclusion
"Social phobia" AND psychosis	9	1	6	0	2
"Social phobia" AND schizophrenia	21	6	12	1	2
"Social anxiety" AND psychosis	8	5	1	1	1
"Social anxiety" AND schizophrenia	15	3	7	2	2
Number of papers identified through reference lists					3
Total number of papers included					10

1.5.2.2 Assumptions (based on schema) leading to perceived social danger.

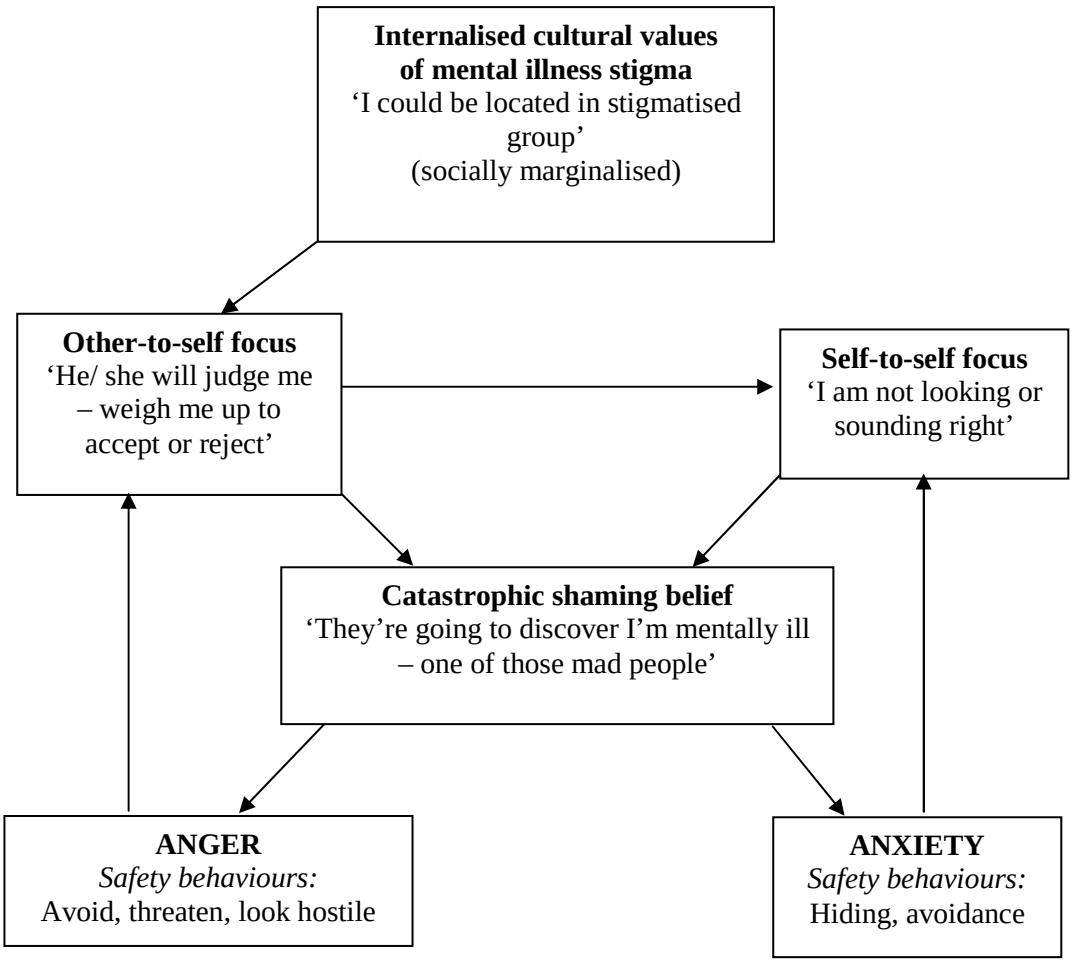
Clark and Wells (1995) suggest that people with social anxiety make a number of assumptions based on past experiences and schemas when entering feared social situations. The authors state that schemas in those with social anxiety generally take the form of excessively high standards for social performance, conditional beliefs about social evaluation and (unstable) unconditional beliefs about the self. Of particular salience seems to be the fear that they will be rejected and lose their social "rank". Negative schema of the self, others and the world have been shown to be relatively stable in individuals with psychosis (Fowler at al., 2006). Fowler et al. (2006) evaluated a new questionnaire, The Brief Core Schema Scale (BCSS) on 252 people with psychosis and 754 students. They found that the psychosis sample had similar levels of self-esteem and positive evaluations of self and others to the student sample, but showed very extreme negative evaluations of self and others. Fowler et al. (2006) comment that appraising oneself as inadequate, whilst appraising others as devious and bad implies a potentially very dangerous social position, in which one is both weak and threatened by others. Although socially anxious participants were not identified in this sample, high rates of comorbidity of social anxiety and psychosis would imply that a number of the psychosis sample also had social anxiety. It can therefore be tentatively hypothesised that those with social anxiety with psychosis may have similar schema styles to this study's participants with psychosis, although a specific investigation would be required to support this.

Birchwood et al. (2006) explored the role of self-belief in social anxiety participants with first episode psychosis, using 'social rank' theory (Gilbert, 2000) to predict that one pathway to social anxiety in psychosis is triggered by the anticipation of a catastrophic loss of social status that the stigma of schizophrenia can entail. They compared 23 individuals with psychosis and social anxiety with 56 non-socially anxious individuals with psychosis on measures of cognitive appraisals of psychosis, internal (self-focussed) and external (other-focussed) shame and perceived social rank, as well as severity of psychosis

and social anxiety. They found participants with social anxiety experienced greater shame attached to their diagnosis of psychosis and felt socially marginalised by it, feeling that they incurred a lower social status ($p < .001$).

This fear of loss of social status seems concordant with the above cognitive theories of social anxiety, which also highlight this specific fear. However, Birchwood et al. (2006) cite the core of this fear in individuals with psychosis as being the stigma of their mental illness. Although stigma could be perceived to influence core schema and therefore be considered to be included in the "activates assumptions" section of Clark and Wells' (1995) model, Birchwood et al. (2006) state that a new model, in which stigma is central, would better explain social anxiety in psychosis. This can be seen in Figure 6.

Figure 6. Birchwood et al's (2006) stigma model of social anxiety in schizophrenia.



Birchwood et al. (2006) state that they are in the process of testing this model further by comparing young people with social anxiety and psychosis to age-matched socially anxious (without psychosis) peers. In comparison to the above cognitive models of social anxiety, this model is very specific in terms of threat perception. While the social anxiety models have at their core the fear that the individual will be unable to meet future social expectations, Birchwood and colleagues' (2006) model is based on knowledge that is already known (ie. that the individual has a mental illness). The anxiety is that others will discover this fact, and then judge negatively, resulting in possible rejection. However, it is the individual's own negative appraisal of their diagnosis that leads to this expectation. This does not seem markedly different to the social anxiety models, where the appraisal is also that others will judge negatively, as this is how the individual judges themselves.

Birchwood and colleagues' (2006) study appears robust, with information being provided about the reliability and validity of most of the measures used and statistical methodology employed to test if differences between groups are significant. However, the use of a first episode of psychosis group with a limited age range (16 – 30 years) may mean the results are not generalisable to the population of people with psychosis and social anxiety. A potential flaw in the model is its specificity, assuming that all people who are socially anxious with a diagnosis of psychosis have the same core fear. The planned continued exploration of this model by Birchwood at al. (2006) will give further indications as to whether this assumption is justified.

In a similar study, Gumley, O'Grady, Power, and Schwannauer (2004) also tested the hypothesis that individuals with social anxiety and psychosis would feel more shame, humiliation, loss and entrapment, would blame themselves more for their psychosis and have lower self-esteem, than schizophrenic individuals with no social anxiety. Participants were 38 adults (18 – 35 years) with a diagnosis of schizophrenia (not actively psychotic). Nineteen participants had concurrent social anxiety; the other 19 (acting as controls) were matched for gender and primary diagnosis to the socially anxious group but had no social anxiety.

Gumley et al. (2004) used self-report measures of negative beliefs about illness, negative beliefs about the self and psychological distress. They found that the socially anxious group scored significantly higher than controls for 'self-verses illness' ($p < .05$), entrapment ($p < .01$), shame ($p < .01$) and low self-esteem ($p < .01$). This study has an absence of data on power which, in such a small sample, could make the results less reliable. However, as the results are similar to those found by Birchwood et al. (2006) they can be considered to add support to Birchwood and colleagues' (2006) suggestion that shame of self and diagnosis may be core to social anxiety in psychosis, elevating shame to a more prominent position than it appears to hold in Clark and Wells' (1995) model. In addition, these studies use participants from different age groups and at different stages of psychotic illness, but reach similar conclusions. This suggests that they may be generalisable to the population of people with psychosis and social anxiety as a whole, although more research would be needed to support this.

The above studies suggest that shame schema may be implicated as central to social anxiety present in individuals with psychosis. While shame schemas have also been found to be prevalent in individuals with social anxiety but no psychosis (Pinto-Gouveia et al., 2006), a key factor of social anxiety is that individuals often feel more self-confident and less ashamed when out of the threatening social situation (indicated by the fact that all the models incorporate the social situation as a trigger for the maladaptive thoughts and corresponding behaviours). For individuals with psychosis the diagnosis will always be present, indicating that feelings of shame are likely to be present more consistently than in individuals with social anxiety alone. Additionally, schemas may be more extreme (eg. "I am in danger from others" rather than "I might be rejected").

1.5.2.3 Processing of the self as a social object.

Clark and Wells (1995) describe a key element of social anxiety being the way some people with social anxiety see themselves as though through the eyes of a critical observer when in a "threatening" social situation. The exploration of whether people with

psychosis and social anxiety experience a similar observer perspective in feared social situations has so far been neglected in the literature. However, Morrison et al. (2002) explored mental imagery experienced by clients with psychosis receiving CBT, and found that the majority (74.3%) reported images. These predominantly consisted of images of feared outcomes related to paranoia or traumatic memories (eg. being physically assaulted or threatened), and were related to hallucinatory voice content (eg. seeing themselves being murdered or criticised by others). Additionally, the work by Fowler et al. (2006), indicating that individuals with psychosis are more likely to view themselves as vulnerable and others as dangerous, as well as observation from clinical and research work with socially anxious clients with psychosis (D. Fowler & J. Hodgekins, personal communication, November 11, 2008), also suggests that this client group often tends to see an exaggerated, threatening other rather than themselves from an observer perspective.

In a pilot to the present study (in press, see Appendix A), the semi-structured interview developed by Hackmann et al. (1998) to explore images in social anxiety was adapted for use with clients with social anxiety and psychosis (see method section for details of changes made). This interview was used with eight clients of an Early Intervention Service who experienced social anxiety in addition to psychosis. Thematic template analysis (King, 2008) was used to identify the common themes from the interviews. Themes analogous to those found by Hackmann et al. (1998) were present in this group, including fear of negative evaluation from others, fear of loss of social status, experiencing an impression or image that is negatively distorted, and experiencing images/ impressions in all sensory modalities (sight, hearing, touch, smell, taste). However, several additional themes were also identified: other people being threatening (especially physically threatening, which matched the findings by Morrison et al., 2002), having an image/ impression that everyone is staring at them or knows them or is talking about them, and perceiving threat as being most strong from certain types of people (eg. strangers, teenagers or crowds).

These additional themes may be influenced by paranoia, but further investigation exploring paranoia levels is needed to investigate this. There may be clinical implications if different types of belief are found to be the basis for different people's experiences of anxiety in social situations. For instance, the anxiety based on fear of social judgement and relegation may be successfully treated with an established treatment for social anxiety (eg. CBT for social anxiety), whereas anxiety based on paranoid beliefs may be more appropriately treated with an established treatment for psychosis (eg. CBT for psychosis).

1.5.2.4 Safety behaviours.

Clark and Wells (1995) attribute the maintenance of social anxiety to safety behaviours, preventing people with social anxiety from being open to information disproving their feared assumptions. Safety behaviours also form the basis of a "vicious circle" of not challenging the catastrophic shaming belief in Birchwood and colleagues' (2006) model of social anxiety in psychosis. This is supported by their subgroup scoring significantly higher for social avoidance than their non-socially anxious counterparts. Birchwood et al. (2006) state that they will be further exploring the use of safety behaviours in this client group as they test the accuracy of their stigma model. This should help further inform this area, which may be useful when therapeutically addressing social anxiety in psychosis.

1.5.2.5 Cognitions and somatic symptoms.

Examples of cognitions in social anxiety might be, "I'll shake and lose control. Everyone will notice me" or "I don't know what to say. People will think I'm stupid" (Wells, 1997). While beliefs and schemas of those with social anxiety and psychosis have started to be explored through research studies (see above), there do not as yet appear to be any studies exploring specific cognitions in this population. As outlined above, similar behaviours to those with social anxiety (eg. social withdrawal, monitoring, performance difficulties) have also been seen in those with social anxiety and psychosis. Similar behavioural responses may stem from similar cognitions, indicating that cognitions may be comparable between the two groups. It may be useful to explore whether there are certain thoughts which are particularly

associated with this client group as this may provide further insight into the nature of social anxiety in psychosis, and how best to treat it.

Social anxiety in psychosis is identified through use of established measures of social anxiety, which include common somatic symptoms (eg. blushing, heart racing). As these symptoms have to be present for a diagnosis of social anxiety to be made, it seems appropriate to state that individuals with social anxiety and psychosis are likely to share similar somatic symptoms to people with social anxiety as a primary diagnosis.

1.5.2.6 The relationship between psychotic symptoms and social anxiety when present co-morbidly.

Studies (eg. Freeman, Garety & Kuipers, 2001; Michail & Birchwood, 2009) have indicated that similar themes and processes underlie both anxiety and persecutory delusions: both are perceived as defensive reactions to perceived threat (physical, social or emotional). Freeman et al. (2001) argue that anxiety is inherent in paranoia and therefore likely to have a key role in the development and maintenance of persecutory delusions. However, there have been conflicting results in studies exploring the relationship between social anxiety specifically and psychotic symptoms.

Huppert and Smith (2005) explored symptoms of anxiety in 32 participants (none acutely psychotic) diagnosed with either schizophrenia or schizoaffective disorder. Twelve (37.5%) met the criteria for social anxiety. Score correlations identified that social anxiety symptoms were related to positive psychotic symptoms (global delusions, $p < .01$) on two self-report measures of social anxiety. In addition, increased levels of paranoia were related to severity of social anxiety. There was no consistent relationship found between social anxiety and negative psychotic symptoms. This study had a small sample size, especially considering the number of analyses conducted, increasing the risk of Type 1 error. However, Huppert and Smith (2005) justify this by stating that they asked important questions which had not been previously considered, so they wished to be sensitive to any relationships which might exist between the variables. Therefore, the results should be taken as requiring further

research rather than of strong evidence for a relationship between positive psychotic symptoms and social anxiety.

Lysaker and Hammersley (2006) also explored the role of psychotic symptoms in social anxiety among 71 adult participants with schizophrenia or schizoaffective disorder. ANOVAs were conducted comparing scores of psychotic symptoms, social anxiety and executive functioning between four groups: impaired executive functioning, no delusions (n=39), impaired cognitive function and delusions (n=11), executive functioning not impaired, no delusions (n=15), executive functioning not impaired and delusions (n=6). They identified that participants with both significant delusions and impairments in flexibility of abstract thought had significantly higher levels of social anxiety and fewer psychological resources for interpersonal relationships than participants with only one, or neither, of these difficulties. The authors suggest that perhaps neither the presence of delusions nor impairments in abstract thought alone put people at risk for social anxiety but that it is their confluence which accounts for the unusually high rates of social anxiety observed in schizophrenia. However, these results cannot imply causality; for example, higher levels of social anxiety may lead to delusional beliefs and could lessen the ability to flexibly think about abstract matters.

In contrast to these two studies, Birchwood et al. (2006) (as discussed above) and Michail and Birchwood (2009) found that, in their samples, neither delusions nor suspiciousness/ persecution were correlated with social anxiety or avoidance, suggesting that social anxiety is not significantly associated with psychotic symptoms. Gumley et al. (2004) (discussed above) also found no difference in psychotic symptoms between his social anxiety and non-social anxiety psychotic samples.

Freeman et al. (2008) used a non-clinical sample of 200 adults to explore the differential prediction of social anxiety and persecutory ideation in an experimental situation. Participants completed 17 measures of psychological functioning, then experienced a neutral virtual reality social scenario and were subsequently measured on paranoia and social

anxiety. They found that participants who experienced perceptual anomalies had increased risk of paranoid reactions but decreased risk of social anxiety, which again suggests that social anxiety is not related to psychotic symptoms. Although this study did not use a clinical population, participants with anomalous (psychotic-like) experiences were identified. Its large sample size is a strength, and essential for the number of hypotheses tested and analyses conducted to reduce the risk of Type 1 errors. A replication of this study in a clinical population would be interesting, to see if the results are replicated when more significant symptoms are involved.

Pallanti, Quercioli, and Hollander (2004) compared three groups of adult participants (socially anxious, n=27; schizophrenic, n=51; socially anxious with psychosis, n=29). A comparison of difference in clinical symptoms, quality of life and social adjustment, measured using clinical interviews, was conducted using ANOVA. They found social anxiety scores of socially anxious and psychotic participants did not differ from those of socially anxious (without psychosis) participants. No differences in psychotic symptom rates were found between schizophrenia patients with and without social anxiety. Despite this, Pallanti, Quercioli and Hollander (2005) claim that social anxiety in psychosis is qualitatively different from social anxiety without psychosis, with social anxiety being "close" to (ie. phenomenologically similar to and co-morbid with) depression, whereas social anxiety in people with psychosis may be considered to be a "phenocopy": a manifestation of psychotic symptoms. The authors suggest that these manifestations are affected by the cognitive deficits frequently seen in psychosis, which impairs social cognition.

In contrast to this hypothesis, Michail & Birchwood (2009), in a study comparing clients in their Early Intervention for Psychosis Service with and without social anxiety to age-matched participants with social anxiety but no psychosis, state that they found no evidence that social anxiety in psychosis is a phenocopy arising from psychotic symptoms. They found no relationship between suspiciousness or persecutory paranoid ideation (or any positive psychotic symptoms) and social anxiety in their participants, suggesting that social

anxiety in psychosis is distinct from paranoia, although they did find that a significantly greater proportion of those with psychosis perceived that someone was out to harm them. Michail and Birchwood (2009) therefore query whether the severity of social anxiety in those with psychosis is linked to the nature and degree of persecutory thinking. However, correlational analysis did not show any significant relationship between social anxiety, avoidance, negative evaluative concerns and persecutory thinking within this group. This study also found no significant difference in social anxiety scores, social avoidance or depression scores between their groups, although the social anxiety (no psychosis) group scored significantly higher on the Brief Fear of Negative Evaluations Scale (FNEB, Leary, 1983). The authors conclude that, overall, the phenomenology and severity of social anxiety in psychosis is indistinguishable from social anxiety with no psychosis.

The above studies seem to draw differing conclusions as to whether social anxiety with psychosis is qualitatively different to social anxiety without psychosis. However, as the purpose of establishing whether the two conditions are similar is to explore clinical implications, it is important to consider research trials into CBT for social anxiety with psychosis. To this author's knowledge, very few studies have been conducted in this area, the literature search identifying only three. These will now be reviewed.

1.5.2.7 Cognitive behavioural therapy (CBT) trials for people with social anxiety and psychosis.

Halperin, Nathan, Drummond, and Castle (2000) conducted the first 'pilot' study, using 16 adult participants with social anxiety and psychosis. Seven participants were randomly assigned to the CBT treatment group leaving 9 to act as controls. CBT was provided weekly for 8 weeks in 2-hour sessions. The intervention was based on the cognitive–behavioural model advocated by Heimberg et al. (1995) for social anxiety, with adjustments for use in a group setting. Some flexibility was employed to accommodate the associated symptomatology and disabilities manifested by individuals with schizophrenia, but the authors state that this was largely a matter of style rather than content. The key

components of treatment were exposure situations, cognitive restructuring, and homework assignments between sessions. Results indicated that the intervention group all made clinically significant improvements on measures of depression, and nearly the whole group improved on measures of social anxiety and quality of life, which were maintained at 6-week follow-up. In contrast, the control group showed no change in symptomatology. Although the small sample size weakens the statistical power of this study, as a pilot it certainly indicates that CBT for people with social anxiety and psychosis is worth investigating further.

Kingsep, Nathan and Castle (2003) conducted a similar study, using CBT to treat 16 adults with social anxiety and psychosis. Seventeen adults with social anxiety and psychosis were controls. Treatment design was also based on Heimberg et al. (1995), with some content change for this population. The intervention consisted of 12 weekly group sessions of 2 hours duration and a follow-up session 2 months after the last treatment session. The authors state that the treatment group made clinically significant improvements on scores of social anxiety, depression and quality of life, maintained at follow-up. Controls showed no change. This study also had only a small number of participants. Additionally, the control group may have also been receiving treatment for their social anxiety, making the between-group comparison less valid. However, the similarity of results between this study and Halperin and colleagues' (2000) study again supports further exploration.

While the above appear to be the only randomised control studies to date exploring the effectiveness of CBT at reducing social anxiety in psychosis, a single-case study by Valmaggia, Tabraham, Morris, and Bouman (2008) of a 20-year-old man who fitted criteria for a prodromal psychotic episode does describe the use of CBT for social anxiety in psychosis. Although single case studies cannot be generalised, Valmaggia et al. (2008) make some interesting observations about the nature of this client's social anxiety which deserve consideration. Additionally, while some of the other studies have looked at first-psychotic episode participants, none have considered prodromal participants. Valmaggia et al. (2008)

use Clark and Wells' (1995) model to formulate this clients' difficulties and report that his case seemed to fit successfully with it. CBT was reportedly successful at reducing his symptoms of social anxiety as well as negative psychotic symptoms and depression.

These studies all indicate that CBT for social anxiety in psychosis may have good success rates and significantly reduce emotional distress in this client group. Additionally, although all studies were flexible in their administration of therapy to best suit their clients, the success indicates that, in many ways, social anxiety in psychosis must have strong similarities to social anxiety without psychosis.

1.6 Summary of Literature and Rationale for Further Research

There is conflicting evidence as to the extent that social anxiety which is co-morbid with psychosis is phenomenologically similar to social anxiety as a primary diagnosis. While some studies (eg. Michail & Birchwood, 2009) report no differences, others (eg. Pallanti et al., 2005; Huppert & Smith, 1995) report significant relationships between symptoms of psychosis and social anxiety. The reviewed evidence suggests that, while social anxiety in psychosis seems to share many similarities with social anxiety as outlined in the above cognitive models, there may also be a number of differences. These warrant further investigation, with a view to making treatment for this client group more available and successful. Additionally, thus far no specific exploration into some of the key features of the cognitive models, namely schemas, cognitions and imagery of the self as a social object, has been conducted with a socially anxious with psychosis client group. As these areas are extremely important targets in the cognitive treatment of social anxiety, it seems essential that investigation into these features is conducted.

It is to this end that this research study is to be conducted. Two groups will be compared, one socially anxious with psychosis, the other socially anxious without psychosis, on measures of core schemas, cognitions, and imagery experienced while socially anxious. Additionally, due to the similarities between social anxiety and paranoia, it seems important to study the role of paranoia in social anxiety with psychosis in more detail. Cognitive, rather

than behavioural, features are explored in this study, as behaviours are usually investigated in vivo rather than using set validated measures. This would have decreased the accuracy of between-group comparisons and increased both the amount of time taken for data collection and the likelihood of distress, potentially reducing recruitment and making the study less ethical.

The following hypotheses were based on the above literature and a pilot study in which Hackann, Surawy and Clark's (1998) semi-structured interview was adapted for use with individuals with social anxiety and psychosis (see Appendix A and Method section for more details.)

1.7 Research Hypotheses

1. Participants with social anxiety will experience imagery that is concordant with Clark and Wells' (1995) Cognitive Model of Social Phobia (ie. imagery will be an exaggerated embarrassed version of themselves seen from an observer perspective), whereas participants with social anxiety and psychosis will experience imagery of others as threatening and judging, predominantly from a field perspective.
2. The social anxiety (with psychosis) group will score significantly higher on the negative self and negative other dimensions of the Brief Core Schema Scales (BCSS) than the social anxiety (no psychosis) group.
3. The social anxiety (no psychosis) group will score significantly higher than the social anxiety (with psychosis) group on measures of typical socially phobic cognitions and fear of negative evaluation from others.
4. The social anxiety with psychosis group will score significantly higher for paranoia than the social anxiety (no psychosis) group.

2 Method

2.1 Design

This study had a mixed-methods cross-sectional design, comparing social anxiety in two different groups: individuals who are socially anxious with no current or historic psychotic symptoms (SAn) and individuals who are socially anxious with a co-morbid diagnosis of psychosis (SAp). Specifically, the imagery experienced by participants during anxiety-provoking social situations was explored in detail using a semi-structured interview, thematic template analysis and chi-squared analyses. Additionally, questionnaires identifying core schemas, cognitions, and paranoia in both groups were administered and analysed using t-tests, Mann-Whitney U tests, and chi-square analyses to compare group scores. This design is appropriate for the research questions, which ask if there are differences between the groups.

2.2 Participants

2.2.1 Sample size.

In order to obtain a sample size with a high level of power (meaning that the results of statistical analysis are more likely to be valid), sample sizes were calculated using the computer software G*Power 3 (Faul, Erdfelder, Lang, & Buchner, 2007). The number of participants required for a one-tailed, independent group t-test with an effect size of 0.5, an α error probability of 0.05, a power of 0.8 and an allocation ratio of 1, is 102. The total sample size for a chi-square analysis with a medium effect size of 0.3, an α error probability of 0.10, power of 0.74 and 5 degrees of freedom, the total sample size required is 101. Effect sizes were estimated based on previous research. Therefore, this study attempted to recruit a minimum of 102 participants (51 per group).

The following criteria were used to select participants:

2.2.1.1 Inclusion criteria.

- Eligible by one of the group's criteria (see below)

2.2.1.2 Exclusion criteria.

- Moderate to severe learning disability
- Evidence of organic brain disease
- Insufficient fluency in English (this would prevent the use of standardised self-report measures)

The sample consisted of two groups who met the above criteria with additional inclusion criteria to distinguish each group. The groups are described below.

2.2.1.2.1 Socially anxious with a diagnosis of psychosis (SAp).

This group consisted of clients of an Early Intervention in Psychosis Service (NEIS), who scored at a clinically significant level on the Social Interaction Anxiety Scale (SIAS; Mattick & Clarke, 1989). This recruitment source was chosen as individuals who have been experiencing psychosis for a shorter amount of time are less likely to have severe negative psychotic symptoms than those who have been having psychotic experiences for many years. As negative psychotic symptoms may act as confounding variables, it seemed appropriate to minimise the likelihood of these symptoms being present in participants.

Clients of the NEIS are aged 16-35 years old.

2.2.1.2.2 Socially anxious without psychosis (SAn).

This group consisted of individuals who scored at clinically significant levels on the SIAS. In addition, this group had no current or past psychotic disorder. They were aged between 16 and 65 years. The age range was originally to be matched to the SAp group. However, it became clear once recruitment commenced that the number needed for statistical power was not likely to be reached using this age restriction.

2.2.2 Accessing the sample.

The SAp group were recruited from the NEIS, with the measures for this study conducted as part of routine assessment of clinical need. For the SAn group, clinical and non-clinical participants were recruited from three recruitment sources: Improving Access to

Psychological Therapies (IAPT) and Link Worker teams (clinical group), and a university (non-clinical group). The data collection team for this study was Helen Lockett (hereafter referred to as the researcher) for the SAn group and the research associates and assistant psychologists of the NEIS, as well as the researcher, for the SAp group. All researchers were trained and supervised in administering standardised assessments by qualified clinical psychologists.

2.2.2.1 Social anxiety, no psychosis (SAn) group: clinical sample.

A variety of methods for participant recruitment were used to maximise sample size. The researcher liaised with managers of the IAPT and Mental Health Link Worker (MHLW) teams, providing verbal and written study information to inform them about the study. Permission was then sought for the researcher to talk to team members about the study and begin recruitment. The researcher regularly attended team meetings and sent out emails to remind the teams about the study. Team members were asked to identify any clients who experienced social anxiety, provide them with a study information leaflet and ask for verbal consent for the researcher to contact them. Additionally, some teams were willing to identify clients on their waiting lists who appeared suitable, who were contacted by post with an information sheet. Potential participants either contacted the researcher themselves, or requested that they were contacted by phone by the researcher (which was done at least 72 hours after the participants had received the information sheet), when they had the opportunity to ask questions about the study and decide whether or not to provisionally agree to participate. An appointment was then arranged for data collection, at the beginning of which two copies of the consent form were signed (one for the participant and one for the researcher).

2.2.2.2 Social anxiety, no psychosis (SAn) group: non- clinical sample.

Recruitment through the IAPT and MHLW teams proved to be much slower than anticipated. The researcher was in regular contact with the teams to offer support with the recruitment process and ask the teams if there was anything the researcher could do to

improve the process (eg. offering to meet participants with their team worker, if this would make them less anxious). Additionally, the positives of the study to both the participants and teams were reiterated (a thorough assessment of social anxiety symptoms and a report outlining this assessment, which could be used in the clinical intervention – see Appendix B for an anonymous example). However, the feedback received was that, while a large number of clients were being offered the study, only a very small number were agreeing to take part. Perhaps, considering the nature of social anxiety, this was not surprising. However, this meant that another source for recruitment in order to improve the statistical power of the sample size needed to be identified. Therefore, ethical consent was sought and granted to recruit from the staff and students of a university.

A number of methods were chosen to optimise recruitment from the university:

1) The study was advertised by posters put up on the campus, containing the researcher's contact details. Those interested were asked to contact the researcher, who emailed them the Participant Information Sheet and the Social Interaction Anxiety Scale (SIAS). They were asked to read the information sheet and, if they still wished to participate, to complete the SIAS and return it to the researcher to establish if they were eligible.

2) An email was circulated to students and staff in the School of Medicine (with the permission of the Head of School), also containing the contact details of the researcher and study information. The above method to establish eligibility was then employed.

3) The University Counselling Service was approached and asked to pass on Participant Information Sheets to all the students/ staff they saw with social anxiety. Those interested were asked to contact the researcher. Alternatively, these participants could ask the Counselling Service to pass on their details to the researcher.

4) The university has a panel of research volunteers. Members of the panel were contacted with the Participant Information Sheet and asked to contact the researcher if they wished to participate. The above procedure was followed to assess eligibility.

The researcher contacted eligible participants (using the details provided) to arrange an appointment. The researcher ensured that a minimum of 72 hours had passed between the participant receiving the information sheet and the interview being scheduled. Once an appointment was arranged, a confirmation email with the researcher's contact details was sent to the participant. Interviews took place in a room in the university Clinical Trials Unit. Participants were offered the chance to be in a prize draw for a £50 voucher (eg. Amazon) as an incentive for their participation.

2.2.2.3 Social anxiety and psychosis group (SAp).

Participants were recruited from a Social Anxiety Research Clinic (SARC) within an Early Intervention Service (NEIS). A study information leaflet was offered to possible participants (ie. those who scored to a clinically significant level on the SIAS, which forms part of the routine assessment conducted with NEIS clients) who expressed an interest in participation during their first assessment session with the Assistant Psychologist. The NEIS Assistant Psychologists were fully informed about the nature of the study and so were able to answer any questions. After a minimum of 72 hours, prospective participants were again contacted by the Assistant Psychologist and asked if they wished to take part. Two copies of the consent form were signed, one given to the participant and the second consent form stored in their clinical notes. Following consent, the Assistant Psychologist collected the study data. The Assistant Psychologists were supervised by the researcher in the specific administration of the measures used in the study. This was particularly important for the semi-structured interview, which was audio recorded by the Assistants (when granted permission by the participant) and listened to by the researcher to ensure consistency.

2.3 Data Collection

2.3.1 Measures.

The following measures/ interviews were used:

2.3.1.1 Social anxiety.

The Social Interaction Anxiety Scale (SIAS, Mattick & Clarke, 1989) was used to establish whether potential participants experienced sufficiently severe levels of social anxiety to be included in the study. The SIAS consists of a series of statements about emotional and behavioural responses to social situations, and uses these to measure social anxiety. It has demonstrated reliability: Mattick and Clarke (1989) measured internal consistency across five patient and control groups, and reported that it exceeded alpha = .88. Test-retest reliability for social phobia patients was r = .91 and .93 after intervals of 1 and 3 months. It has also demonstrated validity: Mattick and Clarke (1989) found significant positive correlations (rs = .54-.69) between SIAS scores and other standard measures of social anxiety among a social phobia sample. The SIAS takes approximately 3 minutes to complete.

2.3.1.2 Mental images during social anxiety/ when recalling incidents of social anxiety.

To investigate Hypothesis 1 (concerning the perspective and content of images experienced during social anxiety) a semi-structured interview, based on interviews by Hackmann, Surawy and Clark (1998, exploring images experienced in social anxiety) and Wild, Hackmann and Clark (2008, exploring images and relating them to previous memories), was used. The version used in this study was a combination of the two interviews, with the included questions selected by the researcher for particular relevance to this study (ie. focussing particularly on the symptoms identified in models of social anxiety and being investigated in this study: core schemas and thoughts, emotional and behavioural responses, image perspective (self-focussed attention), image content and distortion). Two further demographic questions were added to the beginning of the interview (gender and ethnicity). The interview was amalgamated, re-formatted and piloted in an initial study with eight clients of the NEIS, the results of which are in press for publication in the journal 'Behavioural and Cognitive Psychotherapy' (Lockett, Wilkinson, Turner, Stubbins, Hodgekins, & Fowler, in press, see Appendix A for paper and Appendix C for final interview).

The interview asks participants to recall social situations in which they felt anxious and consider whether they experienced corresponding mental images (in any sensory modality). They are asked to indicate how frequently they experience images in anxiety-provoking situations or while anticipating such situations and describe a recent image in detail. Participants are also asked to rate whether the predominant perspective is one of field perspective (ie. as though seen through their eyes) or observer perspective (ie. seeing themselves as though through another's eyes), and rate the extent to which the image seems in retrospect to have been distorted. Additionally, the interview explores emotions and beliefs about the self, others and the world (schemas). Rating scales are presented each time participants are asked to provide a rating. Scores are compared quantitatively to check for significant differences between groups. In addition, the information is explored qualitatively to provide rich qualitative information on image content and nature.

There is no psychometric data for this interview, which is important when considering the validity of the quantitative analysis. For the qualitative analysis, inter-rater reliability was maximised by the researcher training all interviewers and ensuring that all interviewers used the wording as outlined in the interview. Audio recordings of the interviews were also listened to by the researcher to ensure consistency in ratings.

The interview takes approximately 30 minutes to conduct.

2.3.1.3 Core beliefs.

To investigate Hypothesis 2, that the SAp group would score significantly higher than the SAn group on scores of negative self and negative other schema, the Brief Core Schema Scale (BCSS, Fowler et al., 2006) was utilised. The BCSS is a 24 item, five point rating scale that assesses core beliefs about the self and others. The scales have good internal consistency, and the principal components analysis suggested an underlying dimensional structure that reflects independence between different dimensions of self and other evaluation. Four scores are obtained: negative self, positive self, negative other and positive other. The scales have been found to be both reliable and valid. The alpha coefficients were reported as

0.79 for positive self, 0.84 for negative self, 0.84 for positive other and 0.87 for negative other. The BCSS takes approximately 2 minutes to complete.

2.3.1.4 Thoughts.

2.3.1.4.1 The Social Cognitions Questionnaire.

Hypothesis 3 proposes that the SAn group will score higher than the SAp group on measures of typical socially phobic cognitions and fear of negative evaluations from others. To investigate this, the Social Cognitions Questionnaire (SCQ; Wells, Stopa, & Clark, 1993, see Appendix D) was used to measure socially phobic cognitions. The SCQ comprises 22 thoughts about social situations such as 'I am foolish' and 'People won't be interested in me'. Participants rate the frequency of the thought on a 1 (never occurs) to 5 (always occurs) scale. Participants also rate belief on a 0 (I do not believe this thought) to 100 (I am completely convinced this thought is true) scale. Scores for both frequency of thoughts and strength of belief are totalled to provide two total scores for data analysis. Tanner, Stopa and De Houwer (2006) report good test–retest reliability over 4–6 weeks ($r = .79$, $p < .001$) for the SCQ, which takes approximately 5 minutes to complete.

2.3.1.4.2 The Brief Fear of Negative Evaluations Scale.

To investigate fear of negative evaluations for others, the Brief Fear of Negative Evaluations Scale (FNEB, Leary, 1983) was used. The FNEB contains 12 items to which respondents rate the degree each statement applies to them on a 5-point Likert scale (1 = not at all characteristic of me; 5 = extremely characteristic of me). Total scores range from 12 to 60. A high level of internal consistency is obtained for the items comprising the FNEB (alpha = .90) and a test-retest reliability coefficient of .75 was found over a 4-week interval (Leary, 1983). The FNEB has been evaluated for validity and reliability with a non-clinical college sample (Leary, 1983) and with a clinical sample, comparing a socially anxious group with a panic disorder group (Collins, Westra, Dozois, & Stewart, 2005). The FNEB takes approximately 3 minutes to complete.

2.3.1.5 Paranoia.

To investigate Hypothesis 4, that the SAp group will score significantly higher for paranoia than the SAn group, the Green et al. Paranoid Thought Scales (GPTS, Green et al., 2007) was used. The GPTS was developed to be a multi-dimensional measure of persecutory ideas for use across the general population-psychopathology continuum. The GPTS consists of two 16-item scales, assessing ideas of social reference and persecution. For each item, the participant rates the statement for applicability with a number between 1 (not at all) and 5 (totally).

Good concurrent and convergent validity have been established for both scales and their dimensions, significantly correlating with other measures of paranoia (the Paranoia Scale, Fenigstein & Venable, 1992; the Peters et al. Delusions Inventory, Peters, Joseph & Garety, 1999) (Spearman's ρ ranging from 0.68 to 0.86, $p < 0.01$ for the clinical sample and from 0.62 to 0.71, $p < 0.01$ for the non-clinical sample, Green et al., 2008). Internal consistency was also demonstrated across the two groups (Chronbach's α values were between 0.68 and 0.90 for the clinical group and 0.69 and 0.95 for the non-clinical group, Green et al., 2008) and test-retest reliability after 2 weeks was highly significant (intra-class correlation coefficients = 0.88 for the social reference dimension, 0.81 for the persecutory dimension and 0.87 for total score, Green et al., 2008).The scales have also shown to be sensitive to clinical change (effect sizes between -0.24 and -1.0, Green et al., 2008).

Although the GPTS was designed to measure paranoia on a continuum, a total score of 68 can be considered to be the clinical cut-off (Catherine Green, personal communication, 7th October 2010).

The GPTS takes approximately 3 minutes to complete.

2.3.2 Procedure for data collection.

For the SAp group, the NEIS research team had primary responsibility for recruitment, the consenting process and data collection from the clients of the NEIS, under supervision from qualified clinical psychologists. The researcher also recruited from the two

other Early Intervention teams in the region, following the same procedure as for recruitment from the IAPT and MHLW teams (see above). For the SAn group, the researcher had primary responsibility, also under the supervision of qualified clinical psychologists.

The data was collected between May 2009 and September 2010. For the SAp group, all participants in the Social Anxiety Research Clinic (SARC) between these times gave consent for some or all of their data to be used in this study (see analysis sections for each hypothesis for specific information on how many participants completed each measure). The data collection process was identical for both groups. Following the completion of a consent form (see Appendix E), the interview began with some basic demographic questions (gender, age, ethnicity, education level). The Imagery semi-structured interview was then conducted, which takes approximately 30 minutes. Responses were written down as close to verbatim as possible. Additionally, interviews were audio recorded (with the participants' consent), to ensure both accuracy and inter-rater reliability. During the interview, the participants' descriptions of their images were read back to them to further check accuracy.

The remaining questionnaires were then presented to the participants, the instructions talked through and any questions answered. The interviewer remained present while the self-report questionnaires were completed, to provide help and support if required and to increase the likelihood that questionnaires were completed appropriately. In addition, by remaining the interviewer was available to support the participant should the questionnaires cause any emotional distress or confusion.

The whole process took an average of 60 minutes, and was completed in one sitting. Once the data collection was completed, data were encoded into SPSS for analysis.

2.4 Ethical Issues

Ethical approval was granted for this study by Essex 1 Research Ethics Committee and Norfolk and Waveney Research Governance department (see Appendix H).

2.4.1 Informed consent.

All participants were provided with an information sheet (see Appendix I) about the study at least 72 hours before consent was sought. The sheet explained the rationale of the study and exactly what would be required of participants; no deception was involved. It also explained that participants could withdraw at any time during the study without giving a reason, in which instance their data would be destroyed. This would not affect current or future involvement from services. The information sheet also provided information on participant confidentiality and gave advice for where support can be found should participants feel distressed or want to discuss anything following the interview. Consent was taken by the researcher or the Assistant Psychologist who conducted the interview.

2.4.2 Support for participants.

All clinical participants were receiving support from mental health services (the NEIS, IAPT teams or Link Worker teams). With the consent of participants, a detailed report of their results was sent to their care team to contribute to the care they were receiving. Non-clinical university participants who identified their social anxiety as something they would like support with were offered signposting to their GP or the University Counselling Service, also with the option of a report to help inform their treatment.

During data collection, particular consideration was given to detecting any distress or concerns that may have arisen during the research and ensuring that these were addressed, by giving the participant the opportunity to choose whether to continue with the interview and providing time to talk through their distress or concerns. Distressed participants were either signposted to their GP, the University Counselling Service or their care team. There were no participants who became very distressed in this study or who disclosed information indicating that they or someone else might be in danger; however, if there had been, a condition of participation was agreeing to a clause on the consent form that the appropriate authorities (eg. GP, police, care team) would be informed if such information was elicited.

Debriefing of participants included the following components:

(1) explanation of the hypotheses and the rationale underlying them,

(2) explanation of how the hypotheses are related to the interview and questionnaires completed by the participant,

(3) opportunity for participants to ask questions and have those answered in an informative way,

(4) opportunity to find out more about the study at its end, and in particular, information about the findings and conclusions of the research (see Appendix J for the information sent to interested participants, teams and locality managers).

2.4.3 Confidentiality and data protection procedures.

Details of potential participants were only given to the researcher following potential participants being given the information sheet and asked for their verbal consent for disclosure of contact details, which was recorded in their clinical notes. Once participants consented to take part in the study, each participant was assigned a number which was used for identification. Participants were given the option to have their data shared with their care team with a view to enhancing team knowledge about the client. Information was only disclosed with the participant's consent. The exception to this was if a participant indicated that there were issues of risk, which was made clear to participants prior to the assessment in the information sheet and again at the beginning of the assessment.

Data and consent forms were kept in separate folders in a locked filing cabinet during the study, which only the researcher and Assistant Psychologists involved in the study had access to. The SPSS database contained no identifying information about the participants and was only accessed by the researcher and the Assistant Psychologists on a password-protected network.

2.4.4 Benefits, risks and burdens to participating.

No additional burden was placed on clients in the SAp group, as the measures in the study formed part of the routine clinical assessment offered by the NEIS to all its clients. For

the SAn group, the study took approximately 60 minutes of their time (plus time taken to consider and discuss the study and travel time).

Benefits to participation were that the information from the study could be used, with the participants' consent, to feedback to their team and thereby inform the work conducted with the participant. As social anxiety is known to be a distressing and disabling condition, the detailed knowledge obtained in the study may improve their team's ability to work with them successfully to reduce their symptoms. Additionally, participants recruited for the non-clinical SAn group were offered the chance to be entered into a £50 voucher prize draw. This was because it was thought less likely that they would request a report and therefore should be offered a different benefit or incentive for participation, in order to maximise participant numbers.

During the study, participants were asked for personal information which could be distressing. Therefore, interviews were conducted by psychologists with experience in diagnostic and experiential interviewing, and a sensitive awareness of how difficult the subject area may be for participants.

2.5 Plan for Data Analysis

2.5.1 Quantitative analysis.

All data will be analysed using Statistical Package for Social Science for Windows, version 14 (SPSS, 2005). Descriptive statistics will be conducted on the data, and examined for normality of spread to determine the use of parametric or non-parametric tests. The following analytical methods will be employed:

2.5.1.1 Hypothesis 1: Participants with social anxiety will experience imagery that is concordant with Clark and Wells' (1995) Cognitive Model of Social Phobia (ie. imagery will be an exaggerated embarrassed version of themselves seen from an observer perspective), whereas participants with social anxiety and psychosis will experience imagery of others as threatening and judging, predominantly from a field perspective.

The number of people who experienced an image, and the scores for field/ observer perspective from the semi-structured interview will be compared between both groups using chi-square analysis. The participants' descriptions of their images will be described and analysed using qualitative template analysis (see below). In secondary analyses, qualitative template analysis will be used to identify additional themes in the interview for each group.

2.5.1.2 Hypothesis 2: The social anxiety (with psychosis) group will score significantly higher on the negative self and negative other dimensions of the Brief Core Schema Scales (BCSS) than the social anxiety (no psychosis) group.

Initial exploratory analysis of differences between the groups for positive self, positive other, negative self and negative other schemas from the BCSS will be conducted using t-tests (for normally-distributed data) or Mann-Whitney U tests (for skewed data).

2.5.1.3 Hypothesis 3: The SAn group will score significantly higher than the SAp group on measures of typical socially phobic cognitions and fear of negative evaluation from others.

T-tests (for normally-distributed data) or Mann-Whitney U tests (for skewed data) will be conducted comparing differences in means between groups for total score on the FNEB, total score on the belief dimension of the SCQ and total score on the frequency dimension on the SCQ.

2.5.1.4 Hypothesis 4: The social anxiety with psychosis group will score significantly higher for paranoia than the social anxiety (no psychosis) group.

T-tests (for normally-distributed data) or Mann-Whitney U analyses (for skewed data) will be conducted to compare the groups on GPTS scores. Additionally, the number of people per group scoring at a clinically significant level for paranoia on the GPTS will be compared using chi square analysis.

2.5.2 Qualitative analysis.

2.5.2.1 Objectives and rationale.

In order to investigate Hypothesis 1, it is necessary to identify themes within the participants' descriptions of their images. Due to the varied nature of anxiety experiences (as indicated by both the literature and the clinical work of the researcher), it is important to use a qualitative framework for analysis in order to take advantage of the rich data. Also, the interview chosen asks about additional aspects (such as emotions, thoughts and beliefs associated with the image), which add detail to the descriptive and quantitative analysis to be undertaken.

Qualitative research methods do have weaknesses; however, these are felt to be less significant in this study: Qualitative results can be considered to be un-generalisable due to the idiosyncratic nature of the questions asked and the smaller numbers of participants used. However, in this study a semi-structured interview is used (meaning that the data are more directly related to the research question and less idiosyncratic) and the qualitative analysis will be conducted for all participants. Additionally, using a mixed-methods design has the specific strength of allowing triangulation of the data for cross-validation.

2.5.2.2 Philosophical position.

In qualitative research, it is important to identify a philosophical position for the study in order to choose an appropriate analytic method. This study assumes that social anxiety is an individual and varied experience, but that there are a number of experiential themes which can regularly be experienced by a number of people with social anxiety. Consequently, it can be perceived as a universal experience with individual variations. The study therefore occupies a position between realist and critical realist: this assumes that language can be used to communicate what people are really thinking and feeling (a realist position – Reicher, 2000), so the participants' descriptions of their images can be taken as an accurate communication. However, the accuracy of the interpretation of meaning may be biased in the communication due to the interpretation of the language based on the subjective

experience of the researcher (a critical realist position). Flexible methods of analysis should therefore be employed, in line with Madill, Jordan and Shirley's (2000) view of epistemology being on a continuum.

2.5.2.3 Template analysis.

In qualitative research, epistemology should lead to methodology. Template analysis is a flexible method for analysing text (particularly interview transcripts), which King (1998) describes as occupying a position between content analysis (Weber, 1985) and grounded theory (Glaser & Strauss, 1967). Content analysis was considered to be too rigid a form of analysis for this study, as it requires that all codes be pre-determined (and therefore that new information from the interviews cannot be used to create new codes). As this is the first study (to the researcher's knowledge) to explore the nature of imagery in social anxiety among people with psychosis, it was considered likely that novel themes might be identified through the interviews. Grounded theory presented the opposing difficulty, that no prior themes can be identified. As the purpose of this study was to compare two groups, one of which has been the subject of extensive research in identifying themes in imagery, it was felt that it would be inappropriate not to start with an initial template containing these themes. This allowed the comparison of both groups with the results of previous research.

Template analysis allows both the use of a priori templates and the addition of new themes identified during analysis. It can be adapted for use with a number of epistemological positions, including realist and critical realist, although different precautions during analysis are required for these two positions. With a realist position, the researcher must ensure that the information recorded is accurate and reflects what was actually communicated. With a critical realist position, the researcher must be aware that there is unlikely to be a "correct" interpretation, and that the interpretation chosen will be influenced by the researcher's subjective experiences. Therefore, it is important to regularly review decisions around the template and encoding, and to check the quality and accuracy, while all the time bearing in mind that interpretations may not be entirely accurate.

2.5.2.4 The process of template analysis in this study.

Both groups will have an identical a priori template, incorporating themes found to be common in the images experienced by the pilot participants. The a priori template can be seen in Appendix F. Following the completion of the interviews, the participants' responses to the imagery interview will be studied to establish whether any additional themes can be identified ("insertion" – King, 2004). Themes can be re-ordered into new hierarchical positions to enhance the analysis ("changing scope" and "changing higher-order classification" – King, 2004), and final templates for coding the descriptions will be developed for each group. The image descriptions will be coded (see Appendix G for an example), and the templates compared to look for similarities and differences in the experiences of both groups when in anxiety-provoking social situations.

2.5.2.5 Checking quality and accuracy of analysis

The majority of the data in the interview are descriptive and therefore require little interpretation on the part of the researcher. Therefore, in accordance with qualitative analysis from a realist perspective, the data will be checked with the participants to ensure accuracy. The interviewer (the researcher or Assistant Psychologist) will read back the notes made in the interview to the participant, asking if they are accurate and if anything else should be included. The interview will also be audio-recorded and transcribed, with participant consent.

Choosing which theme to code the image description data requires a more critical realist perspective, in which the researcher must be aware of their own impact on the interpretation. King (2004) recommends that trustworthiness is maintained by asking another person to independently code the data and then comparing the results. In this study, two Assistant Psychologists will be asked to independently check the construction of the themes and quotes included in each theme. When statements seem to fit more than one theme (eg. a participant who describes seeing an ugly image of himself when with others fits the themes "fear of negative evaluation from others", "specific anxiety about appearance" and "seeing a distorted observer-perspective self-image"), the use of parallel coding (using the same data as

an example of more than one theme – King, 2004) will be allowed to ensure that openness to the data is maintained. Finally, clear records of the decisions made in creating the final template will be kept (providing an audit trail) and the Qualitative Research Forum at the University of East Anglia will be attended to receive supervision, guidance and feedback on methodology and analysis. This will enable the researcher to further consider issues of reflexivity.

3 Results

3.1 Introduction to Results Section

This section outlines the procedure used for data analysis, particularly the data screening process. It will then list the descriptive data about the participants, summarising the gender, age, ethnicity and years in education, comparing the groups. Scores on the SIAS for each group will be used to check the comparability of levels of anxiety in each group. The structure of the SAn group will also be outlined, including the number of clinical and non-clinical participants. Descriptive statistics for each variable will be presented.

The section will then consider the results for each hypothesis in turn, before describing the secondary analyses.

Finally, the findings from the whole Results section will be summarised.

3.2 Description of Data Analysis

3.2.1 Data screening.

Prior to each statistical analysis, the data were screened to ensure they met the assumptions for each test. All data screening was conducted using SPSS version 16. For continuous data, this was done by conducting Kolmogorov-Smirnov tests and creating histograms to check for normality of distribution, and conducting Levene's Test for Equality of Variances to check for normality of spread. When the Kolmogorov-Smirnov test was significant, non-parametric tests were used to analyse the data (where possible). When Levene's Test was significant, significance values were taken from the 'Equal variances not assumed' row. For the categorical variables, where expected counts were less than 5, this was taken into account when interpreting the results (see Discussion section). Exact tests were also used to help compensate for the small sample size and unequal groups (Field, 2005).

3.2.2 Missing data.

Missing data was excluded listwise from the analysis prior to conducting the above data screening methods. When large amounts of data were missing in a particular analysis, this was considered when drawing conclusions from the data (see Discussion section).

3.3 Descriptive Information for the Participant Sample

The total sample size for this study was 61 participants (32 in the SAn group and 29 in the SAp group). There were a total of 33 men in the group (54.1%). The mean age of the whole group was 29.7 years (SD=10.11) and the mean number of years in education was 14.4 (SD=3.49) (although data was missing for nine SAp participants for this variable). Fifty-seven (93.4%) of the group classified themselves as White British, three (4.9%) as British or European Asian and one (1.6%) as French. Please see Table 2 below for details on group splits for gender, age, ethnicity, and years in education. Also included is the mean SIAS score for each group.

Table 2.

Descriptive data for both groups: Numbers (n), percent (%), means (M) and standard deviations (SD).

Independent variable	**SAn** ***n*(%)**	**SAp** ***n*(%)**	**SAn** ***M*(SD)**	**SAp** ***M*(SD)**
Gender	19:13	9:20		
(F:M)	(59.4:40.6)	(31:69)		
Ethnicity	28[a]:3[b]:1[c]	29[a]:0[b]:0[c]		
	(87.5:9.4:3.1)	(100:0:0)		
Age			34.0(11.51)	24.9(5.24)
Years in education			15.8(3.56)	12.1(1.83)[d]
SIAS			47(9.64)	54.66(10.97)

Note: [a]=White British, [b]=British/ European Asian, [c]=French, [d]= data from 19 participants

As can be seen in Table 2 above, the groups were unequal in terms of gender split and mean age. The SAn group also had an average of 15.8 years in education compared to 12.1 years in the SAp group. As 20 (62.5%) of the SAn group were either students or staff of the University of East Anglia this is not surprising. The SAp group was made up entirely of

participants identifying themselves as White British, and the SAn group had only four participants who did not identify as White British (three British or European Asians and one French national), which is indicative of the small amount of ethnic diversity in the region. SIAS scores also varied between the groups, the SAp group scoring significantly higher (t = 2.90, $p < .01$). Therefore, the groups cannot be considered to be comparable on these variables, which must be taken into account when considering the results of this study.

3.4 Exploration of Hypotheses

3.4.1 Hypotheses 1: Participants with social anxiety will experience imagery that is concordant with Clark and Wells' (1995) Cognitive Model of Social Phobia (ie. imagery will be an exaggerated embarrassed version of themselves seen from an observer perspective), whereas participants with social anxiety and psychosis will experience imagery of others as threatening and judging, predominantly from a field perspective.

3.4.1.1 Quantitative analysis.

Pearson Chi-square analysis was used to see if there were significant differences between the groups for whether an image was experienced and the perspective of the image.

3.4.1.1.1 Was an image experienced?

Twenty-six (82%) of the SAn group reported having an image or impression, compared with 26 (81%) in the SAp group, which was a non-significant difference (χ^2(df = 1, N = 52) = 0.34, p = 0.56). Of these, 24 SAn participants (75%) and 18 (64%) SAp participants were rated by the interviewer as having a clear visual image, which was also a non-significant difference (χ^2(df = 1, N = 52) = 0.82, p = 0.37).

3.4.1.1.2 Image perspective.

The imagery interview asked participants to rate the perspective of their image. The scores ranged from -3 (completely field perspective) to +3 (completely observer perspective), with 0 being switching between perspectives equally. Nine (31%) of the SAn group reported a predominantly field perspective, 15 (52%) reported a predominantly observer perspective and

five (17%) reported an equal switching of perspectives. Nine (39%) of the SAp group reported a predominantly field image, 10 (43%) reported a predominantly observer image and four (17%) reported an equal switching of perspectives.

In order to explore significant differences between groups for image perspective, Pearson Chi-square analyses were conducted for image perspective scores on the imagery interview. Chi-square analyses were conducted between all seven ratings (scores between -3 and +3), and also when ratings were grouped into 'predominantly field perspective' (scores of between -1 and -3), 'equally switching between perspectives' (scores of 0) and 'predominantly observer perspective' (scores between +1 and +3). However, no significant differences were found with either analysis (all ratings: χ^2(df = 6, N = 52) = 1.03, p = 0.98; grouped ratings: χ^2(df = 2, N = 52) = 0.42, p = 0.81) (number analysed is the number of participants who identified experiencing a visual image).

This between-group comparison indicated that there was no difference between the groups for image perspective. However, the interviews contained a large amount of rich descriptive information, which could be further explored using qualitative template analysis to establish whether there were other aspects of the images that varied between the groups.

3.4.1.2 Qualitative analysis.

A semi-structured interview exploring imagery experienced while socially anxious was conducted with 60 participants, 32 from the SAn group and 28 from the SAp group. One participant in the SAp group chose not to be interviewed. The interview was only fully completed with people who identified experiencing an image; however, all 60 participants were asked the initial interview questions (these were: descriptives; can you tell me about a few times that you have felt socially anxious; how anxious were you; did you experience an image or impression). Three participants in the SAn group and four participants in the SAp group did not provide sufficient information to be used in the template analysis (ie. answers were either "no" or were very brief). Therefore, a total of 29 SAn participants and 24 SAp participants contributed to the template analysis. Summaries of each participant's image, along

with the quantitative scores from the interview, can be seen in Appendix K (SAn group) and Appendix L (SAp group).

The interview was specifically selected to explore the hypothesis that the SAn group would be more likely to experience imagery that is concordant with Clark and Wells' (1995) Cognitive Model of Social Phobia (ie. imagery will be an exaggerated embarrassed version of themselves seen from an observer perspective), whilst participants with social anxiety and psychosis would experience imagery of others as threatening and judging, predominantly from a field perspective. However, a number of additional themes were also identified through template analysis of the interviews. As the area of social anxiety comorbid with psychosis has as yet been the subject of comparatively little investigation, it was important to gain as much exploratory information concerning this area as possible. Therefore, these additional themes are described as part of the secondary data analysis following the exploration of the hypotheses. The full thematic templates for each group can also be seen in that section (Figure 9).

The following image themes were identified in images described by the SAn group:

1. Seeing an image of themselves as they fear others see them, which is distorted.
2. Image of being ridiculed or laughed at.
3. Image or impression that everyone is staring at them or knows them or is talking about them.
4. Impression of self as invisible or unimportant to others.
5. Image of what might happen in the immediate future.
6. Image indicating fear of vulnerability to physical threat.
7. Seeing a distorted image of their surroundings.
8. Image of escape from the situation.
9. Experiencing a non-distorted image.
10. Experiencing an auditory image.

11. Experiencing an olfactory image.
12. Experiencing a tactile image.
13. Choosing to see an image (for rehearsal or to aim for).

The SAp group also described images that seemed to fit with the above themes, with the exception of '8. Image of escape from the situation', with which none of this group's images appeared to fit. In addition to the above themes, the SAp group had the themes 'Images or thoughts indicating specific fear of physical threat to the self' and 'Image indicating fear of causing physical harm to others'. Therefore, the SAp group's list of themes was as follows:

1. Seeing an image of themselves as they fear others see them, which is distorted.
2. Image of being ridiculed or laughed at.
3. Image or impression that everyone is staring at them or knows them or is talking about them.
4. Impression of self as invisible or unimportant to others.
5. Image of what might happen in the immediate future.
6. Image indicating fear of vulnerability to physical threat.
7. Images indicating specific fear of physical threat to the self.
8. Image indicating fear of causing physical harm to others.
9. Seeing a distorted image of their surroundings.
10. Experiencing a non-distorted image.
11. Experiencing an auditory image.
12. Experiencing an olfactory image.
13. Experiencing a tactile image.
14. Choosing to see an image (for rehearsal or to aim for).

Of the above themes, theme one (Seeing an image of themselves as they fear others see them, which is distorted) in both templates seemed most related to typical social anxiety images (ie. self-focussed, expecting the threat to come from the self by

behaving inappropriately). The themes 'Images or thoughts indicating specific fear of physical threat to the self', 'Image indicating fear of causing physical harm to others', 'Image indicating fear of vulnerability to physical threat', and 'Seeing a distorted image of their surroundings' seemed most related to externally-focussed threat. Two of these themes (those of specific images of physical assault to the self or from the self to others) were only present in the SAp group. The other identified themes could equally apply to either threat focus.

More specific descriptions and examples from both groups for each theme will now be given in Figure 7 (SAn group) and Figure 8 (SAp group) below. Participant ages, genders and full image descriptions can be seen in Appendices K (SAn group) and L (SAp group) and the full account of quotes which were analysed as fitting with each theme can be seen in Appendix M (SAn group) and Appendix N (SAp group). Information in speech marks are direct quotes from the participants. The use of "…" in the quotes indicates that some of the quote has been cut for the purpose of succinctness. Information within quotes in square brackets ([…]) is not taken from the quote but is added by the researcher to clarify the meaning of the quote. Information without speech marks is summarised by the researcher.

Figure7. Examples of image themes in SAn group

1. *Seeing an image of themselves as they fear others see them, which is distorted*

   This theme involved the participants seeing an observer-perspective image of themselves, which was distorted and represented how they feared others saw them. Seventeen SAp participants identified with this theme (examples below):

   SAn6: An image of just her, standing with her hands by her side, looking straight ahead. She is wearing "drab, dull clothes" [even when dressed up in reality], looking sad, shorter and pale. She is not speaking. She looks "mousy", young and "naïve".

   SAn25: Sees herself in her present situation, but as a child: "I can see a silly young girl being immature. She's leaning over the side of the chair being sick – she can't stop her body from shaking. I'm thinking, "She's embarrassing and should have better control over herself" – it's what other people are thinking, also that she's a nuisance."

Figure 8. Examples of image themes in SAp group

1. *Seeing an image of themselves as they fear others see them, which is distorted*

This theme involved the participants seeing an observer-perspective image of themselves, which was distorted and represented how they feared others saw them. Seven SAp participants identified with this theme (examples below):

SAp6: Gets an image of herself as fat, walking down the street, when getting ready to go out and when she is walking down the street.

SAp20: "I could see my face, and my face was really piggy. I picture myself first, because I always try to guess how I look, and my brain automatically goes to everything bad, like my belly hanging over my trousers, and I start to panic about it… I'm picturing myself looking really piggy and disgusting, um, just everything, really grotesque. Then I think how pathetic I look, so gross trying to explain my way out of this."

2. Image of being ridiculed or laughed at This theme was categorised by seeing an image of others responding to the participant in a way that shows ridicule (eg. glaring or laughing). Eight SAn participants identified with this theme (examples below): SAn7: Imagines people are looking at her as though she is "a failure – a complete waste of space". SAn28: Image that people were going back to their friends after talking to her, pointing at her and laughing.	*2. Image of being ridiculed or laughed at* This theme was categorised by seeing an image of others responding to the participant in a way that shows ridicule (eg. glaring or laughing). Five SAp participants had images analysed as fitting with this theme (examples below): SAp10: Image of people pointing and laughing at her and saying nasty things (eg. "useless waste of space"). SAp22: Image of his friends laughing about something he has said and "taking the piss" after he has left the room.
3. Image or impression that everyone is staring at them or knows them or is talking about them This theme is categorised by anxiety about being the centre of attention. Fourteen participants in the SAn group had images analysed as fitting with this theme (examples below): SAn14: "[In my image] I feel set apart from everyone – people are surrounding me, looking at me, but I'm singled out… the victim." SAn26: Image of people staring at her if she fainted, and talking about her afterwards.	*3. Image or impression that everyone is staring at them or knows them or is talking about them* This theme is categorised by anxiety about being the centre of attention. Sixteen SAp participants had images analysed as fitting with this theme (examples below): SAp4: "I feel that people are staring at me." SAp29: Has an impression that people are looking at him, watching his every move, and experiences this as an image: "All I can see really is just faces, it's just like looking into a mirror with faces, it's people constantly looking and staring at me."

4. *Impression of self as invisible or unimportant to others* This theme appeared to be opposite to the above theme of fearing being the centre of attention; only one participant identified with both these themes (SAn19, who had an impression of people looking at her, judging her for being alone and then ignoring her). Four SAp participants had images analysed as fitting with this theme (examples below): SAn13: "Everyone else is standing and having fun, unaware of me." SAn18: Has an image of herself after a social situation being alone in the corner – even though it is usually not true.	4. *Impression of self as invisible or unimportant to others* This theme appeared to be opposite to the above theme of fearing being the centre of attention. Only one participant in the SAp group had an image analysed as identifying with this theme: SAp1: "No one's really looking at me or talking to me, they're kind of ignoring me."
5. *Image of what might happen in the immediate future* This theme is characterised by participants having an image of how the social interaction will play out. Eight participants from the SAn group had images analysed as identifying with this theme (examples below): SAn9: Anticipating how the people he will be meeting (housemate's parents) will react to him: sees two people (one male, one female) looking at him, looking puzzled, confused and concerned. SAn29: Image of himself forgetting the words in his presentation.	5. *Image of what might happen in the immediate future* This theme is characterised by participants having an image of how the social interaction will play out. Eleven participants from the SAp group had images analysed as identifying with this theme (examples below): SAp20: "I pictured myself having to tell him I couldn't give to his charity, and him looking at me disgusted… Just, um, pressuring me and forcing me to do it… he's gritting his teeth." SAp21: "It's like when you get a film in your head – I can see something playing itself out in front of me… I'm on red alert, watching everything he does – in my head I'm seeing

	something different to the others – every time he puts his hands in his pocket I have an image of him pulling a gun out, I get hurt and I'm alone. He'll go off, run away, and I'm left hurt on the floor."
6. *Image indicating fear of vulnerability to physical threat* This theme was classified by participants having images that were analysed as indicative of feeling vulnerable to physical (as opposed to threat to social status or of social isolation) threats. Two SAn participants were analysed as having images that fitted with this theme: SAn1: In his image, the participant is cowering from people and feeling very scared, as if he were being faced by a physical threat (although the participant does not identify a physical threat). SAn24: When socially anxious and perceives that others have reacted to him in an unfriendly way, gets an image of himself as less fit and toned than he used to be and feels vulnerable, less able to protect himself if they "make trouble". One SAn participant reported an anxiety about being assaulted, as he had been assaulted before. However, this was not an image so is instead described below in the 'Full template analysis' section.	6. *Image indicating fear of vulnerability to physical threat* This theme was classified by participants having images that were analysed as indicative of feeling vulnerable to physical (as opposed to threat to social status or of social isolation) threats. Four SAp participants were analysed as having images that fitted with this theme (examples beloow): SAp6: "I see people looking at me a lot, looking down upon me, and I don't like that feeling, that really scares me, and I will do anything to get out of that situation." SAp7: "They [people in his images] look quite intimidating." 7. *Images indicating specific fear of physical threat to the self* This image theme was distinct to participants in the SAp group. Three SAp participants had images analysed as indicative of a fear of physical threat to the self (three additional participants had thoughts indicative of

	this theme, discussed in the full template analysis below). These images differed from those in theme 6. 'Image indicating fear of vulnerability to physical threat', as they are actual images of physical assault rather than images indicative of vulnerability (examples below): SAp5: Image of being kidnapped by a man and treated violently. SAp21: Has an image of the man in front of him pulling a gun on him: "…Every time he puts his hands in his pocket I have an image of him pulling a gun out, I get hurt and I'm alone. He'll go off, run away, and I'm left hurt on the floor… I don't want to be hurt." *8. Image indicating fear of causing physical harm to others.* This theme was characterised by participants having images of causing aggression to others. Two SAp participants had such images: SAp7: "I expect aggression when I leave my house… I get horrible, intrusive pictures of being violent to people [people he sees as potential threats]." SAp16: "[In my image I see] violence, towards them, the people around me. Sometimes it's specific people around me. I'm committing the violence. I'm observing the scene… [The

7. *Seeing a distorted image of their surroundings* This theme was characterised by participants seeing their current surroundings, but somehow distorted. The majority of the quotes indicated that the distortion made their surroundings appear more intimidating. The images classified into this theme were either images or impressions of being separate from others (eg. behind an invisible wall or further away), of others being closer and crowding or intimidating the participant, of the surroundings being more vivid or being blurred, with others moving faster around the participant, or of others looking at and judging the participant. Nine SAn participants identified with this theme (examples below): SAn23: Impression that she is very separate from all the other people who are in groups with their backs to her, as though they are "behind a glass wall". Some people are clear – people she is particularly nervous about. Others are a "general blur." SAn26: "It felt like everyone was in my face – they're all just there."	violence is like] Saw films – blood and gore." 9. *Seeing a distorted image of their surroundings* This theme was characterised by participants seeing their current surroundings, but somehow distorted. The majority of the quotes indicated that the distortion made their surroundings appear more intimidating. The images classified into this theme were either images or impressions of being separate from others (eg. behind an invisible wall or further away), of others being closer and bigger, crowding or intimidating the participant, of the surroundings being lighter or darker, of others moving faster or appearing "paused", or of others looking at and judging the participant. Twelve SAp participants identified with this theme (examples below): SAp14: "I can see people sort of flitting by, but not clearly – like on a fast forward, but it keeps jumping like an old cassette. I'm just standing still. It seems grey, darker where I am, the shadows seem pronounced. The buildings seem bigger, I suppose the world seems bigger." SAp29: Sees the faces of those around him looking closer to him and staring at him.

8. *Image of escape from the situation.* This theme was categorised by participants having an image of being able to leave the situation, either of the escape itself or of the place they wanted to escape to (eg. home). Three participants in the SAn group had images analysed as fitting this theme (examples below): SAn3: Imagines himself as a bird flying through the window and escaping. SAn26: Has an image of being back at home, safe: "There's a big fat fluffy pair of slippers waiting for me, my husband and dogs are around… I've driven home and am shutting the door and being safe."	No participants from the SAp group identified with this theme.
9. *Seeing an image or impression that does not seem to be distorted* This theme was inserted as a small number of participants disclosed an image that they did not believe was distorted. SAn15 said her image was based on a video image of herself, and other participants said that their image was of themselves just as they are. While it is not possible to know whether these images are really distorted or not, it is important to consider the participants' views and interpretations. Therefore, it seemed appropriate to add this category. Two participants in the SAn group had images analysed as fitting with this theme: SAn15: "[My face has an expression of] something, sort of blankness	10. *Seeing an image or impression that does not seem to be distorted* This theme was inserted as a small number of participants disclosed an image that they did not believe was distorted. SAn15 said her image was based on a video image of herself, and other participants said that their image was of themselves just as they are. While it is not possible to know whether these images are really distorted or not, it is important to consider the participants' views and interpretations. Therefore, it seemed appropriate to add this category. Two participants from the SAp group were analysed as having images that fit with this theme: SAp5: Image of herself where she is at the present time, focussed

– like when your face falls, a bit like horror, also a bit helpless and out of control. And motionless – frozen – and not knowing where to go with it." SAn31: Saw an image of himself waiting for his friend: "I'm sitting down, moving my legs up and down. My hands are on my lap, they're sweaty, sometimes grabbing the arm rest."	particularly on her upper body and clothes – unclear whether this image is distorted. SAp15: Sees an image of herself walking, with people hurrying by.
10–12. Images or impressions in other sensory modalities. This theme was in the original a priori template, as previous studies exploring images concordant with social anxiety identified that as well as visual images, images could also be aural (sound), olfactory (smell) or tactile (physical sensations). Twenty-three participants in the SAn group identified experiencing images in other sensory modalities, which were each divided into auditory, olfactory and physical sensations.	*11-13. Images or impressions in other sensory modalities.* This theme was in the original a priori template, as previous studies exploring images concordant with social anxiety identified that as well as visual images, images could also be aural (sound), olfactory (smell) or tactile (physical sensations). Sixteen participants in the SAp group identified experiencing images in other sensory modalities, which were each divided into auditory, olfactory and physical sensations.
10. Aural images Nine people in the SAn group experienced a distinct voice or sound in their image. Eight heard the sounds around them (eg. others or themselves talking), but the sounds were distorted (for many, the sound was muffled). Examples of both are below: SAn9: Hears what he fears others will say in anticipated situation. SAn12: Hears the taunts from school bullies ("flea").	*11. Aural images* Six people in the SAp group experienced a distinct voice or sound in their image. Five participants heard the sounds around them (eg. others or themselves talking), but they were distorted (for many, this sound was muffled). Examples of both are below: SAp4: "You can hear, but you know when you jump in a swimming pool – everything seems loud but fuzzy."

	SAp10: Hears people saying horrible, negative things about her – "useless waste of space" – gets this every time she goes out, even if there are no people around.
11. Olfactory images Two participants in the SAn group described having smells as part of their image: SAn12: Can smell the school canteen (in her image) very strongly. SAn25: Can smell the inside of a gas and air mask – related to giving birth when the smell of the mask made her feel sick, now whenever she feels sick she smells the mask.	*12. Olfactory images* Four participants in the SAp group described experiencing smells as part of their image (examples below): SAp1: Strong, exaggerated smell of shoe polish. SAp10: Smells perfume/ body spray and hair chemicals – what the women in her image smell like.
12. Images of physical sensation These images were categorised by feeling physically different in relation to their surroundings (eg. smaller, fatter, further away or closer to others). Eighteen participants in the SAn group described such sensations (examples below): SAn5: Feels further away from others, and taller than usual, "gangly and awkward – like a teenager". SAn12: Image of herself as a little girl – feels like this child when interacting with authority figures.	*13. Images of physical sensation* These images were categorised by feeling physically different in relation to their surroundings (eg. smaller, fatter, further away or closer to others). Twelve participants in the SAp group described such sensations (examples below): SAp1: The participant feels bigger than in reality, and further away from the other people in the room. SAp21: The participant felt as though his jeans had become too big and baggy, and felt as though the other people were moving away from him "like the zoom on a camera".

13. Choosing to see an image (positive self-image to aim for or using imagination to rehearse for upcoming social situation) This theme is qualitatively different to all the other themes about images as it is categorised by choice: rather than experiencing an intrusive image, these participants chose to imagine themselves or a scenario for practice or as an example to aim for. Three participants in the SAn group identified experiencing such sensations when in anxiety-provoking social situations (examples below): SAn6: Used her CBT to envisage herself as she wanted to come across, but found this hard and afterwards could only see her negative self-image. SAn29: "All is good, I find memoirs [I remember everything], I am not anxious, I have a good voice and don't shake. I'm like people we can see in normal representations on TV – good people. Others seem interested in what I say. It's a good presentation."	*14. Choosing to see an image (positive self-image to aim for or using imagination to rehearse for upcoming social situation)* This theme is qualitatively different to all the other themes about images as it is categorised by choice: rather than experiencing an intrusive image, these participants chose to imagine themselves or a scenario for practice or as an example to aim for. Five participants in the SAn group identified experiencing such sensations when in anxiety-provoking social situations (examples below): SAp8: Sees himself as though from above, standing, talking to others, enjoying himself. SAp21: Tries to imagine feared scene to rehearse how he will cope and keep him and his family safe.

3.4.1.3 Conclusion for Hypothesis 1.

There were no significant differences between the groups for the number of participants who saw an image when socially anxious. Additionally, in opposition to the hypothesis, chi-square analyses did not find any significant differences between the groups for image perspective. Template analysis indicated a number of qualitative similarities between the images in the different groups: both groups had participants who saw a distorted self-image, who saw people laughing at or ridiculing them, who saw people talking about them or staring at them, who saw others ignoring them or had an impression of being invisible, who saw an image of what they feared happening in the immediate future, who saw an image indicating that they feared being vulnerable to physical threat, who saw a distorted image of their surroundings, and who saw non-distorted mental images. Members of both groups also experienced aural, olfactory and physical sensation images, and both groups had participants who chose to see an image to rehearse the upcoming situation. There were also differences between the images seen by the two groups: some members of the SAp group had images analysed as being indicative of a specific fear of physical threat to the self and of causing physical harm to others, whereas such images were not experienced by the SAn group. Some members of the SAn group had images of escaping the situation, which was not present in the SAp group.

In summary, both groups did experience images in concordance with existing research into social anxiety, and the SAp group had the additional image themes of being physically threatened by others and physically assaulting others. However, the SAn group did have images indicating that they felt vulnerable to physical threat from others. Therefore, the hypothesis that participants with social anxiety will experience imagery that is concordant with Clark and Wells' (1995) Cognitive Model of Social Phobia (ie. imagery will be an exaggerated embarrassed version of themselves seen from an observer perspective), whereas participants with social anxiety and psychosis will experience imagery of others as threatening and judging, predominantly from a field perspective, was not supported. Instead, it could be concluded that both groups experienced images

concordant with Clark and Wells' model, and experienced both observer and field-perspective images, but members of the SAp group additionally experienced images of violence and aggression.

3.4.2 Hypothesis 2: The social anxiety (with psychosis) group will score significantly higher on the negative self and negative other dimensions of the Brief Core Schema Scales (BCSS) than the social anxiety (no psychosis) group.

3.4.2.1 Descriptive data.

The descriptive data for the groups' scores on the BCSS can be seen in Table 3 below. Initial observation of the data indicates that the SAp group had higher mean scores for negative self and negative other schemas. However, the SAp sample also had greater within-group variation. Exploratory statistical analysis was conducted to check for indications of statistically significant difference.

Table 3.

Means (M), standard deviations (SD), and numbers (n) per group for BCSS schema scores

Schema type	Group	M	SD	*n*
Negative self	SAp	10.57	7.70	21
	SAn	8.50	5.36	32
Positive self	SAp	6.14	4.76	21
	SAn	7.47	4.82	32
Negative other	SAp	11.00	8.42	21
	SAn	7.38	5.36	32
Positive other	SAp	7.95	6.33	21
	SAn	9.91	4.28	32

3.4.2.2 Testing the normality of the data.

In order to decide which statistical tests to use, the data were first tested for normality of distribution using the Kolmogorov-Smirnov test. This indicated that data distributions for the SAp group were skewed for all dimensions except 'negative other', whereas the data for the SAn group were normally distributed for every dimension (see Appendix O for the normality test results tables). Observation of histograms supported these indications.

3.4.2.3 Testing for significant differences between the groups.

As the data did not meet the assumption of normal distribution, initial analyses using the Mann Whitney U test were used to look for significant differences between the groups in BCSS scores for 'positive self', 'negative self' and 'positive other' scores (see Table 4 below). A t-test was used to compare the groups on 'negative other' scores, as this data was normally-distributed (see Table 5 below).

These tests indicated that the SAp group scored significantly higher for 'negative other' schemas. There were no significant differences between groups for the other schema types.

3.4.2.4 Conclusions from Hypothesis 2.

There were no significant differences between groups for positive-self, negative-self or positive-other schemas. However, the SAp group scored significantly higher for negative-other schemas, indicating that there was a higher level of negative beliefs about other people in this group. Therefore, the hypothesis that the SAp group would score higher for negative-self and other schemas than the SAn group, was only partly supported.

Table 4.

Median, range (minimum-maximum), Mann-Whitney U statistic (U), and significance level (p) for significant difference between groups on positive self, negative self and positive other schemas.

Schema	Group	Median	Range	*U*	*p*
Positive self	SAp	5.00	24(0-24)	355.5	0.12[a]
	SAn	7.00	20(0-20)		
Negative self	SAp	8.00	24(0-24)	360.5	0.14 [a]
	SAn	7.50	20(0-20)		
Positive other	SAp	6.00	24(0-24)	399.0	0.79 [a]
	SAn	10.00	19(1-20)		

Note: [a]=Exact significance (1-tailed)

Table 5.

Levene's test score (F), group mean (M) and standard deviations (SD), independent t-test score (equal variances assumed) (t) and one-tailed significance level (p) for between-groups comparison on negative-other schema (BCSS).

Group	*M*	SD	*F*	*t*	*p*
SAp	10.56	8.14	5.59*	1.74	0.05[a]*
SAn	7.38	5.36			

Note. [a]Equal variances not assumed

*Significant at the $p \leq 0.05$ level (1-tailed)

3.4.3 Hypothesis 3: The SAn group will score significantly higher than the SAp group on measures of typical socially phobic cognitions and fear of negative evaluation from others.

3.4.3.1 Descriptive data.

Scores for both groups for frequency of cognitions, belief in cognitions and fear of negative evaluation from others can be seen in Table 6 below.

Initial observation of the descriptive data indicates that both groups had similar mean scores for frequency of typical social anxiety-related thoughts. However, the SAp group scored lower on average on the FNEB and higher on average for belief level than the SAn group. In order to provide an indication of whether these differences are significant, exploratory statistical analyses were conducted. Tests of data normality were conducted to aid the selection of appropriate analytical methods.

Table 6.

Group means (M), standard deviations (SD) and number per group (n) for FNEB and SCQ total scores.

Variable	Group	*M*	SD	*n*
Total FNEB score	SAp	37.50	8.96	29
	SAn	45.97	11.10	32
Total SCQ frequency score	SAp	67.82	17.75	29
	SAn	67.50	16.19	32
Total SCQ belief score	SAp	1227.83	510.04	29
	SAn	1194.93	462.51	32

3.4.3.2 Testing the normality of the data.

The Kilmogorov-Smirnov test was conducted to check the distribution of the data, which indicated that all the variables were normally distributed with the exception of total frequency score in the SAn group (see Appendix O for normality data table). Observation of histograms supported this analysis. Therefore, independent-means t-tests were conducted to compare group scores for total score on the FNEB and total belief score on the SCQ, while the groups' scores for thought frequency on the SCQ were compared using the Mann-Whitney U test.

3.4.3.3 Comparing groups on total FNEB scores.

Levene's test for equality of variance was non-significant, indicating that data variances were equal between the groups. An independent-samples t-test was conducted, and the results from the 'equal variances assumed' row indicated that there were significant differences between the groups (see Table 7 below). Group means indicate that the SAn group scored significantly higher than the SAp group for fear of negative evaluation from others. However, the group sizes were unequal (18 in the SAp group, 32 in the SAn group), meaning that this difference must be interpreted with caution.

3.4.3.4 Comparing groups on total scores for level of belief in social anxiety-related thoughts on the SCQ.

Levene's test was also non-significant for belief level on the SCQ, so independent t-test results were taken from the 'equal variances assumed' row. The t-test indicated that there were no significant differences between groups for level of belief in social anxiety-related thoughts (see Table 7 below).

3.4.3.5 Comparing groups on total scores for frequency of social anxiety-related thoughts on the SCQ.

A Mann-Whitney U test compared group scores for frequency of social anxiety-related scores. The Exact method for ascertaining significance was used due to the unequal sample sizes (18 in SAp group, 32 in SAn group). The test indicated that

there were no significant differences between groups for frequency of social anxiety-related thoughts (see Table 8 below).

Table 7.

Kolmogorov-Smirnov test results (D) Levene's test score (F), group means (M) and standard deviations (SD), independent t-test score (equal variances assumed) (t) and significance level (p) for between-groups comparison on total FNEB score and total belief in thoughts score (SCQ)

Variable	**Group**	***D***	***F***	***M***	**SD**	***t***	***p***
Total FNEB	SAp	0.12	1.15	37.50	8.96	2.77	0.004*
score	SAn	0.13		45.97	11.10		
Total SCQ	SAp	0.12	0.23	1227.83	510.04	0.23	0.41
belief score	SAn	0.12		1194.93	462.51		

Note. *Significant at the $p \leq 0.01$ level (1-tailed).

Table 8.

Kolmogorov-Smirnov (D) value, median, range (minimum-maximum), Mann-Whitney U statistic (U), and significance level (p) for significant difference between groups on frequency of social anxiety-related thoughts.

Group	***D***	**Median**	**Range (min-max)**	***U***	***p***
SAp	0.12	66.50	75(35-110)	2870.00	0.50[a]
SAn	0.19	71.00	63(31-94)		

Note: [a]=Exact significance (1-tailed)

3.4.3.6 Conclusions for results of Hypothesis 3.

Contrary to hypothesis 3, there were no significant differences between groups for either belief level or frequency of social anxiety-related thoughts on the SCQ. However, in support of the hypothesis, there was a significant difference for fear of

negative evaluation from others (measured by the FNEB), with the SAn group scoring significantly higher than the SAp group.

3.4.4 Hypothesis 4: The social anxiety with psychosis group will score significantly higher for paranoia than the social anxiety (no psychosis) group.

3.4.4.1 Descriptive data.

Descriptive data for paranoia scores on the GPTS can be seen in Table 9 below. Initial observation of the data shows that mean scores in the SAp group were higher for both types of paranoia and total GPTS score. In order to provide indication as to whether this difference is significant, exploratory statistical analyses were conducted. Tests of homogeneity were first conducted to aid the selection of appropriate tests.

Table 9.

Means (M), standard deviations (SD), and numbers (n) per group for GPTS scores

Paranoia Type	Group	M	SD	*n*
Social reference	SAp	41.59	17.01	17
	SAn	34.69	11.87	32
Persecutory ideation	SAp	37.88	21.69	17
	SAn	26.03	11.95	32
Total GPTS score	SAp	79.47	37.18	17
	SAn	60.72	20.86	32

3.4.4.2 Testing normality of distribution.

Scores for GPTSA (social reference), GPTSB (persecutory thoughts) and total GPTS scores were tested using the Kolmogorov-Smirnov test for normality of distribution (see Appendix O for the results table). This test indicated that GPTSA and total GPTS scores were normally distributed in both groups, but that the data for GPTSB had skewed distribution in both groups. Therefore, independent-samples t-tests were

used to compare the groups on GPTSA and GPTS total scores, while the Mann-Whitney U test was used to compare the groups on GPTSB scores.

3.4.4.3 Testing for significant differences between groups on social ideas of reference.

An independent-samples t-test was conducted to check for significant differences between groups on GPTSA scores. Levene's Test for Equality of Variance was non-significant, indicating that group variances were approximately equal. Therefore, significance values were taken from the 'equal variances assumed' row. The t-test indicated that there were significant differences between the groups, the SAp group scoring significantly higher (see Table 10 below).

Table 10.

Kolmogorov-Smirnov test results (D) Levene's test score (F), group means (M) and standard deviations (SD), independent t-test score (t) and 1-tailed significance level (p) for between-groups comparison on social ideas of reference score and total GPTS score.

Variable	Group	*D*	*F*	*M*	SD	*t*	*p*
Ideas of social	SAp	0.08	3.41	41.59	17.04	1.66[a]	0.05*
reference	SAn	0.11		34.69	11.87		
Total GPTS score	SAp	0.17	7.40	79.47	37.18	1.93[b]	0.04*
	SAn	0.13		60.72	20.86		

*Significant at $p \leq 0.05$ (1-tailed).

3.4.4.4 Testing for significant differences between groups for persecutory ideation.

A Mann-Whitney U test to identify significant differences between the groups for GPTSB scores was conducted (see Table 11 below). The Exact significance was used as the groups were unequal sizes (17 in the SAp group, 32 in the SAn group). This indicated that there were significant differences between the groups, the SAp group scoring significantly higher.

Table 11.

Kolmogorov-Smirnov (D) value, median, range (minimum-maximum), Mann-Whitney U statistic (U), and significance level (p) for significant difference between groups on persecutory ideation (GPTSB scores).

Group	***D***	**Median**	**Range (min-max)**	***U***	***p***
SAp	0.22	28.00	64(16-80)	176.50	0.01[a]*
SAn	0.23	22.00	40(16-56)		

Note: [a]=Exact significance (1-tailed)

*$p \leq 0.05$

3.4.4.5 Testing for significant differences between groups on total GPTS scores.

An independent-samples t-test was conducted to check for significant differences between groups on total GPTS scores. Levene's Test for Equality of Variances indicated that group variances were not equal; therefore, significance levels were taken from the 'equal variances not assumed' row. The t-test indicated that there were significant differences between groups, the SAp group scoring significantly higher (see Table 10 above).

3.4.4.6 Conclusions for Hypothesis 4.

In support of the hypothesis, the SAp group scored significantly higher than the SAn group for ideas of social reference, paranoid ideation and total GPTS score, indicating that there were significantly higher levels of paranoia in the SAp group. However, the SAp group also scored quite highly on the GPTS, indicating that levels of paranoia in this group were also quite high.

3.5 Secondary Analyses : Qualitative template analysis of the imagery interview.

Due to the semi-structured nature of the interview, a number of additional themes were identified to make up full templates for each group. Qualitative analysis of all the interviews produced the following final templates (see Figure 9 below). Appendix P shows the templates with descriptions for each theme with examples of quotes and number of participants who identified with each theme. The templates are shown side by side, so the experiences described by the participants in each group can be compared.

3.5.1 Construction of the templates.

Themes can be categorised according to the level they are given in the template; for example, 'negative evaluation' is a first level theme, which has within it a number of second (eg. 'fear of negative evaluation from others'), third (eg. 'specific anxiety because of mental health symptoms') and fourth (eg. 'seeing an image or impression of themselves as they fear others see them') level sub-themes. The quotes used to qualify identification with each theme were checked independently by two Assistant Psychologists in the NEIS, and can be seen in Appendix M (SAn group) and Appendix N (SAp group).

Figure 9: Final template for SAn group

1. Negative evaluation of the participant
    - 1.1 Fear of negative evaluation from others
        - 1.1.1 General fear of judgement or ridicule from others
        - 1.1.2 Fear of being judged as inferior
        - 1.1.3 Fear of being judged as boring
        - 1.1.4 Fear of being judged as stupid, unknowledgeable or foolish
        - 1.1.5 Fear of being judged as irritating
        - 1.1.6 Fear of being judged as a failure
        - 1.1.7 Fear of being judged as unlikeable or a bad person
        - 1.1.8 Fear of being judged as "weird" or abnormal or different
        - 1.1.9 Fear of being judged as dangerous
        - 1.1.10 Specific anxiety about judgement because of mental health symptoms
        - 1.1.11 Specific anxiety about breaking social norms/ rules/ boundaries
        - 1.1.12 Specific anxiety about appearance
        - 1.1.13 Seeing an image/ impression of being negatively evaluated by others
            - 1.1.13.1 Image of themselves as they fear others see them, which is distorted – eg. emphasised flaws/ behaviour (others noticing these)
            - 1.1.13.2 Image of being ridiculed or laughed at
            - 1.1.13.3 Image/ impression that everyone is staring at them

Figure 10: Final template for SAp group

1. Negative evaluation of the participant
    - 1.1 Fear of negative evaluation from others
        - 1.1.1 General fear of judgement or ridicule from others
        - 1.1.2 Fear of being judged as inferior
        - 1.1.3 Fear of being judged as "weird" or abnormal or different
        - 1.1.4 Fear of being thought of as dangerous
        - 1.1.5 Specific anxiety about judgement because of mental health symptoms
        - 1.1.6 Specific anxiety about breaking social norms/ rules/ boundaries
        - 1.1.7 Specific anxiety about appearance
        - 1.1.8 Seeing an image/ impression of being negatively evaluated by others
            - 1.1.8.1 Image of themselves as they fear others see them, which is distorted – eg. emphasised flaws/ behaviour (others noticing these)
            - 1.1.8.2 Image of being ridiculed or laughed at
            - 1.1.8.3 Image/ impression that everyone is staring at them

or knows them or is talking about them	or knows them or is talking about them
1.2 Negative self-evaluation	1.2 Negative self-evaluation
1.2.1 Negative self-comments	1.2.1 Negative self-comments
1.2.2 Comparing self to others (negatively)	1.2.2 Comparing self to others (negatively)
1.2.3 Inability to live up to own expectations	
1.2.4 Thoughts or beliefs that they will "mess up" in the situation	1.2.3 Thoughts or beliefs that they will "mess up" in the situation
1.2.5 Judgements about own mental health	1.2.4 Judgements about own mental health
1.3 Fear of consequences of negative evaluation	1.3 Fear of consequences of negative evaluation
1.3.1 Loss of social status or social isolation (feeling separated from others or invisible/ unimportant)	1.3.1 Loss of social status or social isolation (feeling separated from others or invisible/ unimportant)
1.3.2Image of feared outcome	1.3.2Image or thoughts about feared situation/ outcome
1.3.2.1 Image or thoughts of what might happen in the immediate future	1.3.2.1 Image or thoughts of what might happen in the immediate future
1.3.2.2 Image or thoughts indicative of fear of actual or physical threat	1.3.2.2 Image or thoughts indicative of fear of actual or physical threat
1.3.2.2.1 Specific fear of physical threat to self	1.3.2.2.1 Specific fear of physical threat to self
1.3.2.2.2 Image indicating fear of vulnerability to physical threat	1.3.2.2.2 Images or thoughts indicating fear of vulnerability to physical threat
	1.3.2.2.3 Image indicating fear of causing physical harm to others
1.3.2.3 Loss of something material (eg. money)	
1.3.3Threat perceived as being most strong from certain types of people	1.3.3Threat perceived as being most strong from certain types of people

1.3.3.1 Crowds 1.3.3.2 Strangers 1.3.3.3 Assessors/ authority figures/ people thought to be in a position to judge/ superiors 1.3.3.4 Teenagers or young people 1.3.3.5 People judged to be likely to cause conflict 1.3.3.6 When the exact nature of the threat is unknown/ people give "mixed messages"	1.3.3.1 Crowds 1.3.3.2 Strangers 1.3.3.3 People likely to judge (peers) 1.3.3.4 Younger people 1.3.3.5 Men
2. Negative evaluation of others 2.1 Others are evil 2.2 Others are untrustworthy 2.3 Others are judgemental 2.4 Others are cruel 2.5 Others are selfish (self-preserving) 2.6 Others are dangerous/ frightening	2. Negative evaluation of others 2.1 Others are nasty/ bad/ evil 2.2 Others are untrustworthy 2.3 Others are judgemental 2.4 Others are out to get you/ cruel 2.5 Others are selfish (self-preservation) 2.6 Others are aggressive/ violent/ dangerous 2.7 Others are intimidating 2.8 Others have ulterior motives 2.9 Others are uncaring 2.10 Others are racist 2.11 Derogatory thoughts about others
3. Other images 3.1 Of their surroundings, which are distorted	3. Other images 3.1 Of their surroundings, which are distorted

3.2 Non-distorted image	3.2 Non-distorted image
4. Images/ impressions in other sensory modalities	4. Images/ impressions in other sensory modalities
4.1 Sound	4.1 Sound
4.2 Smell	4.2 Smell
4.3 Feeling physically different	4.3 Feeling physically different
5. Aware that image/ impression may not be accurate	5. Aware that image/ impression may not be accurate
6. Linking image to past memory	6. Linking image to past memory
7. Emotions / feelings	7. Emotions / feelings
7.1 Feeling out of control or overwhelmed	7.1 Feeling out of control or overwhelmed
7.2 Feeling trapped or frustrated by or in the image	7.2 Feeling trapped or frustrated by or in the image
7.3 Feeling embarrassed or stupid	7.3 Feeling embarrassed or stupid
7.4 Feeling strong emotions in the image	7.4 Feeling strong emotions in the image
7.5 Image is perceived as dependant on type of anxiety symptoms	
8. Safety/ coping strategies	8. Safety/ coping strategies
8.1 Choosing to see an image (positive self-image to aim for or using imagination to rehearse for upcoming social situation)	8.1 Choosing to see an image (positive self-image to aim for or using imagination to rehearse for upcoming social situation)
8.2 Image of escape from the situation	
8.3 Trying to appear “invisible”	
8.4 Altering/ monitoring behaviour	8.2 Altering/ monitoring behaviour
8.5 Trying to hide anxiety symptoms from others	8.3 Trying to hide anxiety symptoms from others

3.5.2 Conclusions for template analysis of the semi-structured interview.

As can be seen, both templates have a large number of similarities, indicating that the experiences of people with social anxiety and psychosis and people with social anxiety without psychosis when in anxiety-provoking situations are comparable. Consistent with previous research into social anxiety, both groups have in their templates fear of negative evaluation from others, although the SAn group have a number of additional subthemes (fear of being judged as boring, stupid, unknowledgeable, foolish, irritating, a failure, unlikeable or a bad person). Members of both groups were anxious about being judged as inferior, different or dangerous, and both feared judgement because of mental health symptoms (be they symptoms of anxiety or psychosis). Also consistent with previous research, both groups had a large number of participants who were anxious about breaking social rules or norms, and about their appearance. Both groups also had members who experienced images or impressions in a range of sensory modalities, as discussed above.

Both groups had quotes analysed as indicative of negative self-evaluation, with the SAn group having an additional subtheme, ‘Inability to live up to own expectations’. Both groups’ templates have the theme ‘Fear of the consequences of negative evaluation’, with the subthemes ‘Loss of social status or social isolation’ and ‘Image or thoughts of feared situation/ outcome’. Within this subtheme, both groups have the further subthemes, ‘Image or thoughts of what might happen in the immediate future’ and ‘Image or thoughts indicative of fear of actual or physical threat’, with the further subthemes ‘Specific fear of physical threat to self’ and ‘Image indicating fear of vulnerability to physical threat’. Only the SAp group experienced images of physical threat, in the form of seeing violence towards themselves. The SAp group also had the additional subtheme, ‘Fear of causing physical harm to others’ which was not present in the SAn group. The SAn group had the additional subtheme of ‘Loss of something material (eg. money)’.

Both groups had participants with specific anxieties around crowds, strangers, people thought to be in a position to judge and young people. The SAp group also had a specific fear of men as a subtheme. Both groups also made comments indicative of making negative evaluations of others, with the subthemes, 'Others are nasty/ bad/ evil', 'Others are untrustworthy', 'Others are judgemental', 'Others are out to get you/ cruel', 'Others are selfish (self-preserving)', and 'Others are aggressive/ violent/ dangerous'. The SAp group also had the subthemes, 'Others are intimidating', 'Others have ulterior motives', 'Others are uncaring', 'Others are racist' and 'Derogatory thoughts about others'. Both groups had the themes 'Other images' (images that did not appear to fit within any of the other image themes) and 'Images/ impressions in other sensory modalities'. A number of participants in both groups also indicated that they were aware that their images or impressions were not completely accurate, and both groups had participants who linked their images to past memories. Both groups also had themes of strong emotions in their images: 'Feeling out of control or overwhelmed', 'Feeling trapped or frustrated by or in the image', 'Feeling embarrassed or stupid', and 'Feeling other strong emotions in the image'. The SAn group also had the subtheme, 'Image is perceived as dependant on type of anxiety symptoms'

The final theme, shared by both groups, was 'Safety/ coping strategies'. Subthemes shared by both groups are, 'Choosing to see an image (positive self-image to aim for or using imagination to rehearse for upcoming social situation)', 'Altering/ monitoring behaviour' and 'Trying to hide anxiety symptoms from others'. The SAn group also had the themes, 'Image of escape from the situation' and 'Trying to appear "invisible"'. These similarities and differences will be discussed further in the Discussion section.

3.6 Summary of Results Section

There were no differences between the groups for number of people who saw an image when anxious in social situations, or for the perspective of the image. Template analysis

indicated that both groups had similar themes in their templates, such as fear of negative evaluation from others, negative evaluation of the self and seeing distorted images of themselves or their surroundings. However, the SAn group had a number of additional themes concerned with fearing negative evaluation from others, and also scored higher on the Brief Fear of Negative Evaluation Scale. The SAp group had additional themes of seeing images of physical aggression, either to themselves or from themselves to others, and were more likely to have negative beliefs about others and have paranoid thoughts than the SAn group. There were no significant differences between the groups on the Social Cognitions Questionnaire, for positive beliefs about others or for negative beliefs about the self.

4 Discussion

4.1 Aims of the Study

This study aimed to explore the nature of social anxiety when it is co-morbid with psychosis by comparing it to social anxiety as a primary diagnosis. Following a review of the existing literature, it was decided to focus this exploration on the key factors of cognitive models for social anxiety (Clark & Wells, 1995; Rapee and Heimberg, 1997; Hoffman, 2007): thoughts and beliefs related to social anxiety, and self-focussed attention in the form of mental images. Due to the similarities between social anxiety and the psychotic symptom paranoia, it was also an aim to explore the role of paranoia in both groups; specifically, whether paranoia is more strongly implicated in the development of social anxiety with psychosis than in social anxiety without psychosis. The overall aim was to see whether existing models of social anxiety could also be applied to social anxiety with psychosis. If they cannot, this study aimed to consider the factors that might be pertinent for a potential new model, and the clinical implications of this.

4.2 Findings from the Data Analysis

While the data analysis must be interpreted cautiously due to the small sample size, there were nonetheless some interesting results. The findings relevant to each hypothesis will now be considered.

4.2.1 Hypothesis 1: Participants with social anxiety will experience imagery that is concordant with Clark and Wells' (1995) Cognitive Model of Social Phobia (ie. imagery will be an exaggerated embarrassed version of themselves seen from an observer perspective), whereas participants with social anxiety and psychosis will experience imagery of others as threatening and judging, predominantly from a field perspective.

As the additional themes identified in the templates for the imagery interview help inform both the nature of the images and the participants' beliefs and interpretations of their images and social situations, both the images and the additional themes will be discussed in this section.

4.2.1.1 Images/ impressions.

4.2.1.1.1 Image perspective.

Both groups had themes of seeing images, either of themselves, of others or of their surroundings/ the situation. Pearson's Chi-square analysis indicated that there were no significant differences between groups for the percentage of participants who experienced an image or for participant-rated image perspective (field, observer or mixture of both). Just over half of the SAn group (52%) reported an observer-perspective image. This is in keeping with previous research (eg. Hackmann et al., 1998; Coles et al., 2001), which indicates that images experienced by people with social anxiety while in social situations are likely to be experienced as observer perspective by half or more of the group. This figure was slightly less for the SAp group (43%); however, this was still the perspective for the majority of images in the group (39% were field perspective and 17% switched between perspectives equally).

4.2.1.1.2 Image themes.

Both groups had participants who saw a distorted image of themselves as they fear others see them, images of being ridiculed or laughed at by others, or an image or impression that everyone is staring at them or knows them or is talking about them. This self-focussed attention, which also assumes that others are focussed on the self, is in keeping with previous research into imagery experienced by individuals with social anxiety (eg. Hackmann et al., 1998; Wells at al., 1998).

In addition, both groups had participants who described having images of what might happen in the immediate future (ie. what they were afraid will happen). Both groups had images implying fear of physical threat, although the nature of this was different between the groups: the SAp group had participants with clear images of either being assaulted or assaulting others, whereas the SAn group had images that might imply fear of vulnerability to physical threat (cowering in the corner; looking "weak" and unable to defend himself) or worries about being assaulted, but not specific images of assault. In addition, a total of 11 SAp participants were analysed as having images or thoughts indicative of fear of physical threat, compared with only three SAn participants. Statistical analyses were not used to look for differences in numbers of

people in each group identifying with each image theme, as this was qualitative data (as opposed to numerical data). However, this distinction in numbers for physical threat themes seems worth mentioning as, in combination with the more graphic and direct threat in the SAp group's images, this could implicate a greater role for fear of others in the SAp group (discussed further in the 'Full template analysis' section below).

Both groups also have 'Images of their surroundings, which are distorted' present in their templates. In the SAn group, these images predominantly consisted of either being separated from others (eg. by an invisible wall), the surroundings "closing in" on the participants, of others as "blurred" or spinning round the participant, or of others staring at or turning away from the participant. There are also often changes in colour or brightness in the images. The SAp group described similar images, although there was only one example of being ignored or unnoticed by the other people in the image. This possibly also indicates that people in the SAp group were more likely to fear being targeted by others than being ignored.

Participants of both groups described images that they did not believe were distorted. All were self-images, and still appeared to be a way of monitoring themselves to check how others would perceive them. However, as opposed to the theme "Choosing to see an image", these images were still considered by the participants to be involuntary. In keeping with Hackmann and colleagues' (1998) research, both groups also had participants who experienced aural, olfactory and tactile images. These therefore appear to be a common element to social anxiety, irrespective of co-morbidity. The final image theme, 'Choosing to see an image', is included under the theme "Safety behaviours" in the full templates. This type of image is qualitatively different from others, as they are a sign of the participant controlling the image and using it to decrease their anxiety, rather than it being perceived as intrusive and anxiety-provoking. This is perhaps relevant to the work done by Wild et al., (2008) into rescripting associated memories, providing support for this type of treatment at reducing social anxiety.

Overall, both groups reported similar types of images, although those of the SAp group could be considered to contain more examples of looking for signs of external threat from others than the SAn group.

4.2.1.1.3 Full template analysis.

There are marked similarities between the templates of the two groups. However, there are a number of differences which may indicate that the experience of social anxiety for an individual with psychosis may sometimes be incomparable with the experience of an individual without psychosis. This distinction is important, as it indicates that current approaches to understanding and treating social anxiety might be applicable for some individuals with psychosis but not for others.

Consistent with previous research into social anxiety, both groups had in their templates fear of negative evaluation from others, although the SAn group had a number of additional subthemes (fear of being judged as boring, stupid, unknowledgeable, foolish, irritating, a failure, unlikeable or a bad person). This indicates that the anxieties of individuals with psychosis when in social situations are predominantly that others will consider them inferior, different or weird, or dangerous. While individuals in the SAn group also had these anxieties, a large number were concerned with a wider range of potential negative evaluations, perhaps more relevant to a wider range of social interactions (ie. a situation where one might be judged as stupid or unknowledgeable might be more evaluative, such as at work or university). A possible explanation for this is that 62.5% of the SAn group were university staff or students, and as such were considerably more likely to be in such evaluative situations. Another explanation is the stigma associated with psychosis, which could understandably lead individuals with psychosis to expect judgement as dangerous or different from others. Three SAp participants made comments indicating that they made negative judgements about their own mental health, which perhaps supports this explanation. Also consistent with previous research, both groups had a large number of participants who were anxious about breaking social rules or norms, and about their appearance, for fear of judgement from others.

In addition to fearing negative judgement from others, both groups had quotes analysed as indicative of negative self-evaluation, with the SAn group having an

additional subtheme, 'Inability to live up to own expectations'. This may also be explained by the high percentage of participants from a university environment, who were being regularly evaluated and needed to perform well to pass their course. This negative self-evaluation in both groups indicates that, for many individuals with social anxiety, their fear of negative evaluation from others may be based on a belief that this negative evaluation might be accurate.

Both groups' templates have the theme 'Fear of the consequences of negative evaluation', with the subtheme 'Loss of social status or social isolation'. For the majority of participants in both groups, the quotes analysed as fitting with this theme were descriptions of feeling isolated or separated from others. A number of participants in both groups also feared rejection by significant others (eg. friends or colleagues). Both groups had examples of feeling invisible or unimportant to others. This is in keeping with the existing research into social anxiety, which indicates that the fear of being excluded from the safety of a desired group is a key element in this condition.

As discussed above, both templates had the theme 'Image or thoughts indicative of fear of actual or physical threat', with the further subthemes 'Specific fear of physical threat to self' and 'Image indicating fear of vulnerability to physical threat'. None of the SAn group had images analysed as fitting with a specific fear of physical threat to the self; however, one participant had thoughts that he was anxious about assault, based on previous experience. In contrast, six SAp participants experienced vivid images of physical assault. The SAp group also had the additional subtheme, 'Fear of causing physical harm to others' which was not present in the SAn group. This perhaps also links with the theme 'Judgements about own mental health', as one of the two participants who were analysed as fitting with 'Fear of causing physical harm to others' was also analysed as fitting with 'Judgements about own mental health'. The other participant whose quotes contributed to 'Fear of causing physical harm to others' states that the images do not fit with his self-perception, stating that he is not a violent person. Both participants state that these images are very distressing. These images are stark contrasts to anything described by the SAn group. Such thoughts might be considered

similar to command hallucinations or obsessive thoughts and might therefore be more appropriately treated using techniques aimed at targeting beliefs around the power of voices or thought-action fusion (see below for discussion of treatment implications).

A further difference between group templates was that the SAn template included the subtheme "Fear of loss of something material', such as money or a job, whereas this was not included in the SAp template. This again indicates that the individuals in the SAp group were likely to have more physical fears than the SAn group, and the SAn group were more likely to have fears of loss of social status.

Both groups had participants with specific anxieties around crowds, strangers, people thought to be in a position to judge and young people. The SAp group also had a specific fear of men as a subtheme. Both groups made comments indicative of making negative evaluations of others, with the subthemes, 'Others are nasty/ bad/ evil', 'Others are untrustworthy', 'Others are judgemental', 'Others are out to get you/ cruel', 'Others are selfish (self-preserving)', and 'Others are aggressive/ violent/ dangerous'. The SAp group also had the subthemes, 'Others are intimidating', 'Others have ulterior motives', 'Others are uncaring', 'Others are racist' and 'Derogatory thoughts about others'. These additional subthemes perhaps indicate that the SAp group are more likely to make negative evaluations of others; however, the amount of negative-other evaluation in the SAn group was also high. The results of Hypotheses 2 and 4(discussed below) support this indication: although the SAp group scored higher on average for negative-other evaluation and paranoia, scores in the SAn group were also quite high.

Consistent with Hackmann and colleagues' (1998) study, a number of participants in both groups indicated that they were aware that their images or impressions were not completely accurate. Both groups also had participants who linked their images to past memories. Both these themes have positive implications for therapy, as acknowledging the inaccuracy will make it easier to challenge the power of the image

and recognising the associated memory will mean that memory rescripting may be possible.

Both groups also had themes of strong emotions in their images: ‘Feeling out of control or overwhelmed’, ‘Feeling trapped or frustrated by or in the image’, ‘Feeling embarrassed or stupid’, and ‘Feeling other strong emotions in the image’. The SAn group also had the subtheme, ‘Image is perceived as dependant on type of anxiety symptoms’, with one participant stating that she would only get an image if she felt physically detached from the anxiety she was experiencing (ie. not feeling physical symptoms of anxiety). The image was therefore viewed as a type of dissociation, which could be rectified by the participant acknowledging that she was anxious. This could also have implications for treatment if this experience was found to be common in social anxiety, as it would suggest that psycho-education about anxiety symptoms and identification of threat appraisals might be very effective at reducing social anxiety and associated distressing mental images.

The final theme, shared by both groups, was ‘Safety/ coping strategies’. Subthemes shared by both groups were, ‘Choosing to see an image (positive self-image to aim for or using imagination to rehearse for upcoming social situation)’, ‘Altering/ monitoring behaviour’ and ‘Trying to hide anxiety symptoms from others’. The SAn group also had the themes, ‘Image of escape from the situation’ and ‘Trying to appear “invisible”’. These strategies provide support for the Clark and Wells (1995) Cognitive model of social anxiety, which states that safety behaviours are used by individuals with social anxiety and that these can maintain the cycle of anxiety. All these behaviours keep the attention self-focussed, rather than looking for evidence that others are responding well, or prevent the testing of threat appraisals (eg. that showing others you are anxious will result in others using this against you).

4.2.1.2 Conclusions for Hypothesis 1.

In conclusion, there are many similarities in the templates of the groups. Both groups experienced a range of images, including observer-perspective distorted self-images, distorted images of their surroundings, images of others' reactions to them, images of the feared outcome of the situation and images in other sensory modalities. Both groups also had participants who chose to see an image to reduce their anxiety. Participants in both groups made negative judgements about themselves, their performances in social situations and their mental health symptoms. There were also high rates of negative judgements of others in both groups, which is an area that has not featured significantly in current models of social anxiety. While it could be taken as implicit in Clark and Wells' (1995) model that fearing negative judgement from others indicates a belief that others are judgemental and threatening in some way, the usual emphasis of CBT for social anxiety (based on Clark and Wells' model) is on the negative self-beliefs that are perceived as being the cause of the negative judgement. This therefore has potential implications for the treatment of social anxiety with psychosis, and also for the treatment of social anxiety in general if negative judgement of others is found to be commonly present in those with social anxiety.

There are also some important differences between the groups. The SAp group had the theme 'Fear of causing physical harm to others', which is perhaps indicative of intrusive thoughts relating to psychosis. This suggests that some individuals with social anxiety and psychosis might have additional anxieties when in social situations connected with their beliefs about psychosis (ie. that psychosis means they are dangerous, unable to control themselves). Additionally, while there appears to be more emphasis in the SAp template on physical threat than in the SAn template, there seems to be more emphasis in the SAn template on loss of status (eg. loss of a job, loss of money) than in the SAp template. This perhaps reflects the life experiences and situations of the participants (ie. more people in the SAn group were likely to have a job than in the SAp group, based on the recruitment from among university staff). However, as the individuals in the SAp group who feared physical assault to themselves or others predominantly stated that such

experiences had never occurred to them, it seems likely that this anxiety is more connected with symptoms of psychosis.

The presence of the theme 'Specific anxiety about judgement because of mental health symptoms' indicates that the model proposed by Birchwood et al. (2006), positing that the key element to social anxiety in psychosis is shame from being in a stigmatised group, may be applicable to some of the SAp group. However, the number of themes in the SAp group concerning negative evaluation and fear of others indicates that there is also likely to be a key role for paranoia and negative beliefs about others for many of the people with social anxiety and psychosis in this sample, which is not included in Birchwood and colleagues' model. This is further supported by the results of Hypothesis 4 (discussed below), which indicate high rates of paranoid ideation in the SAp group. 'Negative evaluation of others' was also a theme of the SAn template, indicating that the incorporation of this may be considered in future revisions of models for social anxiety.

These results indicate that the hypothesis that participants with social anxiety will experience imagery that is concordant with Clark and Wells' (1995) Cognitive Model of Social Phobia (ie. imagery will be an exaggerated embarrassed version of themselves seen from an observer perspective), whilst participants with social anxiety and psychosis will experience imagery of others as threatening and judging, predominantly from a field perspective, is not supported. Some members of the SAn group did experience images that were concordant with Clark and Wells' model, other members also experienced images of others as threatening from a field perspective. Likewise, the SAp group also experienced a mixture of images from both perspectives. Therefore, in spite of a number of differences in the templates of the two groups, the groups were predominantly similar in their range of images and image perspectives.

4.2.2 Hypothesis 2: The social anxiety with psychosis group will score significantly higher on the negative-self and negative-other dimensions of the Brief Core Schema Scales (BCSS) than the social anxiety (no psychosis) group.

In support of the hypothesis, the SAp group scored higher for negative-other schema than the SAn group. However, in contrast to the hypothesis, there was no significant difference

between the groups for negative-self schema, both groups scoring quite highly. There were also no significant differences between the groups for scores on positive-self and other schemas.

The high levels of negative-self schemas in the SAn group could have been predicted based on the literature (eg. Coles et al., 2001; Wells and Papageorgiou, 1999), which indicates that negative self-beliefs in people with social anxiety may be situation-specific to anxiety-provoking social situations; especially as the present study's participants had been discussing anxiety-provoking social situations shortly before completing this questionnaire. Additionally, triangulating these results with those of the template analysis indicated that both groups had themes of negative self-evaluation. Therefore, it appears from this study and previous research that both psychosis (eg. Fowler et al., 2006) and social anxiety (eg. Coles et al., 2001; Wells and Papageorgiou, 1999) are associated with negative self-evaluation. This has implications for the treatment of both conditions (discussed below), and may contribute to their high co-morbidity rate (ie. negative self-evaluation may be a risk-factor for both).

The significantly-higher rates of negative-other schemas in the SAp group could also be predicted from previous research (Fowler et al., 2006), and from the results of Hypothesis 4 (discussed below) indicating significantly higher levels of paranoia in this group. These results can also be triangulated with the template analysis, which, interestingly, shows that both groups had themes of negative evaluation of others. However, the SAp group had the additional theme of fearing physical assault from others, indicating that their negative evaluations of others may be more extreme. This could contribute to the higher mean score for negative-other schemas in the SAp group.

4.2.3 Hypothesis 3: The SAn group will score significantly higher than the SAp group on measures of typical socially phobic cognitions and fear of negative evaluation from others.

Contrary to the hypothesis, there was no significant difference for SCQ scores between groups. However, in support of the hypothesis, there was a significant difference between groups on FNEB scores (with the SAn group scoring significantly higher than the SAp group). While these results can also only be considered tentatively due to the small sample and differences in

group sizes (18 compared with 32 in the SAn group), a possible explanation for the results can still be considered: while fear of negative evaluation from others was quite high in the SAp group, perhaps higher levels of negative beliefs about others (see Hypothesis 2) made this group less concerned about the opinions of others than the SAn group (who were more likely to consider others to be superior to them in some way, see Hypothesis 1). The SCQ contains some questions about fear of negative evaluation from others, but also has questions about anxieties concerning the impact of anxiety on functioning. These anxieties may have been more likely to have been shared by both groups.

4.2.4 Hypothesis 4: The social anxiety with psychosis group will score significantly higher for paranoia than the social anxiety without psychosis group.

In support of the hypothesis, the SAp group scored significantly higher than the SAn group for ideas of social reference, paranoid ideation and total GPTS scores. As paranoia (particularly paranoid ideation) is a psychotic symptom, this is not surprising. However, what is perhaps surprising is that the SAn group also had quite high mean scores for paranoia, with ten participants scoring at or above the clinical cut-off of 68.

Two issues are raised by these results: firstly, that paranoia may be implicated as playing a significant role in social anxiety in psychosis; secondly, that there may also be a similar role for paranoia in general social anxiety. This could be subsumed into the factors that influence threat appraisal in the cognitive models for social phobia. However, the significantly higher levels of paranoia in the SAp group indicate that current models of social anxiety co-morbid with psychosis (ie. Birchwood et al., 2006) might be revised to include negative evaluation of others and paranoia, to take account of these findings. This will be discussed in more detail in the following sections, following consideration of the study's strengths and weaknesses.

4.3 Strengths and Weaknesses of Study Design

When considering the results of the study, it is important to establish the strengths and weaknesses that may impact on the reliability and validity of the data.

4.3.1 Weaknesses of the study.

There were weaknesses in the study that must be considered when evaluating the results.

4.3.1.1 Participant recruitment difficulties.

Several strategies were employed in order to maximise the potential participant pool. However, the final number of participants recruited was significantly below the number indicated by the power calculation as necessary for appropriately-powered statistical analysis (61 as opposed to 102). In addition to regularly contacting the regional IAPT and Link Worker teams, attending their meetings, and asking the teams to send study invitation letters to clients on their waiting lists who appeared suitable, a number of methods were employed to increase participant numbers: for the SAn group, increasing the age range from 16 to 35 years (to match the age range of the Early Intervention client criteria) to 16 to 65 years (to match the age range of IAPT and Link Worker clients), and expanding recruitment to university staff and students; for the SAp group, expanding recruitment to the other Early Intervention Services (EISs) in the region.

Despite these efforts, recruitment remained extremely difficult. Feedback from the teams indicated that a large number of clients were invited to take part in the study, but only a small number consented. Considering the nature of social anxiety (especially shame and anxiety around strangers), as well as psychosis (particularly paranoia), it is perhaps not surprising that the majority of people invited chose not to meet a stranger and talk about their difficulties. Previous studies of social anxiety and psychosis (eg. Michail & Birchwood, 2009) also reported similar difficulties recruiting an appropriately-powered sample size. An additional recruitment difficulty was that fewer newly-referred clients of the EIS than anticipated reported experiencing social anxiety, significantly reducing the number of potential participants for the SAp group.

A further difficulty was that a number of the SAp participants chose not to complete all the study measures, meaning that SAp sample size for some measures was as low as 17. Consequently, the results of the statistical analysis must be taken tentatively.

4.3.1.2 Participants were not matched for age, gender, ethnicity, education level or social anxiety level.

As discussed above, the groups were originally intended to be age-matched. However, it was deemed more important to maximise the sample size to increase statistical power, meaning that the participants were not age-matched. It was also not thought possible to match the groups for gender splits, education level or ethnicity. Therefore, the SAp group was predominantly male while the SAn group was predominantly female, the SAp group had a mean number of years in education of 12.1, while the SAn group had a mean of 15.8 years in education, and the SAp group was entirely made up of participants who classified themselves as White British while the SAn group also included three British/ European Asians and one French national. In addition, the SAp group scored significantly higher on the SIAS than the SAn group ($t=2.90$, $p < .01$). This was perhaps partly a consequence of including people who were not receiving support from mental health services in the SAn group.

4.3.2 Strengths of the study.

This study is the first (to the author's knowledge) to specifically explore the factors that are used in CBT for social anxiety in a group of participants with social anxiety and psychosis. The prevalence and debilitating nature of this condition indicate that such research is both theoretically and clinically relevant, essential in providing insight into appropriate treatments for this client group. The theoretical and clinical implications of the study will now be discussed in more detail.

4.4 Relating the Results to the Existing Theory and Research

The results of this study supported the findings of previous research into social anxiety. The SAn group scored highly on measures of fear of negative evaluation from others, cognitions relating to social anxiety and negative self-beliefs. Quite a high proportion of the group (53%) also reported experiencing a distorted, observer-perspective self-image. This indicates that they are likely to be a representative sample of people with social anxiety, appropriate as a comparison group for social anxiety with psychosis.

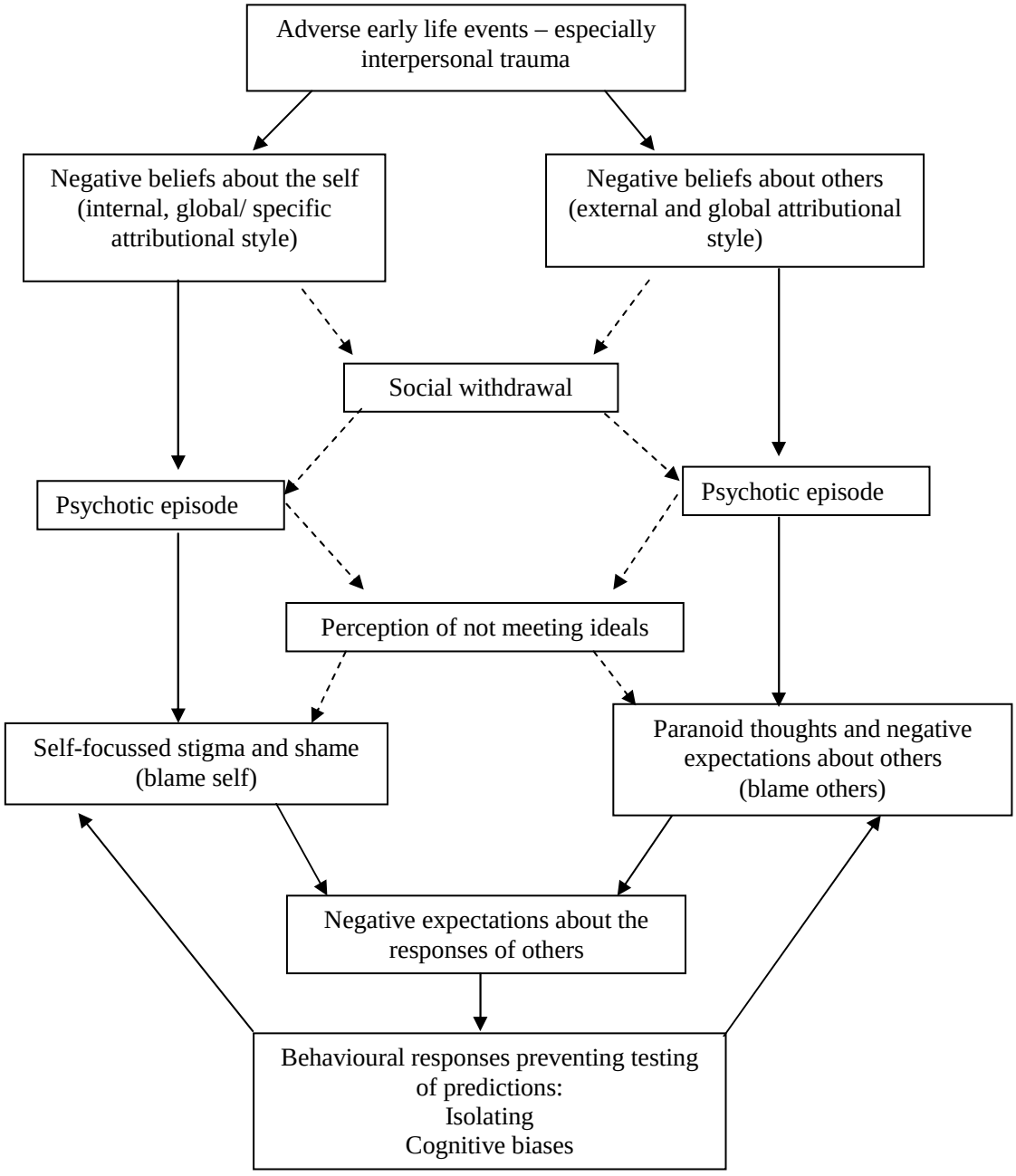
There were a number of areas in which there were no significant differences between the groups: frequency and intensity of belief in social anxiety-related cognitions, positive beliefs about the self and others, negative beliefs about the self, and experiencing distorted images of the self, others, their surroundings, or of their feared outcome of the situation. Both groups also described images in other sensory modalities. However, there were also areas in which the two groups differed. A number of participants in the SAp group had images of physical aggression, either to themselves or from themselves to others. There were also increased levels of paranoia and negative judgement of others in the SAp group, which perhaps contributed to the experiencing of such images. These seem to be the principal factors that distinguished the SAp group from the SAn group.

While paranoia and negative-other schemas may be considered to be implicit parts of Birchwood and colleagues' (2006) stigma model of social anxiety in schizophrenia (leading to the expectation that others will judge their diagnosis harshly), perhaps the implications of this study are that a revision of this model incorporating the role of paranoia may be warranted. Additionally, it should be noted that only nine of the SAp group elicited specific anxiety about judgement because of their mental health, and none added additional thoughts concerning this anxiety to the SCQ (which has a space for additional thoughts experienced during social anxiety).

This suggests that there may be at least two specific influences on social anxiety with psychosis: shame and stigma experienced from the self and feared from others, and paranoia related to negative expectations of others. Both these pathways may have as influences on their development traumatic past interpersonal experiences, and both are concerned with the reactions of others. However, the stigma pathway has a core of negative self-evaluation, whereas the paranoia pathway would seem to have at its core negative-other evaluation. This implicates a schema-based model for social anxiety in psychosis. A suggested model is shown below (Figure 10). The similarities between the groups, particularly the high levels of paranoia and negative evaluation of self and other themes in the SAn group, indicate that this model may also apply to general social anxiety.

Figure 11.

A two-path schema model of the development and maintenance of social anxiety in psychosis



This is a purely hypothetical model, based on the findings of this study. It would therefore require testing to establish if it is a) accurate and b) helpful in clinical application (see below). However, the model is also based in existing theory and research. It is influenced by cognitive behavioural theory, particularly the maintenance cycle which is similar to that of Clark

and Wells' (1995) model of social phobia. Bentall and colleagues' (1994, 2001) theory of attributional style in paranoia is also included: the 'negative other' path is characterised by making external and global attributions (others are to blame for everything, based on Bentall and colleagues' findings of attributional style from their sample), while the 'negative self' path is characterised by an internal attributional style that may be either global or specific (ie. just applicable to certain social situations). Bentall and colleagues' (2001) model of shifting attributional style has led to the exclusion of the "stable" attributional style being included in this model, meaning that the same individual may progress down both paths at different times, depending on situational factors (eg. present mood or situation). The two paths could also be perceived as similar to Trower and Chadwick's (1995) theory of "poor me/ bad me" paranoia, with the 'negative self' path being conceptually similar to "bad me" paranoia and the 'negative other' path being similar to "poor me" paranoia.

The clinical implications of this study and the model will now be discussed.

4.5 Clinical Implications

The similarities in the thematic templates of the two groups suggest that individuals with social anxiety and psychosis may often respond well to established methods of treatment for social anxiety. However, the additional themes and significant differences between the groups for negative-other evaluation and paranoia suggest that other individuals may require a different treatment approach. Additionally, the unexpectedly high levels of paranoia in the SAn group indicate that some individuals with non-comorbid social anxiety may also benefit from a more individualised approach to treatment.

The two-path schema model of psychosis implicates four potential approaches for treatment, the choice of which depends on the formulated path taken by the client. Firstly, CBT for social anxiety with specific focus on psycho-education and graded exposure to social situations, with behavioural experiments to test the expectation of negative responses from others. This approach is equally implicated for both paths. The second approach (also for both pathways) is schema therapy to challenge the underlying core beliefs. This would require the initial development of a strong, trusting therapeutic relationship, and may constitute a longer-term

therapy. Thirdly, for the 'negative others' pathway, CBT for psychosis is implicated to gently challenge the paranoid expectations, also following the development of a strong therapeutic relationship. In particular, thoughts or images of assaulting others might be considered similar to command hallucinations or obsessive thoughts. They might therefore be appropriately treated using techniques aimed at targeting beliefs around the power of voices or thought-action fusion. Lastly, compassion-focussed therapy (Gilbert, 2005) with an emphasis on normalisation may be particularly implicated with clients in the 'negative self' pathway, to decrease levels of shame and negative-self beliefs.

Clinical trials of different therapeutic approaches for social anxiety with psychosis are currently in progress (eg. the SARC study, trialling CBT for social anxiety with clients with early psychosis). Only through such trials will further insight be gained into both the accuracy and the clinical usefulness of the two-path schema model for therapeutic interventions. These implications will be discussed further in the next section.

4.6 The Future of the Research: Improvements and Extensions to the Study

This study could be improved in a number of ways. The sample size could be increased to at least the number needed for high (0.8) statistical power (102), with all participants completing all measures and the groups being equal sizes. Ideally, the groups would also be matched for age, gender, years in education, social anxiety level (although having a range of social anxiety scores could be useful in further analysis) and ethnicity, to maximise validity and generalisability. The measures used could be more directed towards exploring the factors that have been implicated in the study. Specifically, the interview exploring imagery and other themes related to social anxiety could be made more structured, based on the themes identified in the template. This would allow for both descriptions and quotes of images and themes, and a participant-rated yes/no response to each theme. The NEIS is planning to continue this research, implementing some of these suggestions.

4.7 Conclusion

This study has considered the current literature and research for both social anxiety and psychosis, and has also considered the emerging literature into social anxiety with psychosis.

It has concentrated on models for social anxiety, establishing similarities and common factors shared by the models and then using these as a basis to test whether social anxiety with psychosis is comparable to general social anxiety. The hypotheses tested were based on both the social anxiety and psychosis research literature, producing some interesting results. While the results must be interpreted tentatively due to the small sample sizes, indications were that findings from both groups were similar to those from previous research into social anxiety (seeing a distorted, observer-perspective self-image when in social situations, fearing negative evaluation from others and judging themselves harshly). However, participants in both groups also identified with negative evaluations and expectations of others. This was particularly strong in the SAp group, who scored significantly higher for negative-other schemas and paranoia than the SAn group, and had mental images of being physically assaulted by others. However, it is important to acknowledge that there were also quite high rates of negative-other evaluation and paranoia in the SAn group, suggesting that experiences of social anxiety with and without psychosis can be similar and possibly share similar developmental and maintaining factors.

These results were compared with the existing literature, particularly with Birchwood and colleagues' (2006) stigma model of social anxiety in schizophrenia. While some of the participants identified with negative views of their mental health and feared negative evaluation from others in regard to this, and could therefore be hypothesised to fit with the stigma model, a large proportion did not. This seems to suggest that there are at least two potential pathways for people with psychosis to develop social anxiety, one resulting from the formation of negative core beliefs about the self and the expectation that others also hold these beliefs, the other from the formation of negative beliefs about others and the expectations that if (and when) others judge you harshly the outcome will be threatening. A two-path schema model for the development and maintenance of social anxiety in psychosis was therefore developed, based on the results of this study and the existing literature. While this model requires testing to establish its accuracy and value, it does suggest four distinct therapeutic interventions that may be successful when working with people with social anxiety and psychosis, and possibly also with people with social anxiety without psychosis. The key element in such clinical work is to remain idiosyncratic, basing the

formulation and interventions on the client's specific experiences, beliefs and expectations. The two-path schema model tries to encourage such an idiosyncratic approach.

The overall conclusion to this study is that, while social anxiety with psychosis shared a number of similarities with general social anxiety in this sample, there were also a number of ways in which the groups appeared to differ. This suggests that a flexible and idiosyncratic approach to treatment may be required when working with this client group. Suggestions of therapeutic methods that may be effective, based on a newly-developed model, are made. However, further research into both the accuracy and clinical effectiveness of the model are required to establish if these conclusions and suggestions are supported. A continuation of this study is planned at the Early Intervention Service, which, in combination with additional research within the Social Anxiety Research Clinic, will provide further indications as to the nature of, and effective treatment for, social anxiety with psychosis.

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List of Appendices

Behavioural and Cognitive Psychotherapy, 2011, 00, 1–14
doi:10.1017/S1352465811000439

Using a Semi-Structured Interview to Explore Imagery Experienced During Social Anxiety for Clients with a Diagnosis of Psychosis: An Exploratory Study Conducted Within an Early Intervention for Psychosis Service

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Background: Social phobia frequently occurs as a comorbid condition, with high rates reported among people with psychosis. Little is known about the nature of social anxiety in this population or whether current psychological theories apply. **Aims:** This paper aims to develop and pilot a suitable measure to explore imagery experienced by participants with comorbid psychosis and social anxiety and to provide preliminary indications as to its nature. **Method:** A semi-structured interview exploring imagery was used with seven participants (adapted from Hackmann, Surawy and Clark, 1998) and the results were analysed using qualitative template analysis. **Results:** Initial indications from this sample suggest that some participants experience typical social anxiety images, as identified by Hackmann et al. (1998). However, some experience images that appear more threatening, and may be related to residual psychotic paranoia. Image perspective was also explored: typical social anxiety images tended to be seen from an observer perspective, while those that may have been more related to psychosis tended to be seen from a field perspective. **Conclusions:** This exploratory study has facilitated the careful adaptation and development of an imagery interview for use in this population and has suggested areas for further research and raised questions around clinical implications.

Keywords: Social anxiety, social anxiety disorder, social phobia, psychosis, schizophrenia, early intervention, CBT.

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Introduction

Clark and Wells' Cognitive Model of Social Phobia (1995) is probably the best known social phobia model and provides the theoretical basis for cognitive behavioural therapy (CBT) for this condition. There is a body of evidence in support of this model since its creation in 1995, both from research studies (e.g. Wells, 2001) and from CBT for social phobia (e.g. Wells and McMillan, 2004).

Clark and Wells (1995) posit that the ". . .core of social phobia appears to be a strong desire to convey a particularly favourable impression of oneself to others and marked insecurity about ones ability to do so" (p. 69). Their Cognitive Model of Social Phobia proposes that when those with social phobia become concerned that they may fail to make their desired impression on others, their attention shifts to detailed observation and self-monitoring. They then use this internal information to construct a negative impression of their public self from the observer perspective, i.e. see an image of themselves as they imagine other people see them. This processing bias prevents individuals with social phobia from collecting evidence against the perceived social danger, maintaining the cycle (Clark and Wells, 1995).

Attentional bias is also a key feature in other related psychological models of social phobia. Such models include Rapee and Heimberg's Cognitive-Behavioural Model of Social Phobia (1997), which emphasizes the salient role of an observer perspective bias in maintaining social anxiety, and Kimbrel's (2008) Model of the Development and Maintenance of Generalized Social Phobia, which includes the attentional bias for threat-relevant information as an important part of social phobia maintenance.

Social phobia frequently occurs as a co-morbid condition. A number of studies have reported high rates of social phobia among people with psychosis, estimating rates between 13% and 36% (Bermanzohn et al., 2000; Cassano, Pini, Saettoni and Dell'Osso, 1999; Cosoff and Hafner, 1998; Kendler, Gallagher, Abelson and Kessler, 1996; Pallanti, Quercioli and Hollander, 2004). However, since psychosis is generally considered to be the primary diagnosis and social phobia the secondary, it will often remain untreated (Cosoff and Hafner, 1998; Kingsep, Nathan and Castle, 2003; Tarrier, 2005). This can cause an additional burden on people with psychosis, which may seriously impact on their quality of life (Braga, Mendlowicz, Marrocos and Figueira, 2005). In addition, social anxiety can remain present after the florid psychotic symptoms have resolved, causing continued distress and restriction (Birchwood, 2003).

However, despite these findings, a literature review has indicated that relatively little investigation into the nature of social anxiety among people with psychosis or its treatment has been conducted. Studies exploring the effectiveness of CBT at reducing social anxiety in those with psychosis (Halperin, Nathan, Drummond and Castle, 2000; Kingsep et al., 2003) have shown positive outcomes; however, both had a small number of participants. Birchwood (2003) has stated that neither CBT for psychosis nor neuroleptic treatments have shown any consistent effect on co-morbid emotional disorders. He suggests that future treatments for such clients should focus on these disorders, their development and their psychological origins. To this end, a study exploring whether social anxiety comorbid with psychosis is similar in nature to social anxiety as a primary diagnosis, is implicated. This should have particular focus on the aspects of social anxiety that have been effectively manipulated in the treatment of social anxiety, such as imagery and memories.

An image is a cognitive event in which perceptual information is accessed from memory, giving rise to a mental representation equivalent to "seeing in the mind's eye" or "hearing in the mind's ear" (Holmes, Geddes, Colom and Goodwin, 2008; Hackmann and Holmes, 2004). An image is more than a memory as it is an active process in which imagination is able to produce novel combinations such that a memory can take the form of an image but an image does not have to be a memory. Images can therefore provide an opportunity for an individual to create a representation of possible future, present or past events as well as distortions of events. Imagery has been shown to play an important role in a range of psychological difficulties including anxiety disorders (Hackmann and Holmes, 2004).

Hackmann et al. (1998) used a semi-structured interview to explore the frequency and content of spontaneously occurring images during episodes of social anxiety. Comparing participants with social phobia to non-clinical controls, they identified that the clinical group gave significantly higher frequency ratings than controls for spontaneously occurring images (77% compared with 47%). Significantly more people with social phobia than controls were judged to have a clear image, to see in an observer perspective, and to have images perceived as negative. The images reported by the social phobia group generally involved visualizing their worst fears about how they appear in social situations; for example, seeing themselves blushing, sweating or shaking profusely, or looking very fat or small.

Coles, Turk, Heimberg and Fresco (2001) explored perspective for imagery in those with social phobia compared with non-anxious controls when recalling memories of low, medium and high anxiety social situations. They found that approximately half the socially phobic participants took a field perspective and half took an observer perspective in high social anxiety situations. None of the participants took an observer perspective in low or medium social anxiety situations.

Hackmann, Clark and McManus (2000), using a semi-structured interview, found that images in social anxiety are recurrent across a range of situations, are linked to early memories, and are multi-sensory. The authors conclude that their results suggest early unpleasant social experiences may result in those with social phobia developing a negative, observer perspective image of their social selves. This is repeatedly activated in subsequent anxiety-provoking interactions and fails to update with new experiences. In a follow-up to this study, Wild, Hackmann and Clark (2008) found that memory re-scripting therapy significantly reduced the clarity of, and distress caused by, the associated image.

Morrison et al. (2002) explored mental imagery (as opposed to hallucinatory experiences) experienced by clients with psychosis receiving CBT. They found that the majority (74.3%) reported images. These predominantly consisted of images of feared outcomes related to paranoia or traumatic memories (e.g. being physically assaulted or threatened), and were related to hallucinatory voice content (e.g. seeing themselves being murdered or criticized by others).

Morrison et al.'s (2002) study, as well as clinical experience with clients with psychosis, suggests that this client group tend to see an exaggerated, threatening "other" rather than themselves from an observer perspective. It therefore seems likely that images related to social anxiety in a psychotic group may also contain similar themes, being strongly influenced by fear and paranoia as opposed to a predominant fear of performance anxiety and loss of social status. Clinical experience with this client group indicates that there may be differences in the way they experience imagery when socially anxious, such as images being focused on exaggerated threats from others (e.g. seeing others glaring at them) rather than seeing

themselves. This would contrast with Clark and Wells' (1995) Model of Social Phobia, which states, "how social phobics believe others see them has a greater impact on their appraisal of the danger of the situation than the situation itself." This difference could possibly partly be attributed to residual or schizotypal (sub-psychotic) paranoia. However, Freeman et al. (2005) suggested that social anxiety and paranoia could fall on a continuum, with social anxiety being more common and providing a foundation on which increasing concerns about physical threat could occur.

To summarize, previous research and models of social anxiety have indicated that people with social anxiety frequently fear negative evaluation from others and consequent loss of social status. The research has also indicated that people who experience social anxiety will frequently experience images, which incorporate this fear. Particularly common are exaggerated images of themselves (i.e. from an observer perspective) as they fear others see them (e.g. seeing themselves looking very embarrassed, bright red and sweating, or looking shorter or fatter than usual). Studies have also indicated that images can be multi-sensory.

Research exploring imagery experienced by people with psychosis indicates that these images are predominantly seen as if through their own eyes (field perspective), and frequently consist of exaggerated threatening images of others. This could be related to psychotic paranoia. It has been suggested that social anxiety and paranoia could form a continuum.

The aim of this research was therefore to develop and pilot a suitable measure to explore the imagery experienced by clients with comorbid psychosis and social anxiety and to provide preliminary indications as to its nature. The following hypotheses were developed:

1. Participants' images will show themes of negative evaluation from others and loss of social status.
2. Participants' images will be multi-sensory.
3. Images will be distorted, with exaggerated negative elements (e.g. looking shorter, fatter or redder, others looking more threatening).
4. Participants will identify themes of physical threat from others in their images.
5. Typical social anxiety images (e.g. being laughed at or criticized by others, social threats, exaggerated negative images of themselves) will be viewed from an observer perspective.
6. Images that appear more related to paranoia (threats to physical safety) will be viewed from a field perspective.

Method

Ethical approval

Ethical approval for this study was sought from and approved by the Norfolk Research Ethics Committee.

Design

This was an exploratory study, using a semi-structured interview with socially anxious participants with psychosis. It explored the nature of the imagery experienced by these participants when feeling socially anxious. The interview provided rich, detailed information describing the content of images, and the associated emotional responses. Common themes in image

content were identified using qualitative template analysis (King, 2008), which makes use of the rich qualitative information obtained. Quantitative numerical data were also provided by the interview, with participants giving rating scores for image perspective, amount of social anxiety and amount of distortion in the image. The interviewer also gave a score for the extent the image appeared to constitute a clear visual picture. However, due to the sample size quantitative analysis would be underpowered. Therefore, the scores are used to consider tentative indications of the relationships between image content, strength of anxiety, image perspective and clarity of image in this participant group, rather than being statistically analysed.

Participants

Participants were all clients of Central Norfolk Early Intervention Service who had consented to participate in a wider study looking at the nature of social anxiety and appropriate treatments. Participants were male and female, aged 14–35 years (age range of the service) and were scoring at a clinically significant level on a measure of social anxiety (Social Interactions Anxiety Scale; Mattick and Clarke, 1989). Due to the position of diagnostic uncertainty within early intervention services no diagnoses are available for the participants. However, all participants would have had at least one clinically significant positive psychotic symptom at the point of entry into the service. All participants were receiving regular support from their care coordinator. Exclusion criteria included participants who were currently experiencing positive psychotic phenomena, those unable to give informed consent (i.e. mental health problems, learning difficulties) and those unable to identify an image when interviewed.

Recruitment

All clients of the Early Intervention Service who scored to a clinically significant level on the Social Interaction Anxiety Scale (SIAS; Mattick and Clarke, 1989) were invited to take part in the research. Those who were interested were provided with an information sheet and were given the opportunity to consent.

Measures

Social anxiety measure. The Social Interaction Anxiety Scale (SIAS; Mattick and Clarke, 1989) was used to identify clients experiencing social anxiety. The SIAS measures social anxiety by asking individuals to rate the extent to which they make affective, behavioural, and cognitive responses to a variety of situations requiring social interaction. It has shown good reliability and validity: the internal consistency exceeding alpha = .88 (Mattick and Clarke, 1989), with test-retest reliability at $r = .91$ and .93 after intervals of 1 and 3 months. The SIAS shows significant positive correlations (rs = .54 – .69) with standard measures of social anxiety (Mattick and Clarke, 1989). The SIAS takes approximately 3 minutes to complete.

Selection and development of imagery measure. The interview by Hackmann et al. (1998) was selected and permission was sought and granted from the first author to use and develop the measure. The semi-structured interview asks participants to recall social situations in which they felt anxious and describe any corresponding mental images (in any sensory modality) in detail. They are asked to indicate how frequently they experience

images in anxiety-provoking situations or while anticipating such situations, rate whether the predominant perspective is one of field or observer perspective, and rate the extent to which the image seems distorted. The information is explored descriptively to provide rich qualitative information on image content and nature. This interview takes approximately 30 minutes to conduct.

The interview was developed for use with this client group through a process of trial, evaluation and development. It was agreed that developments would only enhance or make clearer queries already explored in the original interview, in order to maintain validity and reliability. One development was on supporting participants to understand what was meant by a mental image and differentiating this from a hallucination. This was done by emphasizing the "mind's eye" quality of an image. Other aspects involved including additional clarifying questions to support the reliable collection of data in line with the original Hackmann et al. (1998) interview.

Procedure

The researcher (Assistant Psychologist) collected consent and completed a battery of baseline assessment measures, including the imagery interview. The imagery interview was audio recorded, with the participant's consent. Following seven interviews, the first author was given the anonymized recordings of the interviews and the interviewer's summary notes. The author transcribed the recordings and double-rated the interviews to ensure inter-rater reliability and that the qualitative information on the nature of imagery was reported accurately. The author then analysed the data.

Data analysis

Quantitative analysis. Although the number of participants in this study did not reach the number required for statistical analysis, the interview did provide numerical data. These data consisted of the participants' ratings for level of anxiety, image perspective (entirely field, entirely observer, or a mixture of both) and image distortion, and the interviewers' rating for image clarity. These data were used to provide exploratory information on potential interactions between these ratings and image content.

Qualitative analysis. The participants' descriptions of their images were explored using thematic template analysis. This method was chosen in order to explore if there were any shared themes among participants. It also provided important information on the specific differences in image content in this group when compared with the socially anxious group interviewed by Hackmann et al. (1998).

King (2008) recommends the use of template analysis to identify themes within qualitative data. The researcher creates an a priori template of themes that have been identified through previous literature and the hypotheses. For this study, it was hypothesized that participants would show themes of fear of negative evaluation from others and fear of loss of social status. In addition, they would have a negatively distorted impression of themselves (e.g. that they are fatter than in reality). These hypotheses were based on the research into imagery experienced by those with social anxiety. It was also hypothesized that this client group would show themes of physical threat (possibly based on residual paranoia), based on the research

into images experienced by those with psychosis. Following the completion of the interviews, the participants' descriptions of their images were studied to establish whether any additional themes could be identified, and a final template for coding the descriptions was developed.

Results

Four females and three males participated in this study. Ages ranged from 18 to 33 years. One person was excluded as they were unable to identify an image when interviewed. The quantitative scores and summarized image descriptions can be seen in Table 1.

Five of the eight participants agreed to have their interviews recorded (P2, P3, P4, P7 and P7). Therefore, information from their interviews is direct quotations. Information from the other participants was taken from the written summaries recorded by the researcher conducting the interview. P2 elicited an additional image after the interview was complete, so this was recorded in notes by the researcher. The researchers read back their summaries to the participants to ensure they were accurate.

Qualitative thematic template analysis

Fear of negative evaluation from others and loss of social status. All participants identified significant fear of being negatively judged by other people. Central characteristics of the experience of being evaluated were described as people staring, receiving funny looks from people, being talked about and laughed at, and not being liked by people. Identified reasons for negative evaluation included not being seen as equal, not looking right, and coming across as slow. Three participants reported feeling judged because of their mental health problems and feeling abnormal. For example, "Because I'm not . . . mentally healthy. . . so they think I'm acting weird." (P6); "People think I'm being a loon." (P4); "They think I've got problems." (P7). In addition, one participant reported concerns around loss of social status, for example "I think they're just pretending to be my friends."(P4).

Experiencing an impression or image that is negatively distorted. The second theme identified in the analysis was the apparent negative distortion of the reported image. The distortion was experienced in the visual, olfactory, auditory and tactile sensory modalities. For example, "Seeing sweat marks on her clothes, seeing her strained expression with a sweaty forehead, her body hunched over." (P5, interviewers words); "Smells cigarette smoke, lip gloss and food." (P1); "I hear lots of laughing." (P2); "Feels itchy." (P5).

Three of the five participants that reported distorted images described distortions as occurring in more than one sensory modality; visual distortions were always present. In addition, one participant reported experiencing a distorted "felt-sense" when experiencing social anxiety. They described this as "It seems as though I am further away from people." (P4)

Fear of physical threat. Of the seven images reported, three were recounted as having elements of physical threat, both fearing physical threat from others and fearing causing physical threat to others. All three participants described being in fear of other people, or "dreading", "being intimidated by" or "expecting aggression from" other people when they are in social situations. For example, "When I was poorly [actively psychotic]. . . everyone's faces were warped, they'd all look at me and everything looked so dark, evil, looking at me. That scared me." (P2). Just one participant reported experiencing an image about harming

Table 1. Scores for levels of anxiety, image perspective, image distortion, clarity of image and summary description of images

Participant number, gender and age	SIAS	Anxiety	Image perspective	Image distortion (%)	Picture clear?	Image description SA = typical socially anxious image P = threat related/paranoia image
1) Female, 19	70	80	0	30	probably	Can see self, upper body and clothes and top/underwear falling down. Thinking people are judging her negatively (SA). Also images of being kidnapped and held hostage, being grabbed by a man and treated violently (P). Can smell cigarette smoke, lip gloss, food.
2) Female, 22	61	85	−3	50	probably	Sees warped, dark, evil faces and people staring at her. Hears lots of noise and laughing and sees people going out of their way to look at her. It's very dark – can't see herself. Sees lots of younger people in their 20s/ 30s, but she's on her own (P).
			+3	0	probably	Image of herself as fat, walking down the street. Gets the image when she is getting ready to go out and when she's walking down the street. Sees people laughing. Always gets this image (SA)
3) Male, 33	66	82.5	−3	100	yes	Tackling an aggressive shouting man in the supermarket or being violent towards people he sees – lots of blood. Person is always male and teenage to early 20s. Particularly 1 person with a sharp face and pointy nose. Impression of being stared at "It's almost like I've put a video on pause." (P)
4) Female, 18	56	70	+3	90	no	Hears her name being said and thinks her friends are talking about her. Feels as though she is further away from people. Recalls herself sitting in a car with a "beeny" in her hand, with people looking at her. Worried about what they are thinking. More sensations than image (SA).

5) Female, 32	68	80–90	+1	50 – smell, 0 – sight/ sound	yes	Sees herself as if from a distance. Feels as though everyone is looking at her and that she is short, sees people sniggering at her behind her. Hears her own thoughts clearly, criticizing her. .Feels itchy. Sees sweat marks on her clothes, sees her strained expression with sweaty forehead, body hunched over. Can see the people behind her. Can smell a "humid" smell and feel her heart racing. Recurrent image (SA).
6) Male, 21	50	70	+3	20	probably	People looking at him strangely, judging him. Sees himself red in the face, feeling tense and nervous. Other people look normal (SA).
7) Male, 25	44	50	−2	10	probably	Clearly sees other people around him and as if everyone knows him. Feels like his behaviour is slow and that people are thinking he's not normal and whispering. Hears them saying, "He's slow". Others seem bigger than him. Self in situation – not historical (SA / P).

Notes: Image perspective: (–3 = completely field, 0 = switching between perspectives, +3 = completely observer); SIAS: Social Interaction Anxiety Scale; Anxiety: rated at worst moment scale 0–100.

other people: ". . . I get horrible, intrusive pictures of being violent to people [people he sees as potential threats]." (P3)

Image/impression that everyone is staring at them, knows them or is talking about them. This theme was present in five of the image descriptions. Although there is some overlap with the fear of negative evaluation element already described, there seemed to be a distinct theme around being stared at/talked about and being known by others. Those that described being stared at recounted the image vividly and described the staring as happening overtly, for example, "Sometimes I walk into a shop and the picture is that everyone has just stopped and stared, it's almost like I've put a video on pause." (3); "People almost going out of their way to look at me, bending their heads." (P2). One participant described having images of being stared at in anticipation of going into an anxiety-provoking situation.

Image of what might happen in the immediate future. Participants described having images anticipating what could happen to them in the near future; of those reported, the imminent event seemed to be one that would cause embarrassment and humiliation. For example, "Worry that her top/underwear will fall down." (P1, interviewers' words); "Before going out I would have these images. . . of accidents, you know, things that might happen." (P2). In addition, another participant reported having an image of the immediate future that did not involve an element of embarrassment, but seemed to be more a rehearsal of what they would do if certain happenings occurred. For example, "My violent thoughts might change to a picture – in my head I might be running through the conversation the woman at the till might have with me, or someone might speak to me, it might be a little picture of people talking to me." (P3).

Threat perceived as being most strong from certain types of people. Within some of the participants' descriptions there was evidence that they feel more threatened by some people than others. Most participants reporting a person/people-specific perceived threat recounted young people in their early 20s as the most threatening group and as older people never being seen as a threat. For example, "I think they'd always be male [the people in the image], usually the people around me, never old people, always teenagers or younger people up to early 20s, because I get quite scared around teenagers." (P3). Other groups seen as more threatening were unfamiliar people, big crowds and queues, for example, "My anxiety is usually worse around people I don't know, but I can also feel paranoid with my friends." (P4).

Initial indications from quantitative data

See Table 1 for image summaries and quantitative ratings. For the purposes of this analysis the images were separated into those that demonstrated themes that could be considered typical of non-psychotic social anxiety and those that are less typical. The less typical images tended to have a stronger physical threat theme and so are being described as paranoia/physical threat images. This is not an indication of the presence of clinical paranoia but rather a qualitative description of the themes present in the image.

Considering the relationship between perspective and image content, of particular interest is participant 2 (P2) who identified two images. One appeared to be a "typical" socially anxious image of herself walking down the street looking fat with people laughing at her, and was from an entirely observer perspective. The other image is of "evil" faces staring at her, and is entirely from a field perspective.

Additionally, participant 1 (P1) described two images and said her perspective switched between field and observer. It is possible that each image could have been from a different perspective. All the images seen from a predominantly observer perspective described by the participants appear similar to "typical" socially anxious images, with themes of embarrassment and being ridiculed by others, and of distorted self-images (e.g. looking fatter or redder). Of the images seen from a predominantly field perspective, one (P7) also seems like quite a traditional social anxiety image, seeing others judging him and feeling smaller than them. However, there is also an element of personal danger (as opposed to social threat) in this image, identified by the associated belief, "the world is a dangerous place". The image described by P3 involves blood and violence and feeling physically threatened by others (indicated by him attacking others), and is seen from an entirely field perspective.

These initial data therefore tentatively indicate that, in this participant group of people with diagnoses of both social anxiety and psychosis, images of a typically socially anxious nature (as identified by Hackmann et al., 1998) are more often seen from an observer perspective. Images that seem more influenced by psychosis (and perhaps paranoia) are predominantly seen from a field perspective.

Discussion

From this small sample, the initial indications are that the images experienced by people with psychosis and social anxiety can sometimes be similar to the images identified by Hackmann et al. (1998), although this is not always the case. The template analysis found examples of themes of negative evaluation from others and loss of social status in the images of six of the eight participants, supporting the first hypothesis. Five of the eight participants reported experiencing their images in additional sensory modalities to sight (sound, smell and touch), supporting hypothesis two. All participants gave a score indicating that they believe their image is distorted from reality to some extent. In particular, participants 2, 5 and 6 identified seeing themselves as looking fatter, redder or sweatier than they were in real life, supporting hypothesis three, and apparently fitting with Clark and Wells' (1995) Cognitive Model of Social Phobia.

However, even when fear of negative evaluation was present, the nature of this sometimes appeared different to that proposed by Clark and Wells' (1995) model. The statements by three participants (P3, P4 and P7) indicate that the stigma they experienced as a response to their diagnosis of psychosis can be a significant contributory factor to their fear of negative evaluation from others. P3 stated that he would happily give a presentation in front of thousands of people on a topic he knew a lot about, but feels very uncomfortable in smaller, more informal situations when people might identify him as "different" or know his diagnosis. P4 said she thought others saw her as "a loon". P7 described the impact of his mental health on how people saw him, saying they thought he was "slow". This could be perceived as being fundamentally different to the fear of performance anxiety or appearing embarrassed, which characterises social anxiety.

Additional differences in image content were identified in three participants (P1, P2 and P3), with the theme of images seeming more related to fear of physical danger than with anxiety and social threats. This supports hypothesis four. These images may be influenced by paranoia, but further investigation exploring paranoia levels would need to be conducted to support this. It remains unclear whether these clients are actually experiencing social anxiety

or whether their anxiety about going out can be fully explained by residual paranoia from their psychotic episode.

With the exception of P7, images that were congruent with typical social anxiety images (i.e. those based on fear of social judgement and relegation) were predominantly from an observer perspective and images congruent with themes identified as being present in some people with psychosis (i.e. threat) were predominantly from a field perspective, supporting hypotheses five and six.

Strengths and limitations of the study

This study was intended as an initial exploratory study into the nature of images experienced by clients with comorbid psychosis and social anxiety. A strength is that it has facilitated the careful adaptation and development of an imagery interview (Hackmann et al., 1998) for use in a new population. A further strength lies in the study's originality as the first (to the authors' knowledge) to explore the nature of images in socially anxious clients with a diagnosis of psychosis. Currently, this appears to be an area ripe for investigation with significant implications for treatment within this client group.

However, as with all exploratory studies, there are several limitations. The sample size is too small for any generalizations to be made. Additionally, the interview would have benefited from the participants' descriptions of their images being recorded verbatim for the participants who did not consent to audio recording. This would have ensured that none of the information was omitted from analysis. Furthermore, it would have been useful to have separate image perspective ratings for all clients who reported more than one image.

A further issue is that the "images" described by some participants may be examples of memories or psychotic hallucinations, rather that images of possible future or current outcomes as in the images explored by Hackmann et al. (1998). Specifically, the images described by participants 6 and 7 would appear to be memories of actual events rather than images. However, through recalling these events the participants were able to provide information on the feelings and interpretations they experienced in the situation, which could be considered to be a form of image (Hackmann et al., 1998, refer to this as an "impression"). Therefore, the information given by these participants remains valid for use in analysis. Some of the images described by P2 (dark, distorted faces) could be considered to be hallucinations rather than images, particularly as the participant stated she only experienced these when she was acutely psychotic. However, her image of herself as fat walking down the street is a typical social anxiety image.

Theoretical and clinical implications

The majority of participants in this study reported experiencing images when anxious in social situations. Of these, some were congruent with the typical social anxiety images identified by Hackmann et al. (1998), and others with the threatening images identified by Morrison et al. (2002) as being present in their sample of people with psychosis. Two participants experienced both types of images. This suggests that both beliefs associated with social anxiety (fear of social judgement and relegation) and beliefs associated with paranoia (fear of physical threat) may be contributing to these images, although further exploration into levels of paranoia in this group is needed to support this hypothesis. The presence of a variety of images containing

social evaluative and physical threat themes within this client group could support Freeman et al.'s (2005) view that social anxiety and paranoia fall on a continuum.

The work of Hackmann et al. (2000) would suggest that some of these images may be the result of previous incidents in which an individual has experienced social threat. If this is the case, then rescripting may be a useful clinical tool for this group as has been shown for non-psychotic social anxiety (Wild et al., 2008). Further research would therefore be useful to establish whether there is a link with early memories, for which images this is the case, and whether rescripting these images would help to alleviate the social anxiety.

There may be clinical implications if different types of belief are found to be the basis for individual's experiences of anxiety in social situations. For instance, the anxiety based on fear of social judgement and relegation may be successfully treated with an established treatment for social anxiety (e.g. CBT for social anxiety), whereas anxiety based on paranoid beliefs may be more appropriately treated with an established treatment for psychosis (e.g. CBT for psychosis).

Overall, this study has shown that many people experiencing social anxiety following an episode of psychosis will experience intrusive images in social situations. The content of these images will be idiosyncratic and may fit into themes typical of social anxiety or fit with themes including a stronger sense of physical threat. It therefore seems important that when working with this client group therapists ask about the imagery experienced in social situations and include in this assessment questions about the perspective of the image and whether the image is distorted. This may provide opportunities for direct interventions as described by Holmes, Arntz and Smucker (2007) or provide information about the specific fears of clients. Further research could usefully explore the origins of these images and interventions to help reduce their impact.

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Appendix B.
Clinical report

A study exploring social anxiety, unusual experiences and thoughts about yourself and others

PARTICIPANT RESPONSE REPORT

Contact details of researcher: Helen Lockett, Trainee Clinical Psychologist, University of East Anglia, Norwich, 07882279535.

NAME OF PARTICIPANT:
AGE:
REFERRED BY:
DATE OF PARTICIPATION:

THE STUDY

… consented to take part in a study designed to discover more about different peoples' experiences of social anxiety. The study particularly focussed on the mental images people get when socially anxious and whether social anxiety symptoms are related to factors such as current feelings, unusual experiences and thoughts about self and other people. It is hoped that this will help us to find out if these factors are important in our understanding of social anxiety and aid us in helping people with experiences/symptoms associated with emotional difficulties.

This study has been reviewed and approved by the Essex 1 Research Ethics Committee.

SOCIAL ANXIETY MEASURES

Social Interaction Anxiety Scale (SIAS) *(Mattick & Clarke, 1989)*

… scored … on the SIAS, indicating that … has a clinically significant level of anxiety in social situations (the clinical cut-off is a score of 36). … scored particularly highly on the following statements, indicating that these are areas of significant difficulty:

…

Imagery in social anxiety interview *(adapted by the researcher from an interview by Hackmann, Surawy and Clark (1998)*

Brief description of participant's responses in the interview, including image and particularly anxiety-provoking situations.

THOUGHTS AND SCHEMAS

Social Cognitions Questionnaire (SCQ) *(Wells, Stopa & Clark, 1993)*

The SCQ asks participants to say how often they experience thoughts that have been found to be common in people with social anxiety, and how much they believe each thought to be true when they are anxious.

… identified always experiencing the following thoughts when socially anxious during the past week:

- …

… identified experiencing the following thoughts most of the time when socially anxious during the past week

- …

… identified experiencing the following thoughts half the time when nervous:

- …

… identified experiencing the following thoughts occasionally:

- …

Brief Fear of Negative Evaluation Scale (FNEB) *(Leary, 1983)*

The FNEB asks participants to rate how much statements indicating a fear of negative evaluation (shown to be a key component in social anxiety) apply to them.

… identified the following statements as extremely characteristic of him:

- …

… identified the following statements as very characteristic of him:

- …

… identified the following statements as moderately characteristic of him:

- …

… identified the following statements as slightly characteristic of him:

- …

Green et al. Paranoid Thoughts Scale (GPTS) (Green et al., 2007)

Paranoid thoughts are thoughts that you are being negatively targeted by others, eg. that people are spying on you or talking about you behind your back. The GPTS asks participants to indicate how much specific paranoid thoughts have applied to them during the past month. These thoughts are split into two categories: social ideas of reference and persecutory, and are rated on a 5-point scale: 1 = not at all applicable to me, 3 = somewhat applicable to me, 5 = totally applicable to me.

… rated the following social ideas of reference as 5 (totally applicable):

- …

… rated the following social ideas of reference as 4.

- …

… rated the following persecutory thoughts as 3 (somewhat applicable):

- …

… rated the following persecutory thoughts as 2:

- …

The Brief Core Schema Scales: Beliefs about self and others (BCSS) *(Fowler et al., 2006)*

The BCSS lists beliefs that people can hold about themselves and other people.

… rated negative beliefs about himself as …/24, indicating that …

… rated positive beliefs about himself as …/24, indicating that …

… rated negative beliefs about other people as …/24, indicating that …

… rated positive beliefs about other people as …/24, indicating that …

Brief summary of implications.

ADDITIONAL PSYCHOLOGICAL SYMPTOMS

Brief Symptom Inventory (BSI) *(Derogatis, 1975)*

The BSI asks participants to rate how much a problem has distressed or bothered them during the past week. It explores the following symptoms: Somatisation (physical symptoms arising from psychological factors), obsessive-compulsive (symptoms that may indicate that someone is distracted due to obsessive thoughts), interpersonal sensitivity (feelings of not being good enough, particularly in comparison to others), depression, anxiety, hostility, phobic anxiety (a strong fear or phobia of a specific thing), paranoid ideation (how likely someone is to have paranoid thoughts) and psychoticism (the extent to which someone has unusual experiences, like seeing or hearing things that others don't or having a strong belief in something most other people do not believe in).

The BSI is **not** a diagnostic instrument. However, it can provide an indication of areas that may benefit from support. Scores are compared with scores from the participant's peer group to indicate how common their score is in this group, and therefore how likely it is to be a clinically significant difficulty. …'s scores were compared with those of others receiving outpatient support from mental health services, which indicated that he is experiencing difficulties with phobic anxiety (social anxiety), and paranoia.

Therefore, the BSI indicates that …

SUMMARY

…

Helen Lockett
Clinical Psychologist in Training, supervised by Dr Sian Coker

Appendix C.

Imagery in social anxiety semi-structured interview – Version 3, revised 01/12/09

AGE: GENDER: ETHNICITY:

DATE: YEARS IN EDUCATION:

MEETS CRITERIA FOR SOCIAL PHOBIA ON SIAS?: YES / NO

EVER HAD TREATMENT FOR AN ANXIETY PROBLEM: YES / NO

1. Do you ever get anxious in social situations? I wonder if you could tell me about a few times recently when that happened to you?

2. I know that when you are anxious you probably notice a variety of things going through you mind. I'm particularly interested in the little pictures or images people get when they are nervous *(give lots of reassuring and prompts here)*. Have you ever had images like that when you are anxious either in social situations, or in anticipation of them?

   Always / often / sometimes / never
   (coded 4, 3, 2, 1)

3. Can you think of a time recently when you felt particularly anxious in a social situation?

4. How anxious were you at the worst moment? *(Show 0-100mm rating Scale 1 and enter rating in box below)*

5. Did you have an image or picture going through your mind at the time?

   Yes / No

   Did you hear any sounds, such as a voice, in your mind at the time?

   Yes / No

   Were you aware of any smells?

   Yes / No

   Were you aware of any strange sensations in your body? Some people say when they are in a scary social situation they feel as if they are smaller than usual, or further away from people, or fatter than usual – were you aware of any feelings like this at the time?

   Yes / No

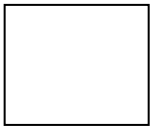
6. Sometimes people get an impression of how they appear, or how others might be reacting, even if they are not looking at them. Did that happen to you?

   Yes / No

7. Please try to clearly recall the image/ impression now, with your eyes closed *(allow about 30 seconds).* Have you got it now?

   Thinking about the image/ impression, is your predominant impression one of viewing the situation as if looking out through your eyes, observing the details of what is going on around you, or is the predominant impression one in which you are observing yourself, looking at yourself from an external point of you?

   Get ratings of the extent to which the field/ observer perspective is being taken on scale 2 – a 7 point scale ranging from -3 (completely field) to +3 (completely observer). 0 is seeing both perspectives equally. Enter score in box below:



8. Please recall this image as clearly as you can. I'm now going to ask you some questions about it:

   What is happening in the image?

Appendix C.

What can you see?
If focussed on appearance probe for details of posture, clothing, facial aspects, other parts of the body, general appearance, any change in size (height/ weight), voice characteristics, pronunciation, etc… Account must be detailed enough for a film director to recreate the image.

What can you hear?

What can you smell?

How do you feel in the image (emotions and body sensations)?

Why is this happening?

What has led up to this event?

What is the worst thing about it?

Appendix C.

What does it mean about you?

What does it mean about others?

What does it mean about the world?

Write down every detail. Summarise all the client has described, in detail, adding "Is that right?"
Summarise the interpersonal meaning, asking "Is that right?" and make a written summary.

9. Are parts of the image in your mind bigger or smaller than they would be in real life? Do you or other people in your image look different to how you do in real life? Is anything distorted in its shape or appearance? Is the perspective (how far things seem from each other or how big things seem in comparison to each other) how it would be in real life? Please look at this scale *(present Scale 3, 0-100mm rating scale)* and tell me how much you feel the image was distorted, with 0 being "Not at all" and 100 being "Completely distorted, things appeared completely different to how they would in real life". *Enter rating in box below.*

How about the things you hear in the image – do they appear louder or quieter or at all distorted to how they would in real life? On this scale *(present Scale 3 again),* with 0 being "Not distorted at all" and 100 being "Completely distorted

to how it would sound in real life", how distorted would you say the sounds in your image are? *Enter rating in box below.*

How about the smells in the image? Are they stronger or at all distorted from how you would experience them in real life? On this scale *(present Scale 3)*, with 0 being "Completely the same as I would smell them in real life" and 100 being "Completely different to how they would smell in real life", how distorted would you say the smells in your image are? *Enter rating in box below.*

10. *Interviewer – estimate whether the image or impression had the characteristics of a clear visual picture*

Yes (code 2) / No (code 0) / Probably (code 1)

11. When was the image located in time?

If it reflected something that had happened in the past, ask what was happening at that moment/ would happen in the immediate future in that situation/ would happen in the far future.

Did it involve just you/ others/ a mixture of the two/ no people?

12. Do you frequently experience this specific image when you feel anxious in social situations?

Yes / No

Appendix D.

SOCIAL COGNITIONS QUESTIONNAIRE
SCQ: Developed by Adrian Wells, Lusia Stopa and David Clark (1993)

Name……. Date……

Listed below are some thoughts that go through people's minds when they are nervous or frightened. Indicate, on the LEFT hand side of the form, <u>how often in the last week</u> each thought has occurred; rate each thought from 1-5 using the following scale:

1. **Thought never occurs**
2. **Thought rarely occurs**
3. **Thought occurs during half of the times when I am nervous**
4. **Thoughts usually occurs**
5. **Thought always occurs when I am nervous**

_____	**I will be unable to speak**	…….
_____	**I am unlikeable**	…….
_____	**I am going to tremble or shake uncontrollably**	…….
_____	**People will stare at me**	…….
_____	**I am foolish**	…….
_____	**People will reject me**	…….
_____	**I will be paralysed with fear**	…….
_____	**I will drop or spill things**	…….
_____	**I am going to be sick**	…….
_____	**I am inadequate**	…….
_____	**I will babble or talk funny**	…….
_____	**I am inferior**	…….
_____	**I will be unable to concentrate**	…….
_____	**I will be unable to write properly**	…….
_____	**People are not interested in me**	…….
_____	**People won't like me**	…….
_____	**I am vulnerable**	…….
_____	**I will sweat/perspire**	…….
_____	**I am going red**	…….
_____	**I am weird/different**	…….
_____	**People will see I am nervous**	…….
_____	**People think I am boring**	…….
	Other thoughts not listed (please specify)	
_____	**……..**	…….
_____	**……..**	…….

When you <u>feel anxious</u>, how much do you believe each thought to be true. Please rate each thought by choosing a number from the scale below, and put the number which applies on the dotted line on the RIGHT hand side of the form

<u>0 10 20 30 40 50 60 70 80 90 100</u>

I do not believe this thought — **I am completely convinced this thought is true**

Appendix E.
Consent form (SAn group), Version 4, 9/12/09

PARTICIPANT CONSENT FORM

A study exploring social anxiety, unusual experiences and thoughts about yourself and others

Contact details of researcher: Helen Lockett, Trainee Clinical Psychologist, University of East Anglia, Norwich, 07882279535.

Please tick box

1. I have read (or read with someone) the Participant Information Sheet (Version 4, 9/12/09) on the study. I understand what the study is about and have had the chance to ask questions.

☐

2. I understand that my participation in the study is voluntary and it's OK to stop taking part at any time, without giving any reason, without my medical care or legal rights being affected.

☐

3. I understand that my personal information and information I provide about myself will be kept anonymous and confidential. However, if the researcher is concerned for my safety or the safety of others I understand that they are obliged to inform services (e.g. GP, police).

☐

4. I consent to my interview being audio recorded.

☐

5. I consent to anonymised quotes from my interview being used in the write-up of this study.

☐

6. I wish to have the results of my interview and questionnaires shared with my GP.

☐

7. I wish to be informed about the results of this study. Please send information to:

_____

☐

8. I understand that the data collected during the study may be looked at by individuals from the University of East Anglia, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my data.

☐

9. I agree to take part in this study.

☐

If you do want to take part, please print and sign your name below:

Your name (print) _____ Your signature _____

Date _____

THANK YOU FOR YOUR HELP.

_____	_____	_____
Researcher	Date	Signature

Patient Identification Number: _____
(A copy for you, a copy to be kept with the research team)

PARTICIPANT CONSENT FORM

A study exploring social anxiety, unusual experiences and thoughts about yourself and others

Contact details of researcher: Helen Lockett, Trainee Clinical Psychologist, University of East Anglia, Norwich, 07882279535

Please tick box

1. I have read (or read with someone the Participant Information Sheet (Version 4, 9/12/09) on the study. I understand what the study is about and have had the chance to ask questions.

☐

2. I understand that my participation in the study is voluntary and it's OK to stop taking part at any time, without giving any reason, without my medical care or legal rights being affected.

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3. I understand that my personal information and information I provide about myself will be kept anonymous and confidential. However, if the researcher is concerned for my safety or the safety of others I understand that they are obliged to inform services (e.g. GP, police).

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☐

8. I agree to take part in this study.

☐

If you do want to take part, please print and sign your name below:

Your name (print) _____ Your signature _____

Date _____

THANK YOU FOR YOUR HELP.

_____	_____	_____
Researcher	Date	Signature

Patient Identification Number: _____
(A copy for you, a copy to be kept with the research team)

Appendix F.

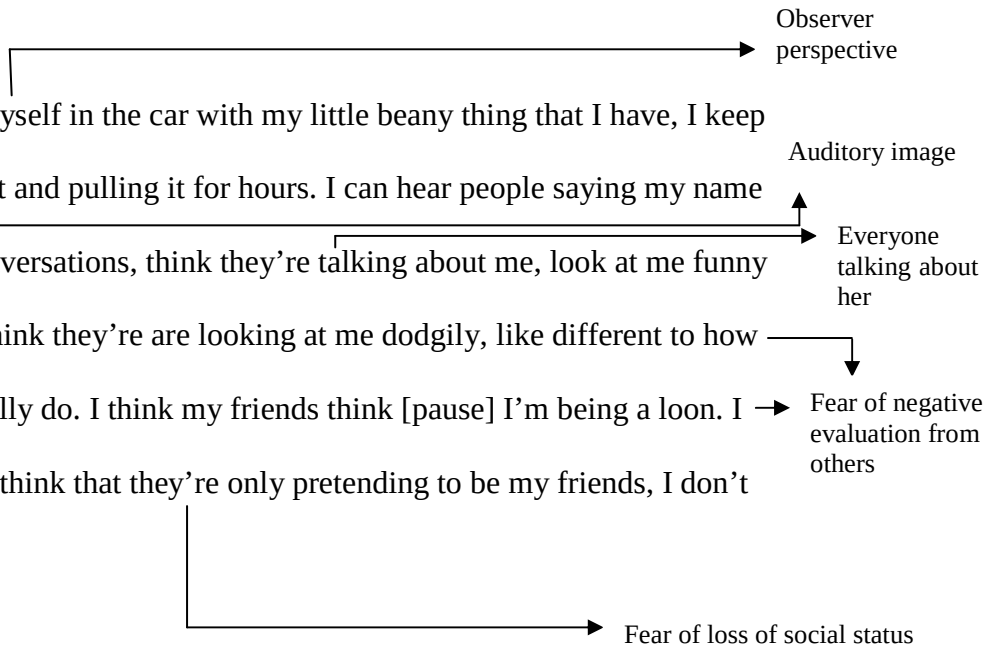
A priori template

1) **Themes identified from the literature as being typically experienced by those with social anxiety.**
    - 1.1) Fear of negative evaluation from others
    - 1.2) Fear of loss of social status
    - 1.3) Experiencing an impression or image that is negatively distorted
    - 1.4) Images/ impressions in all sensory modalities (sight, hearing, touch, smell, taste)
2) **Themes identified from the literature as being common in imagery experienced by those with psychosis.**
    - 2.1) Others being threatening
3) **Themes identified from study of the completed interviews**
    - 3.1) Image/ impression that everyone is staring at them or knows them or is talking about them
    - 3.2) Image of what might happen in the immediate future
    - 3.3) Threat perceived as being most strong from certain types of people (eg. strangers, teenagers or crowds)

Appendix G.

Example of Coding

23 AP Can you now describe the image?



24 P5 I can see myself in the car with my little beany thing that I have, I keep
25 stretching it and pulling it for hours. I can hear people saying my name
26 in their conversations, think they're talking about me, look at me funny
27 as well, I think they're are looking at me dodgily, like different to how
28 they normally do. I think my friends think [pause] I'm being a loon. I
29 sometimes think that they're only pretending to be my friends, I don't
30 know why.

31 AP How do you feel in the image?

32 P5 I'm not sure [pause] weird, I don't know what to do.

Feeling helpless/ hopeless

33 AP Why is this happening?

34 P5 Don't know [pause]. Just seems to sort of happen really.

35 AP What's the worst thing about the image?

Feeling threatened by others, unable to trust them

36 P5 Feeling like I can't trust my friends, and I feel like I can't enjoy myself
properly, and I worry about what other people think of me.

Fear of negative evaluation

NHS
National Research Ethics Service
Essex 1 Research Ethics Committee
Level 9
Terminus House
The High
Harlow
Essex
CM20 1XA

Telephone: 01279 413136
Facsimile: 01279 419246

14 December 2009

Miss Helen Lockett
93 Nursery Close
Norwich
NR6 5SL

Dear Miss Lockett

Study Title: **Is social anxiety which is co-morbid with psychosis the same as social anxiety as a primary diagnosis? An investigation into the nature of social anxiety in psychosis.**

REC reference number: **09/H0301/78**

Thank you for your letter of 09 December 2009, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Ethical review of research sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

For NHS research sites only, management permission for research ("R&D approval") should be obtained from the relevant care organisation(s) in accordance with NHS research governance arrangements. Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.
Where the only involvement of the NHS organisation is as a Participant Identification

Centre, management permission for research is not required but the R&D office should be notified of the study. Guidance should be sought from the R&D office where necessary.

Sponsors are not required to notify the Committee of approvals from host organisations.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	*Version*	*Date*
Covering Letter		29 October 2009
REC application		03 November 2009
Protocol		24 April 2009
Investigator CV		29 October 2009
Evidence of insurance or indemnity		28 October 2009
Questionnaire: SIAS, BCSS, SCQ, FNEB, SSI, GPTS, BSI		
Supervisor CV		26 October 2009
Confirmation of appointment letter	2	24 April 2009
Unfavourable opinion letter from Essex 1 REC		28 September 2009
Flow-chart SAp and SAn	2	29 October 2009
Participant Information Sheet: SAp group	4	09 December 2009
Participant Information Sheet: SAn group	4	09 December 2009
Participant Consent Form: SAp group	4	09 December 2009
Participant Consent Form: SAn group	4	09 December 2009
Imagery in social anxiety semi-structured interview	3	01 December 2009
Response to Request for Further Information		09 December 2009

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Now that you have completed the application process please visit the National Research Ethics Service website > After Review

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

The attached document *"After ethical review – guidance for researchers"* gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

We would also like to inform you that we consult regularly with stakeholders to improve our service. If you would like to join our Reference Group please email referencegroup@nres.npsa.nhs.uk.

09/H0301/78	**Please quote this number on all correspondence**

Yours sincerely

Dr Alan Lamont
Chair

Email: liz.wrighton@eoe.nhs.uk

Enclosures: "After ethical review – guidance for researchers"

Copy to: Ms Sue Steel
University of East Anglia

Ms Brenda Jones
Norfolk & Waveney Mental Health Partnership NHS Foundation Trust

East Norfolk and Waveney Research Governance Committee

Please reply to: Research Governance Committee Office
Research and Development Department
Level 3, East Block, Room 032
Norfolk & Norwich University Hospitals NHS Foundation Trust
Colney Lane
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NR4 7UY
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Direct Fax: 01603 289800

e-mail: rdoffice@nnuh.nhs.uk
Website: www.norfolkhealthresearch.nhs.uk

Ms Helen Lockett
University of East Anglia
School of Medicine, Health Policy & Practice
Elizabeth Fry Building
Norwich
NR4 7TJ
Norfolk

12/01/2010

Dear Ms Lockett

Re: 2010MH01S (15-01-10) Is social anxiety which is comorbid with psychosis the same as social anxiety as a primary diagnosis? An investigation into the nature of social anxiety in psychosis.

Following confirmation of a favourable Ethical opinion I am pleased to confirm that your project has been given full approval from the East Norfolk and Waveney Research Governance Committee and Research Management Team and you may start your research.

Please note that this approval applies to the following sites:

- Norfolk & Waveney Mental Health Trust

I have enclosed two copies of the Standard Terms and Conditions of Approval. Please sign and return one copy to the Research Governance Committee office. Failure to return the standard terms and conditions may affect the conditions of approval.

Please note, under the agreed standard terms and conditions of approval you must inform this Committee of any proposed changes to this study and to keep the Committee updated on progress.

If you have any queries regarding this or any other study please contact Julie Dawson, Research Governance Administrator, at the above address. Please note, your reference number is **2010MH01S (15-01-10)** and this should be quoted on all correspondence.

The Committee would like to take this opportunity to wish you every success with this project.

Yours sincerely

Dr Richard Reading
Chair
Consultant Paediatrician – NHS Norfolk

Encs – Standard terms and conditions
Guidance for screening of patient notes

Appendix I.
Participant Information Sheet (SAn group), Version 4, 9/12/09

A study exploring social anxiety, unusual experiences and thoughts about yourself and others

PARTICIPANT INFORMATION SHEET

You are invited to take part in a research study. Before you decide to take part, it is important for you to understand why the research is being done and what it will involve. The study is being carried out by the researcher, Helen Lockett, as part of an educational qualification. Helen is a trainee clinical psychologist with experience of working with people with difficulties such as anxiety and low mood, and with experience in conducting research to find out more about such difficulties and how best to help. If you would like to discuss the study further, please email Helen at **h.lockett@uea.ac.uk** or leave a message for her on **07882279535** and she will return your call. Please take time to read the following information carefully, and take time to decide whether or not you wish to take part.

Thank you for reading this.

THE STUDY

This study is designed to discover more about different peoples' experiences of social anxiety, in order to hopefully improve the treatment we can offer for this in the future. We specifically want to find out about the different ways people experience social anxiety and if social anxiety symptoms are related to factors such as current feelings and thoughts about yourself and other people. It is hoped that this will allow us to find out if these factors are important in our understanding and aid us in helping people with experiences/symptoms associated with emotional difficulties.

This study has been reviewed and approved by the Essex 1 Research Ethics Committee.

WHY HAVE I BEEN ASKED?

You have been invited to participate in this study because you have been identified by your medical/ care team as someone who experiences difficult anxiety in social situations. This is a comparison study; we aim to compare 51 people who experience social anxiety and 51 people with social anxiety and a diagnosis of psychosis, to see if the two groups experience social anxiety differently.

WHAT DO I HAVE TO DO TO TAKE PART?

If you decide to take part it will involve meeting with Helen at one of the following locations, chosen by you: your home, a clinic room at 80 St Stephens Road, the UEA, or your GP surgery (if there is a room available). You will have an interview about your experiences of anxiety in social situations and will fill in 7 questionnaires. The interview will ask you about the kind of things that go through your mind when you are anxious around others. The questionnaires ask about your symptoms of social anxiety, thoughts and beliefs you may have about yourself and others and some experiences people have which they may consider to be unusual or special. The whole process will probably take approximately 1 hour.

HOW WILL MY INFORMATION BE RECORDED

Written notes will be taken throughout the interview. Additionally, with your consent, the interview will be recorded on a digital audio recorder. It will not be recorded without your permission.

ARE THERE ANY RISKS OR BENEFITS TO TAKING PART?

Taking part in the study may help us understand more about the nature of social anxiety, which may help us develop better treatments. At your request, information from the study can also be shared with your medical/ care team to increase their understanding of your difficulties, which

may aid them to provide a better service for you. However, participation involves answering questions about your feelings and experiences and it is possible that you may find the interview (or parts of it) upsetting. If you decide to participate but after completing the interview you find that you become worried or distressed you can talk to the researchers, your care worker or GP.

DO I HAVE TO TAKE PART?
No. Taking part is entirely up to you. If you do not wish to take part it will not affect any health care treatment that you currently receive. Also, if you do decide to take part, you are able to change your mind and withdraw from the study at any time (even during the interview) without giving a reason. This would not affect your care either now or in the future.

WHAT IF I DECIDE I WANT TO WITHDRAW FROM THE STUDY
If you decide either during the interview or after it that you would rather not participate in the study or have your data used, just tell the interviewer that you have changed your mind. You will not have to give a reason and all your data will be destroyed. You have this option until the data is analysed (estimated as July 2010), as after this time it will be very difficult to extract your data.

WILL MY INFORMATION BE KEPT CONFIDENTIAL
All information that is collected about you will be kept strictly confidential, unless you request that we share it with your medical/ care team. Any information about you will have your name and address removed so that you cannot be recognised from it. Direct quotes from the interview may be used in the write-up of the study. However, there will be no information in the write-up to identify you from the quote or even for anyone to know that you participated in the study.

There is one exception when we cannot guarantee confidentiality: as employees of the NHS it is our duty to inform public services (e.g. your GP, Social Services, the police) if you disclose any information to us which may indicate that you or someone else is in danger, or that there has been criminal activity or professional malpractice.

WHAT WILL HAPPEN TO THE RESULTS OF THIS STUDY
The results will be written as a report and assessed as a piece of course work for the researcher's doctorate in Clinical Psychology at the University of East Anglia. It may also be published in a psychology journal. You will not be able to be identified in any report/publication arising from this study.

WHAT IF I WANT ANY FURTHER INFORMATION
If you want any further information or have any questions, please telephone Helen Lockett on **07882279535**, or email her at h.lockett@uea.ac.uk.

WHAT IF I WANT TO MAKE A COMPLAINT?
If you want to complain about any aspect of this study, please contact the Complaints Manager at Norfolk & Waveney Mental Health NHS, Foundation Trust, Hellesdon Hospital, Drayton High Road, Norwich, NR6 5BE, Tel: *01603 421421*, and The Clinical Psychology Course Directors at the University of East Anglia on *01603 593310*.

IF I DECIDE TO TAKE PART, WHAT DO I DO NEXT?
If you have decided to take part in the study, please either tell the person who told you about the study, who will ask for your permission to give Helen your name and address/phone number, or you can telephone Helen yourself on **07882279535**. Helen will then contact you (or return your call) and a meeting can be arranged where you will be asked to sign a form agreeing you consent to the study before you carry out the interview and questionnaires. You will able to ask any questions you may have about the study. A letter will be sent to you with details to confirm the arranged meeting date, time and place.

A study exploring social anxiety, unusual experiences and thoughts about yourself and others

PARTICIPANT INFORMATION SHEET

You are invited to take part in a research study. Before you decide to take part, it is important for you to understand why the research is being done and what it will involve. The study is being carried out by the researcher, Helen Lockett, as part of an educational qualification. Helen is a trainee clinical psychologist with experience of working with people with difficulties such as anxiety and low mood, and with those who have unusual experiences (such as seeing or hearing things that others can't). She also has experience in conducting research to find out more about such difficulties and how best to help. If you would like to discuss the study further, please either speak to the Assistant Psychologist or leave a message for Helen on **07882279535** and she will return your call. Please take time to read the following information carefully, and take time to decide whether or not you wish to take part.

Thank you for reading this.

THE STUDY

This study is designed to discover more about different people's experiences of social anxiety, in order to hopefully improve the treatment we can offer for this in the future. We specifically want to find out about the different ways people experience social anxiety and if social anxiety symptoms are related to factors such as current feelings and thoughts about yourself and other people. We are interested in finding out if additional symptoms or experiences (such as those associated with psychosis) change the way people experience social anxiety. Social anxiety is quite common among people with a diagnosis of psychosis, and it is hoped that this study will contribute to our understanding and aid us in helping people with these symptoms more effectively.

This study has been reviewed and approved by the Essex 1 Research Ethics Committee.

WHY HAVE I BEEN ASKED?

We are inviting all the people who have been recently referred to the Norfolk Early Intervention Service who also experience strong anxiety in social situations to participate in this study. We are interested in finding out about a range of experiences and seeing if different factors are related to different experiences/symptoms for different people. This is a comparison study; we aim to compare 51 people who experience social anxiety and 51 people with social anxiety and a diagnosis of psychosis, to see if the two groups experience social anxiety differently.

WHAT DO I HAVE TO DO TO TAKE PART?
Consenting to take part in this study will mean that some of the information collected during your routine Early Intervention Service assessment with the assistant psychologist can also be used in this study. The assistant psychologist will already have completed a questionnaire with you about anxiety in social situations. If you consent to take part in this study, this information will be used as part of the study data. Additionally, your results for six other questionnaires which ask about your thoughts related to social situations, your beliefs about yourself and others, and any unusual experiences or symptoms you might experience, will also be used in the study. The assistant psychologist will also conduct an informal interview with you asking about the types of things you see, think and feel when you are anxious in social situations. This interview and the questionnaires take approximately 1 hour to complete in total.

You will be asked to sign a consent form allowing us to use your anonymised (without any of your identifying details on it) information from the questionnaires and interview in this study. You will be given at least 72 hours between reading this information and being asked if you have made a decision, and you can take longer than this if you wish. Feel free to ask the assistant psychologist who is conducting your assessment any questions you have about participating.

HOW WILL MY INFORMATION BE RECORDED
Written notes will be taken throughout the interview. Additionally, with your consent, the interview will be recorded on a digital audio recorder. It will not be recorded without your permission.

ARE THERE ANY RISKS OR BENEFITS TO TAKING PART?
Taking part in the study may help us understand more about the nature of social anxiety among people who also have a diagnosis of psychosis, which may help us to develop better treatments. Participation involves answering questions about your feelings and experiences and it is possible that you may find the interview (or parts of it) upsetting. If you decide to participate but after completing the interview you find that you become worried or distressed you can talk to the Assistant Psychologist who conducted the interview, another member of the Early Intervention Service or your GP.

DO I HAVE TO TAKE PART?
No. Taking part is entirely up to you. If you do not wish to take part and allow the assessment information to be used for study purposes, it will not affect any treatment that you currently receive. Also, if you do decide to take part, you are able to change your mind and withdraw from the study at any time without giving a reason. This would not affect your care either now or in the future.

WHAT IF I DECIDE I WANT TO WITHDRAW FROM THE STUDY
If you decide either during the interview or after it that you would rather not participate in the study or have your data used, just tell the interviewer that you have changed your mind. You will not have to give a reason and all your

data will be destroyed. You have this option until the data is analysed (estimated as July 2010), as after this time it will be very difficult to extract your data.

WILL MY INFORMATION BE KEPT CONFIDENTIAL?
All information collected about you by your assistant psychologist and given to the researcher will be kept separate from any information identifying who you are. No information about who the participants were will be included in the write-up of the study. Direct quotes from the interview may be used in the write-up of the study. However, there will be no information in the write-up to identify you from the quote or even for anyone to know that you participated in the study.

WHAT WILL HAPPEN TO THE RESULTS OF THIS STUDY?
The results will be written as a report and assessed as a piece of course work for the researcher's doctorate in Clinical Psychology at the University of East Anglia. It may also be published in a psychology journal. You will not be identified in any report/publication arising from this study.

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IF I HAVE DECIDED TO TAKE PART, WHAT DO I DO NEXT?
If you have decided to take part in the study, please tell your Assistant Psychologist. You will be able to ask any questions that you may have about it. At your assessment appointment the Assistant Psychologist will ask you to consent to the study by signing a consent form.

Appendix I.
Participant Information Sheet (SAp2 group – Clients of the other EISs in the region), Version 1, 26/05/2010

A study exploring social anxiety, unusual experiences and thoughts about yourself and others

PARTICIPANT INFORMATION SHEET

You are invited to take part in a research study. Before you decide to take part, it is important for you to understand why the research is being done and what it will involve. The study is being carried out by the researcher, Helen Lockett, as part of an educational qualification. Helen is a trainee clinical psychologist with experience of working with people with difficulties such as anxiety and low mood, and with experience in conducting research to find out more about such difficulties and how best to help. If you would like to discuss the study further, please email Helen at h.lockett@uea.ac.uk or leave a message for her on **07882279535** and she will return your call. Please take time to read the following information carefully, and take time to decide whether or not you wish to take part.

Thank you for reading this.

THE STUDY

This study is designed to discover more about different people's experiences of social anxiety, in order to hopefully improve the treatment we can offer for this in the future. We specifically want to find out about the different ways people experience social anxiety and if social anxiety symptoms are related to factors such as current feelings and thoughts about yourself and other people. We are interested in finding out if additional symptoms or experiences (such as those associated with psychosis) change the way people experience social anxiety. Social anxiety is quite common among people with a diagnosis of psychosis, and it is hoped that this study will contribute to our understanding and aid us in helping people with these symptoms more effectively.

This study has been reviewed and approved by the Essex 1 Research Ethics Committee.

WHY HAVE I BEEN ASKED?

We are inviting all the people who have been referred to the Norfolk Early Intervention Service who also experience strong anxiety in social situations to participate in this study. We are interested in finding out about a range of experiences and seeing if different factors are related to different experiences/symptoms for different people. This is a comparison study; we aim to compare 51 people who experience social anxiety and 51 people with social anxiety and a diagnosis of psychosis, to see if the two groups experience social anxiety differently.

WHAT DO I HAVE TO DO TO TAKE PART?

If you decide to take part it will involve meeting with Helen at either a local community mental health building (eg. where you see your case manager) or your GP surgery (if a room is available), whichever is easier for you. It may also be possible to see you at your home if you would prefer. You will have an interview about your experiences of anxiety in social situations and will fill in 7 questionnaires. The interview will ask you about the kind of things that go through your mind when you are anxious around others. The questionnaires ask about your symptoms of social anxiety, thoughts and beliefs you may have about yourself and others and some experiences people have which they may consider to be unusual or special. The whole process will probably take approximately 1 hour.

You will be asked to sign a consent form allowing us to use your anonymised (without any of your identifying details on it) information from the questionnaires and interview in this study. You will be given at least 72 hours between reading this information and being asked if you have made a decision, and you can take longer than this if you wish. Feel free to ask the assistant psychologist who is conducting your assessment any questions you have about participating.

HOW WILL MY INFORMATION BE RECORDED

Written notes will be taken throughout the interview. Additionally, with your consent, the interview will be recorded on a digital audio recorder. It will not be recorded without your permission.

Appendix I.
Participant Information Sheet (SAp2 group – Clients of the other EISs in the region), Version 1, 26/05/2010

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Taking part in the study may help us understand more about the nature of social anxiety among people who also have a diagnosis of psychosis, which may help us to develop better treatments. Participation involves answering questions about your feelings and experiences and it is possible that you may find the interview (or parts of it) upsetting. If you decide to participate but after completing the interview you find that you become worried or distressed you can talk to your Case Manager with the Early Intervention Service or your GP.

DO I HAVE TO TAKE PART?
No. Taking part is entirely up to you. If you do not wish to take part it will not affect any health care treatment that you currently receive. Also, if you do decide to take part, you are able to change your mind and withdraw from the study at any time (even during the interview) without giving a reason. This would not affect your care either now or in the future.

WHAT IF I DECIDE I WANT TO WITHDRAW FROM THE STUDY
If you decide either during the interview or after it that you would rather not participate in the study or have your data used, just tell the interviewer that you have changed your mind. You will not have to give a reason and all your data will be destroyed. You have this option until the data is analysed (estimated as September 2010), as after this time it will be very difficult to extract your data.

WILL MY INFORMATION BE KEPT CONFIDENTIAL
All information that is collected about you will be kept strictly confidential, unless you request that we share it with your care team. Any information about you will have your name and address removed so that you cannot be recognised from it. Direct quotes from the interview may be used in the write-up of the study. However, there will be no information in the write-up to identify you from the quote or even for anyone to know that you participated in the study.

There is one exception when we cannot guarantee confidentiality: as employees of the NHS it is our duty to inform public services (e.g. your GP, Social Services, the police) if you disclose any information to us which may indicate that you or someone else is in danger, or that there has been criminal activity or professional malpractice.

WHAT WILL HAPPEN TO THE RESULTS OF THIS STUDY
The results will be written as a report and assessed as a piece of course work for the researcher's doctorate in Clinical Psychology at the University of East Anglia. It may also be published in a psychology journal. You will not be able to be identified in any report/publication arising from this study.

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If you have decided to take part in the study, please either tell the person who told you about the study, who will ask for your permission to give Helen your name and address/phone number, or you can telephone Helen yourself on **07882279535**. Helen will then contact you (or return your call) and a meeting can be arranged where you will be asked to sign a form agreeing you consent to the study before you carry out the interview and questionnaires. You will able to ask any questions you may have about the study. A letter will be sent to you with details to confirm the arranged meeting date, time and place.

Appendix J.
Study feedback letter

A study exploring social anxiety, unusual experiences and thoughts about yourself and others

Many thanks for your interest in the above study. I am writing to let you know the outcome.

Background to the study

Feeling anxious in social situations is a common experience for lots of people. We know that there are high numbers of people who have a diagnosis of psychosis and also get anxious in social situations. However, we do not currently know if social anxiety with psychosis is the same as social anxiety without psychosis. This means that we do not know if current treatments for social anxiety will be effective for social anxiety with psychosis.

What did we do?

The study compared two groups, one with social anxiety and the other with social anxiety and a diagnosis of psychosis. Participants were asked to fill in a number of questionnaires and be interviewed, to find out whether the people in the two groups had similar beliefs, thoughts and mental images when in anxiety provoking social situations.

What did we find out?

The groups were similar in a lot of ways. However, there were some differences: The group with social anxiety and a diagnosis of psychosis were more likely to have negative thoughts and beliefs about other people and expect others to wish them harm. The group with social anxiety and no psychosis were more likely to worry that other people would think badly of them and to think that other people are better than them in some way. Both groups had a large number of participants who experienced mental images when in anxiety-provoking social situations (eg. a negative image of themselves or other people), which has been found in previous research to be very common among people with social anxiety.

I hope this answers your questions about the study. If it does not, please contact Helen Lockett (the researcher) at **h.lockett@uea.ac.uk**.

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Quantitative Scores and Image Description Summaries – SAn Group

Participant number, gender & age (years)	Anxiety at worst moment (0-100)	Image perspective (-3 = completely field, 0 = switching between perspectives, +3 = completely observer)	Image distortion (0-100%)	Clear picture? (0 = No, 1 = Probably, 2 = Yes)	Image description
1) Male, 20	80	+3	0-Visual	2	Participant is tensing up, shaking, with everyone laughing and joking around him. He is in a room approximately 3x2.5metres, with 5 walls, no doors and no windows. There are about 30 people in the room. In one corner, people in suits are laughing together "in their own little world". On the other side are younger people of about the participant's age, pointing and laughing at him. The participant is in another corner, cowering, nearly crying, feeling sick.
2) Male, 36	75	Does not experience images			
3) Male, 41	100	N/A	N/A	0	Has the impression that others are staring at him and judging him. He imagines himself as a bird, flying through the

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					window to escape. The sounds around him are muffled although his voice sounds very loud, and he feels "bigger, more on display".
4) Male, 21	50			Does not experience images.	
5) Female, 31	85	+1	80-Visual 80-Sound	2	Participant is on her own, isolated, separated from others as if there is a glass wall. Everything sounds louder but everything outside the "wall" is muffled and blurry. The participant is sitting, watching everyone else looking really blurred through the "wall" – there are lots of people. She is sitting hunched, looking taller, gangly and "awkward, like a teenager". She cannot see her own face clearly in the image – it is blurred.
6) Female, 29	50	+3	50-Visual	2	Participant sees just herself, standing with her hands by her sides, looking straight ahead. She is wearing drab, dull clothes (even though in reality at the time she was wearing a smart dress). She looks sad, shorter and paler than in reality.

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					She is not speaking.
7) Female, 21	90	-3	0-Visual 12.5-Sound	2	Image is a memory of not getting the grades the participant needed to go to her preferred medical school. She sees herself walking into her room, closing and locking the door. She opens the results envelope and keeps re-checking them. They are not good enough. Then she is in floods of tears. People are knocking on her door – her dad is saying "It's okay". She can hear her mum telling people, "She didn't get in". She can see the image in great detail, even her clothes and the objects in her room.
8) Female, 21	50	+3	25-Visual 25-Sound	2	Saw an image of her face, redder than in reality and with enlarged spots and accentuated blackheads, with her fringe out of place.
9) Male, 21	62	-2	10-Visual 0-Sound	2	Sees himself looking nervous, rubbing and pulling on his face, rubbing his hands, not making eye contact, moving about and stammering. Even more than looking at himself,

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Quantitative Scores and Image Description Summaries – SAn Group

					he sees other people's reactions to him – in this situation he sees imagined versions of his housemate's parents (who he is anxious about meeting), looking at him puzzled, confused and concerned. He can hear himself talking – trying to "dig myself out of a hole".
10) Female, 55	50			Does not experience images.	
11) Female, 34	75	0	50-Visual 75-Sound	2	Sees herself in her current situation, looking a bit red, a bit flustered, "and sort of waffling a bit". She has a piece of paper in her hand and is desperately looking for the piece of information she needs. She looks younger and has the impression that she is at the end of table, more prominent than everyone else. She can see the other people looking at her as if to say, "What is she talking about?" It is overwhelmingly silent, even though she is talking.
12) Female, 56	75	+3	75-Visual 60-Sound	2	Sees an image of herself as a child aged 6-7years – small, helpless and frightened, in the playground at school near the

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Quantitative Scores and Image Description Summaries – SAn Group

			75-Smell		canteen. She sees herself as “a very lonely, unhappy child”, not understanding why she is being bullied; trying to understand, and realising she’s different, or perceived by the other children as different. Hears the bullies calling her “flea”. She can smell the canteen food strongly.
13) Female, 20	75	-3	35-Visual 75-Sound		She is surrounded by other people at a party, sitting down while everyone else is standing. Everything is very colourful and there is a fun atmosphere, all her friends are there, but she can’t join in. She feels that she looks a bit goofy and awkward, and is mumbling. Everyone is unaware of her as she sits silently.
14) Male, 29	50	-1	25-Visual	2	He is sitting in the mortgage advisor’s office next to his fiancé, opposite the mortgage advisor. He is focussed on the mortgage advisor’s face, which is neutral, and is very aware of his own body – his arms and legs look slightly bigger than in reality. There is a red tint to the image. The image is

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					from his perspective, but seems slightly "out of body".
15) Female, 40	70	+1	0	2	Sees herself looking almost expressionless or blank, and not in control of the situation, overwhelmed by it. She also looks a bit hopeless, motionless and frozen. She can see the family in her therapy session, sitting in a circle. She is most focussed on the mother – she is the most physically tense in the family but has a very calm, smiley face. The participant has an impression of being watched by her colleagues.
16) Female, 58	75	+2	50-Visual 25-Sound	1	Image of herself in the current situation (a business meeting with colleagues, client and accountant). She is looking very nervous, hunched forward and tense, looking unconfident and wide-eyed, "a failure". She also looks older. She and her colleagues are on one side of the table; the accountant is sitting opposite her, quite close, giving her a "withering look" and shaking his head. Everyone seems to have their eyes on her except her colleagues, who are looking down

Appendix K.
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					and appear to be avoiding her gaze. She has a strong impression that the director and accountant are thinking, "What are they doing, sending this woman out?", while her colleague is thinking that she is "letting the side down". She had the sensation that she is "shrinking into" herself.
17) Female, 27	90	0	0	2	While speaking in a staff meeting, the participant had an image of herself with a "steaming hot face, looking really awkward and nervous." She can see herself with heat rising from her neck to the top of her head – she's "beetroot" coloured – everyone is staring, can see how red she am. People can see the heat coming off her face. She is looking awkward and "fiddly", crossing and uncrossing her legs, fiddling with her bag, looking very awkward and out of place.
18) Female, 21	60	-3	0	2	Had an image of what will happen if she confronts her housemate about using her tin. She sees the image through

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					her eyes, and can see him standing about 1½ metres away from her is his room. He is avoiding what she has asked and bringing up other issues, like the bills. He is dressed in jeans and a shirt and is fidgeting, moving his legs. His expression is quite plain, not smiling but not looking cross. She can see him talking, but cannot hear what he says.
19) Female, 28	70	-3	80-Visual 60-Sound	2	The participant experiences an image of herself as though she is in a bubble, separated from everyone. She can see lots and lots of faces laughing and talking to each other – the faces keep changing quite rapidly. She feels very aware of people's body language, particularly groups of people and their body language together, how they are interacting, particularly couples being close. Then she turns around and sees the same all around her. It seems like "being in the middle of a doughnut" – the longer it goes on, the bigger the hole gets and the further away from the groups she feels.

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Quantitative Scores and Image Description Summaries – SAn Group

				She can see some faces clearly but the rest are blurred and similar. She can see her own hands and feet, as though completely through her eyes. This image usually occurs when the participant has been on her own for a long time at a social event.
	70	+2	30-Visual 30-Sound	Participant SAn19 also experiences on image of groups of people turned in on each other. Occasionally they turn round to look at her, then look away again as if they notice that she is not involved, think negatively of it, but don't care. The people look partly disapproving and critical, like they're judging her, then decide they feel indifferent towards her. The participant does not see herself but the image is not quite from her perspective – as though she is standing in front of herself. She used to see them talking about her, saying she is odd, but this has not happened recently. Now she hears "white

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					noise – silence in the middle of sound." This image usually occurs if she is in one group but being very quiet, and she imagines people in other groups looking at her and judging.
20) Male, 43	75			Does not experience images.	
21) Male, 34	80	+2	80-Visual	0	When in the queue at the shop the participant feels like he might faint, and has an impression of what would happen if he did faint – everyone would stare. Also has general impression that people are staring at him. Sometimes experiences everything around him "juddering" while he remains still. He also sometimes has an impression that people can sense that there is something wrong with him, can see how anxious he is – people giving him "furtive looks". *These are more impressions than clear visual images.*
22) Female, 36	25			Does not experience images.	

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23) Female, 29	60	-3	50-Visual 85-Sound 85-Smell	0	When at a garden fete, sees groups of people, talking and obviously connected to each other. No one is saying “hello” or bringing her over – she has the impression that they all have their backs to her, closed off from her. More an impression than clear visual image. Also has an impression of other people in “bubbles” that she is unsure about how to break in to.
24) Male, 33	33	-2	33-Visual	2	Sees an image of himself looking more overweight in the upper body than he feels he is, looking unfit. The image is as though he is looking in a mirror – through his own eyes but seeing himself.
25) Female, 51	100	2	75-Visual 100-Sound 100-Smell	2	Participant sees herself in her present situation, but looking like a “silly young girl” – “silly and stupid, uncontrollable, pathetic”. She is leaning over the side of her chair, being sick, and can’t stop her body from shaking. Her husband and sister are beside her, her husband looks fed-up and her sister

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					looks embarrassed. In real life, the participant says they are both being supportive. She can hear her own thoughts saying, "She's embarrassing", and "She should have better control over herself" – what she thinks others must be thinking. She can also hear the surrounding noise, but it is louder and muffled. She can smell the inside of a gas-and-air mask very clearly, which she associates with the birth of her daughter when it made her feel very sick.
26) Female, 44	50	+3	75-Visual	2	When queuing in the post office, the participant experienced an image of herself having fainted on the floor. People are all looking at her and she thinks that afterwards they will all be talking about her. She feels foolish. At the time, she feels as though everyone else in the post office is "in my face", and she worries they will notice she is distressed, which is a threatening thought. The lights seem brighter.
27) Male, 45	75	+3	0	2	The participant sees an image of himself as if from above,

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Quantitative Scores and Image Description Summaries – SAn Group

					either standing or sitting depending on his actual posture. He sees himself as he believes he is and as he believes others see him – "ugly" and "unlikeable". He does not notice what is going on around him as this image dominates his perspective. He does not get this image when with people he knows like him, such as his family.
28) Female, 45	75	1	62-Visual 75-Sound	2	The participant saw an image of herself sitting and talking to someone. This person then re-joins their friends and she sees them talking about her, laughing and pointing. She sees herself looking "like the scruffiest person there". As she drank alcohol to try to feel more relaxed, she saw herself looking quite drunk, lying back in her chair, sitting apart from everybody. She could here people laughing.
29) Male, 25	50	+3	32.5-Visual	2	The participant experienced three images: one before doing a presentation, one during it and one after it. The image before the presentation is of him forgetting his words. The

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Quantitative Scores and Image Description Summaries – SAn Group

					image at the time is very positive, of him remembering his words, not feeling anxious, speaking with "good voice" and not shaking – looking "normal". He also sees his audience being interested in what he is saying. However, afterwards he has an image of the presentation going badly and sees himself looking anxious, while also remembering other situations when presentations have gone badly. The participant attributed this to being a perfectionist who always judges himself harshly.
30) Female, 29	63	+3	50-Visual	2	The participant sees a close-up image of her face, her cheeks are "burning". She is looking straight ahead and looks scared with wide eyes. Her hair and mouth look normal. There are no sounds or smells in her image.
31) Male, 21	75	+3	0-Visual	1	The participants sees himself as he imagines he appears – he sees just him, sitting down, with his legs moving up and down agitatedly. He can see his hands are sweaty, grasping

Appendix K.
Quantitative Scores and Image Description Summaries – SAn Group

					and releasing the arm rest. He is smiling, looking excited, but he can tell he is agitated by the above signs of anxiety.
32) Male, 45	75	-3	75-Visual 75-Sound 0-Smell	1	The participant has the impression that the crowd of people around him in the supermarket is much bigger than in reality. It is very bright with lots of hustle and bustle and it is very noisy. It seems like everyone is really close to him and it seems as though the shop is getting smaller and smaller, forcing the crowd to close in on him. He cannot see himself.

Appendix L.
Quantitative Scores and Image Description Summaries – SAp Group

Participant number, gender & age	Anxiety at worst moment (0-100)	Image perspective (-3 = completely field, 0 = switching between perspectives, +3 = completely observer)	Image distortion (0-100%)	Clear picture? (0 = No, 1 = Probably, 2 = Yes)	Image description
1) Female, 19	75	+3	50-Visual 10-Sound 75-Smell	2	Image of self at a party 2 years ago, sitting in the middle of a group of people, but they don't feel close to her. She is wearing a dress (which is unusual for her) and looks really big. But everyone else and the room also looks bigger than is reality. People are talking around her but she cannot hear anything, except for the voice in her head saying, "Why did we come here?", "You're going to mess up – they'll all thing you're weird". There is a strong smell of shoe polish. She is looking panicked, anxious because no one is talking to her and because she wants to talk to her voice but does not want to do this in public. Her eyes look "glazed over" when she is listening to the voice, and she is worried others will notice this and think she is dangerous or weird, a "fruit loop".
2) Male, 19	35	-3	0	2	Image of going into the pharmacy to pick up his medication, through his own eyes. Cannot see himself or others, just the room which seems very big.
3) Male, 25	75	-2	25-Visual 25-Sound	2	Just before having to introduce himself to a group of strangers, had an image of telling the group his name an no one reacting. The group seemed bigger than it really was and he could not make out faces, just bodies.
4) Male, 31	87	2	50-Visual 85-Sound	0	Perception of what was going on around him, but very distorted and he feels 'disembodied'– everything seemed grey, and his hearing sounded like he was underwater. Impression of people "flitting by", it being darker where he is, and shadows being more pronounced. The surrounding buildings look bigger than in real life. It feels as though everything surrounding him is closing in around him, particularly sounds getting louder – it

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					feels like "overload".
5) Female, 19	80	0	30-Visual 30-Sound 30-Smell	1	Thoughts of going into Norwich – panic attack. Thoughts about appearance, worrying that top/ underwear will fall down. Thinking people are judging her negatively. Particularly difficult being around men. "Vile thoughts about smoking". "Completely vain thoughts". Whitish image of Chapelfield. Can see self, upper body and clothes, and other people around. Sometimes images of being kidnapped and held hostage, being grabbed by a man and treated violently. Associated smells and sounds – cigarette smoke, lip gloss, food. Experiences lots of different images when anxious.
6) Female, 22	85	-3	50-Visual 50-Sound	1	Warped faces, dark, evil. People staring at her. Sees accidents – that might happen. Hears lots of noise and laughing – people going out of their way to look at her. Moving her head around. It's very dark – can't see herself. Sees lots of younger people in their 20s/ 30s, but she's on her own. Feels panicky. Has her music on. Image located in the future – what she fears will happen.
		+3	0 (participant's perception)	1	Image of herself as fat, walking down the street. Gets the image when she is getting ready to go out and when she's walking down the street. Sees people laughing. Always gets this image.
7) Male, 33	82.5	-3	100-Visual (although seems completely real in situation)	2	Images of himself rugby tackling an aggressive shouting man in Tesco (after he has actually seen this man) or being otherwise violent towards people he sees (eg. in front of him in a queue) – lots of blood. Person is always male and teenage to early 20s. Particularly 1 person with a sharp face and pointy nose. No sound in image. Gets similar images regularly. Around 50% of the time gets an impression when he walks into a shop that everyone has stopped to stare at him, "It's almost like I've put a video on pause."

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					Sometimes gets a picture of what might happen in the immediate future, eg. someone talking to him.
8) Male, 16	60	+3	0-Visual 50-Sound 50-Smell	2	Sees himself as if from above. Sees himself standing, talking to other people, enjoying himself and happy. However, he still has an impression that others are talking about him, saying "nothing good", and is worrying about what they are saying – or is worried that this is what will be happening imminently.
9) Male, 21	70	+3	20-Visual	1	People looking at him strangely, judging him. Sees himself in jeans, t-shirt and jumper, red in the face, feeling tense and nervous. Other people look normal. Self in the situation – not historical image. Appears to be his memory of the situation rather than an image he experienced during the incident.
10) Female, 28	82.5	-3	0-Visual 70-Sound 70-Smell	1	When going to her children's school, has an image of 5 women there talking about her, pointing at her, laughing, or of someone punching her in the face. Imagines people calling her "useless" and "a waste of space". In the image she feels fat and further away from people, and she feels sick. She can smell the perfume of these women.
11) Male, 25	50	-2	0	1	Sees other people around him. Sees them clearly. Seems like everyone knows him. Feels like his behaviour is a bit slow, feels dizzy. Feels people are thinking that he's not normal – sees them whispering. Hears them saying, "He's slow". Feels frustrated, angry and worried. Others seem bigger than him. Believes he is not normal. Believes others are judgemental. Believes the world is a dangerous place. Self in situation – not historical.
12) Female, 18	70	+3	90-Visual 20-Sound	0	Hears her name being said and thinks her friends are talking and texting about her. Feels as though she is further away from people. Recalls herself sitting in a car with a beeny in her hand, with people looking at her. Worried about what they are thinking. More sensations than image.

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13) Female, 32	80-90	+1	50 – smell 0 – sight/ sound	2	Sees herself as if from a distance. Feels as though everyone is looking at her, sees people sniggering at her behind her. Hears her own thoughts clearly, criticising her. Feels as though she is really short – close to the floor. Feels itchy. Part of the time she sees through her eyes (fiddling with a tissue), partly sees herself – sees sweat marks on her clothes, sees her strained expression with sweaty forehead, body hunched over. Can see the people behind her. Can smell a "humid" smell and feel her heart racing. Recurrent image.
14) Female, 34	Does not experience images.				
15) Female, 20	25	+1	Unsure	Unsure	The participant found it hard to recall her image, but said that she could see herself walking in the city, with other people rushing around her.
16) Male, 30	75	+3	0	2	The participant sees himself from the outside at the present time, but sees himself assaulting the people around him – "grotesque violence, blood and gore". No sounds or smells in the image.
17) Male, 27	No image reported, although does ruminate afterwards and remembers the scene – perhaps in a distorted way, but unsure.				
18) Male, 27	45	+1	50-Visual	1	Had an image before going shopping of standing facing another person and wondering what he would say to them. Imagining how the other person would react and remembering past positive and negative interactions.
19) Male, 30	75	-3	25-Visual 25-Sound	2	While in a training group, the participant had a memory image of being in the classroom when he was a teenager, feeling very anxious that his classmates were wanting him to mess up, give an incorrect answer, so they could laugh at him. Had the experience of time in the image and real time being different, and felt separated from the others in his training group as though he was in a bubble.
20) Female, 23		+1	85-Visual 70-Sound	2	When approached by a charity worker, has an image of herself as "piggy", "grotesque", "fat" and "slouchy". Also sees charity

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					worker talking to her, trying to convince her to donate. In reality he is being quite flirtatious, which is making her uncomfortable, but in her image she is imaging how he will react when she tells him she cannot afford to donate - he is reacting badly to her, gritting his teeth, maybe getting aggressive and swearing. She also has the impression that the charity worker's colleagues are thinking, "Why's he flirting with her, she's gross?"
21) Male, 27	80	-2	40-Visual 20-Sound	1	When about to go into shop, got the impression that things were further away than in reality – "people zooming away like with a camera". It felt as though there was an invisible force between him and the other people. The sound also seemed distorted, as though his ears were blocked. Concerned that others would notice how uncomfortable he was and think he was bad. Also had the impression that he appeared scruffy, with stuff in his hair, and his jeans felt too big and baggy.
	65	0	25-Visual	2	While walking his dog with his case manager, they passed a man (also with a dog) who stopped to talk to them. The participant had "flashing images" of the man pulling a gun on him when the man reached into his pocket, him getting shot and the man running away.
22) Male, 24	100	-3	0-Visual 25-Sound	2	Image of his friends talking about him, laughing and "taking the piss" about something he has said after he has left the room.
23) Female, 21	Did not complete imagery interview				
24) Male, 21	75	No clear image, but did feel like he was "separated" from the other people he was with and that they were staring at him because he was ugly.			
25) Male, 19	50	Does not experience images.			
26) Male, 35	73	-2	50-Visual 75-Sound	1	Sees his surroundings as blurred and "speeded up", and feels very aware of himself and how he looks – impression that he looks sweaty and "stupid". His voices are very negative and say things like, "Oh, you're going to make a fool of yourself."
27) Male, 25	63	Does not experience images.			

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28) Male, 25	100	N/A	100	N/A	Feels smaller and fatter than in reality.
29) Male, 26	75	+3	75-Visual	1	Sees an image of the faces of all the people around him, looking at him with disgusted expressions on their faces. He can see all around him, 360^{o}, as if he is outside his body, but does not see himself. He is particularly focussed on the eyes of the people.

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Template Thematic Analysis of Semi-Structured Interviews for SAn group (themes are derived from image descriptions and associated thoughts/ feelings)

	Theme	**Participant number (gender, age)**	**Quote/ Summary**
1	Negative evaluation *(total number of participants identifying this theme in SAn group:29)*		See below.
1.1	Fear of negative evaluation from others *(total number of participants identifying this theme in SAn group:28)*		See below.
1.1.1	General fear of ridicule or judgement from others *(total number of participants identifying this theme in SAn group:9)*	1 (M, 20) 5 (F, 31) 11 (F, 34) 15 (F, 40) 16 (F, 58) 17 (F, 27)	Image of being trapped in a room with people his age pointing and laughing at him. "I worry what they're thinking, why they still want to see me [her friends]." "I can imagine that as I look round I'll come across one face that's frowning." "I think they judge me. I think it will be harsh." "People can be judgemental – they judge on first impressions." "I was wondering how it looked to the observers." "[In her image] I imagined my colleagues were looking at me negatively." "[This is happening because] I have a fear of people judging me."

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		18 (F, 21) 23 (F, 29) 24 (M, 33)	"I always think other people are judging me." "I think others are thinking badly of me, so I think badly of myself." Generally has a positive self-image, but when feeling anxious in a social situation he wonders about what others will think of him.
1.1.2	Fear of being judged as inferior *(total number of participants identifying this theme in SAn group:2)*	12 (F, 56) 16 (F, 58)	Feels judged by authority figures – gets the impression that they think she is inferior, unworthy, an annoyance they want to "swat" away (linked to childhood bullying – being called "flea"). "[My colleague] would have been quite cross – he'd have felt I let the side down."
1.1.3	Fear of being judged as boring *(total number of participants identifying this theme in SAn group:2)*	6 (F, 29) 13 (F, 20)	Worries what others will think of her, eg. when talking to someone and the conversation "dries up" – worried they will think she is boring. Imagines that others compare her to the people around her and judge her negatively as boring.
1.1.4	Fear of being judged as stupid or unknowledgeable or foolish *(total number of participants identifying this theme in SAn group:8)*	3 (M, 41) 7 (F, 21) 11 (F, 34) 13 (F, 20)	"I think I appear as very ugly and unintelligent." "I'm a complete failure, stupid, especially compared to others." "I can see the other people looking at me as if to say, "What is she talking about?"" Has image of someone looking at her as if to say, "What are you talking about?" Image of herself trying to talk to a stranger and coming across as "goofy and awkward,

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			mumbling a lot".
		14 (M, 29)	"[Visiting the mortgage advisor] I didn't understand half of what he was saying, but I didn't want him to know that… because he might think I was inferior, less intelligent than him."
		16 (F, 58)	"I thought they were thinking: 'What are they doing, sending this woman out?'"
			"I felt so ashamed, incompetent – I couldn't meet their eyes."
			"I looked like a fool in front of all those people."
			"I felt like I kept getting things wrong and didn't handle it well… I felt so incompetent."
			"I felt so stupid – I wanted the ground to open up."
		23 (F, 29)	"[I think others might be] irritated, thinking "What's she doing here?" "What was the point of saying that?"
		30 (F, 29)	Anxious of "making a fool" of herself in front of others.
1.1.5	Fear of being judged as irritating *(total number of participants identifying this theme in SAn group:2)*	23 (F, 29)	"[I think others might be] irritated, thinking "What's she doing here?" "What was the point of saying that?"
		25 (F, 51)	"The world sees me like an annoying child, a nuisance, silly."
			In her image, her husband and sister look "fed up" and "embarrassed".
			"Others will find me frustrating."

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1.1.6	Fear of being judged as a failure *(total number of participants identifying this theme in SAn group:2)*	7 (F, 21) 29 (M, 25)	When about to be assessed, hears others saying, "Oh, you didn't get in [to university]" – memory related to current fear of judgement – "I don't want people to think badly of me… my worst case scenario is everyone looking at me like I'm a failure." "The worst thing is everyone knowing, the way they look at me – like I'm a waste of space. It's like it wiped out all my achievements." "I'm a complete failure, stupid, especially compared to others." Feels more anxious when he is being graded (ie. for coursework).
1.1.7	Fear of being judged as unlikeable or a bad person *(total number of participants identifying this theme in SAn group:6)*	3 (M, 21) 13 (F, 20) 19 (F, 28) 26 (F, 44) 27 (M, 45) 30 (F, 29)	"People think I might rob them." Imagines that others think she looks stand-offish. "…they notice that I'm not involved, think negatively of it, but don't care… They look partly disapproving and critical – like they're judging. Then they decide they're indifferent." "Others think I'm snobby and stuck-up." Thinks others see him as unlikeable and ugly – as he sees himself. Worries that her physical anxiety symptoms will make others think that she is being untruthful or is guilty.

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1.1.8	Fear of being judged as "weird" or abnormal or different *(total number of participants identifying this theme in SAn group:5)*	8 (F, 21) 9 (M, 21) 20 (M, 43) 21 (M, 34) 28 (F, 45)	Thinks people judge her laugh as "weird". "Other people perceive me as weird." Thinks people might be looking at him, thinking he is different. When feeling dizzy while queuing in a shop, had an image of what might happen if he fainted – people crowding round and staring at him, thinking he was strange. "People think I'm weird."
1.1.9	Fear of being judged as dangerous *(total number of participants identifying this theme in SAn group:1)*	3 (M, 41)	"They might think I'll infect them."
1.1.10	Specific anxiety about judgement because of mental health symptoms *(total number of participants identifying this theme in SAn group:5)*	14 (M, 29) 17 (F, 27) 21 (M, 34) 25 (F, 51)	"I was worried he would see the 'tells' in my body language, that I was anxious". "I'm thinking, 'the others must notice how nervous I look and be curious about why.'" "[The worst thing about the image is] the colour of my face – I can't hide it – the others will see it." "People sensed there was something wrong with me – they could see how anxious I was." Fear that people would think he was strange if he fainted from anxiety. Feels her physical response to anxiety (being sick, shaking) make others judge her as

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			immature, silly and childlike.
		26 (F, 44)	Worried that others will notice she is distressed – "They know" – this is quite a threatening thought as it would make her feel vulnerable.
		30 (F, 29)	"[My image] is very closely related to my fear of going red and showing a weakness which I don't want others to see."
1.1.11	Specific anxiety about breaking social norms/ rules/ boundaries *(total number of participants identifying this theme in SAn group:9)*	3 (M, 41)	Thinks people are thinking about him, judging him, thinking he is talking too loudly.
		6 (F, 29)	Worries about what to say to others for fear it will "come out wrong."
		8 (F, 21)	"You've got to act a certain way to fit in and please society."
		9 (M, 21)	Tends to "say daft things" eg. jokes, then have to explain them – "digging a hole."
		19 (F, 28)	"I kind of thought that I can't be myself, I feel very inhibited."
		21 (M, 34)	Anxious about fainting or "freaking out" in a shop.
		23 (F, 29)	"When I'm not sure of the boundaries I feel very anxious. I don't want people to think bad things of me, so I'm always ultra-sensitive to how I'm behaving – I feel I have to behave in an appropriate way."
		25 (F, 51)	Feels very embarrassed about being sick in public.
		26 (F, 44)	Worries that she will faint in public and then everyone will talk about her.

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		28 (F, 45)	Feels judged as being too scruffy and inappropriately drunk. "I was scared of embarrassing myself and my son."
1.1.12	Specific anxiety about appearance *(total number of participants identifying this theme in SAn group:10)*	3 (M, 41)	"I used to be very confident then I got psoriasis – now I'm very paranoid about what others think of me." Has an impression rather than an image: "I think I appear as very ugly and unintelligent."
		6 (F, 29)	Things she appears "young", "naïve" and "mousy".
		8 (F, 21)	Sees her face "really red with spots and blackheads accentuated, with my fringe out of place." Thinks people judge her as "unattractive".
		11 (F, 34)	Thinks she looks younger than she is, so people will judge her as being unknowledgeable.
		16 (F, 58)	Worries that her hair looks messy, and feels that she appears older and very nervous. "I feel that they don't look at me and see someone that they have a good image of – they think someone with my job should be young, dynamic, smart – not motherly."
		17 (F, 27)	"[The worst thing about the image is] the colour of my face – I can't hide it, the others can see."
		20 (M, 43)	Feels a bit conscious of his weight.
		24 (M, 33)	When feeling threatened, sees himself as a bit overweight with weaker "sparse" arm

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			muscles – worries that others will judge him as not being able to stick up for himself. Image is based in reality (what he saw when he last looked in the mirror), but when he is feeling confident he does not have this image.
		27 (M, 45)	The participant has a strong belief that he is ugly and that others see him as "unlikable and ugly."
		28 (F, 45)	"I feel people look at me and think, "What a mess"".
			"[Before the party I was] worrying about what I would wear and what I would look like."
		30 (F, 29)	Is very red in her image and worries that people can see this.
1.1.13	Seeing an image/ impression of being negatively evaluated by others *(total number of participants identifying this theme in SAn group:25)*		See below.
1.1.13.1	Of themselves as they fear others see them, which is distorted – eg. emphasised flaws / behaviour / vulnerability (others noticing these)	1 (M, 20)	"I'm tensing up, shaking… cowering, ready to cry."
		5 (F, 31)	"I'm sitting hunched. I can't see my face – it's blurred. I feel more gangly and awkward, like a teenager - taller."
		6 (F, 29)	An image of just her, standing with her hands by her side, looking straight ahead. She is

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(total number of participants identifying this theme in SAn group:17)		wearing "drab, dull clothes" [even when dressed up in reality], looking sad, shorter and pale. She is not speaking. She looks "mousy", young and "naïve".
	8 (F, 21)	"It's my face, but it's really red with spots and blackheads accentuated, and my fringe is out of place."
	9 (M, 21)	"I have an impression of how I appear to others, but in my image I see them responding and reacting to me" – sees himself as nervous, displaying mannerisms (rubbing/ pulling his face, rubbing his hands), not making eye contact, stammering, and others noticing.
	11 (F, 34)	"They think I look young, immature, flustered." "I can see myself a bit red, a bit flustered, and sort of waffling a bit." "I am seeing myself as anxious and flustered because I worry that that's how people see me when I talk to them. I think I'm imagining it worse than it is." "The worst thing in the image is the other people looking at me while I'm flustered and red in the face." "I'm sitting at the desk with bits of paper and a folder in front of me. I've got one piece of paper in my hand and I'm desperately looking for the piece of information I need on the paper."
	12 (F, 56)	Image of herself as a small, frightened, helpless child.

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	13 (F, 20)	Sees an image of herself sitting in the corner of the room at a party, looking stand-offish, feeling isolated and intimidated. "I look a bit goofy and awkward, I mumble a lot" (how she imagines strangers will see her if she tries talking to them).
	16 (F, 58)	Saw herself "looking very inefficient" with messy hair, and thought the others in the meeting saw her as "an older woman who's vulnerable."
	17 (F, 27)	Sees herself "looking very nervous, hunched forward and tense, not looking confident – wide eyed." "[Others see me as] someone who looks like a bag of nerves." "I'm sitting more forward than everyone round the table. I have a steaming hot face, I'm looking really awkward and nervous. I can see myself with heat rising from my neck to the top of my head – I'm beetroot – everyone is staring, can see how red I am, can see the heat coming off my face. I'm looking very awkward and fiddly, crossing and uncrossing my legs, fiddling with my bag, looking very awkward and out of place."
	19 (F, 28)	Has the impression that others see her as stand-offish and not interested in them.
	24 (M, 33)	Has an image of himself as he last saw himself in the mirror, but with particular focus on his overweight torso and "sparse" arms.

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	25 (F, 51)	Sees herself in her present situation, but as a child. Also sees her husband and sister who are with her, but they are looking more critical and embarrassed than in reality: "I can see a silly young girl being immature. She's leaning over the side of the chair being sick – she can't stop her body from shaking. I'm thinking, "She's embarrassing and should have better control over herself" – it's what other people are thinking, also that she's a nuisance… Her husband and sister are beside her – he's fed up and she's embarrassed."
	27 (M, 45)	"It's just me, as though I'm looking down on myself… I look how I always appear – ugly... I don't notice anyone or anything around me – nothing sinks in."
	28 (F, 45)	"I could see myself sitting there talking to someone, and they walk off back to their group, and they start talking about me and laughing and pointing. I look like the scruffiest person there – I wasn't really, really drunk, but drunk. I'm laid back a bit in the chair, sitting away from everybody."
	29 (M, 25)	Thinks other people see him like a statue – he finds it difficult to talk or do anything.
	30 (F, 29)	Sees a close-up image of her face – red and blotchy: "It's very close-up on my face and my cheeks are burning. I'm looking straight ahead… I look scared, wide-eyed, I'm looking straight ahead."
1.1.13.2 Image of being ridiculed or laughed at	1 (M, 20)	Sees an image of a group of people his age in tracksuits pointing at him and laughing.

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	(total number of participants identifying this theme in SAn group:8)	7 (F, 21)	Imagines people are looking at her as though she is "a failure – a complete waste of space" and talking about her not getting in to her preferred university.
		11 (F, 34)	"I can see the other people looking at me as if to say, "What is she talking about?"
		12 (F, 56)	Image is a memory of being bullied at school, being called "flea".
		13 (F, 20)	Image of people looking at her after she has spoken as if to say, "What are you talking about?"
		16 (F, 58)	Thought the clients were thinking, "What are they doing sending this woman out?" because she felt she appeared such a failure.
		23 (F, 29)	Worried that others would be thinking, "What's she doing here?" or "What was the point of saying that?"
		28 (F, 45)	Image that people were going back to their friends after talking to her, pointing at her and laughing.
1.1.13.3	Image/ impression that everyone is staring at them or knows them or is talking about them – fear of being the centre of attention	7 (F, 21)	Impression that others are talking about her, judging her.
		8 (F, 21)	Seeing herself as in the centre of a crowd of people with everyone staring at her.
		9 (M, 21)	The people he is anticipating meeting are "staring at me, looking puzzled and confused and concerned."
	(total number of participants identifying	11 (F, 34)	Everybody else is sitting round the table. I'm sitting with everyone else, but all of a sudden

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	this theme in SAn group:14)		it feels like I'm at the head of the table. Everyone's listening to what I've got to say."
		14 (M, 29)	"[In my image] I feel set apart from everyone – people are surrounding me, looking at me, but I'm singled out… the victim."
		16 (F, 58)	"I was very aware that everybody seemed to have their eyes on me except me colleagues."
		17 (F, 27)	"Everyone is staring, can see how red I am."
		19 (F, 28)	Sees other people talking to each other and giving her funny looks as she is by herself.
		20 (M, 43)	Thinks people might be looking at him and thinking he is different.
		21 (M, 34)	"People stare at me, like I'm odd" – more an impression than an image. Fear of people surrounding him and staring if he fainted.
		26 (F, 44)	Image of people staring at her if she fainted, and talking about her afterwards.
		28 (F, 45)	"I feel everyone look at me; they're thinking, "What a mess."
		31 (M, 21)	Feels anxious about meeting a friend from home in case he goes back and gossips about him.
		32 (M, 45)	"It feels like people are watching me all the time – they probably aren't."
1.2	Negative self-evaluation *(total number of participants identifying this theme in SAn group:20)*		See below.

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1.2.1	Negative comments about the self *(total number of participants identifying this theme in SAn group:17)*	3 (M, 41) 5 (F, 31) 6 (F, 29) 7 (F, 21) 11 (F, 34) 13 (F, 20) 15 (F, 40) 16 (F, 58)	"I think I appear as very ugly and unintelligent." "I'm not worthy of their friendship." "I feel and look so young, naïve, unconfident, shy, mousy looking – like there's not much to me." "It's like it wiped out all my achievements." "I'm a complete failure, stupid, especially compared to others." "I'm talking rubbish." "I'm talking nonsense." "The worst thing about the image is that I'm silent, just watching everybody else do what I want to do" – doubts her abilities to be interesting to others, so chooses to just keep quiet and not talk instead. "It's how I see myself – I'm a bit of a cop-out, it's easier for me to do this so I won't put my foot in it. But it means I'm boring by not talking. "Everyone has the opportunity to have fun – it's all there for you if you can make the most of it. But I can't get it." "[I feel] disorganised." "I felt like I kept getting things wrong and didn't handle it well… I felt so incompetent."

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		"I felt so stupid – I wanted the ground to open up."
		"I should have been more assertive."
	18 (F, 21)	"Maybe there's something about me that people don't want to listen to."
	19 (F, 28)	"If I can't interact with all these people then I'm always going to feel isolated, even 1:1."
	21 (M, 34)	"[The worst thing about the image is] how I'm feeling – it's not normal, not like me – I don't recognise myself, it's alien. I don't like the person I've become… I'm odd."
	23 (F, 29)	"I think others are thinking badly of me, so I think badly of myself – I feel ashamed and embarrassed."
		"It's just me that's at fault – people can be unfriendly, but in general it's me."
	24 (M, 33)	When he sees himself in the mirror he looks different to his usual mental image of himself, more overweight and less toned – feels he looks more vulnerable.
	25 (F, 51)	"[In my image I look] silly and stupid, uncontrollable, pathetic. A nuisance."
		About herself in the image: "She's embarrassing and she should have better control over herself."
	27 (M, 45)	"Ugly and unlikeable" – how he sees himself.
	28 (F, 45)	"I look like the scruffiest person there."
	29 (M, 25)	Thinks to himself, "I must be better."

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			Judges himself harshly even if others say he's done well. When he remembers his presentation after the event he has an image of it going badly, and remembers others situations that have gone badly. He sees himself looking anxious.
1.2.2	Comparing self to others (negatively) *(total number of participants identifying this theme in SAn group:13)*	5 (F, 31) 6 (F, 29) 7 (F, 21) 11 (F, 34) 12 (F, 56) 13 (F, 20) 14 (M, 29)	"They're [friends] normal… I'm not worthy of their friendship." Feels overshadowed when talking to others. Feels she has always been the "weird one." "I'm a complete failure, stupid, especially compared to others." "Everyone is nice. Others are better than me." "Everyone's older and more intelligent than me." Impression of being intimidated, inferior, powerless and different to others. "The other children had much more – toys, clothes, rollerskates. I was always different." Compares herself to others and feels smaller, without much presence, easily missed. Feels overpowered by confident, "full-on" people, feels boring compared to them. In her image, everyone else is standing up and having a great time, while she is sitting in the corner. "Everyone else finds it easy to interact." Feels that he understands less than the mortgage advisor – "I don't want him to know I'm

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			inferior in what he's talking about".
		16 (F, 58)	"I often feel incompetent with my colleagues."
			"I can't achieve as much as younger, more attractive people. I'm overlooked because of my age… If they are attractive they can get away with things I can't."
		18 (F, 21)	"I always feel [when in conflict with someone] like I'm half the person they are – I feel really vulnerable."
		19 (F, 28)	"[I feel most uncomfortable when with] authority figures or people with strong opinions – I get the sense that they're such a large personality that mine shrinks to compensate for that, like I don't have a big enough personality. I let it shrink back inside."
			"Other people are better at forming bonds and understanding each other. They're on a different level of understanding each other."
		23 (F, 29)	"I'm not as socially "ept" as other people."
		28 (F, 45)	"I'm different to my friends – I'm the odd one out."
		30 (F, 29)	"I'm different from others – others are all coping fine in that situation."
1.2.3	Inability to live up to own expectations *(total number of participants identifying this theme in SAn group:5)*	7 (F, 21)	Sees image of herself sobbing after not getting in to the university of her choice whenever she submits coursework or is due work back – fear that she will "fail" again.
		11 (F, 34)	After describing image of herself giving a presentation and others negatively judging her:

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			"It's never actually happened – it's more people saying I'm good at presentations… I'm worried I won't live up to it."
			"Because I choose to look different I have to prove myself – but I constantly doubt that I can."
		16 (F, 58)	"I felt like I'd let myself down."
		24 (M, 33)	When he has this image of himself as overweight and less toned, feels depressed about it – it "doesn't quite feel right – not where I want to be." Compares this with how he looked in his teens.
		29 (M, 25)	"I am a perfectionist – I judge myself harshly even if others say it is good."
1.2.4	Thoughts or beliefs that they will "mess up" in the situation *(total number of participants identifying this theme in SAn group:5)*	6 (F, 29)	Predicts what she says will "come out wrong."
		9 (M, 21)	Image of himself saying something "daft" and being looked at in confusion.
		15 (F, 40)	"I can't even see what is going to happen to deflect it [having the anxiety that something is going to go wrong]."
			"I've lost control over myself and my ability to manage the situation."
		16 (F, 58)	Felt like she was completely messing up her meeting: "I kept getting things wrong".
		29 (M, 25)	Before giving a presentation, has an image of himself forgetting his words.
1.2.5	Judgements about own mental health	21 (M, 34)	Speaking about his anxiety and agitation: "It's not normal, not like me… I don't like the

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	(total number of participants identifying this theme in SAp group:1)		person I've become… I'm odd."
1.3	Fear of consequences of negative evaluation *(total number of participants identifying this theme in SAn group: 27)*		See below.
1.3.1	Loss of social status or social isolation (feeling separated from others or invisible/ unimportant) *(total number of participants identifying this theme in SAn group:18)*	1 (M, 20) 3 (M, 41) 5 (F, 31) 7 (F, 21)	In his image, sees himself as separate from the other people, an object of ridicule. "People might think I might rob them… They might think I'll infect them." "I worry what they're thinking, why they still want to see me [her friends]. I'm not worthy of their friendship." Felt like "an outsider" among her friends, "feeling cut off from everybody." "It's me on my own, isolated, like there's a glass wall… I'm just sitting, watching. Others outside are really blurred – there are lots of them but I can't really see them." "I feel that everyone else has got someone around them, I feel isolated sometimes." "Being thought well of is very strong in my family culture" – explaining why being thought of as a failure is so difficult.

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	8 (F, 21)	"Since I was 17, I've always felt on the outside, watching others." "[I feel] a bit out of place, alone, not part of anything." "I'm not being included in conversations." "Everyone else knows each other." "You've got to act in a certain way to fit in and please society."
	10 (F, 55)	Usually thinks, "Why would anyone want to look at me or pay attention to me?" "I feel more invisible now than I did before" [ie. previously in life].
	11 (F, 34)	Thinks her colleagues will take her less seriously.
	12 (F, 56)	Image of self as a child after being bullied, feeling completely different, isolated and rejected – no one would play with her, "totally excluded". Links this with mother being unmarried and money being tight as a child, and the bullies picking up on this.
	13 (F, 20)	Sees herself sitting, alone, isolated from the others at the party (including her friends). "Everyone else is standing and having fun, unaware of me."
	14 (M, 29)	"[When I'm with people] I often feel set apart from everyone… singled out."
	16 (F, 58)	Fears losing her job and ending her career.
	18 (F, 21)	"I'm not worried about my appearance, I'm just worried about being excluded." Has an image of herself after a social situation being alone in the corner – even though it

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	19 (F, 28)	usually is not true. Has an image of trying to confront her housemate and him criticising her for other house-related issues. "The worst case scenario is a permanent rift." "Sometimes after a situation I have an image of how I came across – I'm in the corner alone – maybe there's something about me that people don't want to listen to." When with lots of strangers, she experiences the impression that she is at the centre and everyone else spinning round her very fast. Sees other people talking to each other and giving her funny looks as she is by herself. "It's like being in the middle of a doughnut – the longer it goes on, the bigger the hole gets and the further away from the groups of people I feel… [I feel] isolated, set apart, distant, hyper-self conscious, very nervy." "[The worst thing about the image is] the fact that I don't want to be isolated, and the implications that has, for example on one to one – if I can't interact with all these people I'm always going to feel isolated, even one to one. I'll always be too inhibited to develop strong bonds - I'll always be set apart." "I see groups of people turned in on each other, and every now and then the odd head

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		would turn and look at me, then look away again – as if they notice that I'm not involved, think negatively of it, but don't care… They look partly disapproving and critical – like they're judging. Then they decide they're indifferent."
	23 (F, 29)	"Sometimes when I'm among other people it's like they're all in bubbles and I'm detached, thinking, "How do I break in?""
		"I'm here and there's a group of people over there, talking and obviously connected to each other, and other similar groups. No one's saying "hello" or bringing me over – I've got the impression that they've all got their backs to me – closed off."
		"I wonder if other people want me to be there."
		"If people are open and friendly it's fine. If not, it's like they're behind a glass wall."
		"[The worst thing about the impression is] being on my own in a social situation – the odd one out."
	27 (M, 45)	"I want everyone to like me and get on with them, but I can't – I don't."
	28 (F, 45)	"I'm different to my friends – I'm the odd one out."
	30 (F, 29)	"[The image is happening because] it's very closely related to my fear of going red and showing a weakness, which I don't want others to see – especially in this situation – it makes me think I'm coming across as untruthful or guilty… The image is directly related

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			to my fear of making a fool of myself."
			Worries she will not get the job she is interviewing for because of anxiety symptoms making the interviewers think she is being untruthful.
		31 (M, 21)	Worries that if his friend gossips people will think badly of him at home and he might be isolated.
1.3.2	Image or thoughts about feared situation or outcome *(total number of participants identifying this theme in SAn group:14)*		See below.
1.3.2.1	Image of what might happen in the immediate future *(total number of participants identifying this theme in SAn group:8)*	8 (F, 21)	Pictures what could happen and "over-thinks" what she is saying.
		9 (M, 21)	Anticipating how the people he will be meeting (housemate's parents) will react to him: sees two people (one male, one female) looking at him, looking puzzled, confused and concerned.
		13 (F, 20)	Image of herself at the party she was getting ready for.
		18 (F, 21)	Has an image of her confronting her housemate, through her own eyes – they are both standing – "I've tried to ask him about the pan, he's sort of avoided what I've asked and brought up other issues, like about the bills or coming in at 2am. He's fidgeting, not

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			smiling but not looking cross."
		21 (M, 34)	When feeling dizzy while queuing in a shop, had an image of what might happen if he fainted – people crowding round and staring at him, thinking he was strange.
		26 (F, 44)	Has an image of herself fainted on the floor of the postoffice. People are all looking at her, and she thinks that afterwards they will all be talking about her. She feels really foolish.
		29 (M, 25)	Image of himself forgetting the words in his presentation.
		31 (M, 21)	Imagines his friend going on to gossip about him.
1.3.2.2	Image or thoughts indicative of fear of actual or physical threat *(total number of participants identifying this theme in SAn group:3)*		See below.
1.3.2.2.1	Thoughts of specific fear of physical threat to self *(total number of participants identifying this theme in SAn group:1)*	32 (M, 45)	Worried about risk of assault from others, particularly in crowds, as has been assaulted previously.

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1.3.2.2.2	Image indicating fear of vulnerability to physical threat *(total number of participants identifying this theme in SAn group:2)*	1 (M, 20) 24 (M, 33)	In his image, the participant is cowering from people and feeling very scared, as if he were being faced by a physical threat (although the participant does not identify a physical threat). When socially anxious and perceives that others have reacted to him in an unfriendly way, gets an image of himself as less fit and toned than he used to be and feels vulnerable, less able to protect himself if they "make trouble".
1.3.2.3	Loss of something material (eg. money) *(total number of participants identifying this theme in SAn group:3)*	12 (F, 56) 16 (F, 58) 30 (F, 29)	When having a meeting with the bank manager about her reduced income due to being on sickness benefit, is anxious about what he will say resulting in her not having enough money/ losing money. Worried about losing her job and it being the end of her career. Image is while at a job interview – worried she will not get the job if her anxiety symptoms make are look untruthful.
1.3.3	Threat perceived as being most strong from certain types of people (eg. strangers, teenagers or crowds) *(total number of participants identifying*		

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	this theme in SAn group:16)		
1.3.3.1	Crowds *(total number of participants identifying this theme in SAn group:4)*	1 (M, 20) 19 (F, 28) 25 (F, 51) 32 (M, 45)	Feels most anxious when walking through crowds. Feels very separated when with strangers and when in groups. Gets very anxious in crowds. Crowds
1.3.3.2	Strangers *(total number of participants identifying this theme in SAn group:6)*	6 (F, 29) 8 (F, 21) 9 (M, 21) 11 (F, 34) 13 (F, 20) 19 (F, 28)	Strangers who are in a position to judge her (eg. boyfriend's parents or colleagues). "I feel less confident with strangers – especially loud people and people already in friendship groups." "I find it difficult to get on with people I'm not familiar with. It's an ongoing theme." Strangers. Fears judgement from strangers, people meeting her for the first time – feels she is very different with strangers, quieter. Feels very separated when with strangers and when in groups.
1.3.3.3	Assessors/ authority figures/ people thought to be in a position to judge *(total number of participants identifying this theme in SAn group:7)*	6 (F, 29) 11 (F, 34) 12 (F, 56)	Strangers who are in a position to judge her (eg. boyfriend's parents or colleagues). Authority figures. Feels particularly intimidated by people she perceives as having authority and power over her (eg. bank manager, benefits officer).

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		14 (M, 29) 16 (F, 58) 19 (F, 28) 29 (M, 25)	Feels anxious around people who might judge him as inferior or less intelligent. Fears for her career prospects because of younger, better trained, more attractive colleagues. "[I feel most uncomfortable when with] authority figures or people with strong opinions – I get the sense that they're such a large personality that mine shrinks to compensate for that, like I don't have a big enough personality. I let it shrink back inside." People who are assessing him.
1.3.3.4	Teenagers or young people *(total number of participants identifying this theme in SAn group:1)*	1 (M, 20)	In his image, he is trapped in a room with people in suits who are laughing among themselves and ignoring him, and people his own age in tracksuits who are pointing and laughing at him.
1.3.3.5	Specific people or people judged to be likely to cause conflict *(total number of participants identifying this theme in SAn group:4)*	18 (F, 21) 23 (F, 29) 24 (M, 33)	Feels very anxious about people she feels she needs to confront. When in a social situation most people are a "blur", but if there is someone she is particularly nervous of, eg. a colleague, they stand out. Feels better with strangers, more anxious with people he knows, although also feel anxious around people who he perceives as "not on his wavelength" and who he thinks might "make trouble".

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		32 (M, 45)	Specific people who have assaulted him previously.
1.3.3.6	When the exact nature of the threat is unknown/ people give "mixed messages" *(total number of participants identifying this theme in SAn group:1)*	15 (F, 40)	The participant noticed that she tended to become anxious around people who seemed to give mixed messages: "It always happens with people who are physically tense but with a calm front – it's really disorienting and anxiety provoking." "It doesn't happen when I feel connected to my anxious feelings and the object of anxiety is clear and known."
2	Negative evaluation of others *(total number of participants identifying this theme in SAp group:13)*		See below.
2.1	Others are evil *(total number of participants identifying this theme in SAp group:1)*	1 (M, 20)	Image means others are "a bunch of w*nk*rs" and the world is "an evil place".
2.2	Others are untrustworthy *(total number of participants identifying this theme in SAp group:5)*	4 (M,21) 12 (F, 56) 24 (M, 33) 25 (F, 51) 30 (F, 29)	Participant states that he does not go out very often as he doesn't trust others. "They can't be trusted." "[The world is] not very nice – scary, it's hard to trust people." "It's hard to trust people." "I can be suspicious about others."

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2.3	Others are judgemental *(total number of participants identifying this theme in SAp group:4)*	8 (F, 21) 11 (F, 34) 14 (M, 29) 18 (F, 21)	"[Other people are] judgemental." "People can be judgemental – they judge on first impressions." "[The world is] too judgemental." "Others are concerned with image."
2.4	Others are cruel *(total number of participants identifying this theme in SAp group:1)*	12 (F, 56)	"[People] can be cruel"
2.5	Others are selfish (self-preserving) *(total number of participants identifying this theme in SAp group:2)*	16 (F, 58) 18 (F, 21)	"In the world I feel, especially in Western society, we've slipped away from basic human values – people are now predominantly selfish." Has an image that her housemate will respond with avoidance and blaming her when she confronts him.
2.6	Others are dangerous/ frightening *(total number of participants identifying this theme in SAp group:4)*	25 (F, 51) 30 (F, 29) 31 (M, 21) 32 (M, 45)	"[The world is] not very nice – scary" "[The world] can be scary. "I can be suspicious about others." "There are scary people out there." "[The world has] gone mad – there's always violence and murder on the news. It's not safe

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			anymore."
3	Other images *(total number of participants identifying this theme in SAn group:13)*		
3.1	Of their surroundings, which are distorted *(total number of participants identifying this theme in SAn group:9)*	5 (F, 31) 13 (F, 20) 14 (M, 29) 19 (F, 28) 21 (M, 34) 23 (F, 29) 25 (F, 51)	Others look "really blurred". "The room feels very big and high… it appears like a painting, hazy with soothing colours, bright and colourful." Focussed on the face of the mortgage advisor. There is a red tint to the image. "I can see lots and lots of faces… some are clear but others are blurry." Has the impression that she is in the middle and others are distanced from her, spinning round her very fast. Impression of his surroundings "juddering" while he remained still. Impression that she is very separate from all the other people who are in groups with their backs to her, as though they are "behind a glass wall". Some people are clear – people she is particularly nervous about. Others are a "general blur." Sees her husband and sister as "embarrassed" and "fed up", although in reality they are being supportive.

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		26 (F, 44) 32 (M, 45)	"It felt like everyone was in my face – they're all just there." "The lights were brighter. "It's very bright, lots of hustle and bustle… Lots of noise. It seems like everyone is really close, lots and lots of people – more than there really is. I can't see anyone particularly clearly… Seems like the shop is getting smaller, closing in, so I'm even more enclosed and crowded."
3.2	Non-distorted image *(total number of participants identifying this theme in SAn group:2)*	15 (F, 40) 31 (M, 21)	*Stated she would often see an image of herself from an external perspective if she felt emotionally anxious but not if she had physical symptoms of anxiety – she wondered if this was a result of dissociation from herself and the situation.* "[My face has an expression of] something, sort of blankness – like when your face falls, a bit like horror, also a bit helpless and out of control. And motionless – frozen – and not knowing where to go with it." [Participant saw such an image of herself on video, so believes it is not distorted]. Saw an image of himself waiting for his friend: "I'm sitting down, moving my legs up and down. My hands are on my lap, they're sweaty, sometimes grabbing the arm rest."
4	Images/ impressions in other sensory modalities		See below.

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	(total number of participants identifying this theme in SAn group:23)		
4.1	Sound *(total number of participants identifying this theme in SAn group:17)*	3 (M, 41)	Outside sounds are muffled and hears a grinding noise (which he thinks could be him grinding his teeth). His own voice sounds very loud.
		4 (M, 21)	Hears a "buzzing" in his head, like the sound of blood rushing through his ears.
		5 (F, 31)	Can hear the noise around her but it is louder and more garbled than usual.
		7 (F, 21)	Hears her parents saying, "It's okay" and others commenting on her situation. Hears mother telling others, "She didn't get in."
		8 (F, 21)	Her voice and laugh sound strange, loud, out of context.
		9 (M, 21)	Hears what he fears others will say in anticipated situation. Can hear his own voice "trying to dig me out of a hole."
		11 (F, 34)	"I can hear silence – I know I am talking and waffling but it sounds silent – it's overwhelmingly silent."
		12 (F, 56)	Hears the taunts from school bullies ("flea").
		13 (F, 20)	Hears background noise – experiences this as quiet but still feels like it is drowning her out.
		16 (F, 58)	"I can hear my own voice sounding different, like when you hear your voice on tape – I

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			sound stupid, with a strong, strange accent."
		17 (F, 27)	"My thoughts about how bad it is are loud enough to distract me from what's happening in the room."
		18 (F, 21)	Can hear what she worries her housemate will say when she confronts him for using her pan – bringing up issues with bills and complaining about her coming home at 2am.
		19 (F, 28)	Hears the sounds of the party, but distorted.
		25 (F, 51)	Can hear her voice telling her to control herself – the voice is supportive but critical, speaking to her as though she is being silly. All other noises are louder but muffled.
		26 (F, 44)	Hears a buzzing in her ears and everything sounds muffled, "like before fainting."
		28 (F, 45)	Has a buzzing/ ringing in her hears, hears laughter (louder than in reality).
		32 (M, 45)	Hears lots of noise that sounds garbled, indistinct.
4.2	Smell *(total number of participants identifying this theme in SAn group:2)*	12 (F, 56)	Can smell the school canteen very strongly.
		25 (F, 51)	Can smell the inside of a gas and air mask – related to giving birth when the smell of the mask made her feel sick, now whenever she feels sick she smells the mask.
4.3	Feeling physically different in relation to their surroundings *(total number of participants identifying*	3 (M, 41)	Feels bigger, more on display.
		5 (F, 31)	Feels further away from others, and taller than usual, "gangly and awkward – like a teenager".

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this theme in SAn group:18)	6 (F, 29)	Feels smaller and younger, going bright red, sweaty palms.
	11 (F, 34)	Feels as though she is at the head of the table.
	12 (F, 56)	Self-image of self as a little girl – feels like this child when interacting with authority figures.
	15 (F, 40)	Feels like she is getting smaller and smaller. Feels as though she is drifting away from the situation.
	16 (F, 58)	Feels smaller, with messy hair, and as though she is "shrinking into" herself.
	17 (F, 27)	Feels the heat coming off her face "in waves", and feels further forward than the others round the table – as though she is more in the centre, the focus of attention.
	18 (F, 21)	"I feel like a mouse, small and timid."
	19 (F, 28)	"The space between me and other people seems larger than usual, and it seems as though I'm in slow motion. It's almost as if I'm encased in a bubble – a restricted feeling."
	21 (M, 34)	"It looks like everything around me is juddering, but I'm still."
	23 (F, 29)	"I feel more distant from others, or maybe more aware of the distance." "I feel more clumpy and clumsy, and more aware that I'm taking up space when I want to be taking up less space – be hidden."
	24 (M, 33)	Feels fatter.

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		25 (F, 51)	Feels further away from others and sees herself in her image as a child.
		26 (F, 44)	Feels "really old". Experiences the other people around her as "in her face", "they're all just there".
		28 (F, 45)	Feels smaller.
		29 (M, 25)	Feels further away from other people.
		32 (M, 45)	"People feel closer, closing in – everything around me gets smaller."
5	Aware that image/ impression may not be accurate *(total number of participants identifying this theme in SAn group:23)*	5 (F, 31)	Rated image as 80% visually distorted (taller, distorted faces, further away from others) and 80% aurally distorted ("louder and more garbled").
		6 (F, 29)	Aware that her self image of having "not much to" her is not really true. Rated image as 50% visually distorted, but says that when she sees it, it feels real – her as a child.
		7 (F, 21)	Image is a very vivid memory, which participant thinks may have slightly quieter sound than in reality (10-15% aurally distorted).
		8 (F, 21)	Rated image as 25% visually distorted (zoomed in on face, accentuating the "bad bits") and 25% aurally distorted (her laugh and voice sound strange).
		9 (M, 21)	Rated image as 10% visually distorted, in terms of perspective.
		11 (F, 34)	"I think I'm imagining it worse than it is."

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		Rates image as 50% visually distorted (she appears younger) and 75% aurally distorted (silent).
	12 (F, 56)	Rated her image as 75% visually distorted (she is "diminished", smaller) and 60% aurally distorted (the taunts are louder, drowning out all other sounds), with smells being 75% distorted (strong smell of food).
	13 (F, 20)	Rates her image as 35% visually distorted (room is bigger) and 75% aurally distorted (sounds are muffled)
	14 (M, 29)	Rated his image as 25% distorted: "My body is slightly bigger and there's a red tint to the image."
	16 (F, 58)	Rated her image as 50% visually distorted: "I'm smaller and older and more unpleasing to the eye" and 25% aurally distorted: "My voice sounds like it's on tape, with a strong strange accent."
	18 (F, 21)	"I know I think the worst of how they [others] react to me."
	19 (F, 28)	Rated image as 80% visually and 60% aurally distorted: "It's probably not really happening – it's more a mental projection of maybe what I think I would see if I was one of them looking at me."
	21 (M, 34)	Rated image as 80% visually distorted: "Looking back, it's distorted. At the time it feels

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		100% real, but people aren't really looking at me and don't care."
	23 (F, 29)	Rated image as 50% visually distorted: "The people are more obvious than the surroundings. I feel further away from them." Rated as 85% aurally distorted as there is no sound.
	24 (M, 33)	Rated image as 33% visually distorted, saying that he does exercise so he should look fitter.
	25 (F, 51)	Rated image as 75% visually distorted: Sees her husband and sister as critical and embarrassed when really they are supportive, sees herself as a child, and thinks her impression that people are judging her as negatively as she judges herself: "I don't think others will be as harsh [as I am to myself]."
	26 (F, 44)	Rated image as 75% distorted: Everything seems closer and brighter, aware that people probably wouldn't talk about her after fainting for long.
	27 (M, 45)	Does not rate his image as distorted, but does state that he might be distorting the image subconsciously, making himself look more ugly.
	28 (F, 45)	Rates her image as 62% visually distorted and 75% aurally distorted: Thinks that people are probably not laughing at her and that the laughter sounds louder than it really is."
	29 (M, 25)	Rates image as 32.5% visually distorted: notices the distance seems changed and that the

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			negative image of the presentation after it are not accurate – acknowledges he is a perfectionist and that others judge him less harshly than he judges himself.
		30 (F, 29)	Judges image as 50% visually distorted: "When I see the image I feel frustrated as I know it isn't accurate – I check in the mirror and ask my friends."
		31 (M, 21)	Rated his image as not at all distorted, but rated his anxieties as meaning that he was, "a bit negative, pessimistic… I can be suspicious about others."
		32 (M, 45)	Rated image as 75% visually and aurally distorted: "It feels like people are watching me all the time – they probably aren't." "Probably people just mooching about, minding their own business, and there aren't as many." "There are more people, they're closer, and the shop is smaller."
6	Linking image or anxiety to a past memory *(total number of participants identifying this theme in SAn group:10)*	6 (F, 29)	Links her image of herself as young and mousy to how she was at school, where she was considered to be the "weird one". Participant believes she may have retained her self image from her teenage years because she experienced significant family trauma when aged 14 years – self image not updated since then?
		7 (F, 21)	Image of self failing is a memory of her not getting the grades she needed at A level to go to the university of her choice.

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		12 (F, 56)	Links image to memory of herself just after being bullied at school.
		14 (M, 29)	Perception of being set apart from others, singled out as the victim, may be linked to memories of being bullied at school.
		15 (F, 40)	"[The image] relates to situations where I have felt that anxiety and disorganisation when growing up."
		16 (F, 58)	Participant had been bullied by work colleagues in the past – felt this had made her more sensitive to judgement from others. "I remembered myself in the past as more confident, and saw how I'd aged."
		23 (F, 29)	Thinks her impression of herself as "clumpy and clumsy" is from her childhood when she was clumsy.
		24 (M, 33)	If he has not done so well in an assessment situation he gets memories from his childhood.
		25 (F, 51)	When she feels out of control she sees an image of herself as a child, as the situation reminds her of how she felt as a child.
		31(M, 21)	Stated he had been gossiped about in the past.
		32 (M, 45)	Relates anxiety and image to being assaulted in the past and being told, "It isn't over."
7	Emotions/ feelings *(total number of participants identifying*		See below.

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	this theme in SAn group:23)		
7.1	Feeling out of control or overwhelmed *(total number of participants identifying this theme in SAn group:9)*	5 (F, 31) 6 (F, 29) 11 (F, 34) 14 (M, 29) 15 (F, 40) 16 (F, 58) 17 (F, 27)	Had a panic attack and had to leave the situation. "It'll come out wrong" [in anticipation of talking to others]. "The worst thing about the image is feeling out of control of a situation that I purposely put myself in." "[The worst thing about the image is that] I've lost control in the situation." "I look overwhelmed by the situation and I'm therefore looking a bit not in control and frozen - like I'm not able to manage the situation." "[The worst thing about the image is that it] confirms that I've lost connection with bodily feelings of anxiety, so therefore I've lost some control over myself and my ability to handle the situation." "I can't even see what is going to happen to deflect it." "I'm not sure of my ground." "I felt I kept getting things wrong… I couldn't think straight… I felt completely incompetent." "I can't achieve as much as younger, more attractive people." Wanted to leave the situation, finding it overwhelming.

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		18 (F, 21)	"[The worst thing about the image is] that I don't know how I can resolve the situation – I can't see the end result."
		25 (F, 51)	Feels out of control of her body when anxious – eg. is sick and trembling uncontrollably.
7.2	Feeling trapped or frustrated by or in the image *(total number of participants identifying this theme in SAn group:8)*	1 (M, 20)	Image of being trapped in a small room with 5 walls (one is an alcove) and no doors or windows, with about 30 people.
		8 (F, 21)	"It makes you feel trapped – you have to try to forget about it to get on with people."
		9 (F, 21)	The worst thing about the image is "doing something I've done before – it's irritating that I'm always worrying about p*ssing people off." "It's my place in the world to always feel nervous. The world is something I'm not good at dealing with."
		11 (F, 34)	I feel "anxious and flustered and almost annoyed with myself – because if I wasn't feeling anxious I'd be able to deal better."
		15 (F, 40)	"[I have an] inertness of posture, feeling unable to make it move."
		19 (F, 28)	"It's almost as if I'm encased in a bubble – it's a restricted feeling."
		30 (F, 29)	Feels frustrated as she knows the image is not accurate but it still makes her feel anxious.
		32 (M, 45)	Afraid of being trapped in the supermarket – not being able to breathe and not having space to move.

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7.3	Feeling embarrassed or stupid *(total number of participants identifying this theme in SAp group:6)*	7 (F, 21)	"I'm a complete failure, stupid."
		11 (F, 34)	"I feel younger and thicker – more stupid."
		16 (F, 58)	"I felt so stupid – I wanted the ground to open up."
		23 (F, 29)	Has a sense of shame and embarrassment, thinking that others are thinking badly of her.
		25 (F, 51)	"[In the image I feel] embarrassed, silly."
		26 (F, 44)	In image of her fainted, she would feel "foolish".
7.4	Feeling strong emotions in the image *(total number of participants identifying this theme in SAn group:14)*	1 (M, 20)	In his image, he is nearly crying, very scared, feeling sick.
		5 (F, 31)	Feels detached, anxious, scared, heart racing.
		6 (F, 29)	Feels miserable, very young, naïve, unconfident and shy.
		7 (F, 21)	Feels really depressed, upset – "I'd rather not be here than going through this".
		12 (F, 56)	Confused, upset, frightened, lonely and isolated.
		16 (F, 58)	"I felt totally miserable – I cried afterwards."
		17 (F, 27)	Felt very upset and annoyed with herself.
		19 (F, 28)	"[I feel] isolated, set apart, distant, hyper self-conscious, very nervy…"
		21 (M, 34)	"Very intense anxiety, annoyance at being held up, nervous."
		23 (F, 29)	Really nervous, with a sense of shame and embarrassment.
		25 (F, 51)	"[I feel] dreadful – very anxious, sick, embarrassed and scared that I'll have to go to

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			hospital."
		26 (F, 44)	"I feel really foolish."
		28 (F, 45)	"[I feel] like I want to get up and run."
		32 (M, 45)	Confused and afraid.
7.5	Image is perceived as dependant on type of anxiety symptoms *(total number of participants identifying this theme in SAp group:1)*	15 (F, 40)	The participant stated she would often see an image of herself from an external perspective if she felt emotionally anxious but not if she had physical symptoms of anxiety – she wondered if this was a result of dissociation from herself and the situation.
8	Safety/ coping strategies *(total number of participants identifying this theme in SAn group:11)*		See below.
8.1	Choosing to see a positive self-image to aim for or using imagination to rehearse for upcoming social situation *(total number of participants identifying this theme in SAn group:3)*	6 (F, 29)	Used her CBT skills to envisage herself as she wanted to come across, but found this hard and afterwards could only see her negative self-image.
		16 (F, 58)	"I remembered myself in the past as more confident, and saw how I'd aged."
		29 (F, 25)	"All is good, I find memoirs [I remember everything], I am not anxious, I have a good voice and don't shake. I'm like people we can see in normal representations on TV – good

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			people. Others seem interested in what I say. It's a good presentation."
8.2	Image of escape from situation *(total number of participants identifying this theme in SAn group:3)*	3 (M, 41) 12 (F, 56) 26 (F, 44)	Imagines himself as a bird flying through the window and escaping. Impression of herself getting smaller and smaller, and almost wanting this, so she can disappear and escape from the situation. Has an image of being back at home, safe: "There's a big fat fluffy pair of slippers waiting for me, my husband and dogs are around… I've driven home and am shutting the door and being safe."
8.3	Avoidance of social situations/ trying to appear "invisible" *(total number of participants identifying this theme in SAn group:1)*	13 (F, 20)	Therefore, she prefers to sit and be "invisible" rather than risk judgement, even though she knows this will mean she does not enjoy herself.
8.4	Altering/ monitoring behaviour *(total number of participants identifying this theme in SAn group:3)*	19 (F, 28) 23 (F, 29)	"I kind of thought that I can't be myself, I feel very inhibited." "When I'm not sure of the boundaries I feel very anxious. I don't want people to think bad things of me, so I'm always ultra-sensitive to how I'm behaving – I feel I have to behave in an appropriate way."
8.5	Trying to hide anxiety symptoms from	14 (M, 29)	"[Visiting the mortgage advisor] I didn't understand half of what he was saying, but I

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others *(total number of participants identifying this theme in SAn group:2)*	30 (F, 29)	didn't want him to know that… because he might think I was inferior, less intelligent than him… I was worried he would see the 'tells' in my body language, that I was anxious". "[My image] is very closely related to my fear of going red and showing a weakness which I don't want others to see."

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	Theme	**Participant number (gender, age)**	**Quote/ Summary**
1	Negative evaluation *(total number of participants identifying this theme in SAp group:24)*		See below.
1.1	Fear of negative evaluation from others *(total number of participants identifying this theme in SAp group:23)*		See below.
1.1.1	General fear of judgement and negative evaluation *(total number of participants identifying this theme in SAp group:10)*	2 (M, 19) 5 (F, 19) 8 (M, 16) 9 (M, 21) 12 (F, 18)	Does not explicitly say that he is worried about negative evaluation from others, but does get anxious before going to the pharmacist, rehearses what he is going to say and says he thinks he makes a bad impression. Thinking that others are judging her negatively. Sees others talking and thinks they are talking about him, saying "nothing good." "People are looking at me funny, judging me." "I think they're [her friends] talking about me, looking at me funny as well." "I worry about what other people think of me… I think they think badly of me."

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		13 (F, 32) 18 (M, 27) 19 (M, 30) 22 (M, 24) 24 (M, 21)	Worries everyone is looking at her, judging her, laughing at her, making assumptions about the way she looks. "I'm so paranoid about what others are thinking." "I feel a bit paranoid about people – they have negative thoughts about you." "I worry too much about what people think." "They're taking the piss out of me, having a joke about me, they're not really my friends." Feels self-conscious in a group he does not know well – felt very conscious of how he was speaking.
1.1.2	Fear of being judged as inferior *(total number of participants identifying this theme in SAp group:1)*	6 (F, 22)	"Even before I go out, I would have these images of people staring at me, looking down upon me… not seeing me as an equal."
1.1.3	Fear of being judged as stupid or foolish *(total number of participants identifying this theme in SAp group:2)*	21 (M, 27) 26 (M, 35)	"People think I look uncomfortable, an idiot..." "I'm very, very aware of everything about myself – of the way I'm coming across, the way I look, if I'm smiling am I smiling properly or do I look goofy and stupid?"
1.1.4	Fear of being judged as unlikeable or a bad person *(total number of participants identifying*	20 (F, 23) 29 (M, 26)	Anxious that a charity worker will think badly of her for not donating. "I know inside myself, I think I'm a kind person and it's the worry that others may think I'm different to what I really am – that's what scares me"

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	this theme in SAp group:2)		
1.1.5	Fear of being judged as "weird" or abnormal or different *(total number of participants identifying this theme in SAp group:4)*	1 (F, 19)	Hears the voice saying, "You're only going to mess it up and make people think you're really weird." "I don't think I really care about what people think about me, but I, I must do in some way because, I don't know, I suppose I get quite, um, I get quite anxious when I think about, sort of, you know, a lot of people don't have voices in their heads *[laughs]*, um, and people might think that's just, I don't know, they might think I'm dangerous or really weird or something."
		10 (F, 28)	Thinks the people around her (the other mothers) think she is weird, that she looks weird. Sees them pointing and laughing at her, and angry as though she has done something wrong.
		11 (M, 25)	"Probably people are thinking I'm not normal at all."
		12 (F, 18)	"People think I'm being a loon."
1.1.6	Fear of being judged as dangerous *(total number of participants identifying this theme in SAp group:2)*	1 (F, 19)	"I don't think I really care about what people think about me, but I, I must do in some way because, I don't know, I suppose I get quite, um, I get quite anxious when I think about, sort of, you know, a lot of people don't have voices in their heads *[laughs]*, um, and people might think that's just, I don't know, they might think I'm dangerous or really

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			weird or something."
		21 (M, 27)	"People think I look uncomfortable, an idiot, maybe a risk."
1.1.7	Specific anxiety about judgement because of mental health symptoms *(total number of participants identifying this theme in SAp group:9)*	1 (F, 19)	"[The voice] is talking to me, and when she's talking I always, sort of, worry about talking out loud to her, because I do that when I'm alone." "I get quite anxious when I think about, sort of, you know a lot of people don't have voices in their heads, and people might think that's just , I don't know, they might think I' dangerous or really weird or something… they might react to me differently." "I know a lot of people would look at me and see tattoos, piercings, and then see me talking to myself or something, and just think I'm a complete fruit loop."
		7 (M, 33)	Not wanting to tell interviewer about intrusive violent images: "It's really sick, I don't want to tell you."
		10 (F, 28)	Believes others think she is weird – possibly because of mental health symptoms.
		11 (M, 25)	"They think I've got problems." "Probably people are thinking I'm not normal at all." "I'm not at their level of mental health, mentally healthy, so, um, so not synchronised as they are in my mind, so they think I'm acting weird."
		12 (F, 18)	"People think I'm being a loon."

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		13 (F, 32)	Because of anxiety gets very sweaty and hot, and worries others will judge her for this.
		18 (M, 27)	Worries that people will know about his mental illness – particularly that his work colleagues would wonder why he has had so much time off.
		19 (M, 30)	Reflecting on how he might react when feeling socially rejected: "I'd probably have lost the plot – not outside, I would have sucked it all in, which is what I always do because I don't like people knowing about these things [his anxiety] – knowledge is power – people use these things against you if they see a weakness."
		21 (M, 27)	He thinks he looks obviously uncomfortable because of anxiety, so worries that other people will think that he is "bad". "People think I look uncomfortable, an idiot, maybe a risk."
1.1.8	Specific anxiety about breaking social norms/ rules/ boundaries *(total number of participants identifying this theme in SAp group:7)*	1 (F, 19)	When asked why she is feeling anxious: "Um, I think, because [the voice] is talking to me, and when she's talking I always, sort of, worry about talking out loud to her because I do that when I'm alone *[laughs]*." Interviewer: So you're getting anxious because [the voice] is talking to you, you feel like responding and you're aware you can't do that? "Yeah."
		5 (F, 19)	Worried that her top/ underwear will fall down in public.

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		9 (M, 21)	"Terrified" about not finding the toilet.
		11 (M, 25)	Worries, "Am I behaving in the wrong way?"
			"I can see that everybody knows me somehow, um, and maybe because of my behaviour… I'm a bit slowed there, and probably people are thinking I'm not normal at all."
			"[The worst thing about the image is] people noticing I am behaving badly."
		13 (F, 32)	Thinks others will judge her for being sweaty and "messy".
		19 (M, 30)	Worried that he had done or said something wrong when people he had been speaking to earlier did not sit next to him.
		20 (F, 23)	"I am overweight and I have a lot of pressure to be something that I'm not… I try to be smaller."
1.1.9	Specific anxiety about appearance *(total number of participants identifying this theme in SAn group: 12)*	1 (F, 19)	Feels that she looks bigger and "glazed over" when listening to her voice – worried others will notice that she looks as if she has "been hit by a truck" and think she is weird.
		5 (F, 19)	Worried that her top will fall down.
		6 (F, 22)	Sees an image of herself looking very fat.
		9 (M, 21)	Has an image of himself as red in the face. Worrying, "Did I look alright?"
		10 (F, 28)	Believes other people think she looks weird.
		13 (F, 32)	Sees herself with sweat on her clothes and forehead, and others sniggering at her.

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		20 (F, 23)	Has an image of herself as "piggy", "grotesque", "fat" and "slouchy". "I feel like I'm really fat and slouchy, like I'm kind of like Egor or something, really disgusting."
		21 (M, 27)	Image of himself looking scruffy, with stuff in his hair – thinks "What will they think of me?"
		24 (M, 21)	Thought people were looking at him because he was "ugly".
		26 (M, 35)	Thinks, "Oh my God, I'm pouring with sweat and I must look really bizarre." "I'm very, very aware of everything about myself – of the way I'm coming across, the way I look, if I'm smiling am I smiling properly or do I look goofy and stupid?"
		28 (M, 25)	Feels smaller and fatter than in reality.
		29 (M, 26)	Sees people staring at him with a disgusted impression on their faces: "It's kind of like a disgusted look, they're not happy to see me… It's my worst fear, people looking disgusted with me."
1.1.10	Seeing an image/ impression of being negatively evaluated by others *(total number of participants identifying this theme in SAp group:19)*		See below.

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1.1.10.1	Seeing an image of themselves as they fear others see them, which is distorted – eg. emphasised flaws / behaviour / vulnerability (others noticing these) *(total number of participants identifying this theme in SAp group:7)*	1 (F, 19)	"I'm wearing a dress and I look really, really big. Um, I look a bit flustered… a bit panicked." "I can see a glazed-over look in my eye when [the voice] starts talking to me… I think it's quite noticeable when it happens, um, so someone might look over and see me, looking like I've just been hit by a truck."
		6 (F, 22)	Gets an image of herself as fat, walking down the street, when she's getting ready to go out and when she is walking down the street.
		9 (M, 21)	Sees himself as a bit red in the face, looking "very tense and nervous".
		13 (F, 32)	Sees sweat marks on her clothes, sees her strained expression with sweaty forehead, her body hunched over.
		20 (F, 23)	"I could see my face, and my face was really piggy. I picture myself first, because I always try to guess how I look, and my brain automatically goes to everything bad, like my belly hanging over my trousers, and I start to panic about it… I'm picturing myself looking really piggy and disgusting, um, just everything, really grotesque. Then I think how pathetic I look, so gross trying to explain my way out of this." "I'm big, my voice is really manly, bassy and horrible."
		21 (M, 27)	"I see myself looking scruffy, with stuff in my hair."

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			"I can see myself, like I'm stepping out of my own body while I'm standing there, stone cold, frozen – it's like there's a twin of me seeing a different perspective, and I can see both scenes together."
		26 (M, 35)	"I think, "Oh my God, I'm pouring with sweat, I must look really bizarre"."
			Has an impression rather than an image of himself: "I'm very aware of myself, I don't necessarily see myself though – I'm very, very aware of everything about myself – of the way I'm coming across, the way I look – If I'm smiling, am I smiling properly or do I look goofy and stupid?"
1.1.10.2	Image of being ridiculed or laughed at *(total number of participants identifying this theme in SAn group:5)*	6 (F, 22)	"Even before going out I would have these images of people staring at me, looking down upon me."
			Image of herself walking down the street and being laughed at.
		10 (F, 28)	Image of people pointing and laughing at her and saying nasty things ("useless waste of space").
		13 (F, 32)	Sees people sniggering at her.
		19 (M, 30)	Image of a memory of giving a wrong answer in class and being laughed at by other students.
		22 (M, 24)	Image of his friends laughing about something he has said and "taking the p*ss".

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1.1.10.3	Image/ impression that everyone is staring at them or knows them or is talking about them *(total number of participants identifying this theme in SAp group:16)*	4 (M, 31)	"I feel that people are staring at me."
		6 (F, 22)	"Even before I go out, I would have these images of people staring at me, looking down upon me… not seeing me as an equal."
		7 (M, 33)	"People almost going out of their way to look at me, bending their heads." "Sometimes I walk into a shop and the picture is that everyone has just stopped and stared, it's almost like I've put a video on pause."
		8 (M, 16)	Thinks that people are talking about him – unsure what about, but "nothing good".
		9 (M, 21)	"People are looking at me funny, judging me."
		10 (F, 28)	Has the impression that everyone is staring and talking about her, calling her a "useless waste of space."
		11 (M, 25)	"I would also hear my friends talking against me somehow… saying, 'He's slow.'" "I can see that everybody knows me somehow, maybe because of my behaviour [being slow]."
		12 (F, 18)	"I think they're [her friends] talking about me, looking at me funny as well."
		13 (F, 32)	Feels as though everyone is looking at her, sees people sniggering at her behind her.
		15 (F, 20)	When in crowded places, worries that people are looking at her.
		16 (M, 30)	Impression that people are looking at him.

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		19 (M, 30) 21 (M, 27) 22 (M, 24) 24 (M, 21) 29 (M, 26)	"I just imagined that everybody else was staring at me in interest about what I was going to say." "I feel that they [other people] are looking [at me]." "They're taking the piss out of me, having a joke about me, they're not really my friends. There's a couple of blokes standing there, taking the piss to each other about me." Thought people were looking at him because he is ugly. Has an impression that people are looking at him, watching his every move, and experiences this as an image: "All I can see really is just faces, it's just like looking into a mirror with faces, it's people constantly looking and staring at me."
1.2	Negative self-evaluation *(total number of participants identifying this theme in SAp group:14)*		See below.
1.2.1	Negative self-comments *(total number of participants identifying this theme in SAp group:9)*	1 (F, 19) 7 (M, 33) 10 (F, 28) 11 (M, 25)	Hears her voice saying, "You're only going to mess it up and make people think you're weird." "I don't want to tell you" – appears to feel shame about his image. Thinks her image means that she is a useless waste of space. "[My image means that] I'm not normal."

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		13 (F, 32)	Sees herself as "sweaty, disgusting, messy." Thoughts: "You look stupid. This is so embarrassing."
		19 (M, 30)	Thoughts: "You can't sort this out, it's just like what happened before, you're going to screw this up, you always screw this up, you're going to look stupid." "I'll probably say something stupid, everyone will laugh." "I'm not good enough for this."
		20 (F, 23)	"I'm big, my voice is really manly – bassy and horrible. I feel like I slouch… I feel like I'm really fat and slouchy, like I'm kind of like Egor or something, just really disgusting, and I'm worried about my chin sticking out… I just don't really like anything about me."
		22 (M, 24)	"I'm a complete idiot."
		24 (M, 21)	Considers himself "ugly".
1.2.2	Comparing self to others (negatively) *(total number of participants identifying this theme in SAp group:4)*	6 (F, 22)	"Even before I go out, I would have these images of people staring at me, looking down upon me… not seeing me as an equal."
		11 (M, 25)	"I'm not at their level of mental health… so not as synchronised as they are in my mind."
		20 (F, 23)	"With other women, I automatically compare what's good about them and what's bad about me."
		21 (M, 27)	"The other person seems very calm, like it's very easy for them to do." Commenting on

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			how different the other person seems to him.
1.2.3	Thoughts or beliefs that they will "mess up" in the situation *(total number of participants identifying this theme in SAp group:3)*	1 (F, 19) 18 (M, 27) 19 (M, 30)	Hears her voice saying, "You're only going to mess it up and make people think you're weird." "[I'm] wondering how I'll react this time, wondering what to say – whether I'm going to go into a complete panic." Thoughts: "You can't sort this out, it's just like what happened before, you're going to screw this up, you always screw this up, you're going to look stupid." "I knew I was going to say something stupid, or not have the answer, that was the worst bit, I knew what was going to happen."
1.2.4	Judgements about own mental health *(total number of participants identifying this theme in SAp group:3)*	4 (M, 31) 11 (M, 25) 16 (M, 30)	"It will probably happen again – there's a sense that if I wasn't crazy, I could cope." "I'm not mentally healthy." "I'm not normal." [Interviewer: What does your image mean about you?] "I'm crazy?"
1.3	Fear of consequences of negative evaluation *(total number of participants identifying*		See below.

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	this theme in SAp group:19)		
1.3.1	Loss of social status or social isolation (feeling separated from or invisible/ unimportant to others) *(total number of participants identifying this theme in SAp group:10)*	1 (F, 19)	"There's loads of people either side of me, but not that close." "I'm sort of getting increasingly anxious because no one's talking to me – they're ignoring me - and I'm just sat in the middle." "They [the other people at the party] feel further away from me than they are." "They might react to me differently." "No one's really looking at me or talking to me, they're kind of ignoring me." When asked about what has led up to her standing on her own at a party: "…I'm quite quiet, so I suppose no one's really bothered about talking to me."
		6 (F, 22)	"It feels like people are ignoring me."
		10 (F, 28)	Feels ridiculed by and separated from the other mothers. Even when surrounded by people, has the impression "I'm on my own."
		12 (F, 18)	"I think they're just pretending to be my friends."
		18 (M, 27)	Worries his colleagues will notice he has had lots of time off work and what they will think of this.
		19 (M, 30)	"When I'm low, it can be hard to talk to people because it feels like being locked in a

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			bubble."
		21 (M, 27)	Feels alone in his image even though he is with his case manager.
		22 (M, 24)	"…They're not really my friends."
		24 (M, 21)	"I felt out of place."
			"I felt like I was in my own little circle – separate."
		26 (M, 35)	"I'm feeling further away from people, sort of isolated."
1.3.2	Image or thoughts of feared situation/ outcome *(total number of participants identifying this theme in SAp group: 15)*		See below.
1.3.2.1	Image of what might happen in the immediate future *(total number of participants identifying this theme in SAp group:11)*	2 (M, 19)	Image of himself in the immediate future walking into the pharmacy. There are no people, just space.
		3 (M, 25)	Image of telling the other people in the group his name.
		5 (F, 19)	Worry that her top/ underwear will fall down.
			Image of being kidnapped.
		6 (F, 22)	"Even before I go out, I would have these images of people staring at me, looking down

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		upon me… not seeing me as an equal."
		"Before going out I would have these images… of accidents, you know, things that might happen…"
	7 (M, 33)	"My violent thoughts might change to a picture – in my head I might be running through the conversation the woman at the tills might have with me, or someone might speak to me, it might be a little picture of people talking to me…"
	10 (F, 28)	Image of being punched in the face.
	18 (M, 27)	"The person [whom he is meeting] is standing facing me – they look normal, as they are. I'm looking at them, standing still. Facial expression is normal." Neutral image accompanied by anxious thoughts about what will happen.
	19 (M, 30)	Pictured himself getting an answer wrong.
	20 (F, 23)	"I pictured myself having to tell him I couldn't give to his charity, and him looking at me disgusted… Just, um, pressuring me and forcing me to do it… he's gritting his teeth."
	21 (M, 27)	"It's like when you get a film in your head – I can see something playing itself out in front of me… I'm on red alert, watching everything he does – in my head I'm seeing something different to the others – every time he puts his hands in his pocket I have an image of him pulling a gun out, I get hurt and I'm alone. He'll go off, run away, and I'm left hurt on the

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			floor.”
		22 (M, 24)	Image of his friends laughing about him after he has left the room.
1.3.2.2	Fear of actual or physical threat – to self or from self to others *(total number of participants identifying this theme in SAp group:11)*		See below.
1.3.2.2.1	Specific fear of physical threat to the self *(total number of participants identifying this theme in SAp group:6)*	5 (F, 19)	Image of being kidnapped by a man and treated violently.
		10 (F, 28)	Has images of people beating her up, punching her in the face.
		19 (M, 30)	“I was also worried I would offend someone and get beaten up.”
		20 (F, 23)	“I always feel like, when I speak to people, they might get aggressive.”
			Pictured the charity worker getting aggressive: “I thought he might swear at me or something.”
		21 (M, 27)	Has an image of the man in front of him pulling a gun on him: “…Every time he puts his hands in his pocket I have an image of him pulling a gun out, I get hurt and I’m alone. He’ll go off, run away, and I’m left hurt on the floor.”
			“I don’t want to be hurt.”
		29 (M, 26)	“I’m worried that if people mis-judge me they might bad-mouth me or, one day, attack

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			me… Without this [fear of attack], it would be less hard people being disgusted by me, but it would still be hard."
1.3.2.2.2	Indication of anxiety around physical threat, but not specific fears *(total number of participants identifying this theme in SAp group:4)*	4 (M, 31) 6 (F, 22) 7 (M, 33) 11 (M, 25)	Interviewer: Does that mean that you find strangers threatening? "I suppose there is a little bit of that." "I see people looking at me a lot, looking down upon me, and I don't like that feeling, that really scares me, and I will do anything to get out of that situation." "They [people in his images] look quite intimidating." "He's [person in image] very aggressive…" "The world's a dangerous place – scary."
1.3.2.2.3	Fear of causing physical harm to others *(total number of participants identifying this theme in SAp group:2)*	7 (M, 33) 16 (M, 30)	"I expect aggression when I leave my house… I get horrible, intrusive pictures of being violent to people [people he sees as potential threats]." "I had an image of rugby tackling the shouting man, beating him to death with his hammer – it was quite gruesome, sick and horrible." "It's a re-occurring thing, that's why it's so horrible – it's not something I'd ever do, I'm not a violent person at all." "[In my image I see] violence, towards them, the people around me. Sometimes it's specific people around me. I'm committing the violence. I'm observing the scene… [The

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			violence is like] Saw films – blood and gore."
1.3.3	Threat perceived as being most strong from certain types of people (eg. strangers or crowds) *(total number of participants identifying this theme in SAp group:12)*		See below.
1.3.3.1	Crowds *(total number of participants identifying this theme in SAp group:4)*	6 (F, 22) 15 (F, 20) 16 (M, 30) 29 (M, 26)	"I'm not good with big crowds or queues… I'm okay with people I know very well 1:1 or 2:1." Anxiety is worst in crowds. Crowds. Crowds.
1.3.3.2	Strangers *(total number of participants identifying this theme in SAp group:5)*	1 (F, 19) 4 (M, 31) 6 (F, 22) 12 (F, 18) 22 (M, 24)	Fears judgement from strangers at the party. Strangers. "I don't recognise people [in the image], I dread unfamiliar people." "My anxiety is usually worse around people I don't know, but I can also feel paranoid with my friends." People he does not know well.

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1.3.3.3	Specific fear of people likely to judge you (peers) *(total number of participants identifying this theme in SAp group:1)*	10 (F, 28)	Felt the other mothers at the school were looking at her and judging her negatively – in her image she sees them glaring at her and talking about her.
1.3.3.4	Specific fear of younger people *(total number of participants identifying this theme in SAp group:2)*	6 (F, 22) 7 (M, 33)	"[I see in my image] a lot of younger people in their 20s or 30s, there are no older people." "…never old people, always teenagers or younger people up to early 20s, because I get quite scared around teenagers… The sorts you see outside [local venue], those funny hats and skinny jeans, but that's not a steadfast rule."
1.3.3.5	Specific fear of men *(total number of participants identifying this theme in SAp group:3)*	5 (F, 19) 7 (M, 33) 21 (M, 27)	Men. "I think they'd always be male" Only anxious about men: "In my time, it's always been the male that's going to harm me, or has done."
2.	Negative evaluation of others *(total number of participants identifying this theme in SAp group:16)*		See below.
2.1	Others are nasty/ bad/ evil *(total number of participants identifying*	8 (M, 16) 10 (F, 28)	"Others are not very nice." Thinks the world is horrible and expects others to be nasty and aggressive to her.

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	this theme in SAp group:7)	13 (F, 32) 16 (M, 30) 19 (M, 30) 21 (M, 27) 29 (M, 26)	"I don't really think many people are very nice." "[The world is] filled with quite a lot of horrible people who judge you." "[The world is] a disgusting place – people are horrible, the only species that kill our own." "Some people are nasty people who do enjoy bringing people down…" "I know there are so many bad people out there, that if they have a bad morning they'll go out and hurt somebody." "I can be judgemental – I tend to judge everyone as an enemy, a threat. But I try not to."
2.2	Others are untrustworthy *(total number of participants identifying this theme in SAp group:3)*	8 (M, 16) 12 (F, 18) 20 (F, 23)	"I don't like the population – I'd rather not trust." "I feel I can't trust my friends." "I don't trust people – I generally feel that people want something."
2.3	Others are judgemental *(total number of participants identifying this theme in SAp group:3)*	6 (F, 22) 9 (M, 21) 16 (M, 30)	Believes that people are always judging her and "looking down upon" her. "People will judge me." "[The world is] filled with quite a lot of horrible people who judge you."
2.4	Others are out to get you/ cruel	19 (M, 30)	"Now I see that's what kids do, but it's what people do in general – if they're panicking

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	(total number of participants identifying this theme in SAp group:1)		themselves they'll do their best to take that away by making someone else look stupid… My classmates are trying to make me look stupid… I always felt like they were waiting for me to f*ck up… so they can find it funny." "People use these things [knowledge of your anxiety] against you if they see a weakness."
2.5	Others are selfish (self-preserving) *(total number of participants identifying this theme in SAp group:1)*	19 (M, 30)	"Now I see that's what kids do, but it's what people do in general – if they're panicking themselves they'll do their best to take that away by making someone else look stupid…"
2.6	Others are aggressive/ violent/ dangerous *(total number of participants identifying this theme in SAp group:2)*	5 (F, 19) 10 (F, 28)	Image of being kidnapped and treated violently by a man. Thinks the world is horrible and expects others to be nasty and aggressive to her.
2.7	Others are intimidating *(total number of participants identifying this theme in SAp group:1)*	7 (M, 33)	"They [the people in his image] look quite intimidating."
2.8	Others have ulterior motives *(total number of participants identifying this theme in SAp group:1)*	20 (F, 23)	"Whenever I'm speaking to people, I always have really harsh judgements about what's going on – I always wonder whether guys are trying to flirt with me, and when I meet girls I always think that they don't like me, no matter how they are."

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2.9	Others are uncaring *(total number of participants identifying this theme in SAp group:1)*	22 (M, 24)	"No one cares about me except my family."
2.10	Others are racist *(total number of participants identifying this theme in SAp group:1)*	11 (M, 25)	"…Probably he doesn't like me because I'm not English."
2.11	Derogatory thoughts about others *(total number of participants identifying this theme in SAp group:1)*	26 (M, 35)	Hears a voice saying derogatory things about the people around him (his friends): "She's going to make a fool of herself", "Don't listen to her, she's stupid, fat and rubbish".
3.	Other images *(total number of participants identifying this theme in SAp group:13)*		See below.
3.1	Seeing their surroundings distorted *(total number of participants identifying this theme in SAp group:12)*	1 (F, 19) 2 (M, 19) 3 (M, 25) 4 (M, 31)	The room seems bigger with more space between her and others. There are no people in the room, just lots of space. There were more people in his image than in reality, and they appeared bigger. "I can see people sort of flitting by, but not clearly – like on a fast forward, but it keeps

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		jumping like an old cassette. I'm just standing still. It seems grey, darker where I am, the shadows seem pronounced. The buildings seem bigger, I suppose the world seems bigger."
	5 (F, 19)	Her surroundings seem "whitish".
	6 (F, 22)	Her surroundings seem very dark.
	7 (M, 33)	"Sometimes I walk into a shop, and the picture is that everyone has just stopped to stare – it's almost like I've put a video on pause."
		Also image of committing violence to another person and there being blood everywhere.
	10 (F, 28)	Sees other mothers at the school pointing at her, laughing, saying nasty things about her – they sound angry, like she has done something wrong. There is a "hard look" to their faces. Sees this even if no one else is around.
	13 (F, 32)	Sees people behind her sniggering at her.
	19 (M, 30)	"Another thing is a change of colour – everything starts to merge into a darker shade… I feel it on the edge of my vision, trying to blur inwards."
	26 (M, 35)	"It's just very blurry, just things going on around me, almost like things have been speeded up around you… In my head, it feels almost like time lapse photography – I'm not moving but everyone around me is moving at double speed… I start to see things out of the corner of my eye – shadows and figures and things…"

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		29 (M, 26)	"Things seem to be closing in on me." Sees the faces of those around him looking closer to him and staring at him.
3.2	Image of escape from situation *(total number of participants identifying this theme in SAp group:0)*		
3.3	Seeing an image/ impression that does not seem to be distorted *(total number of participants identifying this theme in SAp group:2)*	5 (F, 19) 15 (F, 20)	Image of herself where she is at the present time, focussed particularly on her upper body and clothes – unclear whether this image is distorted. Sees an image of herself walking, with people hurrying by.
4	Images/ impressions in other sensory modalities *(total number of participants identifying this theme in SAp group:16)*		See below.
4.1	Sound *(total number of participants identifying this theme in SAp group:11)*	1 (F, 19) 3 (M, 25) 4 (M, 31)	Hears her voice telling her that they should not have come to the party as she will "mess up" and make people think she is "weird". Hears him saying his name. "You can hear, but you know when you jump in a swimming pool – everything seems loud

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			but fuzzy."
		6 (F, 22)	"I hear lots of laughing."
			"I've got my music on but I can till hear their loudness."
		10 (F, 28)	Hears people saying horrible, negative things about her – "useless waste of space" – gets this every time she goes out, even if there are no people around.
		11 (M, 25)	"I could hear my friends talking against me somehow."
		12 (F, 18)	"I hear my name in conversations, think they're talking about me."
		19 (M, 30)	Hears the voice of the teacher from his image, but this is quite distant at times – he is more focussed on the visual aspects of the image.
		22 (M, 24)	Hears his friends "taking the p*ss" out of him.
		26 (M, 35)	Hears knocks and bangs and his voices (psychotic symptom).
4.2	Smell *(total number of participants identifying this theme in SAp group:4)*	1 (F, 19)	Strong, exaggerated smell of shoe polish.
		5 (F, 19)	Smells cigarette smoke, lipgloss and food.
		10 (F, 28)	Smells perfume/ body spray and hair chemicals – what the women in her image smell like.
		13 (F, 22)	Smells a humid smell.
4.3	Feeling physically different *(total number of participants identifying*	1 (F, 19)	The participant feels bigger than in reality, and further away from the other people in the room.

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this theme in SAp group:12)	3 (M, 25)	Seems further away from the others in the group, and others seemed bigger.
	8 (M, 16)	Feels further away from others.
	10 (F, 28)	Feels further away from others, and fatter than in reality.
	12 (F, 18)	Feels further away from people.
	13 (F, 32)	Feels closer to the floor, as though she is really small.
	19 (M, 30)	"There's a sensation like falling down a hole, grabbing on to ledges." "I felt further away from the others until I was yanked back by the facilitator." "Everything felt like it speeded up – well, my brain felt like it speeded up and everything else slowed down."
	20 (F, 23)	Next to small statured charity worker, felt as though she was "expanding – I felt really big and massive."
	21 (M, 21)	The participant felt as though his jeans had become too big and baggy, and felt as though the other people were moving away from him "like the zoom on a camera".
	22 (M, 24)	Feels smaller and further away from others.
	26 (M, 35)	"I'm feeling further away from people, sort of isolated."
	28 (M, 25)	Feels smaller and fatter than in reality.
5. Aware that image/ impression may not be	1 (F, 19)	Rates her image as 50% visually distorted, with sound being 10% distorted and smell

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accurate *(total number of participants identifying this theme in SAn group:19)*		being 75% distorted. She is aware that she seems bigger than in reality but that others look much taller (at least a foot), people look further away from her and the room looks bigger. Her voice sounds louder and the smell of boot polish is very strong.
	3 (M, 25)	Rated image as 25% visually distorted – the people were bigger.
	4 (M, 31)	Rated image as 50% visually distorted (grey, bigger) and the sound as 85% distorted (as though underwater).
	5 (F, 31)	Rates image as 30% visually distorted.
	6 (F, 22)	Felt the noise in her image was more intense, rated as 50% distorted.
	7 (M, 33)	Rates image as 100% distorted: "When I'm in the situation it seems like it's really happening, but I know it's not."
	8 (M, 16)	Rated sound as 50% distorted – can see people talking but the sound is muted.
	9 (M, 21)	Rated image as 20% visually distorted.
	10 (F, 28)	Rated her image as not at all visually distorted, but did say everything in it seemed bigger. She rated sounds and smells in her image as 70% distorted, being louder and stronger than in reality.
	12 (F, 18)	Rated image as 90% visually distorted (although at the time it felt very real) and 20% aurally distorted (quieter).

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	13 (F, 32)	Rated the humid smell in her image as 59% distorted, as other people have told her that it is not that bad.
	16 (M, 30)	Did not rate his image as at all distorted, but did state that there was no sound in the image and is aware that the image is not really happening.
	18 (M, 27)	"You don't know if it's [the impression that others have negative thoughts about you] you worrying about it or the other person – I find a lot that it's me worrying about it."
	19 (M, 30)	"I always felt like it was only me they did this to – maybe I'm self obsessed, I don't know, but it always seemed like it was always me." Rated image as 25% visually distorted and 25% aurally distorted.
	20 (F, 23)	Rated her image as 85% visually distorted and 70% aurally distorted.
	21(M, 27)	Aware that his anxieties may not be accurate, but only after the situation. Rated his image as 25% visually distorted, as it seemed "dingier, cloudier and greying."
	22 (M, 24)	"Maybe I'm just paranoid that people don't actually like me." "It's just me – it doesn't mean that it's happened or is true. It's just paranoia." 25% visually distorted – "Clear but a bit distorted, 25%."
	26 (M, 35)	Rates visual aspects of image as 50% distorted (blurry, "closing in") and the sound elements as 75% distorted (knocks and bangs and voices.)

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		29 (M, 26)	Sees the faces of the people around him as very close and is particularly focussed on the eyes. Rated the faces as 75% closer than in reality.
6.	Linking image to a past memory *(total number of participants identifying this theme in SAp group:6)*	1 (F, 19)	While at a party, experienced an image of herself at a party 2 years ago. In this image she is dressed differently to in the present, and has a strong impression that she is wearing the dress she wore at the party 2 years ago.
		9 (M, 21)	[Interviewer: Does your image reflect a previous memory?] "Probably, yeah."
		18 (M, 28)	Although his image is neutral, his anxieties about what will happen are related to past memories: "Things that happened in the past, between you [him and the other person in the image] – a specific event, a night out – what happened when I was really happy. Then remembering bad things too, it makes me nervous. Then I wonder what will happen this time."
		19 (M, 30)	Has an image of being in a Home Economics class at school, an image that felt speeded up: "I'm sat on the bench next to this fat b*st*rd who I really couldn't stand… It's just a standard lesson… it was when we used to have classes together and we'd have to go and sit in the other class, and obviously I felt less comfortable in the other class… I've always felt more comfortable in a situation if I can sit in the same place… so that was totally out

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			of my comfort zone… I'm not really focussing on anyone, my eyes are flicking round the room constantly, just looking – are they looking at me? What are they doing? Are they mucking about? Just thinking, "Okay, they're there, they're there, they're there" and I'd just keep going round and doing it, just kind of checking people… so I could see who was there and what to expect."
		20 (F, 23)	"I remember a couple of times saying an answer and getting something completely wrong… and people were sat there going, "What the hell are you on about?"
			"My father used to tell me that women should be short and blonde, with big boobs and a little waist, and if I – I was really skinny when I was younger, and when I started to put on weight he called me "the pig"".
			Sexual trauma history, related by participant to the expectation that others will always want something from her and may become aggressive if they do not get it.
		29 (M, 26)	Links fear of attack from others to past experiences.
7.	Disclosing emotions/feelings *(total number of participants identifying this theme in SAp group:15)*		
7.1	Feeling out of control or overwhelmed	2 (M, 19)	The worst thing about the image is that he has got to do it and can't avoid it.

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	(total number of participants identifying this theme in SAp group:5)	4 (M, 31) 7 (M, 33) 16 (M, 30) 19 (M, 30)	"It feels like it closes in – almost like overload – the people looking, the sounds, everything is dark – boils like hell… I feel like it's more than I can take sometimes." "When I can't work it out, when it's chaos, unpredictable, it's bad." Believes the images are put into his mind by his voice, that he cannot control them. Perception that the time until he will have to introduce himself to the group is going very fast: "Everything's running so fast that I've lost all rational sense of control." "In my mind, this could be the thing that finishes me off – I can't cope with this."
7.2	Feeling trapped or frustrated by or in the image *(total number of participants identifying this theme in SAp group:3)*	4 (M, 31) 7 (M, 33) 11 (M, 25)	"It's sometimes like a feeling of being caged." Feels claustrophobic, with a pressure in his head. "It's a reoccurring thing, that's why it's so horrible." Feels frustrated.
7.3	Feeling embarrassed or stupid *(total number of participants identifying this theme in SAp group:4)*	10 (F, 28) 19 (M. 30) 20 (F, 23) 22 (M, 24)	Feels really embarrassed and silly. "I knew I was going to say something stupid." "I was scared because I thought he was going to have a go and embarrass me – I was worried about being embarrassed." "I feel like a f*cking idiot."
7.4	Feeling strong emotions in the image	1 (F, 19)	Anxious, panicked.

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Template Thematic Analysis of Semi-Structured Interviews for SAp group (themes are derived from image descriptions and associated thoughts/ feelings)

	(total number of participants identifying this theme in SAp group:12)	4 (M, 31) 5 (F, 19) 6 (F, 22) 7 (M, 33) 9 (M, 21) 10 (F, 28) 11 (M, 25) 16 (M, 30) 19 (M, 30) 21 (M, 27) 26 (M, 35)	"I felt like my head's about to blow." Has a panic attack. "I feel extremely intimidated." "It feels horrible." "Just very nervous." "Sad, wanting to cry." "I feel angry all the time." Feels very tense, irritable and aggressive. Feels so anxious he does not know if he will cope. Feels fear, anxiety, stress and worry. "I feel self-conscious and low and anxious, I feeling unhappy about feeling anxious."
8	Safety/ coping strategies *(total number of participants identifying this theme in SAp group:12)*		See below.
8.1	Choosing to see a positive self-image to aim for or using imagination to rehearse	2 (M, 19)	Sees image of himself walking into the pharmacy and rehearses what he is going to say. Imagines saying his name – perhaps as a rehearsal?

Appendix N.

Template Thematic Analysis of Semi-Structured Interviews for SAp group (themes are derived from image descriptions and associated thoughts/ feelings)

	for upcoming social situations *(total number of participants identifying this theme in SAp group:12)*	3 (M, 25) 7 (M, 33) 8 (M, 16) 21 (M, 27)	Imagines himself saying his name and others not reacting. "My violent thoughts might change to a picture – in my head I might be running through the conversation the woman at the tills might have with me, or someone might speak to me, it might be a little picture of people talking to me…" Sees himself as though from above, standing, talking to others, enjoying himself. Can also see 4-5 other people. Tries to imagine feared scene to rehearse how he will cope and keep him and his family safe.
8.2	Altering/ monitoring behaviour *(total number of participants identifying this theme in SAp group:2)*	1 (F, 19) 26 (M, 35)	"[The voice] is talking to me, and when she's talking I always, sort of, worry about talking out loud to her, because I do that when I'm alone." "I'm very, very aware of everything about myself – of the way I'm coming across, the way I look, if I'm smiling am I smiling properly or do I look goofy and stupid?"
8.3	Trying to hide anxiety symptoms from others *(total number of participants identifying this theme in SAp group:1)*	19 (M, 30)	Reflecting on how he might react when feeling socially rejected: "I'd probably have lost the plot – not outside, I would have sucked it all in, which is what I always do because I don't like people knowing about these things [his anxiety]."

Note. Information in quotation marks is direct quotes, information without quotation marks is taken from the researcher's summary of participant information (for participants who did not consent to being audio recorded), which is recorded as close to verbatim as possible and checked with participants.

Appendix O.

Normality tables

Kolmogorov-Smirnov (D) test results, degrees of freedom (df) and significance level (p) for normality of distribution for both groups on the four dimensions of the BCSS.

BCSS dimension	**Group**	**D**	**df**	***p***
Negative self	SAp	0.20	27	0.01*
	SAn	0.12	32	0.20
Positive self	SAp	0.20	27	0.01*
	SAn	0.07	32	0.20
Negative other	SAp	0.13	27	0.20
	SAn	0.13	32	0.17
Positive other	SAp	0.21	27	0.00*
	SAn	0.13	32	0.17
Depression	SAp	0.28	24	0.00*
	SAn	0.20	32	0.00*
Paranoia	SAp	0.13	24	0.27
	SAn	0.14	32	0.10

Note. *Significant at the $p \leq 0.05$ level.

Appendix O.

Normality tables

Kolmogorov-Smirnov (D) test results, degrees of freedom (df) and significance level (p) for normality of distribution for both groups on the two factors of the SCQ and total FNEB score.

Variable	**Group**	**D**	**df**	***p***
Total score for FNEB	SAp	0.12	17	0.20
	SAn	0.13	32	0.18
Total score for belief (SCQ)	SAp	0.12	17	0.20
	SAn	0.12	32	0.20
Total score for thought frequency (SCQ)	SAp	0.12	17	0.20
	SAn	0.19	32	0.01*

Note. *Significant at the $p \leq 0.05$ level.

Kolmogorov-Smirnov (D) test results, degrees of freedom (df) and significance level (p) for normality of distribution for both groups on GPTSA, GPTSB and total GPTS scores.

Variable	**Group**	**D**	**df**	***p***
Ideas of social reference	SAp	0.08	17	0.20
	SAn	0.11	32	0.20
Persecutory ideation	SAp	0.22	17	0.03*
	SAn	0.23	32	0.00**
Total GPTS score	SAp	0.17	17	0.18
	SAn	0.13	32	0.17

Note. *Significant to the $p \leq 0.05$ level, **Significant to the $p \leq 0.001$ level.

Appendix P.

Description of template analysis and example quotes for SAn group	Description of template analysis and example quotes for SAp group
1. Fear of negative evaluation of the participant This theme was divided into several sub-themes, and was characterised by specific anxieties about negative evaluation, either from others or negative self-evaluation. Twenty-nine of the SAn group identified with at least one of the subthemes.	*1. Fear of negative evaluation of the participant* This theme was divided into several sub-themes, and was characterised by specific anxieties about negative evaluation, either from others or negative self-evaluation. Twenty-four of the SAp group identified with at least one of the subthemes.
1.1 Fear of negative evaluation from others. This theme was divided into 13 further subthemes. Twenty-eight of the SAn group gave statements analysed as indicating that they feared negative evaluation from others in some form.	*1.1 Fear of negative evaluation from others.* This theme was divided into 10 further subthemes (unlike the SAn group, none of the SAp groups' quotes appeared to fit with themes of anxiety about being judged as being boring, irritating or a failure). Twenty-three made statements analysed as meaning they feared negative evaluation from others in some form.
1.1.1 General fear of ridicule or judgement from others. This theme consisted of quotes that were non-specific about the type of judgement that was feared from others. Nine of the SAn group identified with this theme. Examples are given below.	*1.1.1 General fear of ridicule or judgement from others.* This theme consisted of quotes that were non-specific about the type of judgement that was feared from others. Ten of the SAp group identified with this theme. Examples are given below.

SAn11: "I think they [others] judge me. I think it will be harsh." SAn18: "I always think other people are judging me." *1.1.2 Fear of being judged as inferior.* Two of the SAn group gave statements indicating that they specifically feared being judged as inferior to others: SAn12: Feels judged by authority figures – gets the impression that they think she is inferior, unworthy, an annoyance they want to "swat" away (linked to childhood bullying – being called "flea"). SAn16: "[My colleague] would have been quite cross – he'd have felt I let the side down." *1.1.3 Fear of being judged as boring.* Two of the SAn group had quotes analysed as fitting the theme of fearing being judged by others as boring: SAn6: Worries what others will think of her, eg. when talking to someone and the conversation "dries up" – worried they will think she is boring. SAn13: Imagines that others compare her to the people around her and judge her negatively as boring.	SAp9: "People are looking at me funny, judging me." SAp18: "I feel a bit paranoid about people – they have negative thoughts about you." *1.1.2 Fear of being judged as inferior.* One of the SAp group gave a statement indicating that she specifically feared being judged as inferior to others: SAp6: "Even before I go out, I would have these images of people staring at me, looking down upon me… not seeing me as an equal." *Fear of being judged as boring was not included in the SAp template.*

1.1.4 Fear of being judged as stupid, unknowledgeable or foolish. Eight of the SAn group gave quotes analysed as fitting the theme of fearing being judged as stupid, unknowledgeable or foolish (examples below): SAn11: "I can see the other people looking at me as if to say, "What is she talking about?"" SAn16: "I looked like a fool in front of all those people."	*1.1.3 Fear of being judged as stupid or foolish.* Two of the SAp group gave quotes analysed as fearing being judged as foolish or stupid ("unknowledgeable" is omitted from this theme as it does not seem to fit with the quotes): SAn21: "People think I look uncomfortable, an idiot" SAn26: "I'm very, very aware of everything about myself – of the way I'm coming across, the way I look, if I'm smiling am I smiling properly or do I look goofy and stupid?"
1.1.5 Fear of being judged as irritating. Two of the SAn group had a quote analysed as fitting with a fear of being judged as irritating: SAn23: "[I think others might be] irritated, thinking "What's she doing here?" "What was the point of saying that?" SAn25: "The world sees me like an annoying child, a nuisance, silly."	*Fear of being judges as irritating was not included in the SAp template.*
1.1.6 Fear of being judged as a failure. Two of the SAn group gave quotes analysed as indicating fear of being judged a failure: SAn7: "I don't want people to think badly of me… my worst case scenario is everyone looking at me like I'm a failure."	*Fear of being judged as a failure was not included in the SAp template.*

SAn29: Feels more anxious when he is being graded (ie. for coursework).	
1.1.7 Fear of being judged as unlikeable or a bad person Six of the SAn group gave quotes analysed as indicating that they were anxious about being judged as unlikeable or bad people. For many, this was a concern that their anxiety was keeping them from joining in with social gatherings, and that others would judge them to be "stand-offish". Alternatively, they were concerned that their anxiety symptoms made them look "shifty", as if they were doing something wrong (eg. lying, planning to rob someone) (examples below): SAn3: "People think I might rob them." SAn26: "Others think I'm snobby and stuck-up."	*1.1.4 Fear of being judged as unlikeable or a bad person* Two of the SAp group gave quotes indicating that they were anxious about negative judgements from others: SAp20: Anxious that a charity worker will think badly of her for not donating. SAp29: "I know inside myself, I think I'm a kind person and it's the worry that others may think I'm different to what I really am – that's what scares me."
1.1.8 Fear of being judged as "weird" or abnormal or different Five participants in the SAn group gave quotes analysed as fitting with anxiety about being judged as "weird", abnormal or different (examples below): SAn21: When feeling dizzy while queuing in a shop, had an image of what might happen if he fainted – people crowding round and staring at him, thinking he was strange.	*1.1.5 Fear of being judged as "weird" or abnormal or different* Four participants in the SAp group gave quotes analysed as fitting with anxiety about being judged as "weird", abnormal or different (examples below): SAp1: Hears the voice saying, "You're only going to mess it up and make people think you're really weird." SAp12: Thinks the people around her (the other mothers) think she is weird, that she looks weird.

SAn 28: "People think I'm weird." *1.1.9 Fear of being judged as dangerous* One SAn participant gave a quote that was analysed as indicating that he was anxious about being judged as dangerous: SAn3: "They might think I'll infect them." *1.1.10 Specific anxiety about judgement because of mental health symptoms* Although a number of the participants in the SAn group were not seeking support from mental health services, all but four participants in this group scored at a clinically-significant level on the SIAS. Therefore, anxiety about being judged for being anxious was included in this theme. Five SAn participants identified with this theme (examples below): SAn17: "[The worst thing about the image is] the colour of	*1.1.6 Fear of being judged as dangerous* Two participants in the SAp group gave quotes that were analysed as indicating they were anxious about being judged as dangerous. SAn1: "I get quite anxious when I think about, sort of, you know, a lot of people don't have voices in their heads *[laughs]*, um, and people might think that's just, I don't know, they might think I'm dangerous or really weird or something." SAn21: "People think I look uncomfortable, an idiot, maybe a risk." *1.1.7 Specific anxiety about judgement because of mental health symptoms* Nine SAp participants identified with this theme (examples below): SAp1: "I get quite anxious when I think about, sort of, you know a lot of people don't have voices in their heads, and people might think that's just, I don't know, they might think I'm dangerous or really weird or something… they might react to me

my face – I can't hide it – the others will see it." SAn25: Feels her physical response to anxiety (being sick, shaking) make others judge her as immature, silly and childlike. *1.1.11 Specific anxiety about breaking social norms/ rules/ boundaries* This sub-theme concerned anxiety about acting in a way perceived by others to be inappropriate because of accepted social conduct. Nine SAp participants identified with this theme (examples below): SAn6: Worries about what to say to others for fear it will "come out wrong." SAn23: "When I'm not sure of the boundaries I feel very anxious. I don't want people to think bad things of me, so I'm always ultra-sensitive to how I'm behaving – I feel I have to behave in an appropriate way." *1.1.12 Specific anxiety about appearance* This theme was categorised by anxiety about others judging the participant's appearance negatively. Ten SAn participants identified with this theme (examples below): SAn8: Sees her face "really red with spots and blackheads	differently." SAp13: Because of anxiety gets very sweaty and hot, and worries others will judge her for this. *1.1.8 Specific anxiety about breaking social norms/ rules/ boundaries* This sub-theme concerned anxiety about acting in a way perceived by others to be inappropriate because of accepted social conduct. Seven SAp participants identified with this theme (examples below): SAp11: Worries, "Am I behaving in the wrong way?" SAp20: "I am overweight and I have a lot of pressure to be something that I'm not… I try to be smaller." *1.1.9 Specific anxiety about appearance* This theme was categorised by anxiety about others judging the participant's appearance negatively. Twelve SAp participants Identified with this theme (examples below): SAp20: Has an image of herself as "piggy", "grotesque", "fat"

accentuated, with my fringe out of place." SAn28: "[Before the party I was] worrying about what I would wear and what I would look like." *1.1.13 Seeing an image/ impression of being negatively evaluated by others* Twenty-five SAn participants were analysed as having an image or impression of being negatively evaluated by others. See the Results section for Hypothesis 1 for the analysis of imagery themes. *1.2 Negative self-evaluation.* This is a second-level theme (so is not a sub-theme of 'negative evaluation from others' but is still a sub-theme of 'fear of negative evaluation') and contains within it five third-level sub-themes (as opposed to the four sub-themes in the SAp template). Twenty SAn participants identified with this theme (examples of quotes from subthemes follow).	and "slouchy": "I feel like I'm really fat and slouchy, like I'm kind of like Igor or something, really disgusting." SAp26: Thinks, "Oh my God, I'm pouring with sweat and I must look really bizarre." *1.1.10 Seeing an image/ impression of being negatively evaluated by others* Nineteen SAp participants were analysed as fitting with this theme. See the Results section for Hypothesis for the analysis of imagery themes. *1.2 Negative self-evaluation.* This is a second-level theme (so is not a sub-theme of 'negative evaluation from others' but is still a sub-theme of 'fear of negative evaluation') and contains within it four third-level sub-themes (as opposed to the five sub-themes in the SAn template). Fourteen SAp participants identified with this theme (examples of quotes from subthemes follow).

1.2.1 Negative self-comments. This theme incorporated negative comments made by the participants about themselves. Seventeen SAn participants identified with this theme (examples below): SAn3: "I think I appear as very ugly and unintelligent." SAn16: "I felt like I kept getting things wrong and didn't handle it well… I felt so incompetent."	*1.2.1 Negative self-comments.* This theme incorporated negative comments made by the participants about themselves. Nine SAp participants identified with this theme (examples below): SAp19: Thoughts: "You can't sort this out, it's just like what happened before, you're going to screw this up, you always screw this up, you're going to look stupid." SAp20: "I'm big, my voice is really manly – bassy and horrible. I feel like I slouch… I feel like I'm really fat and slouchy, like I'm kind of like Igor or something, just really disgusting, and I'm worried about my chin sticking out… I just don't really like anything about me."
1.2.2 Comparing self to others (negatively) Thirteen SAn participants were analysed as having quotes that indicated they negatively compared themselves to others. SAn11: "Everyone's older and more intelligent than me." SAn13: Compares herself to others and feels smaller, without much presence, easily missed. Feels overpowered by confident, "full-on" people, feels boring compared to them.	*1.2.2 Comparing self to others (negatively)* Four SAp participants were analysed as having quotes that indicated they negatively compared themselves to others. SAp6: "Even before I go out, I would have these images of people staring at me, looking down upon me… not seeing me as an equal." SAp20: "With other women, I automatically compare what's good about them and what's bad about me."

1.2.3 Inability to live up to their own expectations. Five participants in the SAn group were analysed as having quotes that indicated they felt unable to meet their expectations for themselves (examples below): SAn16: "I felt like I'd let myself down." SAn29: "I am a perfectionist – I judge myself harshly even if others say it is good."	*Inability to live up to theirown expectations was not included in the SAp template.*
1.2.4 Thoughts or beliefs that they will "mess up" in the situation. This third-level theme was predominantly characterised by thoughts that were in anticipation of social encounters. However, there were also examples of being within the situation and the participant feeling that they were getting it wrong. Five SAn participants were analysed as having quotes that fit with this theme. SAn9: Image of himself saying something "daft" and being looked at in confusion. SAn29: Before giving a presentation, has an image of himself forgetting his words.	*1.2.3 Thoughts or beliefs that they will "mess up" in the situation.* This third-level theme was predominantly characterised by thoughts that were in anticipation of social encounters. However, there were also examples of being within the situation and the participant feeling that they were getting it wrong. Three participants were analysed as fitting with this theme (examples below): SAp1: Hears her voice saying, "You're only going to mess it up and make people think you're weird." SAp19: "I knew I was going to say something stupid, or not have the answer, that was the worst bit, I knew what was going to happen."

1.2.5 Judgements about own mental health. The last third-level sub-theme of negative self-evaluation quotes negative judgements made by the participants about their own mental health. One participant in the SAn group gave a quote that was analysed as being indicative of judging their own mental health negatively: SAn21: Speaking about his anxiety and agitation: "It's not normal, not like me… I don't like the person I've become… I'm odd."	*1.2.4 Judgements about own mental health.* The last third-level sub-theme of negative self-evaluation quotes negative judgements made by the participants about their own mental health. Three participants from the SAp group gave quotes analysed indicative of judging their own mental health negatively: SAp4: "There's a sense that if I wasn't crazy, I could cope." SAp11: "I'm not mentally healthy… I'm not normal."
1.3 Fear of the consequences of negative evaluation. This was a second-level theme, identifying what made negative evaluation such an anxiety-provoking prospect for the participants. It is divided into three third-level and four fourth-level sub-categories, which encompass all the quotes. A total of 27 SAn participants identified with at least one of the themes which identified their feared consequence of negative evaluation.	*1.3 Fear of the consequences of negative evaluation.* This was a second-level theme, identifying what made negative evaluation such an anxiety-provoking prospect for the participants. It is divided into three third-level and four fourth-level sub-categories, which encompass all the quotes. A total of 19 SAp participants identified with at least one of the themes which identified their feared consequence of negative evaluation.

1.3.1 Loss of social status or social isolation (feeling separated from others or invisible/ unimportant) This theme was characterised by either the participants indicating that they felt or feared being separate from or uncared about by others, or having their social status reduced. These themes were grouped together as both seemed to have at their core a fear of being isolated from their preferred social group. Eighteen SAn participants had quotes analysed as fitting with this theme (examples below): SAn12: Image of self as a child after being bullied, feeling completely different, isolated and rejected – no one would play with her, "totally excluded". SAn30: Worries she will not get the job she is interviewing for because of anxiety symptoms making the interviewers think she is being untruthful.	*1.3.1 Loss of social status or social isolation.* This theme was characterised by either the participants indicating that they felt or feared being separate from others, or having their social status reduced. These themes were grouped together as both seemed to have at their core a fear of being isolated from their preferred social group. Ten SAp participants had quotes analysed as fitting with this theme (examples below): SAp1: "They [the other people at the party] feel further away from me than they are." SAp6: Even when surrounded by people, has the impression "I'm on my own."
1.3.2 Image or thoughts about feared outcome This theme was categorised by participants describing thoughts or images analysed as being indicative of thinking about the feared outcome of the social situation. All images or thoughts could be further divided into sub-themes. Fourteen SAn participants had thoughts or images that were analysed as fitting with at least one of the sub-themes.	*1.3.2 Image or thoughts about feared outcome* This theme was categorised by participants describing thoughts or images analysed as being indicative of thinking about the feared outcome of the social situation. All images or thoughts could be further divided into sub-themes. Fifteen SAp participants had thoughts or images that were analysed as fitting with at least one of the sub-themes.

1.3.2.1 Image of what might happen in the immediate future Eight participants in the SAn group had images analysed as fitting with this theme (see Hypothesis 1 analysis above for examples).	*1.3.2.1 Image of what might happen in the immediate future* Eleven participants in the SAp group had images analysed as fitting with this theme (see Hypothesis 1 analysis above for examples).
1.3.2.2 Fear of physical threat – to self or from self to others This theme was categorised by participants having thoughts or images analysed as indicative of a fear of actual threat to safety (as opposed to threat to social status or of social isolation). In the SAn group, this theme was analysed as having two subthemes: 'Specific fear of physical threat to self', and 'Image indicating fear of vulnerability to physical threat'.	*1.3.2.2 Fear of physical threat – to self or from self to others* This theme was categorised by participants having thoughts or images analysed as indicative of a fear of actual threat to safety (as opposed to threat to social status or of social isolation). In the SAp group, this theme was analysed as having three subthemes: 'Specific fear of physical threat to self', 'Indication of anxiety around physical threat, but not specific fears' and 'Fear of causing physical harm to others'. Eleven SAp participants had quotes analysed as fitting with this theme (see below).
1.3.2.2.1 Specific fear of physical threat to the self One participant in the SAn group had images analysed as fitting with this theme: SAn32: Worried about risk of assault from others, particularly in crowds, as has been assaulted previously.	*1.3.2.2.1 Specific fear of physical threat to the self* Six participants in the SAp group had images analysed as fitting with this theme (examples below): SAp 21: Has an image of the man in front of him pulling a gun on him: "…Every time he puts his hands in his pocket I have an image of him pulling a gun out, I get hurt and I'm alone. He'll go off, run away, and I'm left hurt on the floor… I don't want to be hurt."

	SAp29: "I'm worried that if people mis-judge me they might bad-mouth me or, one day, attack me…"
1.3.2.2.2 Image indicating fear of vulnerability to physical threat. Two participants in the SAn group had quotes analysed as fitting with this theme: SAn1: In his image, the participant is cowering from people and feeling very scared, as if he were being faced by a physical threat (although the participant does not identify a physical threat). SAn24: When socially anxious and perceives that others have reacted to him in an unfriendly way, gets an image of himself as less fit and toned than he used to be and feels vulnerable, less able to protect himself if they "make trouble".	*1.3.2.2.2 Indication of anxiety around physical threat, but not specific fears* Four participants in the SAp group gave quotes analysed as fitting with this theme (examples below): SAp6: "I see people looking at me a lot, looking down upon me, and I don't like that feeling, that really scares me, and I will do anything to get out of that situation." SAp7: "They [people in his images] look quite intimidating."
Fear of causing physical harm to others was not included in the SAn template.	*1.3.2.2.3 Fear of causing physical harm to others* Two participants in the SAp group gave quotes analysed as fitting with this theme: SAp7: "I expect aggression when I leave my house… I get horrible, intrusive pictures of being violent to people [people he sees as potential threats]… I had an image of rugby tackling the shouting man, beating him to death with

	his hammer – it was quite gruesome, sick and horrible… It's a re-occurring thing, that's why it's so horrible – it's not something I'd ever do, I'm not a violent person at all." SAp16: "[In my image I see] violence, towards them, the people around me. Sometimes it's specific people around me. I'm committing the violence. I'm observing the scene… [The violence is like] Saw films – blood and gore."
1.3.2 Loss of something material. This theme is categorised by anxiety about losing something material as a consequence of negative evaluation. Three participants in the SAn group had images analysed as fitting this theme (examples below): SAn12: When having a meeting with the bank manager about her reduced income due to being on sickness benefit, the participant is anxious about what he will say resulting in her not having enough money or losing money. SAn16: Worried about losing her job and it being the end of her career.	*Loss of something material was not included in the SAp template.*

1.3.3 Threat perceived as being most strong from certain types of people.

This theme was categorised by participants disclosing that they felt most threatened by specific types of people when asked to describe situations in which they felt socially anxious. Sixteen SAn participants had quotes analysed as being indicative of specifically feeling threatened by one or more of the following groups:

1.3.3.1 Crowds

Four SAn particpants were analysed as fitting with this theme (examples below):

SAn1: Feels most anxious when walking through crowds.

SAn19: Feels very separated when with strangers and when in groups.

1.3.3.2 Strangers

Quotes from six SAn participants were analysed as being indicative of a specific fear of strangers (examples below):

SAn8: "I feel less confident with strangers – especially loud people and people already in friendship groups."

SAn9: "I find it difficult to get on with people I'm not familiar

1.3.3 Threat perceived as being most strong from certain types of people.

This theme was categorised by participants disclosing that they felt most threatened by specific types of people when asked to describe situations in which they felt socially anxious. Twelve SAp participants had quotes analysed as being indicative of specifically feeling threatened by one or more of the following groups:

1.3.3.1 Crowds

Four SAp participants were analysed as fitting with this theme (examples below):

SAn6: "I'm not good with big crowds or queues… I'm okay with people I know very well 1:1 or 2:1."

SAn15: Anxiety is worst in crowds.

1.3.3.2 Strangers

Five SAp participants were analysed as fitting with this theme (examples below):

SAn6: "I don't recognise people [in the image], I dread unfamiliar people."

SAn12: "My anxiety is usually worse around people I don't

with. It's an ongoing theme."	know, but I can also feel paranoid with my friends."
1.3.3.3 Specific fear of assessors/ authority figures/ people thought to be in a position to judge Quotes from seven SAn participants were analysed as being indicative of specific anxiety around people who are perceived to be superior or in a position to judge/ assess (examples below): SAn12: Feels particularly intimidated by people she perceives as having authority and power over her (eg. bank manager, benefits officer). SAn19: "[I feel most uncomfortable when with] authority figures or people with strong opinions – I get the sense that they're such a large personality that mine shrinks to compensate for that, like I don't have a big enough personality. I let it shrink back inside."	*1.3.3.3. Specific fear of people likely to judge you (peers)* One SAp participant was analysed as having a specific anxiety of her peers, who she thought would judge her: SAp10: Felt the other mothers at the school were looking at her and judging her negatively – in her image she sees them glaring at her and talking about her.
1.3.3.4 Teenagers or young people One SAn participant had an image analysed as being indicative of a specific anxiety around teenagers: SAn1: In his image, he is trapped in a room with	*1.3.3.4 Specific fear of younger people* Two participants in the SAp group had quotes analysed as indicating that they felt specific anxiety around younger people:

people in suits who are laughing among themselves and ignoring him, and people his own age in tracksuits who are pointing and laughing at him.	SAp6: "[I see in my image] a lot of younger people in their 20s or 30s, there are no older people." SAp7: "…never old people, always teenagers or younger people up to early 20s, because I get quite scared around teenagers… The sorts you see outside [local venue], those funny hats and skinny jeans, but that's not a steadfast rule."
1.3.3.5 Specific people or people judged to be likely to cause conflict Four SAn participants gave information in the interview analysed as indicating that they had a specific anxiety around people with whom they thought they could potentially come into conflict (examples below): SAn18: Feels very anxious about people she feels she needs to confront. SAn24: Feels better with strangers, more anxious with people he knows, although also feel anxious around people who he perceives as "not on his wavelength" and who he thinks might "make trouble".	*'People judged to be likely to cause conflict' was not included in the SAp template.* '

1.3.3.6 When the exact nature of the threat is unknown/ people give "mixed messages" One SAn participant gave information in the interview analysed as indicating that they become particularly anxious when they feel threatened in some way but are unsure of the origin of this threat. This is particularly the case with people who seem to give "mixed messages": SAn15: The participant noticed that she tended to become anxious around people who seemed to give mixed messages: "It always happens with people who are physically tense but with a calm front – it's really disorienting and anxiety provoking… It doesn't happen when I feel connected to my anxious feelings and the object of anxiety is clear and known."	*When the exact nature of the threat is unknown/ people give "mixed messages"' was not included in the SAp template.*
Specific fear of men was not included in the SAn template.	*1.3.3.5 Specific fear of men* Three participants in the SAp group had interview quotes analysed as indicative of a specific fear or anxiety around men (examples below): SAp7: "I think they'd [the people in her image] always be male" SAp21: Only anxious about men: "In my time, it's always been the male that's going to harm me, or has done."

2. Negative evaluation of others This was the second first-level theme. This theme was characterised by others, rather than the self, being the origin of the threat. Thirteen participants in the SAn group had quotes a nalysed as being consistent with negative evaluation of others. The precise nature of this negative other evaluation could be f urther clarified through six subthemes: *2.1 Others are evil* One SAn participant had a quote analysed as indicative of a belief that others are bad or evil: SAn1: Image means others are "a bunch of w*nk*rs" and the world is "an evil place". *2.2 Others are untrustworthy* Five SAn participants made statements analysed as indicative of a belief that other people are untrustworthy (examples below): SAn24: "[The world is] not very nice – scary, it's hard to trust people." SAn30: "I can be suspicious about others."	*2. Negative evaluation of others* This was the second first-level theme. This theme was characterised by others, rather than the self, being the origin of the threat. Sixteen participants in the SAp group had quotes analysed as being consistent with negative evaluation of others. The precise nature of this negative other evaluation could be further clarified through 11 subthemes: *2.1 Others are nasty/ bad/ evil* Seven SAp participants had quotes analysed as indicative of this theme (examples below): SAp13: "I don't really think many people are very nice." SAp16: "[The world is] filled with quite a lot of horrible people who judge you." *2.2 Others are untrustworthy* Three SAp participants had quotes analysed as indicative of a belief that others are untrustworthy (examples below): SAp8: "I don't like the population – I'd rather not trust." SAp12: "I feel I can't trust my friends."

2.3 Others are judgemental Four SAn participants made statements analysed as indicative of a belief that others are judgemental (examples below): SAn11: "People can be judgemental – they judge on first impressions." SAn18: "Others are concerned with image."	*2.3 Others are judgemental* Three SAp participants made statements analysed as indicative of a belief that others can be judgemental (examples below): SAp6: Believes that people are always judging her and "looking down upon" her. SAp9: "People will judge me."
2.4 Others are cruel One SAn participant made a statement analysed as indicative of a belief that other people can be cruel: SAn12: "[People] can be cruel, and they can't be trusted."	*2.4 Others are out to get you/ cruel* One SAp participant had quotes analysed as indicative of a belief that others are out to get you or are cruel: SAp19: My classmates are trying to make me look stupid… I always felt like they were waiting for me to f*ck up… so they can find it funny… People use these things [knowledge of your anxiety] against you if they see a weakness."
2.5 Others are selfish (self-preserving) Two SAn participants made statements analysed as indicative of a belief that other people are selfish or self-preserving: SAn16: "In the world I feel, especially in Western society, we've slipped away from basic human values – people are now	*2.5 Others are selfish (self-preserving)* One SAn participant made statements analysed as indicative of a belief that other people are selfish or self-preserving: SAp19: "Now I see that's what kids do, but it's what people do in general – if they're panicking themselves they'll do their

predominantly selfish." SAn18: Has an image that her housemate will respond with avoidance and blaming her when she confronts him.	best to take that away by making someone else look stupid…"
2.6 Others are dangerous/ frightening Four SAn participants made statements analysed as indicative of a belief that other are dangerous or frightening (examples below): SAn31: "There are scary people out there." SAn32: "[The world has] gone mad – there's always violence and murder on the news. It's not safe anymore."	*2.6 Others are aggressive/ violent/ dangerous* Two SAp participants had quotes or images analysed as indicative of a belief that others are aggressive/ violent or dangerous: SAp5: Image of being kidnapped and treated violently by a man. SAp10: Thinks the world is horrible and expects others to be nasty and aggressive to her.
Others are intimidating is not included in the SAn template.	*2.7 Others are intimidating* One SAp participant had an image and quote analysed as being indicative of a belief that others are intimidating: SAp7: "They [the people in his image] look quite intimidating."
'Others have ulterior motives' was not included in the SAn template.	*2.8 Others have ulterior motives* One SAp participant had quotes analysed as indicating a belief that others tend to have ulterior motives: SAp20: "Whenever I'm speaking to people, I always have really harsh judgements about what's going on – I always wonder whether guys are trying to flirt with me, and

	when I meet girls I always think that they don't like me, no matter how they are… I don't trust people – I generally feel that people want something." *2.9 Others are uncaring* One SAp participants made a statement analysed as indicating that he believes most people are uncaring: SAp22: "No one cares about me except my family."
'*Others are uncaring' was not included in the SAn template.*	
'*Others are racist' was not included in the SAn template.*	*2.10 Others are racist* One SAp participant made a quote indicating that he expected others to be racially prejudiced against him: SAp11: "…Probably he doesn't like me because I'm not English."
'*Derogatory thoughts about others' was not included in the SAn template.*	*2.11 Derogatory thoughts about others* One SAp participant experienced voices that made negative statements about others, which did not appear to be considering them a threat, but rather to be considering them to be inferior in some way: SAp 26: Hears a voice saying derogatory things about the people around him (his friends): "She's going to make a fool of herself", "Don't listen to her, she's stupid, fat and

	rubbish".
3. *Other images* See analysis section for Hypothesis 1 above for quotes from this theme.	3. *Other images* See analysis section for Hypothesis 1 above for quotes from this theme.
4. *Images/ impressions in other sensory modalities* See analysis section for Hypothesis 1 above for quotes from this theme.	4. *Images/ impressions in other sensory modalities* See analysis section for Hypothesis 1 above for quotes from this theme.
5. *Aware that image/ impression may not be accurate* Twenty-three SAn participants had quotes analysed as indicating that they were aware their image/ impression might not be accurate (examples below): SAn12: Rated her image as 75% visually distorted (she is "diminished", smaller) and 60% aurally distorted (the taunts are louder, drowning out all other sounds), with smells being 75% distorted (strong smell of food). SAn19: Rated image as 80% visually and 60% aurally distorted: "It's probably not really happening – it's more a mental projection of maybe what I think I would see if I was one of them looking at me."	5. *Aware that image/ impression may not be accurate* Nineteen SAn participants had quotes analysed as indicating that they were aware their image/ impression might not be accurate (examples below): SAp7: Rates image as 100% distorted: "When I'm in the situation it seems like it's really happening, but I know it's not." SAp18: "You don't know if it's [the impression that others have negative thoughts about you] you worrying about it or the other person – I find a lot that it's me worrying about it."

6. *Linking the image to a past memory.* This theme was based on the research by Wild et al. (2008), indicating that intrusive images are often related to past memories. Although the interview did not specifically ask participants whether their image was connected to a memory, a number of participants disclosed this link, either spontaneously when describing this image or when asked "Why is this happening?" or "What has led up to this image?" Ten SAn participants were analysed as responding in this way (examples below): SAn7: Image of herself failing is a memory of her not getting the grades she needed at A level to go to her first choice university. SAn25: When she feels out of control she sees an image of herself as a child, as the situation reminds her of how she felt as a child.	6. *Linking the image to a past memory.* This theme was based on the research by Wild et al. (2008), indicating that intrusive images are often related to past memories. Although the interview did not specifically ask participants whether their image was connected to a memory, a number of participants disclosed this link, either spontaneously when describing this image or when asked "Why is this happening?" or "What has led up to this image?" Six SAp participants were analysed as responding in this way (examples below): SAp1: While at a party, experienced an image of herself at a party two years ago. In this image she is dressed differently to in the present, and has a strong impression that she is wearing the dress she wore at the party two years ago. SAp19: Image of being back at school: "I remember a couple of times saying an answer and getting something completely wrong… and people were sat there going, "What the hell are you on about?"
7. *Disclosing emotions or feelings.* The interview specifically asks, "How do you feel in the image?" This theme encompasses quotes from responses to this question,	7. *Disclosing emotions or feelings.* The interview specifically asks, "How do you feel in the image?" This theme encompasses quotes from responses to this question,

and also spontaneously-disclosed emotions. The emotions could be divided into four second-level sub-categories: feeling out of control or overwhelmed; feeling trapped or frustrated by or in the image; feeling embarrassed or stupid; and particularly strong emotions. Twenty-three SAn participants identified experiencing emotions (other than moderate anxiety).	and also spontaneously-disclosed emotions. The emotions could be divided into four second-level sub-categories: feeling out of control or overwhelmed; feeling trapped or frustrated by or in the image; feeling embarrassed or stupid; and particularly strong emotions. Fifteen SAp participants identified experiencing emotions (other than moderate anxiety).
7.1 Feeling out of control or overwhelmed. Nine SAn participants had quotes analysed as fitting with this subtheme (examples below): SAn11: "The worst thing about the image is feeling out of control of a situation that I purposely put myself in." SAn15: "I look overwhelmed by the situation and I'm therefore looking a bit not in control and frozen - like I'm not able to manage the situation."	*7.1 Feeling out of control or overwhelmed.* Five SAp participants had quotes analysed as fitting with this subtheme (examples below): SAp4: "It feels like it closes in – almost like overload – the people looking, the sounds, everything is dark… I feel like it's more than I can take sometimes." SAp19: Perception that the time until he will have to introduce himself to the group is going very fast: "Everything's running so fast that I've lost all rational sense of control."
7.2 Feeling trapped or frustrated by or in the image. Eight SAn participants were analysed as fitting with this theme (examples below): SAn1: Image of being trapped in a small room with five walls (one is an alcove) and no doors or windows, with about	*7.2 Feeling trapped or frustrated by or in the image.* Three SAp participants were analysed as fitting with this theme (examples below): SAp4: "It's sometimes like a feeling of being caged." SAp7: Feels claustrophobic, with a pressure in his head: "It's a

30 people. SAn19: "It's almost as if I'm encased in a bubble – it's a restricted feeling."	reoccurring thing, that's why it's so horrible."
7.3 Feeling embarrassed or stupid. Six SAn participants were analysed as identifying with this theme (examples below): SAn7: "I'm a complete failure, stupid." SAn16: "I felt so stupid – I wanted the ground to open up."	*7.3 Feeling embarrassed or stupid.* Four SAp participants were analysed as identifying with this theme (examples below): SAp19: "I knew I was going to say something stupid." SAp22: "I feel like a f*cking idiot."
7.4 Feeling particularly strong emotions in the image. This sub-theme was inserted as some participants disclosed emotions that did not seem to fit in the above categories but were particularly intense. It therefore felt appropriate to give these emotions their own theme. Fourteen SAn participants were analysed as identifying with this theme (examples below): SAn1: In his image, he is nearly crying, very scared, feeling sick. SAn25: "[I feel] dreadful – very anxious, sick, embarrassed and scared that I'll have to go to hospital."	*7.4 Feeling particularly strong emotions in the image.* This sub-theme was inserted as some participants disclosed emotions that did not seem to fit in the above categories but were particularly intense. It therefore felt appropriate to give these emotions their own theme. Twelve SAp participants were analysed as identifying with this theme (examples below): SAp4: "I felt like my head's about to blow." SAp19: Feels so anxious he does not know if he will cope.

7.5 Image is perceived as dependant on type of anxiety symptoms One SAn participant described the type of situation in which she experiences images: SAn15: The participant often sees an image of herself from an external perspective if she felt emotionally anxious but not if she has physical symptoms of anxiety – she wondered if this was a result of dissociation from herself and the situation.	*'Image is perceived as dependant on type of anxiety symptoms' is not included in the SAp template.*
8. Safety/ coping strategies Although the interview did not specifically ask about safety or coping strategies, 11 SAn participants had images or quotes that seemed descriptive of such behaviours:	*8. Safety/ coping strategies* Although the interview did not specifically ask about safety or coping strategies, a number of participants had images or quotes that seemed descriptive of such behaviours:
8.1 Choosing to see a positive self-image to aim for or using imagination to rehearse for upcoming social situation Three SAn participants described images that appeared to be consciously selected, as opposed to intrusive (see analysis section for Hypothesis 1 above for specific examples).	*8.1 Choosing to see a positive self-image to aim for or using imagination to rehearse for upcoming social situations* Five SAp participants described images that appeared to be consciously selected, as opposed to intrusive (see analysis section for Hypothesis 1 above for specific examples).
8.2 Image of escape from situation Three participants in the SAn group had images analysed as being of escape from the situation they were in (see Hypothesis 1 analysis	*'Image of escape from situation' was not included in the SAp template.*

section for specific examples). *8.3 Trying to appear "invisible"* One SAn participant had a quote analysed as indicating that she tried to protect herself in social situations by keeping quiet and trying to be "invisible": SAn13: Prefers to sit and be "invisible" rather than risk judgement, even though she knows this will mean she does not enjoy herself. *8.4 Altering/ monitoring behaviour* Three participants in the SAn group had quotes analysed as being indicative of altering or monitoring behaviour to keep safe in social situations (examples below): SAn19: "I kind of thought that I can't be myself, I feel very inhibited." SAn23: "When I'm not sure of the boundaries I feel very anxious. I don't want people to think bad things of me, so I'm always ultra-sensitive to how I'm behaving – I feel I have to behave in an appropriate way."	*'Trying to appear invisible' was not included in the SAp template.* *8.2 Altering/ monitoring behaviour* Two participants in the SAp group had quotes analysed as indicating that they alter or monitor their behaviour to avoid negative evaluation from others: SAp1: "[The voice] is talking to me, and when she's talking I always, sort of, worry about talking out loud to her, because I do that when I'm alone." SAp26: "I'm very, very aware of everything about myself – of the way I'm coming across, the way I look, if I'm smiling am I smiling properly or do I look goofy and stupid?"

8.5 Trying to hide anxiety symptoms from others Two participants in the SAn group had quotes analysed as indicative of trying to hide their anxiety symptoms from others, as a way of protecting themselves: SAn14: "[Visiting the mortgage advisor] I didn't understand half of what he was saying, but I didn't want him to know that… because he might think I was inferior, less intelligent than him… I was worried he would see the 'tells' in my body language, that I was anxious". SAn30: "[My image] is very closely related to my fear of going red and showing a weakness which I don't want others to see."	*8.3 Trying to hide anxiety symptoms from others* One SAp participant had a quote that was analysed as indicative of trying to hide his anxiety from others to protect himself: SAp 19: Reflecting on how he might react when feeling socially rejected: "I'd probably have lost the plot – not outside, I would have sucked it all in, which is what I always do because I don't like people knowing about these things [his anxiety]."