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Targeting Reasoning Biases in Delusions; a Pilot Study of the 'Thinking Well Group'

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VOLUME I

**MAIN RESEARCH PROJECT & SERVICE
EVALUATION**

ALISON JONES

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the degree of Doctorate in Clinical
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Main Research Project

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Abstract

Delusions often persist despite antipsychotic medication and Cognitive Behavioural Therapy and can significantly affect quality of life. ‘Jumping to conclusions’ and ‘belief flexibility’ are reasoning biases implicated in the formation and maintenance of delusions. A computerised cognitive-behavioural treatment package targeting these biases has shown promise in improving jumping to conclusions, belief flexibility and conviction. The present study is the first to adapt and pilot the reasoning intervention in a group format. It was anticipated that a group format could be more cost effective and have additional benefits of group therapeutic processes. The primary aim of the study was to assess the acceptability and feasibility of the intervention in a group format. The secondary aim, although not powered to detect significant effects, was to explore the impact of the group on conviction, jumping to conclusions, belief flexibility and paranoia, as well as on affect, activity levels and schemas.

Twenty-one participants with a diagnosis of Schizophrenia-spectrum Disorder and at least 50% conviction in a distressing delusion were recruited. Participants were randomised in a 2:1 ratio to either the group or a waitlist control. Three groups were run over a six month period. The group intervention involved six weekly 1.5 hour sessions, comprising group discussion and exercises to support the learning of CBT-based techniques aiming to improve jumping to conclusions and belief flexibility. Outcomes were assessed at pre-group, post-group and at one month follow-up. Semi-structured interviews to collect qualitative feedback on the intervention were also completed.

Results showed the group format was feasible and acceptable, had high attendance rates and participant satisfaction. Thematic analysis of qualitative feedback indicated the majority of participants highlighted positive changes in jumping to conclusions, belief flexibility and improvement in functioning, as well as benefits from group therapeutic processes. Analyses between pre and post-group revealed a statistical trend towards a decrease in delusional conviction and significant improvements in jumping to conclusions and belief flexibility in those who attended the group in comparison to the control group. Secondary outcome measures between pre and post-group also found significant improvements in activity levels, self-schemas and affect, with some improvements maintained at follow-up. A larger trial sufficiently powered to detect change is required to further assess the effectiveness of the intervention.

1. Introduction

1.1 Delusions

Delusions are a significant diagnostic marker of schizophrenia (Diagnostic and Statistics Manual, DSM-5, American Psychiatric Association, APA, 2000), present in approximately 75% of people with a diagnosis of schizophrenia (Freeman, 2007). Delusions negatively affect well being, functioning and quality of life (Freeman, Garety, Kuipers, Fowler, Bebbington; 2002; Norman et al., 2000). Peters et al., (2012) found conviction in delusions is associated with distress, interference and preoccupation. This illustrates that delusions are a clinically significant feature of psychosis which need to be researched and effective treatments developed.

Garety and Freeman (2013) stated in a recent paper that *‘treatments for schizophrenia have reached a plateau,’* with disappointing advances in the past decade. National Institute for Health and Clinical Excellence (NICE) guidelines (2014) recommend a combination of antipsychotic medication and psychological therapies (including CBT for Psychosis (CBTp) and Family Intervention (FI) are offered as part of routine practice. These interventions however have limited efficacy in the treatment of delusions. Research has found that delusions often persist despite antipsychotic treatment (Craig et al., 2004; Mizrahi et al., 2006) and CBTp (Velligan, 2009; Wykes, Steel, Everitt & Tarrier, 2008; Garety, Fowler, Freeman, Bebbington, Dunn, & Kuipers, 2008). Antipsychotic treatment often has intolerable side effects (Leucht et al., 2012), high treatment costs (McEvoy, 2006) and therefore there is an increasing emphasis on encouraging patient choice in the use of medication due to the health consequences (Morrison et al., 2014). First generation CBTp has also shown limited efficacy in the treatment of positive symptoms, with small to medium effect sizes (NICE, 2014; Jauhar, McKenna, Radua, Fung, Salvador, & Laws, 2014; Wykes, Steel, Everitt & Tarrier, 2008) with conviction in delusions being particularly difficult to change (Garety et al., 2008). It has been proposed that future research should focus on developing symptom specific psychological interventions, targeting the underlying psychological processes that contribute to their maintenance (Garety et al., 2008).

1.1.1 Single Symptom Approach

The focus on delusions in this thesis is consistent with the ‘single symptom approach’, which addresses the limitations of using diagnosis to guide theory and practice, such as

problems with reliability and validity of the schizophrenia constructs (Bentall, 2004; Persons, 1986). It is also suggested that the difficulties in the development of treatment for schizophrenia has been due to its conceptualisation as a single diagnostic category (Garety & Freeman, 2013), despite it being a very heterogeneous disorder, further illustrating the need to focus on specific symptoms and develop targeted interventions. Previous research focusing on single symptoms has led to the development of promising interventions for specific symptoms of psychosis. For example, Trower, Birchwood, Meaden, Byrne, Nelson & Ross (2004) cognitive model for command hallucinations has informed the development of an intervention specifically targeting this symptom group. Results of the pilot study (Trower et al., 2004) were positive with reduction in compliance behaviour and a larger randomised control trial (RCT) is currently underway. Similarly, Foster, Start-up, Potts and Freeman (2010) developed an intervention targeting worry in persecutory delusions, based on previous research highlighting the link between worry and maintenance of distressing delusional beliefs (Freeman & Garety, 1999).

1.1.2 Defining Delusions

There have been significant changes in how delusions have been defined over time. Traditionally delusions were viewed as being psychologically ‘un-understandable’ (Jaspers, 1913). The DSM-III defined them as ‘*fixed, false beliefs, held with absolute conviction, not amenable to reason*’ (APA, 1987). They were considered to be incorrigible, completely false and held with absolute certainty. The DSM-IV (DSM-IV-TR, APA, 2000) builds on the previous definition and stated that delusions are ‘*false beliefs based on incorrect inference about external reality that persist despite the evidence to the contrary and these beliefs are not ordinarily accepted by other members of the person’s culture or subculture*’.

However research findings call into question the definition of delusions as fixed, false and incorrigible. First, delusions are not always held with absolute certainty, as conviction ‘waxes and wanes over time’ (Peters et al., 2012; Sharp et al., 1996). Myin-Germeys et al., (2009) used an Experience Sampling Method, where participants were required to complete a self-report assessment when signalled by an alarm and found that conviction in delusions was variable and was influenced by social factors and activity level. Further, Garety et al. (2005) found that 46% of participants with delusions stated that there was a possibility that they could be mistaken about their belief. Absolute

conviction in a belief is also not pathological in itself, as beliefs in a non-clinical control group were held with equal conviction as a deluded group (Colbert, Peters & Garety, 2010; Davies Coltheart, Langdon, & Breen, 2001). Second, delusions are not always incorrigible, as they can show accommodation (Brett-Jones, Garety & Helmsley, 1987), and be modified by contradictory evidence (Garety et al., 1997). Third, falsity should not be a defining feature of a clinical delusion. Research has found that between 4-25% of the population has a belief which could be considered delusional based on the DSM definition, such as belief in the existence of aliens (van Os Hanssen Bij & Ravelli, 2000). Delusions also reflect themes found in the general population (Freeman, 2007) and personal histories (Janssen et al., 2003; Johns et al., 2004); therefore it is sometimes not possible to define the falsity of a belief. In summary, delusions lie on a continuum with normal beliefs, psychological factors can play a role in their formation and maintenance and they can be amenable to change. Reflecting this research, the most up to date version of the DSM, DSM-5 (APA, 2014) recognises that delusional experience can vary on dimensions, they are no longer defined as ‘false beliefs’ and they do not need to be about external reality or incorrect inference. However the new definition does not fully recognise that conviction fluctuates.

1.1.3 Psychological Conceptualisation of Delusions

Garety and Freeman (1999) have defined a belief as delusional if it is, ‘asserted with high conviction, appears unlikely to respond (rapidly and significantly) to evidence or reason; and it fits one of the content categories found in the diagnostic manual’ (p. 115). Specific definitions have been coined for different subtypes of delusions, for example grandiose, persecutory and delusions of reference. Freeman and Garety (2000) define persecutory delusions as a belief that harm is occurring or going to occur and there is a persecutor who intends to cause harm. Delusions are considered to be on a continuum with normal beliefs (Freeman, Garety, Fowler, Kuipers, Bebbington, & Dunn 2004; Freeman, 2006) and multi-dimensional phenomena that vary on a number of dimensions and are difficult to define categorically as all-or-nothing occurrences (Brett-Jones et al., 1987). Subsequently a variety of measures have been developed which assess delusions on key dimensions of conviction, distress and preoccupation (for example, the Maudsley Assessment of Delusions Schedule; Wessley et al., 1993). Peters, Day, McKenna, & Orbach (1999) used this approach to investigate how delusions in clinical populations differ from those in new religious movements and found distress was the factor which differentiated the experience. Further studies have found ratings of

preoccupation, distress and conviction better differentiated clinical and non-clinical groups and effect on functioning, over the dichotomous presence or absence of a belief (Peters, Joseph, Day & Garety, 2004). Therefore these dimensions can be used to distinguish clinically significant beliefs (Esterberg & Compton, 2009).

1.2 Psychological Mechanisms Associated with Delusions

1.2.1 Delusions as Explanations for Anomalous Experiences

There has been an increased interest in the study of delusional beliefs since the 1980s. Garety and Freeman (1999) reviewed 39 studies focussing on delusions, with a subsequent review identifying a further 200 studies (Garety & Freeman, 2013). The earliest cognitive account of delusions was proposed by Maher (1974, 1988), who believed that delusions were an attempt to explain anomalous internal experiences, where this can trigger ‘a search for meaning’. In support of this theory, people with psychosis are more likely to have unusual internal perceptual experiences compared to the general population (Bunney et al., 1999; Kapur, 2003), they tend to cite internal experiences as evidence for their delusion more often than external experiences (Freeman, 2007; Freeman & Garety, 2004; Garety & Helmsley, 1994) and those with internal anomalous experiences are least likely to have alternative explanations for their delusional belief (Freeman et al., 2004). In non-clinical populations anomalous experiences are also found to be associated with delusional beliefs (Bell, Halligan & Ellis, 2006). However Maher’s account does not provide a complete account of delusion formation since many people have unusual experiences and do not form delusions.

1.2.2 Multi-factorial Models of Delusions

Garety, Kuipers, Fowler Freeman and Bebbington (2001) proposed a cognitive model of the positive symptoms of psychosis, including delusions, which builds on Maher’s approach. The model is multi-faceted and proposes that delusions occur as a result of bio-psycho-social vulnerability, a specific trigger such as a stressful life event and strong emotions. These factors can lead to and be exacerbated by anomalous experiences, which if appraised as external, then result in positive symptoms such as delusions. Garety et al.’s (2001) model (see figure 1) proposes that appraisals are influenced by reasoning and attribution biases, dysfunctional schemas of the self and the world, social isolation and adverse environments. Delusions are maintained by the same reasoning and attributional biases which contribute to their development. Freeman, Pugh and Garety (2008) stated reasoning biases are unlikely to lead to the initial

occurrence of delusional thoughts, but rather emotional processes contribute to their content and reasoning biases contribute to the likelihood of acceptance.

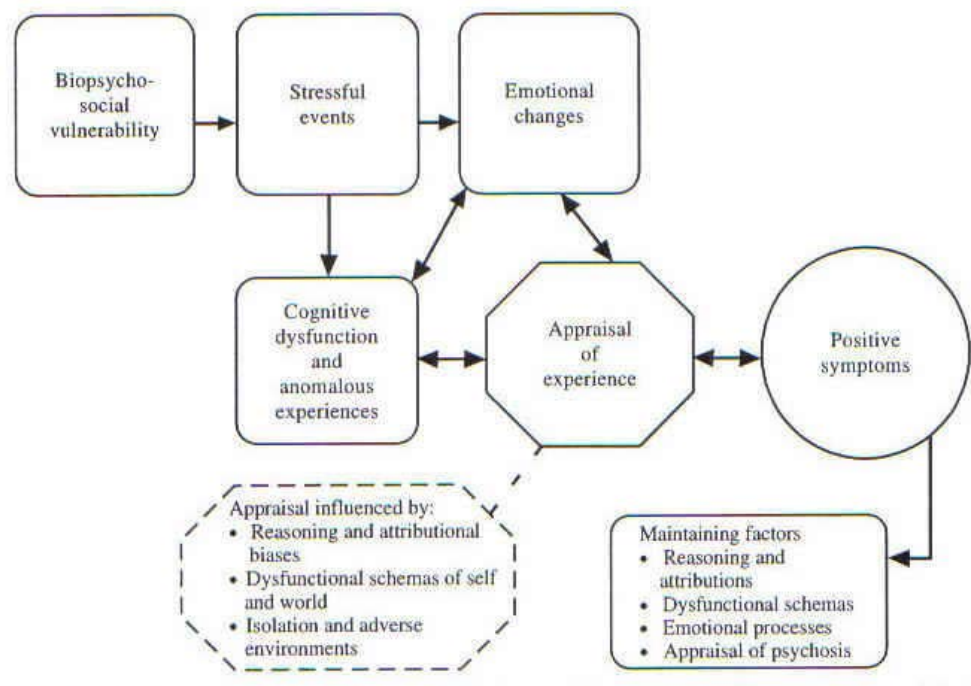


Figure 1: Cognitive model of the positive symptoms of psychosis (originally presented in Garety et al. 2001).

1.2.3 Delusions, Self Esteem and Affect

Alternative theories have focussed on the role of self-esteem, self-discrepancies and attribution style (Bentall et al., 1994), with delusions seen as the result of a psychological defence to underlying negative emotion and low self-esteem. Garety and Freeman (2013) argue that self-esteem has been found to be lowered in individuals with paranoia and delusions, which would not be expected if they served as a defence. Further, negative self-esteem and depression typically correlate with persecutory delusions and paranoia (Bentall, Corcoran, Howard, Blackwood, & Kinderman, 2001; Chadwick Trower, Juusti-Butler & Maguire, 2005; Drake et al., 2004), which suggests they may play a role in their maintenance.

1.2.4 Delusions and Reasoning

There have been several reviews into the role of reasoning biases in the formation and maintenance of delusions (Garety & Freeman, 2013; Garety & Freeman, 1999). The most well researched reasoning biases are: Theory of Mind (ToM, Frith, 1992), the ability of someone to detect and reason about someone else's mental state; an external attribution bias (Bentall, 2001); and Jumping to Conclusions (JTC), which is a reduced

tendency to gather sufficient information before arriving at a conclusion (Garety & Hemsley, 1994) and Frith (1992) proposed that poor ToM is a predisposing factor for persecutory delusions. It has been found people with schizophrenia perform below average on ToM tasks; however this appears to be more strongly associated with negative and disorganised symptoms of schizophrenia than delusions (Garety & Freeman, 1999; Garety & Freeman, 2013; So, Garety, Peters & Kapur, 2010). Research has also investigated the hypothesis that delusions are associated with abnormal attributions (Bentall et al., 2001; Garety & Freeman, 1999). Garety and Freeman's (1999) review concluded that there is evidence for a personal externalising bias, whereby others are blamed for negative events occurring to the self. This bias is then maintained by social isolation. However their most recent review (Garety & Freeman, 2013) found equivocal evidence regarding this attribution bias and conclude even if it is present it does not support the theory of delusions as a defence against low self-esteem. JTC has been consistently posited to contribute to delusion formation and maintenance, with ambiguous and anomalous information being rapidly appraised, alternative explanations and evidence not considered and a delusional conclusion formed based on limited evidence (Garety & Freeman, 2013).

1.3 Assessment and Prevalence of Jumping to Conclusions

Research has looked at the different components of the cognitive model which are involved in the formation and maintenance of delusions. It is well established that people with delusions are more likely to JTC, in comparison to those without delusional beliefs (Garety & Freeman, 1999; 2013). The JTC bias is typically studied using a probabilistic reasoning task, the 'beads' task, based on a Bayesian model of reasoning. It was developed by Phillips and Edwards (1966), but first used by Huq, Garety and Hemsley (1988) in participants with delusions. During the task participants are presented with two jars containing 100 beads of two different colours, organised to a certain ratio. There are two different ratios that are typically used; 85:15 and 60:40. For example in the 85:15 ratio, one jar contains 85 black beads and 15 orange beads and the second jar contains 85 orange beads and 15 black beads. Participants are informed of the ratio and the jars are shown. The jars are then hidden from view and participants are told that one of the jars will be chosen at random and beads from that jar will be drawn and presented on the screen, but always replaced afterwards so proportions stay the same. Participants are asked to work out which jar the beads have come from, and are told that they can see as many beads as they like before making a decision, and that they

should only make a decision when they are certain. The order in which the beads are displayed is predetermined, to standardise the procedure. In the 'draws to decision' version of the task, the outcome of the task is the number of beads requested before making a decision. There is a less frequently used 'probability estimates' where participants indicate the stage in the sequence the probability one container is chosen over the other (Garety, Hemsley & Wessely, 1991). Garety and Freeman (1999) stipulate that the task is a useful framework for investigating reasoning in people with delusions, as it assesses how conclusions are reached in a neutral and non-threatening manner.

Based on Bayes theorem, there is an optimal strategy and it is noted that the general population are consistently over conservative in the tasks (i.e. they ask to see more beads than they need to solve the problem). Maher (2003) notes that the task does not indicate participants with delusions have a faulty inference, as actually they use better Bayesian reasoning than controls, as on the 85:15 version for example if two orange beads have been drawn there is 97% certainty the beads are being drawn from the orange jar. There have been several reviews of studies using the beads tasks, all illustrating that the JTC bias is robust; people with delusions consistently request fewer beads before reaching a decision when compared to non-delusional controls (Freeman 2007; Garety & Freeman, 2013; Fine, Gardner, Craigie, & Gold, 2007; Moritz & Woodward, 2005; van Dael et al., 2006). Freeman's (2007) review highlighted 10 studies using the 'beads decision to draw task' which found the tendency for people with delusions to JTC in comparison to controls, which is a robust finding for psychosis research. Typically around 40-50% of participants with delusions requested one or two beads before reaching a conclusion (Huq et al., 1988; Garety et al., 2005). This is known as the 'extreme JTC bias', which is defined by Garety et al (2005) as choosing two or fewer beads before making a decision. The bias has been replicated using real life stimuli, (Dudley, John & Young, 1997a), with a variety of different tasks (Fine et al., 2007) including 20 questions (John & Dodgson, 1999) and 'Who Wants to be a Millionaire' (Moritz, Woodward & Hausmann, 2006).

1.3.1 Psychological factors associated with JTC

Research has explored potential explanations for the JTC bias and the factors it is affected by. JTC does not appear to be the result of impulsiveness, as participants with delusions requested more beads when the difficulty of the task was increased (Lincoln,

Ziegler, Mehl, & Rief, 2010; Dudley, John, Young, & Over 1997b) and also showed no difference in reaction time when judging the likelihood that beads came from either container (Moritz and Woodward, 2005). It is also not a deficit in probabilistic reasoning or hypothesis testing (Peters, Thornton, Siksou, Linney, & MacCabe, 2008), as when all information is provided there is no significant difference in responses between participants who have delusions and controls (Fine et al., 2007; Garety & Freeman, 1999). Research has shown it is not a result of impaired memory, as results were the same regardless of whether a memory aid of previous beads drawn was present (Dudley et al., 1997a). Freeman (2007) found JTC does not correlate with level of education or depression (Freeman et al., 2008) or demographics such as gender, age, ethnicity or duration of illness.

There appears to be some links with JTC and anxiety (Broome et al., 2007; Ellet, Freeman & Garety, 2008; Lincoln et al., 2010), negative symptoms (Lincoln et al., 2010) and impaired IQ and working memory (Garety & Freeman, 2013). Research has found that emotionally salient items related to people's self-concept were shown to increase the bias (Dudley et al., 1997b; Warman, Lysaker, Martin, Davis, & Haudenschild 2007; Menon, Mizrahi, & Kapur 2006). Ellet et al., (2008) found state anxiety, following a walk down an urban high street, increased the JTC bias in individuals with delusions. Further, Lincoln et al., (2010) found paranoia and JTC increased in an anxiety inducing situation. In a review, Dudley and Over (2003) conclude JTC is a normal reasoning style when applied in a threatening situation: therefore people with delusions have normal reasoning processes, however see threat and apply this reasoning style in ambiguous situations that others would not see as threatening. Lincoln et al., (2010) found links with negative symptoms and intelligence and JTC. It is unclear if other symptoms of schizophrenia contribute to JTC, and the extent it is related to IQ and working memory (Garety & Freeman, 2013; Lincoln et al., 2010). Bentall et al., (2009) concluded these factors may be part of a cognitive vulnerability contributing to paranoia and the extent JTC may be associated with IQ and working memory needs to be further investigated (Lincoln et al., 2010).

1.3.2 Specificity of JTC to Delusions

There is substantial evidence that JTC is specific to delusions, rather than the diagnosis of schizophrenia in general. Colbert and Peters (2002) studied individuals with high and low delusional ideation in a non-clinical population and found higher levels of JTC in

people with high delusional ideation. The bias has been found in participants with delusional disorder but not schizophrenia (Fear & Healy, 1997; Conway et al., 2002) and in people who score high on delusional ideation scales (White & Mansell, 2009; Freeman et al., 2008; van Dael et al., 2006). Strong relationships between delusions and JTC, but not diagnosis and JTC, were also found in numerous trials (Garety et al., 1991; van Dael et al., 2006; Moritz & Woodward, 2005; McGuire, Junginger, Adams, Burright & Donovan, 2001), leading Peters et al., (2008) to conclude that JTC was specific to people with delusions and not the Schizophrenia diagnosis. There have been a few exceptions, with some studies finding JTC in people with schizophrenia unrelated to delusions (Mortimer et al., 1996; Menon et al., 2008). Bentall (2009) and van Dael (2006) found the association of JTC with delusions was lost after controlling for IQ. However Fine et al.'s. (2007) meta-analysis concluded JTC is not an epiphenomenon in schizophrenia and is specific to delusions. In summary JTC is consistently found to be related to delusions, with only a few studies finding exceptions.

1.3.3 State vs Trait JTC

There has been debate in the literature as to whether JTC is a trait that contributes to the formation of delusions and part of the vulnerability to developing psychosis or a state which is a factor mediating delusion maintenance (van Dael et al., 2006). Evidence for JTC as a trait comes from research finding that JTC is present in prodromal individuals without delusions, indicating this bias may be present before delusions occur, in relatives of people with psychosis and in people who had delusions which have since remitted (Moritz & Woodward, 2005; Mortimer et al., 1996; Peters & Garety, 2006; Broome et al., 2007). However JTC also appears to be strongest in those with current high delusional conviction: which supports the state hypothesis. Garety et al., (2005) and Freeman et al., (2004) found there was an association between JTC and delusional conviction. So et al., (2010) reviewed cross sectional and longitudinal studies exploring reasoning biases and their relationship to delusional conviction. Cross sectional studies found the bias is increased in patients with current delusions (Garety, 2005; Peters & Garety, 2006; van dael, 2006; Corcoran et al., 2008; Lincoln et al., 2010). Longitudinal studies looked at the relationship between symptom change and JTC, when patients were acute and remitted and found the bias does not respond to antipsychotics, So et al (2010) conclude JTC does not consistently improve with symptom change, JTC is a relatively stable trait increasing susceptibility to delusion development, and may have a moderating role on delusion symptomatology, being one of the factors associated with

delusional conviction. Freeman (2007) summarises JTC may be a trait factor which makes people vulnerable to delusions, maybe subtle in individuals who are not currently deluded reflecting liability for psychosis and a state factor that co-varies with delusional ideation . JTC therefore contributes to delusional formation and maintenance. Mixed findings may be a result of JTC fluctuating during psychosis, practice effects of the task (Peters & Garety, 2006; Woodward, Munz, LeClerc & Lecomte, 2009), a lack of longitudinal studies, different severity of groups recruited and variation in antipsychotic medication.

1.4 JTC and other Reasoning Biases

There have been several theories of how JTC relates to delusion formation (Freeman, 2007). Research has reported relationships between high delusional ideation and ‘high need for closure’ (NFC) (Bentall & Swabrick 2003; Colbert & Peters, 2002). This research postulated JTC and delusion formation was related to a NFC (Kruglanski & Webster, 1996), which consists of a desire of a simple structure and preference of quick decisive answers (Neuberg, Judice & West, 1997). Freeman et al., (2006) however found no evidence of this relationship and found instead that NFC was more closely related to affect. Moritz and Woodward (2004) proposed a ‘liberal acceptance bias’ and suggest JTC may be the result of this low level threshold in which an explanation is accepted. Moritz and Woodward (2006) also suggest a ‘bias against disconfirmatory evidence’ which was most pronounced in patients with delusions and maybe related to JTC as they make a quick conclusion without considering disconfirmatory evidence (Woodward, Moritz, Cutler & Whitman, 2006; Moritz & Woodward, 2007), which they believe is related to the maintenance of delusions. Menon et al., (2008) links JTC with the dopaminergic system; antipsychotics dampen this salience via dopamine system that reduces the weighting to each piece of information, reducing the likelihood of delusional explanations.

The JTC bias is postulated to play a role with early acceptance of a hypothesis without seeking further information to test beliefs, leading to the formation and maintenance of delusions. When uncertain, people with delusions JTC and use less information to arrive at a conclusion. This limited data collection increases the chance of drawing incorrect conclusions and encourages rapid acceptance of erroneous beliefs (Lincoln et al., 2010; Bentall et al., 2006, Freeman & Garety, 1999). JTC is viewed as influencing the ability to gather confirmatory and disconfirmatory evidence, affecting the rapid

acceptance of implausible explanations. The role of data gathering, production of possible explanations (Freeman et al., 2004), acceptance of explanations and processing of confirmatory and disconfirmation reasoning may all be involved (Freeman, 2007).

1.5 Belief Flexibility

More recent research has also found another reasoning bias to be implicated in delusion formation and maintenance. Garety et al., (2005) were the first to indicate that JTC may be related to reduced Belief Flexibility (BF). BF contains a number of components, and is defined as the *'meta cognitive process of thinking about one's own delusional beliefs and changing it in light of reflection and generating and considering alternatives'* (Garety et al., 2005). Garety et al., (2005) assessed BF using the Maudsley Assessment of Delusions Scale (MADS, Wessley et al., 1993), asking participants if there was any 'possibility of being mistaken' about their delusions, assessing their reaction to a hypothetical contradiction of their belief and the Explanations of Experiences Assessment (Freeman et al., 2004), asking if there were any alternative explanations for experiences they have interpreted delusionally. Half of the participants in Garety et al., (2005) stipulated it was possible they were mistaken and one quarter in Freeman et al., (2004) gave another explanation for their experiences. Garety et al., (2005) found a significant relationship between participants who JTC on the beads task and those reporting inflexible beliefs, and concluded that BF may mediate the relationship between JTC and delusional conviction. Garety et al., (2005) also found BF was associated with less severe delusional conviction and preoccupation but not reduced distress. The role of BF is consistent with evidence people with psychosis make less use of past information (Kapur, 2003) and the current most salient hypothesis is not considered in light of past learning. Garety et al., (2005) therefore proposed a model in which delusional conviction is reached through two different pathways 1) data gathering (JTC), dichotomous all or nothing thinking and BF and 2) anxiety being a separate pathway, directly influencing delusional conviction.

So et al., (2010) reviewed cross sectional and longitudinal studies of BF and concluded BF fluctuates with conviction and may mediate the impact of JTC on conviction. Longitudinal studies illustrate BF is associated with conviction (Garety et al., 2005). Colbert et al., (2010) found higher BF was related to lower delusional conviction and found lower BF in the deluded group compared to the control group, illustrating that BF appears to be closely related to conviction. This was also illustrated in cross sectional

studies where BF improved when delusions were in remission (Brankovic & Paunovic, 1999). Belief flexibility has also been found to moderate treatment response by predicting change in delusions (Brett-Jones, Garety & Hemsley, 1987), positive response to CBT (Sharp et al., 1996; Garety et al., 1997; Chadwick & Lowe, 1990) and BF has been found to mediate the response to antipsychotic medication (So et al., 2010). A factor analysis in So et al., (2012) found high conviction is separate from the inability to think the delusion could be incorrect and generate alternative explanations (BF). It was also concluded that BF is distinguishable from delusional conviction and determined BF is not just an indirect measure of delusional conviction.

1.6 Summary of Reasoning Processes in Delusions; JTC and BF

Therefore in conclusion JTC and BF are both associated with delusional conviction and therefore may be promising targets for modification in therapy for creating change (So et al., 2010). There is evidence JTC is stable, may predict change over time and increases susceptibility to delusions. BF improved over time as delusions remitted (So et al., 2010) and change in delusions may be facilitated by a willingness to consider a delusion could be mistaken and the consideration of alternative explanations (So et al., 2012). So et al (2010; 2012) stipulate JTC and BF reasoning biases are important components of the cognitive model of the development and maintenance of delusions, as they effect the appraisal of anomalous experiences, distressing emotions and adverse events via lack of data gathering and consideration of alternative explanations.

1.7 Incorporating Reasoning Training into CBT for Psychosis

NICE (2014) recommends that CBT should be routinely offered to all people with schizophrenia-spectrum diagnoses. However, there is still poor access to talking therapies (Kuipers, 2011; Berry & Haddock, 2008). This is a result of a variety of factors, including inadequate work force training, organisational factors, lack of staff time to consider referrals, lack of skilled therapists (Pilling & Price, 2006; Prytys Garety, Jolley, Onwumere & Craig, 2011) and complexity of the interventions, which require advanced assessment and intervention skills (Dunn et al., 2011; Rollinson et al., 2007). Farhall and Thomas (2013) stipulate that low intensity versions of CBTp which are briefer and focused may be important areas to develop to increase access to CBTp. The development of group interventions would also improve access to psychological interventions. Farhall and Thomas (2013) describes recent developments in tailoring CBT to target key processes, such as JTC, as promising and stipulates reasoning skills programmes may be a possibility to develop to improve access as service systems are

poor and slow to change. Low intensity interventions targeting anxiety and depression in psychosis have also been successfully piloted (Waller et al., 2013). Previous manuals for CBTp did not include targeting reasoning biases as these had not been specified until recently (Chadwick, Birchwood & Trower, 1996) and effectively understanding these processes may lead to improvements in CBTp outcomes (NICE, 2014; Pilling et al., 2002). Garety et al., (2005) recommends targeting meta-cognitive, reasoning processes such as JTC and BF to target delusions in CBTp.

1.7.1 The Impact of CBTp on Reasoning

Research has found that reasoning biases appear stable and unchanged despite CBTp (Brakoulias et al., 2008; Garety et al., 2008). Surprisingly there have been very few studies which have aimed to manipulate the reasoning biases specifically to reduce delusional conviction. Moritz and Woodward (2007) were the first research group who aimed to improve reasoning biases and developed a group based 'Metacognitive training package' (MCT), consisting of 8 modules. MCT aims to ameliorate symptoms indirectly, by altering the meta-cognitive processes which underlie symptoms. This package targeted a range of cognitive processes, including JTC and memory, theory of mind and attributional biases. The programme aimed to increase participants' knowledge and awareness of cognitive biases and how to counteract them, through engaging exercises and tasks, in order to reduce symptoms and relapse. The programme did not directly challenge their delusions, which they hypothesise increases the dropout rate in traditional CBTp. The modules were standardised and required minimal staff training and preparation.

This MCT programme was piloted in two studies which examined the feasibility, acceptability and efficacy of the training (Moritz & Woodward, 2007; Agothor Pfueller, Moritz, Weisbrod, & Roesch-Ely, 2010). A significant reduction in JTC, delusional conviction and other positive symptoms was found (Moritz et al., 2013). Favrod, Maire, Bardy, Pernier and Bonsack, (2011) also conducted controlled and uncontrolled studies and shown MCT to have significant effects on delusion severity, awareness of delusions, awareness of the disorder and attributions of delusions to the disorder. However, van Oosterhout et al., (2014) in a recent trial found MCT had no effect on reducing delusions, paranoia, subjective experience of cognitive biases or meta-cognitive beliefs in moderately deluded participants. They concluded the MCT programme needed to be more targeted on specific cognitive biases personalised to

participants, of longer duration and for homework to facilitate generalisation of skills to real life and delusional thinking.

In line with the proposal that interventions should target specific biases; Ross et al., (2009) were the first to develop a training package specifically focusing on JTC. The aim of the study was to examine if improvements can be made in reasoning and whether these result in greater flexibility in delusions. The intervention was brief (one session) so it was considered unlikely to impact conviction. Thirty-four delusional patients and 34 non-clinical controls were randomly allocated to an attentional control group or an experimental group. The experimental group completed a 45 minute training package involving three tasks, two of which were adapted from Moritz and Woodward's (2007) MCT package. The modules included neutral material, abstract tasks, with no explicit reference to delusions or delusional material. Following reasoning training participants showed a significant increase in data gathering with an effect size of 0.4. There was a greater effect on the 60:40 version, with participants on average requesting two extra beads after training. The numbers of participants showing extreme responding remained the same. There was a small effect on belief flexibility and conviction, with 23.5% of participants reporting greater belief flexibility and 17.6% reduced conviction, however neither was significant. As the improvement in JTC was most prominent in those who did not JTC on baseline measures, it was suggested the JTC bias is robust and requires longer training to impact upon the JTC bias and delusional conviction.

Waller et al., (2011) therefore further developed Ross et al's., (2009) training package, extending the content to highlight links between JTC, BF and delusional thoughts. The training programme included delusion relevant material which aimed to encourage generalisation to participants' own experiences. The programme also included interactive elements (for example video clips, exercises and scenarios) to increase interest and a handout summarised the key learning points. A follow-up session was also included which aimed to evaluate the impact of the intervention over time. The training programme was delivered over 1.5 hours, double the length of Ross et al's., (2009) original programme. The computer programme included an introduction to JTC and five training tasks which illustrated key training tips for good decision making. Thirteen participants undertook the training, and rated it highly on usefulness, interest and enjoyment. There were also significant improvements between pre and post intervention in the number of beads requested, BF and there was a trend towards a

decrease in delusional conviction. These changes were larger than those in Ross et al., (2009) and 62% of participants reduced their delusional conviction, 27% of the sample gave flexible answers and the intervention had a greater effect on participants with the extreme JTC bias. Participants also commented it was less distressing to think about neutral examples but helpful to have examples which were personally relevant. Currently, Garety and colleagues are conducting a randomised controlled trial of the reasoning intervention, in comparison with a computerised attention control condition. Preliminary analyses of the 100 randomised participants show significant improvements in JTC, BF and paranoia for those completing the intervention, relative to those in the control condition. Further evidence interventions targeting the reasoning bias is effective comes from Lincoln et al., (2010), who found the JTC bias decreased following feedback on errors and a financial incentive. Warman, Martin and Lysaker (2013) also gave participants brief feedback which entailed a JTC discussion and elicitation of a time when they had JTC and found that participants JTC bias decreased and 84% of participants recalled a time they had JTC. This research illustrates the merit in continuing to develop effective interventions targeting the JTC and BF reasoning biases in delusions.

1.7.2 Developing a Group CBT Intervention

There are a number of reasons why developing a group version of the reasoning intervention was of interest in the current study. First, whilst almost all participants reported enjoying the programme and previous studies have shown the computerised reasoning programme holds promise in improving JTC, BF and conviction in delusions (Ross et al., 2009; Waller et al., 2011; Garety and colleagues, personal communication), there were some participants who found it difficult to relate to the idea that JTC is a normal and common process. These participants tended to find it difficult to process and utilise the training tips. It was therefore hypothesised that a group intervention may provide a greater normalising effect, in a non-threatening and non-challenging context. People may find ideas more acceptable and viable if proposed by other service users than ideas coming from a health professional. Further reasons to consider a group intervention is due to the well-established benefits of cost effectiveness, increasing access to psychological therapies, as well as the usefulness of group therapeutic processes (Ruddle et al., 2012; Wykes et al., 2005; Yalom & Leszcz, 2005).

1.7.3 Group Benefits and Therapeutic Processes

Group CBT has been developed and researched in a variety of disorders, with preliminary positive outcomes (Morrison, 2001). The most commonly researched groups are for hearing voices: findings have been mixed with some studies finding improvements on positive symptoms (Mueser et al., 2007; Lectomte et al., 2008) and others not (Wykes et al., 2005; Ruddle et al., 2012; Barrowclough et al., 2006). However even in studies where there has been little benefit on positive symptoms, significant effects on self-esteem and social functioning have been found (Lectomte et al., 2008; Wykes et al., 2005; Ruddle et al., 2012; Barrowclough et al., 2006; Gumley et al., 2006; Hall & Tarrier, 2003). These effects maybe the result of the intervention being conducted in a group and Yalom and Leszcz (2005) highlight group therapeutic factors such as universality, cohesion and interpersonal learning which create change in group interventions (see table 1). Barrowclough et al., (2006) stipulated changes in factors such as hope and self-esteem should not be under-estimated as these are significant factors in models of recovery (Resnick, Fontana, Lehman, & Rosenheck, 2005). In addition, self-esteem, social support and coping strategies have been found to be protective factors for the impact of stress on symptom exacerbation (Wykes et al., 2005).

Table 1

Group Therapeutic Processes (Yalom & Leszcz, 2005)

Cohesion; primary therapeutic factor and mechanism of change in group therapy. Cohesiveness occurs when members feel a sense of belonging, acceptance, validation and warmth from being part of a group. It has been proposed this facilitates greater self-esteem and enables self-disclosure and personal exploration which is necessary for therapeutic change.
Universality; recognition that experiences which may have felt isolating or stigmatising, common in psychosis (Ruddle, Mason & Wykes, 2011) are shared among the group members, which reduces isolation, shame and increases self-esteem. It is proposed by Yalom and Leszcz (2005) that being with individuals who have the same difficulties and therefore producing a sense of connection can be healing in itself and has been found to be important in individuals with severe mental illness (Crouch, 1994).
Inter personal learning; where participants level of self-awareness increases via interacting with others in the group. Emotional experiences in the group are corrective and enable participants to learn from each other and from being in a group context.
Instillation of hope; which can occur in groups with mixed memberships and when individuals are at different stages of recovery. Experiencing optimism by observing improvement in others.
Self-understanding; where individuals achieve greater self-insight.
Catharsis of emotions; the release of emotional distress via talking to a supportive group.
Imitative behaviour; the development of social skills via observing, modelling, and imitating behaviour of the therapist and other group members.
Developing socialising techniques; where the group provides a safe environment to try new interpersonal behaviours.
Altruism; feeling of helping and supporting others.
Existential factors; learning the consequences of decisions and actions.

Wykes et al., (2005) highlights the advantages of group CBTp over individual therapy in relation to Yalom's factors, stipulating that when participants share experiences they can reflect on the similarities and differences with others, which can help restructure their beliefs. Group treatment also increases social support which may enable participants to re-evaluate their negative self-beliefs and the decrease in social isolation

may also improve mood. In support of this, studies interviewing hearing voices group members post-intervention find sharing and normalising to be some of the most valued benefits (Meddings et al., 2004; Martin, 2000; Jones, Hughes, & Ormrod, 2000; Lee, Hannan, van den Bosch, Williams & Mouratoglou, 2002), often valued above symptomatic change (Ruddle et al., 2011). Feedback from groups has been very positive (Ruddle et al., 2012; Barrowclough et al., 2006), Ruddle et al.,’s (2012) case series fourteen of the fifteen participants stipulated the group was helpful for their problems and what participants appreciated most was talking to others with the same experience. Symptomatic change was found in eight of the participants, indicating reported benefits may be missed, with high self-reported satisfaction and utility of the groups, but mixed results on symptomatic measures.

1.7.4 Clustering and Group Processes

To enhance the benefit of group interventions Ruddle et al., (2012) concludes that groups should include time on sharing experiences and have a balance between didactic and unstructured user led conversations, to support the group therapeutic alliance. Wykes et al., (2005) proposes one potential disadvantage to groups is that they provide less flexibility to respond to individual presentations and therefore suggests CBTp groups may be more effective if there is homogeneity in symptoms and focus of the group. Clustering effects, where the treatment effect varies between groups, may occur as a result of heterogeneity in symptoms, recruitment from different geographical or service areas, experience of the therapists, enthusiasm for and adherence to manuals, and service user characteristics. However there is limited research into the therapeutic components and mechanisms of change in groups which may lead to clustering. Johnson, Penn, Bauer, Meyer & Evans (2008) found stronger group alliance was associated with higher group insight, which may increase the opportunity for universality and interpersonal learning, lower autistic preoccupation and lower individual social functioning. It was also found perceived alliance in HVG was correlated with attendance rates and therapist ratings of engagement and compliance, indicating group alliance can be a powerful therapeutic tool and mechanism of change. This research illustrates the utility of group therapeutic processes and adds further justification to the development of a group intervention focusing on targeting a specific symptom of psychosis. To the author’s knowledge there has been no previous research of a group CBTp intervention targeting JTC for people with delusions.

1.8 Summary

As summarised above, previous studies have shown a computerised reasoning programme holds promise in improving JTC, BF and conviction in delusions (Ross et al., 2009; Waller et al., 2011; Garety and colleagues, personal communication). Research also highlights the significant therapeutic benefits of group interventions (Yalom & Leszec, 2005), as well as their cost effectiveness (Wykes et al., 2005; Ruddle et al., 2012). The present study therefore aimed to adapt and pilot a group version of a computerised intervention for individuals with distressing delusions, focusing on JTC and BF reasoning biases hypothesised to play a key role in the formation and maintenance of delusions (Garety et al., 2005; Garety & Freeman, 1999; 2013).

2. Aims and Hypotheses

2.1 Aims

- 1) To explore the acceptability and feasibility of a group CBT-based reasoning intervention for people with delusions.
- 2) To investigate the impact of the group on JTC, belief flexibility, delusional conviction and paranoia severity and secondary outcomes of schemas, mood, activity levels and positive symptoms.

2.2 Hypotheses

The hypotheses are:

- 1) Feasibility and Acceptability: The group will be feasible to run and acceptable to participants, as measured by attendance, dropout rates and qualitative and quantitative feedback from group participants.
- 2) Delusional Conviction: Participants in the experimental group will show a reduction in delusional conviction compared to the control group post-intervention.
- 3) Data gathering/JTC: Participants in the experimental group will show a mean increase in data gathering compared to the control group post-intervention by i) an increase in the mean number of beads requested on the beads task ii) a reduction in the mean number of participants showing the JTC bias.
- 4) Belief Flexibility: Participants in the experimental group will show a mean increase in belief flexibility (measured by Possibility of Being Mistaken, Reaction to Hypothetical Contradiction and Explanation of Experiences) compared to the control group post-intervention.
- 5) Paranoia: Participants in the experimental group will show a mean reduction in paranoia (measured by the VAS-Paranoia Scale; Garety et al., submitted) compared to the control group post-intervention.

3. Methods

3.1 Ethical Approval

Ethical approval was gained from Wandsworth Research Ethics Committee, Reference number = 07/H0803/140, approved on 17/10/07. An amendment was approved on 21st December 2012 Reference number = 07/H0803/14007/ and an extension approved on 5th July 2013 Reference number = H0803/140 (see appendix one).

3.2 Participants

All participants were recruited from adult community psychosis teams and local research registers in a South London NHS Foundation Trust. The inclusion criteria for the study were: a case note diagnosis of Schizophrenia-spectrum Disorder (including schizo-affective disorder and delusional disorder); aged 18-65 (accessing adult outpatient services); currently experiencing a distressing delusion (as defined by Freeman and Garety, 2000), delusion present for at least three months with a moderate level of conviction, self rated of 50% at the point of screening. Exclusion criteria were: organic impairment, difficulty with spoken or written English, an intellectual disability or profound visual impairment, currently receiving CBT focusing on delusions.

The target sample size was 20 participants. This was deemed to be realistic within the time frame and large enough to assess the potential feasibility and acceptability of the group intervention. Previous research investigating the development of new CBTp interventions has recruited similar sample sizes (e.g. Haddock et al., 1999; Hall & Tarrier, 2003). As illustrated in the consort diagram (figure 2), a total of 43 participants were referred to the study: six were uncontactable, five did not meet the criteria and two declined to participate. A total of 28 participants were randomised, one dropped out of the control and four dropped out of the intervention group before attending the group. Two participants withdrew after starting the group, one halfway through the first session and another after 3 sessions. A further two participants dropped out at follow-up. Outcome measures were collected on a total of 21 participants at post-group and 19 participants at follow-up.

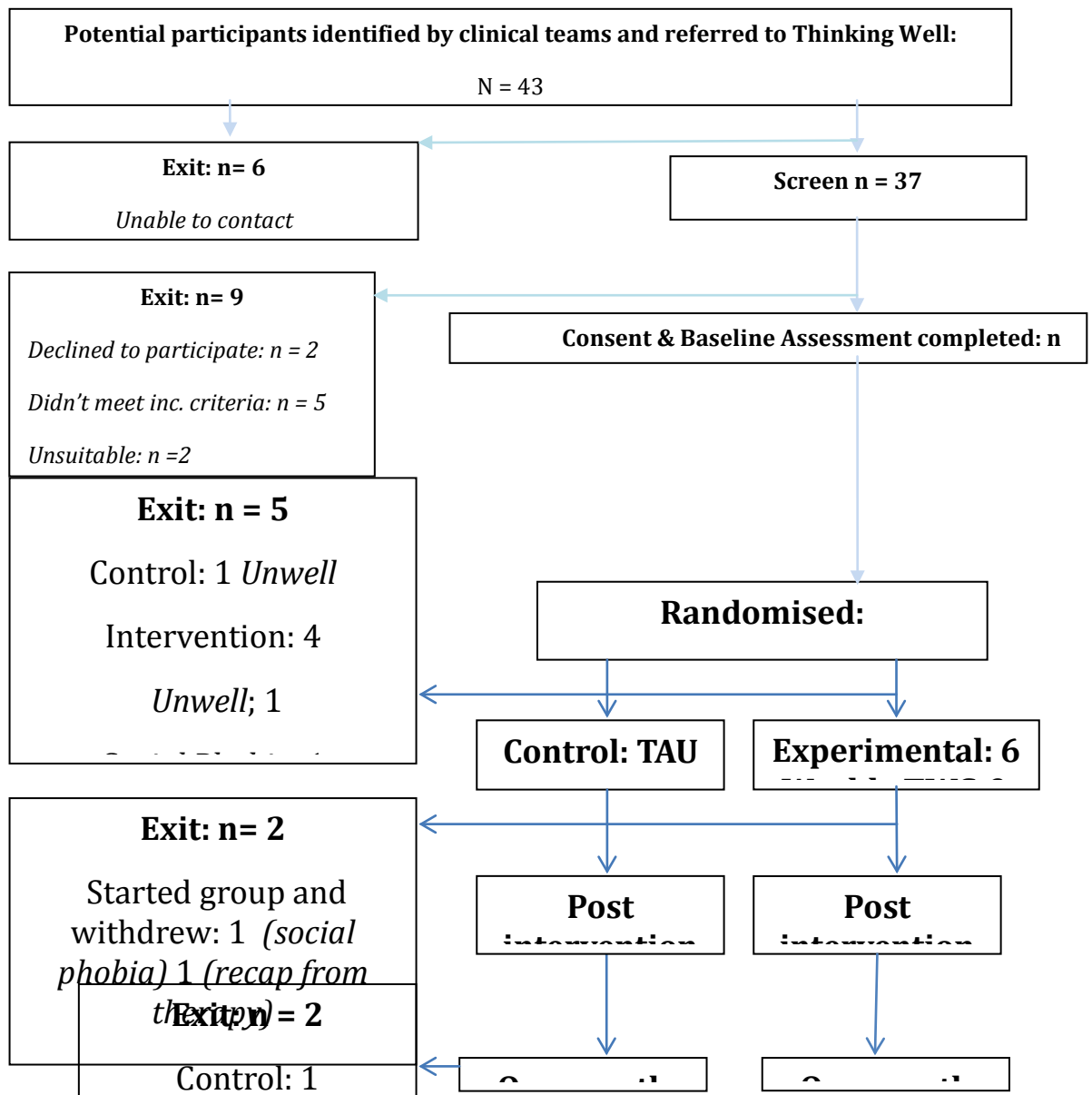


Figure 2: Consort Diagram illustrating the recruitment process

3.3 Design

This study used an experimental design, with a 2:1 wait-list control. Participants who agreed to participate were randomly allocated on a 2:1 ratio (using www.sealedenvelope.com), to either attend the group immediately (intervention group) or after a delay (control group). All participants completed measures at baseline (0 weeks), post-group (6 weeks) and follow-up (10 weeks). The study utilised a mixed qualitative and quantitative design for the purpose of refining development of the intervention and assessing the feasibility and accessibility of the group. Quantitative data was collected through the completion of questionnaires and interviews, and

qualitative data was collected from open ended interviews assessing participants' feedback from the group.

As a feasibility pilot, the group was not be powered to detect changes in the key outcome variables. Should the findings prove promising they will be used to inform a sufficiently powered, larger study. This process represents a vital stage of development of new interventions. The Medical Research Council (MRC, 2000) recommend small scale feasibility and acceptability studies are conducted when developing new health interventions to ensure they can be delivered as intended. Pilot studies are also required to inform assumptions about effect sizes and variability for later RCTs, as well as to inform the recruitment rate and retention in the study. The MRC (2000) stipulates this stage is often missed and therefore larger scale evaluations incur problems such as poor compliance, acceptability, problems with intervention delivery, recruitment and retention and small effect sizes. The MRC (2008) also advises using a mixed qualitative and quantitative design to understand barriers to participation, to estimate response rates and to aid progressive refinement of the procedure.

3.4 Procedure

Potential participants were identified by the clinical team (see appendix two for team information sheet) or self-referred via local research registers. Those who expressed an interest were contacted by telephone and provided with further details about the study. An initial appointment was then offered to confirm their eligibility, review the information sheet (appendix three) and consent form (see appendix four) and if willing, to complete baseline measures. All participants were met by the principle investigator initially. As illustrated by figure 3, following consent, participants completed measures at time one (pre-group). They were then randomly allocated to the intervention or control group. Participants allocated to the intervention group attended six weekly group sessions. It was not possible for the experimenter to be blind to treatment allocation, as the experimenter was required to co-facilitate the groups and conduct assessments at the three time points. Participants completed the same set of measures at time point one (pre-group), time point two (post-group) and time point three (follow-up). This included self-report questionnaires and semi-structured interviews at post-group and follow-up. After follow-up control participants were invited to attend a future group, however post-intervention data was not collected on these participants. Measures at post-group were completed as soon after the group as possible, which was typically

one to two weeks after completing. Time point three was completed approximately a month after the post-intervention assessment. The total payment to participants for their time and expenses incurred through-out the study was £20. Participants randomised to receive the group intervention straight away attended the group which ran for 1.5 hours on six consecutive weeks. Participants randomised to the control received treatment as usual (TAU), in either primary or secondary care.

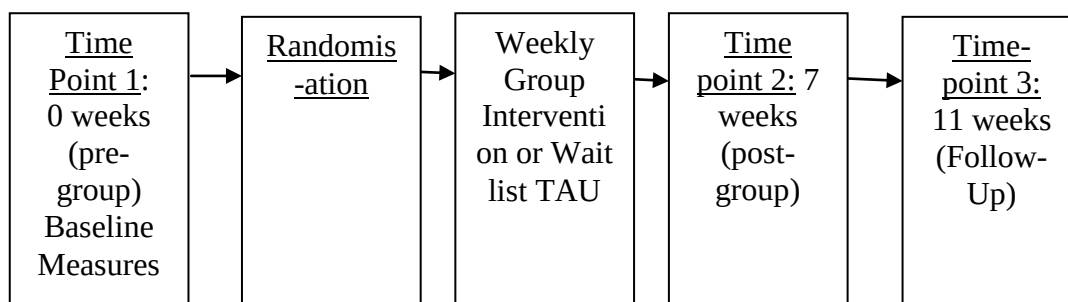


Figure 3: Study design and procedure

3.5 Group Development

As described earlier, the group was adapted from the computerised Maudsley Training Programme. The original programme developed by Waller et al., (2011) was in the process of being adapted further by the Psychosis Research Partnership (PRP) group for a new trial (the Computerised Interventions for Thinking and Anxiety in Delusions (CITADEL trial) at the time of the development of the group protocol. The group intervention therefore was a combination of modules from the Maudsley Training Programme plus additional slides from CITADEL. The content of the sessions was developed through a collaborative process, which involved drafting and amending in conjunction with the wider research team.

3.5.1 Group Structure

Three groups were run between June and November, 2013. Each group had two facilitators, the researcher (Trainee Clinical Psychologist) and a qualified Clinical Psychologist facilitated the first two groups and two qualified Clinical Psychologists facilitated the final group. Each session followed the same format, as illustrated in table 2.

Table 2

Structure of the Group

• Icebreaker; to reduce participant's anxiety and facilitate group cohesion.
• Topic from the previous week was reviewed; brief PowerPoint presentation of key points and participants examples.
• Homework review; participant's experiences of JTC and use of tips over the week were discussed and written on the flipchart. Facilitators often started with their own examples of JTC to normalise the bias. The group discussion of examples of JTC and use of the tips helped to emphasise the universality of the JTC bias and enhance interpersonal learning.
• Introduction of the new topic and key training tip for the session, using PowerPoint slides and introductions from the original computer program.
• Tasks from the original program were adapted to run in a group format; the topic was discussed in a group, participants would indicate their conclusions and the time point they would arrive at their conclusion, which was written on the board. Facilitators reflected others experiences and emphasised helpful comments, insights and checked participants understanding.
• Role plays and discussion of hypothetical scenarios also used to introduce a theme. This often followed the format of using a neutral example with opportunity after for participants to give their own examples if they wished.
• Fifteen minute break for refreshments given at a convenient point
• Homework setting each week of noticing examples of JTC and recording use of the Thinking Well Tips in the goal situation. A summary handout with key training messages was also provided.
• Finish with a humorous media clip illustrating the JTC bias. These video clips were originally from the Maudsley Training Programme and developed for the purpose of a light hearted illustration of JTC.
• Phone calls were made in between group sessions to remind about attendance and as an opportunity to discuss any issues in the group or over the week.

3.5.3 Group Content

Table 3 illustrates the details of the content of each group. See Appendix Five for copies of participant session summary sheets and homework sheets.

Table 2

Content of the Group

Session One	<u>Aims:</u> - For participants to understand the overall aims of the group, to generate a goal to work towards and to learn coping strategies to manage upsetting thoughts. - To introduce the concept of JTC, under what circumstances this is more likely to occur and the potential consequences of JTC on mood, behaviour and making mistakes.
<u>Key training Tip:</u>	 Try out a coping strategy!
<u>PowerPoint Slides:</u>	- Introduce the group aims, what upsetting thoughts are and how everyone's first reactions and conclusions can be wrong sometimes. - Examples of coping strategies
<u>Experiential Tasks:</u>	- Participants discussed 'How they wanted their group to be' which covered ground rules of respect, confidentiality, turn taking, contributing being voluntary, putting mobiles on silent. Broad aims of the group and any additional aims clients had were discussed. - Participants each wrote some upsetting thoughts they have on Post-It notes and placed them on the flip chart. These were discussed and participants were asked to generate a goal that their upsetting thought got in the way of them achieving, e.g. being able to go to the shops and feel more relaxed and less worried about people harming me. Participants were often encouraged to go out more often as part of their personal goals. - Coping strategies to use in the goal situation were discussed. These were in categories of kindness and compassion, relaxation, distraction and talking yourself

		through it.
Session Two	<u>Aims;</u>	- Participants to understand what it means to JTC and discuss their own examples of JTC. - For participants to understand why it can be helpful to gather more information before coming to a conclusion.
	<u>Key training Tip;</u>	 Look for more
	<u>PowerPoint Slides;</u>	- Slides giving details of JTC, normalising the bias, giving examples of JTC in the news and everyday life and information on how people arrive at conclusions.
	<u>Experiential Tasks;</u>	- Facilitators and participants examples of JTC were discussed and written on the flip chart, under the titles; Situation, First Thought, What actually happened. - ‘What’s the Picture?’: An interactive task, taken from the Maudsley Review Training Package (Waller et al., 2011; adapted from a task used in Moritz & Woodward, 2007) was used to illustrate it can be difficult to come to a conclusion without all the information and to emphasise the key training tip. Participants were shown a small piece of a picture and were asked what they initially thought the picture was. They were then shown more pieces of the picture, one piece at a time, and had to decide at what point they would make their decision. Their responses were written on the flip chart. Positive reinforcement for requesting more information was provided and the implications of the task to real life was emphasised.
Session Three	<u>Aims;</u>	- To understand how past experiences and mood may influence the conclusions they arrive at.
	<u>Key training Tip;</u>	 Remember: your mood can affect how you see things



**Remember: the past doesn't
always predict the future**

PowerPoint Slides: - Slides on how mood and past experience can affect decision making.

Experiential Tasks: - Discussion how reaching a conclusion in real life can be influenced by feelings and past experiences. Examples were written on the flip chart.

- Role play with pink and black glasses; two participants were presented with a scenario; one had a very difficult morning (poor night's sleep, spilling cereal and losing keys) and was given black glasses to represent low mood; the other had a more pleasant morning (receiving post card from a friend, a nice breakfast and good weather) and was given pink glasses to represent a more positive mood. Both participants were asked how they would react if a stranger bumped into them on the street and did not say sorry, how they would feel about this and what they would think of the person. The aim of the role play was to illustrate the impact of mood on how we see things.
- A second scenario was presented asking two different participants and illustrated how they would react differently to a friend not answering the phone based on hypothetical past experiences with friends (one person had a previous friend who had really let them down and upset them Vs another person who has never had any difficulties with friends in the past). The aim of the second role play was to illustrate the impact of past experiences on how we see things.

Session Four Aims: - For participants to generate less upsetting explanations for situations, to practice how to come up with an alternative explanation and why they may want to.

- Recognise that coming to an upsetting conclusion can impact negatively on how we feel and behave.

-
- To be able to use tips from the previous weeks.
-

Key
training Tip



**Could there be a less
upsetting explanation?**

PowerPoint
Slides

- Slides introducing three different ways of generating an alternative explanation. 1) Thinking positively, if you felt relaxed how you may see it. 2) Considering if it could have occurred by chance or 3) Could it be something about the situation or person, not you.

Experiential
Tasks

- Discussion of the previous weeks tips
- *'Looking for Other Possible Explanations'* originally developed by Waller et al., (2011) illustrates the concept of thinking of alternative explanations for situations before reaching a conclusion. Participants were asked what their first reaction would be and whether they would like to look for more information, look again or see what happens next before reaching their conclusion. Participants were shown three video clips which illustrated scenarios with potential for paranoid interpretation. Participant's reactions were discussed and typed into the computer.
- Participant's first reactions and alternative explanations were written on a flip chart
- Role Play; To reinforce the tip from the previous week, one participant was given pink glasses and the other black glasses and were asked to think about how positive/negative moods could influence the conclusions the group had come up with.

Session Aims;
Five

- For participants to understand how the confirmatory bias can impact on the conclusions they come to.

Key
training Tip



**Look for evidence that your first
thought might not be true, at least on
this occasion.**

PowerPoint
Slides;

- Additional slides developed on looking for information your first thought is not true, giving examples from
-

		science and real life that we have a tendency to look for evidence to support our strong ideas, but we often forget to look out for evidence that might go against our belief.
	<u>Experiential Tasks</u>	- Role play; one participant was presented with the scenario; ‘someone believes people did not like them and they went on a bus journey; what they may look for when travelling on the bus and what evidence they may have missed.’ Participants were presented with a second scenario; ‘someone believes they are in danger, based on their past experiences, what may they notice when they walk down the street and what may they have been missed.’ - Final clip from ‘<i>Looking for Other Possible Explanations</i>’ illustrate the key tip; video clip of someone being concerned they were being followed by people in red t-shirts; the clip guides participants to look for the number of people wearing other coloured t-shirts
Session Six	<u>Aims;</u>	- To recap and summarise the Thinking Well Tips, what they remember about the tips, how the tips maybe useful and how to continue to use them in their life.
	<u>Key training Tip</u>	- Recap of all tips and how to continue to apply them to daily life
	<u>PowerPoint Slides;</u>	- Summary of all tips, participant’s examples and ‘train tracks’. Participants were provided with information about places to receive further support if they wished.
	<u>Experiential Tasks</u>	- Examples of common worries were discussed , where the old train tracks lead people, what is the usual first reaction and how does this make them feel and act, and how using the tips and a different way of reacting may help.

3.6 Measures

The following measures were completed at all time-points, with the exception of the semi structured feedback interview which was only completed post-group and follow-

up and the WTAR which was only completed at baseline. Copies of all outcome measures are available in Appendix Six.

3.6.1 Key Outcome Measures

3.6.1.1 Probabilistic Reasoning Task or Jumping to Conclusions

Two versions of the *Probabilistic Reasoning Task* ('Beads Task': 60:40 and 85:15 bead ratios; Garety et al., 1991; Dudley et al., 1997a, 1997b) were used to assess data gathering reasoning style. In the easier version participants were shown on a computer two jars containing different coloured beads; a mainly orange jar containing 85 orange beads and 15 black beads and a mainly black jar containing 85 black and 15 orange beads. In the more difficult version the ratio was 60 purple and 40 green beads or 60 green and 40 purple beads. Participants were told the computer had selected a jar at random and beads would be drawn from that jar. Participants were required to state which jar they thought the beads were coming from, after seeing as many beads from the jar as they wished (up to 20). The beads were shown to participants in a set order using a Microsoft PowerPoint programme and participants were told to decide only when they were certain. To reduce demands on working memory, the previous beads drawn were shown on the screen (as in Dudley et al., 1997a). The number of beads participants chose to see before reaching a conclusion on which jar the beads were coming from was recorded as a key outcome variable. As described by Garety et al., (2005) participants were recorded as having a JTC bias if they made a decision after seeing two or fewer beads. Ross et al., (2009) showed the 60:40 version to be more sensitive to change, however both versions of the task were used at all-time points, which were months apart so practice effects were not deemed to be an issue. The control participants also illustrated this was not an issue.

3.6.2.2 Belief Flexibility

The *Maudsley Assessment of Delusions Schedule* (MADS; Buchanan et al., 1993) is a standardised interview designed to assess aspects of a person's delusional beliefs. For the current study, only two items from the 'belief maintenance' scale were used to provide a measure of belief flexibility. Where participants held multiple delusional beliefs they were asked to state the belief that was held with the highest conviction. The first item asked participants if there was any possibility of them being mistaken about their main belief. Participants were asked to rate the likelihood they that they were mistaken on a visual analogue scale ranging from 0, indicating no possibility of being

mistaken, to 100, indicating it is very possible that they are mistaken. Wessley et al., (1993) found good inter-rater reliability for the possibility of being mistaken 0.91 and Taylor et al., (1994) found the MADS had good inter-rater reliability of 0.88.

The second item asked participants how they would react to a given hypothetical contradiction to their main belief; for example *'Let me suggest something to you – something that does not fit with your view that your neighbour is breaking into your home, and could you tell me how you think you would react right now. Imagine over the next few weeks you went out, and when you got back everything was exactly the same in your house and where you left it and nothing became damaged or broken. What would that make you think about your worries about your neighbours coming into your house and damaging and stealing your things?'* The hypothetical contradiction must provide additional evidence, contradict the person's existing evidence and present a challenge to the belief. Participant's responses were recorded verbatim and classified into one of four different outcomes; ignores or rejects relevance; accommodates into their delusional system; changes level of conviction (takes contrary evidence seriously and considers it); dismisses delusional belief. The latter two indicate an increase in belief flexibility compared to the former two classifications. Garety et al., (2005) found that both items had good test retest reliability over three months of $n=53$, $k = .66$, $p < 0.01$.

A third item, Explanations of Experiences Assessment (EoE) (Freeman et al., 2004) was also used as measure of belief flexibility and a key outcome measure. The EoE is a structured interview used to assess the number of alternative explanations that can be generated in response to a stated delusional belief. Individuals were asked *'Thinking about it now, can you think of any other explanations for the experiences that you have described? Are there any other reasons—other than.....that could possibly account for these experiences even if you think they are very unlikely?'* Alternative explanations were rated on a visual analogue scale from 0% indicating no conviction to 100% indicating total conviction. Participants were also asked to rate on a visual analogue scale how upsetting they found the alternative explanations. Freeman et al., (2004) reported good concurrent validity and stability of the measure in participants with similar levels of delusional conviction at 3 month follow-up.

3.6.2.3 Delusional Conviction

The assessment of delusional conviction formed part of the EoE assessment described above. Participants were asked to rate their current level of conviction in their main delusional belief. A visual analogue scale was used to measure conviction, which ranged from 0-100%, where 0% indicated no conviction in the belief and 100% indicated total conviction in the belief.

3.6.2.4 Distress and Preoccupation with Belief

Participants were also asked to rate how upsetting they found the belief (0% – not at all to 100% totally) and how much the belief occupied their mind (0% not at all to 100% totally).

3.6.2.5 Paranoia

As an additional measure of symptom severity participant's level of paranoia was measured using five visual analogue scales. Participants were asked to rate from 0 (not at all) to 100 (totally) how much they felt over the last week that they were being i) deliberately harmed or upset ii) followed iii) that there is a conspiracy against them iv) that they are being persecuted v) that they are being laughed at behind their back. This scale has been used by Garety et al., (submitted) and was developed from Green et al's (2008) Paranoid Thoughts Scales. The items had high loadings on persecution or reference subscales, are representative of a range of concerns and have good internal reliability (Cronbach's alpha = 0.86)

3.7 Secondary Outcome Measures

3.7.1 Severity of Symptoms; Scale for the Assessment of Positive Symptoms (SAPS, Andreasen, 1984)

The Scale for Assessment of Positive Symptoms (SAPS; Andreasen 1984) is a 35 item instrument which assesses the severity of positive symptoms of psychosis. It is a widely used semi-structured interview designed to assess symptoms experienced in the last month. The measure is divided into four subscales: hallucinations, delusions, positive formal thought disorder and bizarre behaviour. Participants are required to rate the severity of each symptom over the past month using a six point Likert scale; none present, questionable, mild, moderate, marked and severe; higher scores indicate a higher level of symptom severity. For two of the subscales, positive formal thought disorder and bizarre behaviour it is recommended to engage the participant in

conversation about a neutral topic for ten minutes to observe the participants manner of speaking, responding and behaviour.

The SAPS has a high inter rater reliability of 0.8 (Peralta & Cuesta, 1999), however the internal reliability is low (0.4) due to the heterogeneous nature of positive symptoms (Andreasen & Olsen, 1982). The SAPS also has good convergent validity with other measures of positive symptoms including the PANSS (positive and negative syndrome in schizophrenia). In the current study the SAPS was used to assess the current level of symptoms experienced by participants.

3.7.2 Brief Core Schema Scale (BCSS; Fowler et al., 2006)

The Brief Core Schema Scales (Fowler et al., 2006) is a self-report assessment of schemata concerning positive and negative beliefs about the self and others in people with psychosis. The BCSS is 24 items and assesses beliefs on a five point rating scale (0-4). Four scores are obtained: negative self (6 items), positive self (6 items), negative others (6 items) and positive others (6 items). Participants had to indicate if they hold each belief in a yes/no format. If the participant holds the belief they were asked to rate their strength of conviction from 'slightly believe it' to 'believe it totally'. The content of the negative self-descriptors were derived from self-devaluative words used by Teadale and Dent (1987) and Teasdale and Cox (2001) as globally negative descriptors of personality. Fowler et al., (2006) generated the other items based on their clinical experience with paranoia. Fowler et al., (2006) in a validation study found the scale to have good internal reliability, with alpha coefficients for positive and negative other schema scales .88 and .88 and the positive and negative self-scales as .78 and .86 respectively. Internal correlations are also highly significant. The scale also has good construct validity with association with related constructs such as the Rosenberg's Self Esteem Scale (Rosenberg, 1965).

3.7.3 Anxiety and Depression

The Beck Depression Inventory- Second Edition (BDI-II; Beck, Steer and Brown, 1996) is a 21-item self-report measure used to assess symptoms of depression and corresponds to the DSM-IV criteria (APA, 2000) for major depressive disorder. Participants were asked to report, on a 4-point Likert severity scale, how much each statement has applied to them over the past two weeks from 0 to 3. Scores of 0–13 indicate minimal depression, 14–19 indicate mild depression, 20–28 indicate moderate depression and 29–63 indicate severe depression. Beck et al., (1996) reported a high internal

consistency for a range of clinical and non-clinical populations (0.86-0.93) and test re test reliability of (0.93).

The Beck Anxiety Inventory (BAI; Beck & Steer, 1993) is a 21-item self-report measure used to assess the physiological and cognitive symptoms of anxiety (e.g. sweating, numbness or tingling, fear of losing control). Participants were asked to report on a 4-point likert scale (0 = not at all, 1 = mildly, 2 = Moderately, 3 = Severely) how much each statement has applied to them over the past week. Total scores from 0-7 indicate minimal level of anxiety; 8-15 indicate mild anxiety, 16-25 indicate moderate anxiety, scores between 26-63 indicate sever levels of anxiety. The measure has high internal consistency (0.92) and test re test reliability of 0.75 (Beck & Steer, 1993) and is significantly correlated with other measures of anxiety (Beck, Epstein, Brown & Steer, 1988; Fydrich, Dowdall & Chambless, 1992).

3.7.4 Time Budget Measure

The Time Budget Measure (Jolley et al., 2006) provides a measure of functional outcome by assessing participants' activity levels. Completing the measure involved discussing with participants what they have done in the past week or a week that was typical for the participant. Each day is divided into four time blocks (morning, middle of the day, afternoon and evening) and activities were rated from 0-4. A score of 0 would be given during a time period where there was no activity, 1 indicates a predominantly passive activity in the time block; 2 indicates a simple independent activity requiring some planning and motivation; 3 indicates several 2 rated activities or a more complex and demanding activity; 4 would be given if the whole time block was filled with demanding independent activities requiring motivation and planning. Where more than one activity is present in the time block the activity highest scoring is rated. There is a total of 28 time blocks for the seven day week and total possible scores range from 0-112 (Jolley et al., 2006). The level of satisfaction for the past week of activities is also rated on a scale of 1 (not satisfied) to 5 (very satisfied). The measure was specifically designed for use with people suffering from psychosis. There is a high inter-rater reliability for the measure (0.99) (Jolley et al., 2005) and has a test re test reliability of 0.83. It is sensitive to change and has effectively discriminated between high and low activity groups as identified by clinicians (Jolley et al., 2005).

3.6.1 Clinical Assessment Measure

3.6.1.1 Intellectual Functioning

An estimate of intellectual functioning was derived using the Weschar Test of Adult Reading (WTAR, Holdnack, 2001). The measure consists of 50 irregularly spelled words and takes about five minutes to complete. The participant is asked to read out loud the list of words and only discontinue after 12 consecutive incorrect pronunciation. The total score is out of 50 and one mark is given for each correct pronunciation. It is a time effective estimate of cognitive functioning. The atypical grapheme to phoneme translations make it difficult for the participant to pronounce the irregularly spelled words without having previously learnt them. This allows the assessment of their vocabulary ability and by extension an estimation of their IQ. Strauss (2006) report WTAR scores correlate highly with measures of full scale IQ, ($r = .73$). The assessment is short and easy to administer.

3.8 Participant Feedback

At one week and one month follow-up participants who completed the group were asked to provide qualitative feedback. Participants were asked open ended question in order to explore their understanding of the training and experience of group processes. Participants were also asked to provide constructive criticism of the group, how they found the intervention being in a group format and any suggestions for improvement. Participants were also asked to complete three Visual Analogue Scales to assess their reported enjoyment, interest and usefulness of the group, with higher ratings indicating more positive outcomes. See Appendix seven for the full interview schedule.

3.9 Contribution to the Study

The principle investigator was Alison Jones (Clinical Psychologist in Training), who was responsible for development of the group protocol in collaboration with the wider research team. The principle investigator was also responsible for recruitment of participants and for completing their assessment measures at the three time points, pre-group, post-group and follow-up. The principle investigator was also responsible for co-facilitating two of the three groups delivered, co-facilitating with a qualified Clinical Psychologist.

4. Statistical Analysis

As a phase one pilot project with a small sample size the study is not powered to detect change. Therefore the preliminary analysis will assess the feasibility and acceptability of the project design and will inform effect sizes for future research. All analyses were carried out using the Statistical Package for the Social Science Version 20.0 (SPSS Institute, Chicago, IL, USA).

4.1 Data Screening and Exploratory Analysis

4.1.1 Missing Data

The total sample size for participants completing each measure is detailed in the results section below. As detailed in the consort diagram (see figure 2), one of the control participants dropped out at follow-up. One of the experimental group also declined to complete full measures at post-group and did not complete any at follow-up. Due to time constraints and participant fatigue the BCSS was not completed by one participant at pre-group, the BDI was not completed by one participant at pre-group and the BAI was not completed by 3 participants at pre-group or by two participants at post-group. All other measures at the time points were completed.

4.1.2 Missing items in scales and subscales

The completion of questionnaire measures was largely over seen by the investigator however there were some partially missing item values, 14.2% of participants had one missing item in the BCSS at one time point and 14.2% of participants had a missing item in the BAI at one time point. Where available guidance on inputting missing items for the original scale was followed. Where this was not available missing items were prorated, using the method detailed in Fox-Wasylyshyn and El-Masri (2005), which required calculating the average for that factor in the scale for the participant and imputing this average for the missing item , which is valid if the % of missing cases is less than 10-20% (Fox-Wasylyshyn, & El-Masri, 2005).

Box plots were used to inspect outliers and two extreme scores from the beads task were corrected using the method detailed in Tabanick and Fidell (2008). All outcome measures were assessed for normality through inspection of histograms, skewness and kurtosis statistics and Kolmogorov-Smirnov's test. A large proportion of the measures

were found to violate the assumption of normal distribution. This is not uncommon in a small sample or with individuals with psychosis, who have been found to score highly on measures of conviction, distress, paranoia, anxiety, low mood and negative self schemas (Garety et al., 2008; Waller et al., 2011; Ross et al., 2009; Barrowclough et al., 2003). The data was often skewed with floor and ceiling effects with a large proportion of people scoring the same lowest or highest possible value, which meant log transformations could not be used to transform the variables to a normal shape. There was also heterogeneity in the variance between the two groups on some measures. As a result of the high level of deviation from the normal distribution in the sample and violation of other assumptions required for parametric assessments (small sample size, heterogeneity in variance) non-parametric assessments were used for all analysis to provide consistency and increase robustness.

4.2 Rationale for Analysis

From inspection of descriptives there were differences between the control group and experimental group scores at pre-group on a variety of measures, including conviction, belief flexibility, schemas, depression and activity, as well as variation within groups, therefore it was important to control for this difference across participants and between groups in the analysis. Since there is no non-parametric equivalent of the ANCOVA which would control for differences at baseline (which are not valid with a small sample size and non-normal/skewed distribution), change scores were calculated between participants scores at pre-group and post-group, and scores at pre-group and follow-up. Non-parametric Mann-Whitney U was then used to assess differences between change scores in the experimental and control group for continuous dependant variables. This test can be seen as a non-parametric equivalent of an interaction test in a 2-way-mixed measures ANOVA, with time as the within factor and group as the between group factor. 2 x 2 chi squares were used to analyse categorical dependant variables to assess differences between the two groups at follow-up. Change scores were not used for the categorical data, just the frequency of responses at post-group and follow-up. Effect sizes were calculated by using the z value of the Mann-Whitney U (*transforming the effect size correlation*) $r = z / \sqrt{n}$ (from Field, 2006) and converting it into Cohen's d using an effect size calculator.

The results will first comment on differences in the experimental group and control group as a whole. The results will then explore the three groups run individually, to see

if there were any differences between the groups, as referrals were obtained from slightly different teams at different time points, had different sizes and perhaps different group alliance effects. The statistical analysis should be treated with caution due to the small sample size and the study was not powered to detect change.

4.3 Qualitative Analysis

A qualitative analysis of participant's feedback will also be presented. Qualitative analysis was conducted using the thematic analysis framework as detailed in Braun and Clarke (2006). A coding frame was developed which was relevant to the aims of assessing feasibility and acceptability of the group, group processes and use of training tips. Topics from the interview schedule were therefore included in the frame as a starting point at the beginning of the analysis. The coding frame was modified and elaborated as new themes and subthemes emerged. The final frame was therefore a combination of deductive elements based on a priori ideas and inductive based on themes emerging directly from the data. This approach has been used in previous research (Pope, Ziebland & May, 2000; Johnson & Onwuegbuzie, 2004).

4.4 Validity and Reliability

The six phases of conducting thematic analysis as outlined in Braun and Clarke (2006) were followed. The principle investigator (AJ) transcribed the interviews (phase one) and an initial coding framework was developed (phase two and three). To explore the extent the initial coding framework was a valid representation of the themes, two other researchers (HW, AH) read four interview transcripts. Through discussion the themes were reviewed and refined and a consensus on the final coding framework was reached (phase four). This ensured the validity of the analysis. The principle investigator further refined the themes, sub themes and working titles (phase five) Reliability of the analysis was established once all transcripts had been coded into the final framework by the principle investigator (phase five). A second researcher (HW) agreed with the coding of 92% of the extracts within the thematic frame-work, indicating the coding frame could be applied with reasonable inter-rater reliability. A third rater (AH) checked the theoretical framework and agreed with the themes. The principle investigator then wrote up the analysis (phase six).

5. Results

The results will be presented in four sections, demographic and sample characteristics, feasibility and acceptability with qualitative analysis, descriptive statistics of the outcome variables and statistical analysis for each hypothesis.

5.1 Baseline Demographic Characteristics

A summary of the demographic characteristics of participants in the experimental and control group is provided in Table 4. The two groups did not have any statistical differences in age, ethnicity or diagnostic status, were from a variety of ethnic backgrounds and had a variety of Schizophrenia-spectrum disorders. Participants were typically single, unemployed and with similar percentages in each group taking anti-psychotic medication. The mean IQ fell in the average range. Both groups had similar duration of illness and similar number of hospital admissions in the past year. The experimental and control group reported similar high levels of positive symptoms, as measured by the SAPS. As a result of the recruitment process, drop outs and timings of when different research registers became available, a larger proportion of the control group were recruited from a specialist psychology service (PICuP). This means that a larger proportion of the control had received intensive CBT-p than the experimental group in the past year. Two of the controls were also not in secondary care, whereas all participants who attended in the experimental group were in secondary care; however two participants randomised to the experimental group were not in secondary care, one dropped out and one was not available to attend. As illustrated by the consort diagram (figure 2) the results presented are from a total of 21 participants, 14 in the experimental group and 7 in the control group. There were no statistically significant differences at pre-group between the two groups on any of the measures.

Table 3

Demographic Information for Each Group Separately

	Experimental n = 14	Control n = 7
Age	Mean = 44.43	Mean = 43.21
Ethnicity	White British = 6 (42.9%) Black British = 3 (21.4%) British Indian = 1 (7.1%) Caribbean = 1 (7.1%) Mixed race = 3 (21.4%)	White British = 2 (28.6%) Black British = 1 (14.3%) Black Caribbean = 1 (14.3%) Black African = 3 (50%)
Sex	Males = 7 (50%) Female = 7 (50%)	Male = 5 (71.4%) Female = 2 (28.6%)
EPJ Diagnosis	Schizophrenia = 7 (50%) Paranoid Schizophrenia = 4 Schizo-affective = 1 (7.1%) Other schizophrenia = 1 (7.1%) Acute transient psychotic disorder = 1 (7.1%)	Schizophrenia = 4 (57.1%) Paranoid schizophrenia = 2 (28.6%) Unspecified non organic psychosis = 1 (14.3%)
Duration of Illness	Mean = 8.21 SD = 5.26 Range = 2 - 21	Mean = 9.5 SD = 3.77 Range = 2 - 13
Medication	No = 5 (35.7%) Yes = 9 (64.3%)	No = 2 (28.6%) Yes = 5 (71.4%)
CBT in last year	Yes = 7 (50%) No = 7 (50%)	Yes = 3 (50%) No = 3 (50%)
Hospital Admissions in last year	Yes = 3 (21.42%) No = 11 (78.57%)	Yes = 0 (1 after follow-up) No = 7 (100%)
In secondary care	Yes = 14 (100%) No = 0 (0%)	Yes = 5 (71.4%) No = 2 (28.57%)
Marital Status	Divorced = 1 Single = 13	Divorced = 1 Single = 6
Employment	Unemployed = 14 (100%) Employed = 0 (0%)	Unemployed = 6 (85.7%) Employed = 1 (14.29%)
Team Recruited	Specialist Psychology Service: 2 (1d/o) (14.3%)	Specialist Psychology Service: 3 (42.8%)

	Research Register: 6 (42.9%) CMHT: 5 (49.0%)	Research Register: 2 (28.6%) CMHT: 2 (28.6%)
WTAR	Mean = 98.2 (11.5)	Mean = 96.7 (11.1)
Estimated IQ		
SAPS Score	Hallucinations = 3 (1.7) Delusions = 4.15 (0.55) Thought Disorder = 0.85 (0.9) Behavioural Disturbance = 0.62 (0.96)	Hallucinations = 3 (0.58) Delusions = 3.43 (0.79) Thought Disorder = 1 (0.38) Behavioural Disturbance = 0.86 (0.9)

5.2 Baseline Sample Characteristics

As illustrated in table 5, at pre-group the majority of participants had strong conviction in their delusions and high levels of distress and preoccupation. Both groups reported low levels of belief flexibility, with low levels of possibility of being mistaken. A third of participants in the experimental group and nearly half the control group had an alternative explanation for their experiences. Data gathering on the 85:15 version and 60:40 versions were similar for both the control and experimental group. The JTC bias was found in a quarter of participants at pre-group on the 85:15 version and 1 participant on the 60:40 version. Levels of paranoia as assessed on the VAS-Paranoia were similar for both groups and mean baseline anxiety and depression was in the moderate range as assessed on the BAI and BDI. Participant's main delusional beliefs and the evidence for them are illustrated in Appendix Eight.

Table 4

Clinical Characteristics for Each Group Randomised Separately

	Experimental n=14	Control n =7
Conviction	Mean = 89.29%	Mean = 77.14%
Distress	Mean = 80%	Mean = 71.4%
PBM	Mean = 8%	Mean = 25.7%
EoE (%)	1 EoE = 35.7%	1 EoE = 42.9%
JTC 85:15	Mean beads = 3.79	Mean beads = 3.86
JTC 60:40	Mean beads = 6.64	Mean beads = 6.43
JTC bias (%) 85:15	28.6%	14.3%
JTC bias (%) 60:40	7.1%	0%
VAS-P	Mean = 56.53%	Mean = 48.54%
BDI total Score	Mean = 21.55	Mean = 18.29
BAI total Score	Mean = 23.73	Mean = 22.71

5.3 Feasibility and Acceptability of the Group

The feasibility and acceptability of the group was assessed through participant's willingness to participate in the group, the number of drop outs and attendance rates. It was also assessed by clinical observations during the group, qualitative feedback in the post-group interview, the VAS completed post-group regarding enjoyment, interest and usefulness of the group and completion of outcome measures at post-group and follow-up. The attendance statistics for the group excluded wait list controls attending and drop outs, therefore was calculated based on the 14 participants in the experimental group. Qualitative data collected in the post group interviews and completion of the VAS was completed for 14 participants in the experimental group and was also collected from two participants from the control group who attended group sessions and were available to give feedback at the end of the group. Therefore qualitative feedback and VAS are from 16 participants in total, 14 participants from the experimental group and two participants from the control.

5.3.1 Feasibility of Recruitment

Sufficient numbers of participants were recruited in a six month time frame and recruitment targets were met, indicating participants were interested in attending. The consort diagram (figure 2) illustrates the total number of participants recruited and exits at different time points. Of participants randomised to the group condition, four did not

start the group, this was due to being unwell, social phobia, difficulty with sleep and starting a mentoring scheme. Two participants started the group but did not wish to continue early on, one participant left half way through the first session due to enduring social anxiety and agoraphobia and one dropped out in the third session stating he had recently received CBT and felt some of the information was a recap.

5.3.2 Attendance

Table 6 illustrates the mean and median attendance at each of the three groups. If participants missed a session a catch up session was offered half an hour before the next group started. There was a consistent pattern of attendance over the three groups, the majority of participants informed the researcher prior to absence and attended catch-up sessions. The reasons for non attendance were given as child care duty, being physically unwell and being on holiday.

Table 5

Attendance Rates for Each Group

Attendance at Group (excluding controls and dropouts)	Group One	Group Two	Group Three
Mean number of attendees	4	5.2	3
Median number of attendees	4	5	3
Number of sessions attended by participants	Three = 0	Three= 1	Three=0
	Four = 1	Four = 1	Four= 0
	Five = 3	Five = 1	Five= 0
	Six = 1	Six = 3	Six=3

5.3.4 Satisfaction Visual Analogue Scale

Table 7 illustrates participants levels of enjoyment, usefulness and interest in the group on a 0-100 visual analogue scale (with points at 0, 25, 50, 75, 100), with higher scores indicating more positive outcomes. As illustrated the mean outcomes were around 75, indicating high levels of enjoyment, usefulness and interest.

Table 6

Mean VAS Satisfaction Ratings

N=16	Enjoyable	Interesting	Useful
Mean	77.66	76	75.2
Median	75	75	75
SD	15.68	16.17	19.6

5.3.5 Clinical Observations during the group

Examples of clinical observations made during the group are presented in Appendix nine, which includes participant's examples of upsetting thoughts, examples of JTC, alternative explanations, as well as points discussed in the role plays and hypothetical scenarios.

5.4 Thematic Analysis; Summary of Categories and Sub-categories

Table 8 illustrates the coding framework developed for the analysis of participant's feedback (n=16). A table summarising quotes coded for each theme is provided in Appendix ten.

Table 7

Thematic Analysis Summary of Categories and Subcategories

<u>Group Style and Presentation:</u>	general comments about how people found the group, the level of the group, style or presentation.
<u>Group Process:</u>	Positive comments about the intervention being in a group.
<u>Universality:</u>	not being alone, normalisation of the illness and bias
<u>Cohesion:</u>	relationships in the group, the group feeling together, comfortable
<u>Interpersonal learning:</u>	learning from other people in the group, using other peoples comments to reflect on own beliefs
<u>Anti group:</u>	negative comments about the intervention being in a group
<u>Difficulties and Suggestions for improvement:</u>	suggestions people made for how the group could be improved
<u>Timing:</u>	length of the group or number of sessions, length of detail can go into
<u>Environmental:</u>	practical aspects of the group
<u>Delivery:</u>	use of handouts or application of the group
<u>Knowledge of tips:</u>	acknowledging, referring to, remembering or commenting on tips that were discussed in the group
<u>Using coping strategies:</u>	comments on use of coping strategies
<u>Looking for more information:</u>	comments on looking for more information
<u>Alternative Explanations:</u>	comments on looking for an alternative explanation
<u>Looking for evidence:</u>	comments on looking for evidence for the thought/belief
<u>JTC:</u>	comments on JTC
<u>Past does not predict the future:</u>	comments on knowing the past not predicting the future
<u>Remember mood can affect how you see things:</u>	comments on knowing mood can affect appraisals
Improved Mental Health;	improvement in mood, thinking , functioning or activity
Application of tips;	putting tips into practice, using and linking tips to real life situations

Group Style and Presentation; the majority of participants (pp) commented on aspects they liked about the presentation of the group (12/16 participants).

‘I think they were excellent groups, really good. I think it was relaxed enough but got through things and discussed stuff and summarised it in a hand out.’ (pp1).

Other participants commented that the groups were ‘*very well organised, clear and well presented*’(pp11) ‘*interesting*’ (pp8) and that the pace was well suited to the client group and ‘*pitched at our level*’(pp12).

Positive Group Process; The majority of participants commented extensively on the positive experience of receiving the intervention in a group, and themes fell into Universality, Cohesion and Interpersonal Learning.

Universality; 14/16 participants commented that being with other people with similar difficulties was the most helpful aspect of the intervention. Participants commented on the therapeutic aspects, which included a reduction in isolation, stigma and benefits of the bias being normalised.

‘I feel less isolated now, I realise there are other people who have the same troubles as me.’(pp6)

Another participant stated they greatly valued ‘*hearing other people’s experiences who are similar to you*’ (pp10). Normalisation and a reduction in stigma as a result of meeting others were also explicitly mentioned. One participant commented on learning that ‘*Others felt the same way, that I’m not mad, it’s a natural part of the illness. It’s Ok to feel the way I’m feeling nothing to be ashamed of*’ (pp6). And some participants directly mentioned the illness and benefits of normalisation of difficult experiences ‘*It was nice to hear some common conversations between schizophrenics. It’s not just me someone else as well has schizophrenia and the same thoughts*’ (pp3). Some participants also commented it was helpful to have the facilitators and participants giving their own examples of JTC to normalise the bias ‘*I’ve been thinking that other people makes mistakes just as much as I do and jump to conclusions.*’(pp7) and that being with other service users meant they ‘*did not feel judged*’ (pp14).

Instil Hope; One person commented he realised how far he recovered seeing ‘people how he was 20 years ago with worries about the TV’ (pp3).

Cohesion; the majority of participants also commented on the therapeutic alliance within the group and stated this was greatly valued. Participants commented the group felt ‘relaxed’ that they ‘got on with others and had a good connection’(pp5) and that people made ‘friends in the group’(pp8) and ‘enjoyed the time together’(pp4). One participant commented;

‘It was stressful at first going to meet with strangers but definitely gained from it, we quickly started to bond and support each other.’(pp9)

Interpersonal Learning; There were also examples of participants learning from the experiences and suggestions made by other group members. One participant stated;

‘Now I think of the ideas when it’s happening and I think if others in the group could see this what would they say.’(pp12)

Another participant commented it was helpful being in a group to discuss issues; *‘It helped being with other people with different perspectives and on the same level. Found the group perfect, positive hearing many points of views other than only one and dealing with the same subject.’(pp14)* This indicates in a group of people with shared experiences the opportunity to hear others perspectives, use and learn from them was helpful.

Anti-group; as part of the interview schedule participants were asked if there was anything negative about the intervention being delivered in a group format. Only 4 of the 16 participants commented there was a negative aspect.

One aspect was related to what participants felt was appropriate to share in a group context:

‘I didn’t speak about things in detail with anyone, I wanted to, a lot of me wanted to but I didn’t’ (pp6) And, *‘Some things a bit personal I didn’t like to say when others were*

there but I liked listening to others really enjoyable.(pp3)' The same participant also had a concern he *'over shared'* the week before disclosing abuse.

Another negative aspect was related to having enough time to talk, *'sometimes in group format don't get all focus on yourself have to focus on everyone in the room, can feel desperate for stuff'*(pp7) and one participant described paranoia relating to other member of the group *'I started to get paranoid about [other participant], getting thoughts about her. Started to think people were thinking things about me, that was strange.'*(pp4)

The anxiety of initially meeting the group was also mentioned, however most stated that this was only temporary being *'uncomfortable'* or *'nervous at first'* (pp12) and went onto comment on the benefits of being in a group. Some participants also commented they preferred a small group size and felt more comfortable after a few drop outs or with the original size being small.

Difficulties and suggestions for improvement; these broadly fell into timings of the group, with two participants finding sessions *'a bit long'*(pp5) suggesting they could just be one hour, two participants wanted the group to be longer than 6 weeks *'to go deeper into it'*(pp4) and 2 participants had difficulty attending due to the 12pm start time. Environmental factors of *'coordinating where looking'* (pp15) at the white board and screen and having *'more cold drinks'* (pp12) to offer was also mentioned. One participant also commented it would have been helpful to be given questions and forms during the session to complete and one suggested having checklists emphasising how to apply the tips to real life would have been helpful *'Not quite sure how to put it into practice, how to apply it to life, think ACT group is more applicable, uses check lists and is easy to practically apply it.'*(pp7). The majority of participants commented there was nothing they could think of to improve.

Knowledge of the tips; participants were asked what they could remember or have used from the group and the majority of participants gave numerous examples of tips. Comments fell into the following themes of coping strategies, looking for more information, the effect of mood and past experience, alternative explanations and JTC.

Participants commented that they remember the importance of *'getting more information before making a decision'* (pp6) and what was *'Most useful was looking at things in more detail before you decide what is happening.'*(pp9), other participants commented on the importance of generating alternative explanations that are less distressing *'I apply that course all the time now, think of an alternative explanation that is more manageable.'*(pp14) And another participant commented on combining the tips;

'I learnt a lot about jumping to conclusions, 1st thoughts might not be what it is, to stand back, hold on and think of evidence, stand back to get a different side of the story,' (pp12)

Participants also commented on not letting their mood affect their thinking and an increased awareness of how their mood can influence their thoughts;

'I learnt not to judge too quickly, based on your mood and rose tinted glasses. Learnt about coming to a conclusion without enough info, I hear things on the street, people talking about me, I imagine things that aren't there, I'm a little more aware of what I'm doing, think people are talking about me but I'm more aware not to come to a quick conclusion if I'm in a bad mood.' (pp2)

Another participant commented after the group that standing back from their mood and *'learning the past does not predict the future'* (pp11) was particularly helpful and relevant to their delusion. There was also the themes of participants looking for more evidence *'I get feelings people are targeting me, feeling not in a good way, but with the course is different now, I reassess how I feel I stop and look at situation how feeling at home, I look for evidence they are targeting me and there isn't any.'* (pp12)

Improved mental health; a theme emerged of improvements participants had noticed in their mood, thinking and activity. These included a decrease in *'paranoid thoughts'*, an improvement in mood, feeling more *'relaxed'*(pp12) and one participant reported reducing JTC and noticing the effects it has on their mental health. *'I think, take time and try not jumping to conclusions when things happen (hear comments), so I'm more peaceful'* (pp15), being able to recognise JTC and *'calm myself down easier'* (pp10) and taking up new activities such as *'gardening'*(pp12) and *'aqua'*(pp7). Participants also

explicitly mentioned these changes having occurred recently and attributing them *'to the course'* (pp6).

Application of tips; Participants commented on coping strategies they continued to use such as *'listening to music'*(pp6) or taking *'baths'*(pp3). Participants also discussed examples of how they have generalised and applied the tips regarding JTC and thinking of alternatives to real life: *'I notice, the group taught me not to jump to conclusions, look at the pros and cons and look at it from different angles. This morning was about to exit and thought someone was there, why would they come in? Got to keep open about things'* (pp8). Participants also discussed applying the tips to events not related to their main belief :*' I jumped to conclusions about the man in the walking group, I know I'm doing that as he didn't say anything out of order'*(pp2), and being aware they JTC and discussed coming up with alternative explanations to their first thought: *'I look at the expression on their face I used to think I was disliked...but it may just be them they're having a bad time or they may be intimidated in that area'*(pp9) and *'One person spat in my shadow, thought he was being aggressive on purpose, then thought it was just a coincidence that it landed in my shadow and just dismissed it.'*(pp3). Another participant gave examples of using the tips; *'I've been jtc and I think why I did I jtc with the lady in Mac Donald's, (I thought she said why do I eat it so much) maybe she doesn't mean it. I also thought a person on street called me unemployed, but then thought how do they know? or they may have said it to someone else?'*(pp15). These examples are extremely positive in illustrating the tips were relevant, remembered and applied to change people's thought processes, mood and functioning in daily life.

JTC; All participants but one gave examples of times they were noticing they had JTC, had applied the tips and felt this was very relevant to their experiences in daily life. Participants explicitly mentioned learning about JTC, being more aware that they do it *'my mind works in a certain way...I've built up a story and a view, my mind leaps and latches to assumptions.'*(pp13) and trying to reduce it: *'I've put a block on it, jumping to conclusions'* (pp3). Participants mentioned noticing they are, *'quite often I am mistaken, I'm convinced I see one at it then see someone who else is there and I'm often wrong'* (pp1) and noticed an awareness that their first thoughts are not always accurate *'I don't let myself think the first thought I think is right as I can get it the wrong way'*(pp7). Only one participant reported they could not relate to JTC and stated they

had '*every possible conclusion in my head at once*' (pp14) but stated that they benefitted from thinking of more likely explanations.

5.5 Descriptives and Statistical Analysis

Table 9 provides a summary of the mean, standard deviation and range for each continuous primary outcome measure, at each time point for each randomised group separately. Table 10 provides the descriptive summary for each categorical primary outcome measure. Statistical analysis, p-values and effect sizes for each continuous primary outcome measure is presented in Table 11 and statistical analysis for each categorical primary outcome measure is presented in Table 12. The statistical analysis should be interpreted with caution as this was a pilot study with a small sample size and replication in an RCT with a larger sample size is required for robust conclusions to be made.

Table 8

Summary Statistics at Each Time Point for Continuous Primary Outcome Measures for Each Randomised Group Separately

Measure (outcome)	Time	Experimental group				Control group			
		Mean	SD	Range	N	Mean	SD	Range	N
Belief conviction	T1	89.29	18.9	50	14	77.14	15.50	50	7
	T2	62.3	33.39	100	13	68.42	23.88	50	7
	T3	71.54	34.3	95	13	69.16	22.45	60	6
Belief PM	T1	8.00	20.57	100	14	25.7	24.22	50	7
	T2	27.14	31.72	100	14	17.14	18.68	50	7
	T3	17.69	31.07	100	13	16.67	20.41	50	6
Belief distress	T1	80	26.89	75	14	71.4	28.09	25	7
	T2	73.14	28.46	75	14	61.42	26.88	75	7
	T3	65	29.72	100	13	45	22.80	65	6
Belief preoccupat ion	T1	76.43	23.97	60	14	80.71	30.60	75	7
	T2	64.86	31.7	100	14	74.29	27.75	75	7
	T3	62.3	23.94	100	13	70.83	35.27	90	6
VAS-P Total	T1	56.53	38.99	100	14	48.54	33.07	100	7
	T2	46.13	40.81	100	14	49.34	34.83	100	7
	T3	47.08	40.39	100	13	40.66	29.24	100	6
JTC 85:15 Number	T1	3.79	1.80	5	14	3.86	1.21	4	7
	T2	6.15	2.97	8	13	4.86	1.46	4	7
	T3	6.23	2.59	8	13	3.66	1.50	4	6
JTC 60:40 Number	T1	6.64	3.31	11	14	6.43	2.99	8	7
	T2	10.54	3.38	11	13	6.14	4.06	10	7
	T3	9.30	2.93	11	13	7	5.1	13	6

Table 9

Summary Statistics at Each Time Point for the Categorical Primary Outcome Measures for Each Randomised Group Separately

Measure (outcome)	Time	Experimental group			Control group	
		Y/N	N	%	N	%
JTC 85:15	T1	No	10	71.4	6	85.7
		Yes	4	28.6	1	14.3
	T2	No	13	100	6	14.3
		Yes	0	0	1	85.7
	T3	No	13	100	5	71.4
		Yes	0	0	1	16.7
JTC 60:40	T1	No	13	92.9	7	100
		Yes	1	7.1	0	0
	T2	No	13	100	6	85.7
		Yes	0	0	1	14.3
	T3	No	13	100	1	71.4
		Yes	0	0	5	16.7
Alternative explanations	T1	No	9	64.3	4	57.1
		Yes	5	35.7	3	42.9
	T2	No	5	38.5	5	71.4
		Yes	8	61.5	2	28.6
	T3	No	6	42.9	4	66.7
		Yes	7	53.8	2	33.3
Hypothetical contradiction	T1	Low BF	10	76.9	5	71.4
		High BF	3	23.1	2	28.6
	T2	Low BF	9	69.3	6	85.7
		High BF	4	30.8	1	14.3
	T3	Low BF	9	69.3	6	100
		High BF	4	30.8	0	0

5.6 Primary Outcome Measures; Statistical Analysis

Table 10

Statistical Analysis for Continuous Primary Outcome Measures

Measure (Outcome)	Comparison	Z	Asymp sig (1 tailed)	Effect Size (d)
Belief conviction	T1 – T2	-1.508	0.076*	-0.716
	T1 – T3	-0.575	0.341	-0.266
Belief distress	T1 – T2	-0.500	0.321	-0.220
	T1 – T3	-0.804	0.213	0.366
Belief preoccupation	T1 – T2	-0.701	0.260	-0.310
	T1 – T3	-1.082	0.151	-0.512
PBM	T1 – T2	-2.109	0.016**	-1.037
	T1 – T3	-1.127	0.138	-0.535
Beads 85:15	T1 – T2	-0.887	0.198	-0.405
	T1 – T3	-2.18	0.014**	-1.118
Beads 60:40	T1 – T2	-2.48	0.006**	-1.333
	T1 – T3	-1.373	0.091*	-0.664
VAS-P Total	T1 – T2	-0.187	0.434	-0.082
	T1 – T3	0.000	0.509	0.00

Table 11

Statistical Analysis for Categorical Primary Outcome Measures

	X² Value	P-value	Cramers V
Alternative explanations (EoE) T2	2.86	0.091*	0.309
Alternative explanations (EoE) T3	0.996	0.318	0.189
RTHC T2	n/a fishers	0.271	0.210
RTHC T3	n/a fishers	0.05**	0.434
JTC 85:15 T2	2.05	0.152	0.229
JTC 85:15 T3	2.43	0.297	0.26
JTC 60:40 T2	2.05	0.152	0.23
JTC 60:40 T3	2.43	0.12	0.27

Note:

* = trend

** = significant

*5.6.1 Hypothesis One: Impact of the group on Conviction, Distress and Preoccupation**Delusional Conviction:*

As table 11 illustrates there was a trend towards a reduction in conviction between pre-group and post-group ($U = 27.5$, $z = -1.51$, $p = 0.076$) which is reflected in the mean scores as shown in table 9. Between pre- and post-intervention 62% of participants in the experimental group had reduced levels of conviction by a mean of 53%, whereas 42.8% of those in the control group had a mean reduction of 25%.

There was no significant difference between the control and experimental group at post-intervention and follow-up ($U = 33$, $z = -0.639$, $p = 0.341$). At follow-up, 46.1% of participants in the experimental group had a mean reduction of 45% and one participant had a 50% increase in conviction. In the control group, two participants had reduced their conviction by a mean of 25%.

Delusional Distress:

As table 11 illustrates there was no significant difference between the two groups in change scores between pre-group and post-group ($U = 42.5$, $Z = -0.500$, $p = 0.321$). This

was reflected in the mean change scores in the experimental group, at post-group 38.5% reduced distress of 38% and 21.4% of participants reported mean increase in distress of. Distress in the control group also reduced in 42.8% of participants.

At follow-up there was no significant difference in groups change scores ($U = 30.00$, $z = -0.804$, $p = 0.213$), which is reflected in the mean change scores in table 9. 42.8% of participants in the experimental group reported a reduction in distress of 41.7% and one reported an increase in distress of 75%. In the control group 66.7% of participants reported a reduction in distress.

Delusional Preoccupation:

As table 11 illustrates there is no significant difference between pre-group and post-group in preoccupation ($U = 40$, $z = -0.701$, $p = 0.260$). 42.8% of the experimental group report a reduction in preoccupation. In the control group 28.5% reported a reduction in preoccupation.

At follow-up there was no significant difference in preoccupation change scores ($U = 27$, $z = -1.082$, $p = 0.151$) which is reflected in the mean scores as shown in table 9. In the experimental group 64.3% of participants reported a reduction and one reported an increase of 50%. In the control group 33.3% of participants reported a reduction.

5.6.2 Hypothesis Two: Impact of the group on Belief Flexibility (PBM, EoE, RTHC)

Possibility of Being Mistaken:

As illustrated in table 11 there was a significant difference between the two groups between pre-group and post-group ($U = 22$, $z = -2.109$, $p = 0.036$), which is reflected in the mean change scores in the experimental group (table 9): at post-group 61.5% of participants had a mean increase in PBM of 53% . In the control group 57.1% of participants reduced their ratings by a mean of 15%.

At follow-up there was no significant difference in PBM ($U = 26.5$, $z = -1.127$, $p = 0.138$). In the experimental group 38.5% of participants showed a mean increase of 46%. In the control group 33.3% showed a mean increase of 25%.

Alternative Explanations:

As illustrated in table 12 participants in the experimental group had a greater number of alternative explanations for their experiences at post-group, this is reflected in 2 x 2 chi squares with there being a trend at post-group with the experimental group having more alternative explanations than the control ($X^2 = 2.86$ (1), $p = 0.091$). At follow-up there is no significant difference between the two groups ($X^2 = 0.996$, $df = 1$, $p = 0.318$), which is also reflected in the descriptives in table 10.

Reaction to Hypothetical Contradiction:

Table 9 illustrates the number and percentages of participant's responses categorised as showing low belief flexibility (i.e. accommodating hypothetical contradiction into the system or ignoring/rejecting the relevance) or with high belief flexibility (changes conviction or dismisses belief). One more participant in the experimental group responded flexibly to the contradiction at post-group and three, and in the control the number of participants responding flexibly reduced from 2 at pre-group, to 1 at post-group and 0 at follow-up. Table 11 illustrates the 2 x 2 chi square, fishers exact static was used as the numbers in each cell were less than 5, at post-group there was no significant difference between the two groups ($p = 0.271$). At follow-up there was a significance ($p = 0.05$), however this should be interpreted with caution as there was a control dropout at follow-up and change scores were not used in this analysis.

5.6.3 Hypothesis Three: Impact of the group on i) Data Gathering ii) the extreme JTC Bias. Hypothesis:

i) Data Gathering Change over time: 85:15 Version

As table 11 illustrates there was no significant difference between the two groups change in number of beads chosen at post-group ($U = 34.5$, $z = -0.887$, $p = 0.198$). This was reflected in the mean change scores in the experimental group: at post-group in comparison with pre-group, 62% of participants requested a mean of 3.8 more beads. In the control group 57.1% requested a mean of 2 more beads at post-group.

At follow-up there was a significant difference between the two groups change in number of beads chosen at follow-up ($U = 14.4$, $z = -2.182$, $p = 0.014$). This is reflected in the mean change scores in table 9: in the experimental group 84.6% of participants in the experimental group requested a mean of 2.8 more beads. There was also an increase at follow-up in the control, with 33% choosing a mean of 1.5 more.

Change over time: 60:40 version

As table 11 illustrates there was a significant increase in the number of beads chosen at post-group in the experimental group ($U = 14.5$, $z = -2.478$, $p = 0.006$). This was reflected in the mean change scores in the experimental group illustrated in table 9. At post-group in comparison to pre-group, 76.9% of participants in the experimental group chose a mean of 4.5 more beads. There were also changes observed in the control group, with 33% choosing a mean of 2 more beads.

At follow-up there was a trend towards a significant difference ($U=23.5$, $z = -1.373$, $p = 0.091$). This is reflected in the mean change scores, with 69.2% of participants in the experimental group requesting a mean of 3.8 more beads. In the control group 50% requested a mean of 2 more beads.

Hypothesis Three: Impact of the group on ii) the extreme JTC Bias

In the 85:15 version the number showing the JTC bias reduces from 28.6% to 0 in the experimental group at post-group and follow-up and remains stable in the control with one participant consistently showing the extreme JTC bias at the three time points. In the 60:40 version one participant shows the bias at pre-group in the experimental group and no participants do at post-group or follow-up. In the control group at pre-group no participants show the bias but one participant does at post-group and follow-up. Table 12 shows the 2 x 2 chi squares that there are no significant differences between the two groups at any time points for the 85:15 or 60:40 beads tasks.

5.6.4 Hypothesis Four: Impact of the Group on Paranoia.

As shown in table 11, there is no significant difference between the groups change scores at post-group ($U= 46.5$, $z = -0.187$, $p = 0.434$) or follow-up ($U= 39$, $z = 0.00$, $p = 0.509$).

5.7 Impact on Additional Outcome Measures

Table 13 provides a summary of the mean, standard deviation and range for each continuous secondary outcome measure, at each time point for each randomised group separately. Table 14 provides the statistical analysis, p-values and effect sizes for each continuous secondary outcome measure.

Table 12

Summary statistics at each time point for the secondary outcome measures

Measure (outcome)	Time	Experimental group				Control group			
		Mean	SD	Range	N	Mean	SD	Range	N
TBM	T1	43.77	9.45	34	13	51.43	15.13	43	7
	T2	65	7.45	27	13	53.14	14.21	38	7
	T3	56.23	7.5	24	13	54.16	15.54	40	6
TBM Sat	T1	2.62	0.97	4	13	3.29	1.38	3	7
	T2	3.15	0.9	3	13	3.42	0.78	2	7
	T3	3.2	0.83	3	13	3.5	1.05	3	6
BCSS NegSelf	T1	8.29	5.28	16	12	11.57	8.3	23	7
	T2	6.07	5.12	17	13	11.66	8.46	23	7
	T3	7.38	6.41	19	13	11.83	8.84	23	6
BCSS PosSelf	T1	8.16	4.42	14	12	9.57	7.52	24	7
	T2	11.51	6.78	24	13	7.14	8.41	23	7
	T3	10.37	7.11	24	13	7.5	6.47	17	6
BCSS NegOther	T1	11.08	6.92	24	12	14.57	5.80	15	7
	T2	12.54	7.87	24	13	14.00	7.21	23	7
	T3	11.85	8.14	24	13	13.00	8.34	21	6
BCSS PosOther	T1	11.05	5.75	24	12	10.29	9.16	24	7
	T2	9.38	6.75	24	13	9.29	6.7	17	7
	T3	8.92	6.36	20	13	9.67	9.40	21	6
BAI	T1	23.73	11.5	42	11	22.71	17.23	51	7
	T2	18.26	10.8	35	12	23.14	18.59	49	7
	T3	16.31	9.11	27	13	25.97	18.55	38.9	6
BDI	T1	24.08	12.9	42	12	18.29	13.33	40	7
	T2	20	9.34	30	13	18	10.79	32	7
	T3	19.62	11.9	43	13	22.33	16.55	43	6
SAPS	T1	8.62	2.69	10	13	8.29	3.15	9	7
	T2	8.54	2.72	10	13	8.29	3.14	9	7
	T3	8.31	2.93	10	13	8.5	3.39	9	6

Table 13

Statistical Analysis for Secondary Outcome Measures

Measure (Outcome)		Comparison	Z Score	Asymp sig (1 tailed)	Effect Size (d)
BCSS Neg Self		T1 – T2	-1.41	0.084*	-0.684
		T1 – T3	-0.705	0.255	-0.337
BCSS Pos Self		T1 – T2	-2.714	0.003**	-1.591
		T1 – T3	-0.947	0.184	-0.458
BCSS	Neg	T1 – T2	-0.977	0.175	-0.460
Other		T1 – T3	-0.188	0.437	-0.089
BCSS	Pos	T1 – T2	-0.254	0.411	-0.117
Other		T1 – T3	-0.094	0.472	-0.044
BAI		T1 – T2	-1.23	0.119	-0.606
		T1 – T3	-1.36	0.094	-0.699
BDI		T1 – T2	-1.57	0.062*	-0.772
		T1 – T3	-2.112	0.034**	-1.148
TBM		T1 – T2	-1.673	0.05**	-0.807
		T1 – T3	-2.504	0.005**	-1.404
TBM Sat		T1 – T2	-0.166	0.454	-0.074
		T1 – T3	-0.628	0.270	-0.291
Total	SAPS	T1 – T2	-0.447	0.411	-0.201
score		T1 – T3	-0.738	0.345	-0.344

Note:

* = trend

** = significant

5.7.1 BCSS

As illustrated in table 14 these pilot results indicate there was a significant difference in change scores on the BCSS, with the experimental group positive self schema increasing significantly at post-group ($U = 10$, $z = -2.714$, $p = 0.003$) and a trend reduction in negative self-schema in experimental group at post-group ($U = 25.5$, $z = -1.41$, $p = 0.084$). There were no differences at other time points or change in other schemas.

5.7.2 SAPS

Table 13 illustrates the mean total SAPS scores between groups across time. Mann-Whitney U test on the change scores as illustrated in table 14 shows no significant difference across the time points.

5.7.3 Mood and Anxiety

Table 13 illustrates participants mean scores on the BAI and BDI over time. Table 14 illustrates for the BAI there is no significant difference at post group but a trend between at follow-up ($U=25$, $z = -1.36$, $p = 0.094$). There is also a trend towards a significant reduction in depression in the experimental group at post-group ($U=23.5$, $z = -1.36$, $p = 0.062$) and a significant difference at follow-up ($U = 13.5$, $z = -2.112$, $p = 0.034$).

5.7.4 Time Budget Measure

Table 14 illustrates there is a significant difference in change on the TBM between pre-group and post-group ($U=24.5$, $z = -1.673$, $p = 0.05$) and between pre-group and follow-up ($U=10.50$, $z = -2.504$, $p = -1.404$). Satisfaction scores increased slightly in the experimental group; however there was no significant difference.

5.8 Analysis within Groups

Appendix 11 illustrates the demographic information for the three groups separately. There was no significant difference in mean age or length of illness, although the duration of illness is slightly lower in the second group. Each group is comprised of a mix of ethnicities, males and females and participants taking medication. There is a mix in each group of participants who received CBT and similar number of people having had a hospital admission in the last year. Participants in the first group are a mix of self referrals from local research registers and CMHT's, participants in the second group were also recruited from the research registers and specialist psychology service research register and participants in the 3rd group were recruited mainly from the CMHT, with some non-attendees from the specialist psychology service research register. SAPS and BDI scores are similar across the three groups and the BAI score is lower in the third group. There were no statistically significant differences at pre-group between the three groups on any of the measures.

The sample is too small to complete multi-variate analysis which accounts for clustering effects with-in groups, however descriptive information for the primary outcome

measures for the three groups completed is presented in Appendix 12. Effect sizes and p values for each group for each primary outcome measure are presented in Appendix 13.

5.8.1 Summary Between Group Differences

In summary, in terms of conviction and PBM it appears group one had large effect sizes at all time points; that group two has small to medium effect sizes at all time points and that group three have large effect sizes post-group and small effect sizes at follow-up. For data gathering, group one and group two have large effect sizes at post-group and follow-up. Group three have large effects sizes for 85:15 version of the task and medium to small effect sizes on the 60:40 version of the task. There were small to medium effect sizes across most groups at both time points for VAS-P, RTHC and EoE. The mean satisfaction ratings for each group also varied as illustrated in table 15.

Table 14

Mean VAS Satisfaction for Each Group Separately

Group Number	Group One	Group Two	Group Three
Mean VAS Score	86	69	72

6. Discussion

This section will focus on the discussion of the current research, the acceptability and feasibility of the group and results from the statistical analysis. Limitations of the study, suggestions for improvement to the group and study design will also be discussed.

6.1 Summary of results

This study investigated the acceptability and feasibility of a group intervention for participants with distressing delusions. The findings of the study support the hypotheses that a group reasoning intervention would be acceptable and feasible for participants. Qualitative feedback illustrates the intervention was well received and participants commented on application of the group to daily life, positive changes in JTC, BF and improvement in functioning, as well as perceived benefits from group therapeutic processes of universality, interpersonal learning and cohesion. Although statistical analysis should be treated with caution due to the small sample size, findings in relation to reasoning processes and clinical outcomes were partially supported, with evidence of reductions in delusional conviction and significant improvements in data gathering and belief flexibility. Secondary outcome measures also indicate a significant improvement in activity levels, negative and positive self-schemas and levels of depression and anxiety in those who attended the group. The findings will be discussed in more detail below.

6.2 Feasibility and Acceptability

Recruitment ran smoothly and was completed within a six month time frame. This illustrates a large portion of participants were willing to attend and indicates participant's willingness to be randomised and consider group CBT. There were some drop-outs prior to the group intervention starting, one due to social phobia, two due to being unavailable on the day of the group and one due to becoming more unwell. This illustrates the group may not be feasible and acceptable for people with social phobia, however with encouragement a few participants with anxiety about the group format were able to attend. A drawback of interventions being conducted in a group format is the inflexibility about when to offer appointments. However in a larger RCT and in routine clinical practice there may be more resources to give participants the option of which day to attend the group, which may reduce drop outs. Attendance rates for the groups were very good, with over 3/4 of participants attending at least five of the six

sessions, illustrating the majority of participant's maintained engagement. The groups also had low dropout rates once participants attended the group, with just two participants dropping out of the intervention, which is low in comparison to drop out rates in CBT which range from 19-50% and increase with greater psychopathology (Salmoiraghi & Sambhi, 2010). This attendance is also slightly higher than attendance rates reported from other group studies (Barrowclough et al., 2006; Wykes et al., 2005; Lectome et al., 2008; Ruddie et al., 2012).

In terms of feedback, participants found the intervention interesting, enjoyable and useful. This is similar to reports in Waller et al., (2011) indicating that the group intervention was viewed similarly to the individual intervention in these areas. Observations in the groups also confirmed the feasibility and acceptability of the group and relevance of JTC to participants. Themes emerging from the qualitative data and feedback illustrate the groups were well received and valued by participants and the high satisfaction ratings are consistent with those reported in previous CBTp groups (Wykes et al., 2005; Barrowclough et al., 2006; Ruddie et al., 2012). Participants gave positive comments about the group being organised, well run and at an appropriate level. There were also numerous examples given of participants noticing JTC, applying the tips to daily life and explicitly acknowledging improvement in mental health, functioning and activity as a result of the group. There was also substantial qualitative feedback on the benefits of the intervention being delivered in a group format, which fell into themes of cohesion, universality and interpersonal learning (Yalom & Leszec, 2005). Previous research illustrates these therapeutic aspects of group interventions are greatly valued with participants benefitting from sharing and testing out beliefs (Ruddie et al., 2012; Wykes et al., 2005; Barrowclough et al., 2006). Ruddie et al., (2012) concluded participants spoke more about group benefits than changes in clinical outcomes. It is possible that the group therapeutic factors in this study mediated the change in outcomes of mood, activity and self-esteem, as improvements in these factors have been found in other group interventions (Barrowclough et al., 2006). There is some literature group therapeutic processes are difficult to build in people with psychosis (Evans-Jones, Peters & Barker, 2009) and the therapists were concerned about how participants may respond to each other's beliefs. However, participants were very supportive of each other, illustrating group therapeutic processes are possible to establish in a group for people experiencing delusions in the context of psychosis.

6.3 Impact on Outcome Measures

6.3.1 Impact on Primary Outcomes

The hypothesis that conviction would reduce in the experimental group was partially supported, with overall mean conviction reducing from 89% to 62% post-group with large effect sizes, and a small effect size at follow-up. The effect size was comparable to Waller et al., (2011) who observed a mean reduction in conviction from 98% to 83% across time points. The reduction in conviction is also substantially greater than the mean reduction of 5% in 17 participants in Ross et al., (2009). No significant changes were observed in distress or pre-occupation, these factors however were hypothesised to be maintained by meta-worry and appraisals (Freeman & Garety, 1999), whereas conviction is hypothesised to be maintained by BF and JTC biases, it therefore fits cognitive-behavioural theories of delusions that there was no change in these measures.

The hypothesis that data gathering will increase in the experimental group can also be partially accepted. The effect sizes were medium to large for both tasks at both time points. This effect is larger than the increase observed by Waller et al., (2011) and Ross et al., (2009). The effect sizes were larger for the 60:40 version, consistent with previous research (Ross et al., 2009; Waller et al., 2011). Menon et al., (2008) suggested this may reflect the difficulty of the versions of the task, with there being more gain in delaying the decision in the 60:40 version in terms of solving the problem correctly. Like Waller et al., (2011) the intervention had an impact on participants with the extreme JTC bias, with no participants retaining the bias in the experimental group at post-group or follow-up. This is an improvement from Ross et al., (2009) which had little effect on participants with the extreme bias.

The hypothesis that belief flexibility would improve was also partially supported. At post-group participants in the experimental group had a significant increase in their PBM compared to the control group, with a large effect size, and a medium effect size at follow-up. This is more flexible than Ross et al., (2009) who only found three participants gave a more flexible answer on any BF measures and is comparable to Waller et al., (2011). The number of alternative explanations given by the experiential group increased with a trend at post-group, again better than Ross et al., (2009) and is comparable to Waller et al., (2011). In terms of RTHC, results were comparable to Ross et al., (2009) but smaller than Waller et al., (2011). The findings in the qualitative

analysis also indicate this hypothesis was partially supported and participants may be more flexible in their responses to daily events which are not related to their main belief. This is illustrated by one participant who's main belief was around the police monitoring him, however applied the tips to everyday situations unrelated to his main belief, such as in encounters with the general public. In terms of paranoia as measured on the VAS, there no support for the hypothesis of a reduction in the experimental group.

6.3.2 Impact on Secondary Outcomes

There were several significant changes in secondary outcome measures at post-group and follow-up. At post-group there was a reduction in negative self-schemas and increase in positive self-schemas with large effect sizes. It could be hypothesised that the group therapeutic processes changed schemas, or that a reduction in conviction resulted in change. Wykes et al., (2005) stated group treatment increases social support which may enable participants to re-evaluate negative self beliefs and decrease social isolation, improving mood and schemas. There was also a significant increase in the experimental group activity levels with large effect sizes. This is consistent with qualitative feedback where during the group participants developed increased confidence to take on more activities. Their attendance at the group alone may have been a clinically significant change for individual participants and could have served as a behavioural experiment, providing participants opportunity to test out abnormal beliefs which may have prevented activity and social contact (Wykes et al., 2005). There was also a significant reduction in depression with large effect sizes. This may be consistent with behavioural activation theory (Martell, Addis & Jacobson, 2001) where attending the group may have increased activity and therefore mood in participants. Decrease in depression may also be due to positive group therapeutic processes or due to participants becoming less distressed by their symptoms. Birchwood, Iqbal, Chadwick and Trower (2000) found depression remitted with psychotic symptoms. There were medium effect sizes on the BAI and a trend at follow-up. The reduction in anxiety may have occurred as a result of group therapeutic processes, or a reduction in other symptoms. A reduction in anxiety may be greater at follow-up than post-group as anxiety may increase at the end of CBT due to change in support, or reduce further at follow-up due to habituation to new activities taken up (Foa, 2011). There was very little change in SAPS scores over time for either group; however this measure was

mainly included to assess demographics of the group, not change and the intervention only targeted delusions not other items on the SAPS.

6.3.3 Sustained Change and Participants who did not respond

Change was sustained at follow-up in JTC, mood and activity, with significant or trend results and large effect sizes. Medium effect sizes were found at follow-up for preoccupation, PBM, positive self-schemas and the effect size for conviction decreased from large to small. The standard deviations at follow-up were larger than at the other time points, which indicates change was maintained in some participants. It could be possible some participants found the time between post-group and follow-up helpful to practice skills, where as other participants reasoning style may have reverted back to baseline. This could be the result of stressful life circumstances or forgetting to use the tips. It has also been reported that some participants respond rapidly to brief CBT interventions and there is literature on sudden gains in CBT for depression (Tang, DeRubeis, Hollon, Amsterdam, & Shelton, 2007), whereas it can take a longer time and a greater number of sessions for CBT to generalise for other participants (Padesky & Greenberger, 1995). As noted in Waller et al., (2011) there was a subset of participants where conviction did not change, despite a longer intervention and group processes. This maybe the result of the length of time they have held the belief and difficulties associated with reducing conviction, for example the alternative explanation being more distressing. Additional follow-up session or a one-to-one intervention alongside the group may be helpful. Further replication in a study powered to detect change at follow-up is required.

6.3.4 Clustering - between group differences

The effect of clustering is important to examine and Lee and Thomson (2005) report clustering to occur in two thirds of psychotherapy research, due to differences in therapist enthusiasm or skill. Wykes et al., (2005) and Barrowclough et al., (2006) made three recommendations to reduce clustering effects, which included having a homogenous presenting problem, ensuring there is an experienced therapist and not sampling over different centres or geographical locations. These groups focused on a homogenous problem and ensured there was an experienced therapist, however recruitment did not take place from the same services at the same time. Clustering can also occur due to characteristics of members in the group effecting the therapeutic alliance (Johnson et al., 2008; Luborsky, 1994; Couture et al., 2006). Differences in effect sizes were revealed when the three groups conducted were analysed separately.

Overall it appeared the first and third group were most effective in respect to symptom change; there were medium to large effect sizes on the majority of measures and generally small to medium effect sizes in the second group. Lower VAS satisfaction scores were also found in the second group which could be due to lower symptom change or could have been affected by other factors such as group alliance or therapeutic relationship, which can be a powerful mechanism of change (Lectome et al., 2008; Wykes et al., 2005; Ruddle et al., , 2011, 2012; Johnson et al., 2008)

There are factors which may have contributed to the second group being less effective on primary outcome measures. Firstly, it was the largest of the three groups run, and had a higher drop-out rate. The large group size and change in group members may have reduced group cohesion, therapeutic alliance and increased participant's anxiety, resulting in smaller effect sizes. The therapeutic alliance with the therapist could also be a factor (Johnson et al., 2008; Evans-Jones et al., 2009) and fewer participants in the second group wanted to receive a phone call during the week. This may have reduced outcomes due to reduced alliance or phone calls may have increased generalisation of skills to real life. Members of the groups may also have had different symptoms or varied on factors such as negative symptoms and social functioning which were not measured and are known to effect group cohesion and therapeutic alliance (Luborsky, 1994; Couture et al., 2006; Ruddle et al., 2012; Johnson et al., 2008). Small differences in group procedure may have also contributed to the differences in effectiveness.

6.4 Successful aspects of the group intervention

There are many factors which may have contributed to the group being feasible and acceptable and creating change in participant's conviction, which is typically resistant to CBTp and antipsychotics (Mizrahi et al., 2006; Garety et al., 2008). One factor was the focus on a single symptom, which is consistent with the single symptom approach recommended by Garety and Freeman (2013) and has lead to the development of other promising interventions in psychosis (Trower et al., 2004; Foster et al., 2010). The group also focused on one specific aspect of the cognitive model: the key cognitive biases of JTC and BF which are implicated in the formation and maintenance of delusions (Garety et al., 2005). This focus follows principles recommend by van Oosterhout et al., (2014) and also meant the group was homogenous in terms of presentation and demographics, which is likely to have facilitated cohesion as difficulties were relevant to all members (Barrowclough et al., 2006; Wykes et al.,

2005). The group also used an experienced therapist which is correlated with larger effect sizes (Wykes et al., 2005).

Further principles recommended by van Oosterhout et al., (2014) were also applied in this group, for example longer duration and personalisation to real-life scenarios. The group helped engage participants by using non-threatening neutral tasks to introduce JTC and normalise the bias. Delusion relevant material was then used, which included tasks with initial paranoid interpretation and illustrated how further data gathering lead to a neutral conclusion. Participants upsetting thoughts and times they had used the tips were also discussed, which may have facilitated learning and generalisation of skills to daily life. Beck (1989) also stipulates some emotion needs to be aroused for cognitive change to occur. The groups also included multimedia, interactive components, role-play and hypothetical situations which may have helped engage participants. Tasks were also not abstract such as in Ross et al., (2009) and highlighted the relevance of JTC to participant's daily life. The group therapeutic processes may have also been beneficial in creating change.

6.5 Ideas for Improvements to the Group

6.5.1 Participant's suggestions of Improvement to the group

Most participants stated there was nothing they could think of that would improve the group, however qualitative feedback revealed a few participants raised concerns about the intervention being conducted in a group setting. These concerns were around what to share, having enough time to talk, anxiety around the first meeting and paranoia regarding other group members. Improvements could be made to the group in future to reduce any negative group therapeutic processes. The feeling of anxiety in the first session could be normalised further and the group could run alongside one to one sessions for extra support. Having concurrent one to one sessions would also allow participants to share issues they do not want to share in the group and mean all participants feel they have enough time to discuss what they wanted. Improvements could also be made by starting the group later in the day to help attendance of participants with sleep difficulties. Session length could be reduced to an hour and homework could be more specific. The group was fairly homogenous and this may have meant that concerns about group dynamics, disruption from agitated participants and those who inconsistently attended were not raised as they have been in previous research (Barrowclough et al., 2006).

6.5.3 Facilitator Suggestions for Improvements to the group

This pilot study can inform changes which could be made to the group in future trials. Improvements could be made to the content, for example including more current examples from the media of JTC, greater video and picture clarity and some more interactive tasks. Examples of beliefs being maintained by internal as well as external experiences could also be included in the content. Improvements could be made around the concept of a goal. Sessions were based around upsetting thoughts and what they get in the way of, however the word ‘goal’ appeared too general for participants and linked with ideas unrelated to the delusional belief and situations they may JTC in. Therefore it would be useful to build in one-to-one meetings prior to the group to discuss the main belief, situations where this is triggered and distressing and to use this to formulate a goal for the group. This would allow for the Goal Attainment Scale (Kiresuk, Smith & Cardillo, 1994) to be used, a measure of an individual’s progress towards a goal. Participants could have written individual coping cards to remind them of helpful key points alongside follow-up sessions to improve generalisation of tips to real life. How to complete homework could also be demonstrated to improve completion rates. A quiz could also be administered at intervals throughout the group to check learning and if any points may need repeating. Future groups might benefit from addressing less strongly held beliefs before targeting participant’s main belief. Main beliefs had typically been held by participants for a long period of time and are very resistant to change. Therefore less strongly held thoughts or a particular aspect of the main belief could be targeted first. This would teach participants the skills to use before more difficult thoughts are targeted. In CBT for depression negative automatic thoughts are targeted first, to teach participants the techniques and build confidence before addressing core beliefs (Padesky, 1994). Main beliefs may also be maintained by positive aspects or alternative beliefs maybe more distressing than the main belief, for example being mad maybe more aversive than beliefs of persecution, these other factors which may maintain the delusional belief may also need to be addressed in future groups. There were also factors which may have resulted in the first and third group being more successful than the second group. This exploration indicated it could be helpful to keep group sizes small, of around five participants and to keep group members consistent to improve cohesion. It could also be useful to include regular phone calls during the week to help participants generalise the tips to real life events.

6.6 Limitations

There are a number of potential limitations with this present study.

6.6.1 Differences between the Control and Experimental Group at Baseline

At baseline there were differences between the control and the experimental group, with typically the control group being less severe, which justifies the use of change scores. The difference may be due to a larger percentage of the control group having come from a specialist psychology service research register, rather than a CMHT. This group had recently received CBTp, which may have increased their belief flexibility, decreased their anxiety and resulted in decreased conviction at baseline (Garety et al., 2005).

6.6.2 Baseline; Sample Characteristics

The sample characteristics were similar to previous research in terms of baseline levels of activity, depression, anxiety and schemas (Jolley et al., 2006; Birchwood et al., 2000; Fowler et al., 2006; Freeman et al., 2004). However the sample had slightly higher belief flexibility and lower conviction and JTC than previous research (Ross et al, 2009; Waller et al., 2011). This indicates this sample was perhaps less severe, which may be due to the difference in the inclusion criteria, which was 50% conviction in a main belief in the current study, however was 75% for Waller et al., (2011) and Ross et al., (2009). The differences at baseline could also be due to mean duration of illness which was 8 years in the current study and around 16 years in Waller et al., (2011) and Ross et al., (2009).

6.6.3 Change in the Control Group over time

There was a change in the control group over time with some improvement in conviction and distress, which means change in the experimental group may not just be due to the intervention. It also means if there are specific factors in the control group but not the experimental group which created change, such as amount of recent CBT, significant differences as a result of the intervention in the experimental group could have been missed. There are a variety of factors which may have contributed to the observed fluctuations. The control group may have found the assessments therapeutic, discussing distressing beliefs and evidence with a compassionate therapist. It is also possible hope was instilled due to being on the waiting list and hope is an important factor in recovery (Resnick et al., 2005). Take up of treatment as usual and medication change may have also led to fluctuation. Small group size may have also lead to change

and some factors in psychosis vary naturally over time, for example conviction (Appelbaum, Robbins & Vesselinov, 2004; Brett-Jones et al., 1987), self-esteem (Thewissen, Bentall, Lecomte, van Os, & Myin-Germeys, 2006) and the beads task can be affected by anxiety (Ellet et al., 2008). A larger proportion of the control had also recently received CBT from a national specialist centre. Some research shows CBT can continue to have an effect after treatment ends, due to further time allowed to test abnormal beliefs (Wykes et al., 2008). Some participants in the control group and one in the experimental group were also currently receiving CBT and even if the CBT was not directly targeting their delusional beliefs (an exclusion factor) their conviction may have been influenced indirectly via other pathways postulated by the model (Garety et al., 2005), for example by anxiety or self-esteem. This illustrates a number of factors should be measured and controlled in future research, for example take up of TAU, medication, life events, previous therapy and levels of anxiety.

6.6.4 Sample

The main issue with the sample was the small sample size. This may have meant results were affected greatly by a few participants' scores and resulted in some baseline differences in this sample compared to previous research. Only a few participants in the sample JTC at baseline, therefore there is only a tentative conclusion that the intervention affects extreme responding. There was also missing data on some items, affecting results and power. Some changes in the control could be responsible for significant difference not changes in the experimental group, for example the Chi-square analysis for RTHC compared the number of people with a flexible answer between the control and experimental group at each time point. Therefore a significant difference in RTHC is not clinically meaningful and just reflects the difference due to dropouts and baseline. There was homogeneity in the focus of the group and the inclusion of only participants with distressing delusions. However, the sample was otherwise heterogeneous, with some participants having more pronounced negative symptoms or cognitive impairment which were not measured and may have affected attention, ability to interact with other group members and group cohesion (Johnson et al., 2008; Evan-Jones et al., 2009). Some participants were also receiving CBT at the time or had recently received CBT. Although CBT is not found to have an effect on JTC and a limited impact on delusional conviction (Garety et al., 2008), it is possible it may have had an impact on other outcomes (e.g. mood, activity levels). The study was also conducted over a period of 3 months and some participants may have had changes in

TAU and life events, effecting results. This is highlighted by one participant who increased her conviction at follow-up due to a stressful Christmas period and stated she had no time to review the handouts she had found helpful. There is also the uncertainty as to whether this sample is generalisable to other people with delusions, as this sample may have been more motivated as some self-referred from research registers.

6.6.5 Study Design

There are some limits in the design of the study. Firstly, the intervention was compared to a wait list control therefore it is not possible to determine if the changes in the experimental group were a result of positive group therapeutic processes, or CBT and the focus on JTC and BF. In future it may be helpful to compare the Thinking Well Group to a supportive therapy group. A further limitation is three intervention groups were completed in total and delivery of the intervention may have varied between them, possibly due to participants presenting problems or the amount of discussion. The principle investigator was also the therapist and randomiser and was not blinded to participant's allocation. This may have biased results and non-blinded trials can have inflated effect sizes (Wykes et al., 2005). The participants may also have displayed demand characteristics when completing the outcome measures to please the principle investigator, or provided biased feedback, however they were told to be honest to help give feedback to improve future groups. Time constraints and participant fatigue when completing outcome measures may have also affected participant's responses or resulted in errors. There was some variability in the number of sessions participants attended and although catch-up sessions were provided there is also the possibility that some participants did not attend enough sessions to have an adequate treatment dose.

There are also some weaknesses in the measures used. There were large reported benefits in the qualitative data and all participants gave high usefulness, enjoyment and interesting VAS scores. However, not all participants appeared to have positive change on the outcome measures used. This was also noted by Ruddle et al., (2012) who found 93% reported they felt the group helped them to deal more effectively with their problems where as only 53% improved on measured outcomes. This raised the question as to whether important benefits are being missed in outcome measures. From qualitative data it appeared changes occurred in other delusional beliefs or change in appraisal and flexibility of day to day situations participants' encountered, therefore it

would be helpful to measure key outcomes for less strongly held beliefs or day to day scenarios.

6.7 Methodological Improvements in Future Studies

In future trials as discussed a larger sample size would be vital. This would increase power to detect change, reduce the effect of natural fluctuation and would enable anxiety and dichotomous thinking, other factors in the cognitive model which affect conviction (Garety et al., 2005) to be co-varied out. A larger sample would also mean advance statistical techniques could control for clustering effects (Wykes et al., 2005), such as Multi-level Modelling. However, this procedure requires a larger sample size (>25 per group) and ideally at least 10 clusters per group, so would only be possible to control for in a larger RCT. Multiple testing could also be controlled for in future trials, especially if exploratory analyses are conducted. Multiple testing was not corrected for here as it was just a pilot study, with no power and comparisons were planned. Predictors of what lead some participants to change and not others could also be analysed and moderators and mediators of change could be explored. Group cohesion, universality and interpersonal learning could also be quantitatively measured to determine if they affect results (Ruddle et al., 2012). Other sources of information such as carers or support workers could be used to assess change in participants, as answers on self-reported measures have been found to correlate with insight (Lincoln, Lüllmann & Rief, 2007). Measures of attainment in individual goals such as by using the GAS (Kiresuk et al., 1994) would be helpful to measure change. Improvements could be made in the detail the qualitative analysis was conducted. Future analysis could look for more data driven themes or a second-rater could derive their own theoretical framework and a consensus agreed upon. This could have been conducted at a later stage and was beyond the scope of this project. The potential use of the group for relapse prevention could also be investigated. In summary, as previously discussed further methodological improvements could include increasing the length of the intervention and follow-up time to determine if benefits are sustained. It could also be helpful to measure change in beliefs held with less conviction and the therapist should be blind to prevent results being unintentionally biased (Wykes et al., 2008). In future participants who had recently or were currently receiving CBT should not be included and various factors should be controlled for, including take up of TAU, anxiety, life events, previous therapy, attendance and duration of participant's delusions.

6.8 Theoretical Implications

In line with the cognitive model proposed by Garety et al., (2005) of the reasoning processes in delusional conviction, it appeared that reduction in conviction in the experimental group was associated with improved belief flexibility and data gathering. This is also consistent with the evidence highlighted by So et al., (2010; 2012). There were some changes in the control group, with conviction changing while JTC appeared to remain stable. This may not be consistent with proposed changes in reasoning biases, however the model stipulates conviction can also be affected by anxiety and dichotomous thinking. This study suggests JTC and BF reasoning biases can be targeted successfully and pilot results suggest BF and JTC can be changed, which reduces conviction and improves mood and functioning. Change may have occurred as a result of targeting biases in the cognitive model and the group processes. Due to the small sample size no mediational analysis is possible, therefore no causal relationships can be inferred and clearly replication of this pilot study which is powered to detect change is warranted.

6.9 Clinical Implications

There are a variety of clinical implications. This study indicates a group intervention is acceptable and feasible. Dropout rates were low once participants attended the group. This study also adds to the evidence that specifically targeting JTC and BF can improve the biases, as well as conviction, affect, self-schemas and level of activity, in a sample that is typically resistant to change (Mizrahi et al., 2006; Garety et al., 2008). The improvements in belief flexibility are also clinically significant as BF is correlated with better response to CBTp (Garety et al., 1997). Specifically targeting these reasoning biases may be more successful than interventions targeting many biases (van Oosterhout et al., 2014; Moritz & Woodward, 2007) or presenting problems (Barrowclough et al., 2006). It also illustrates real life scenarios and less abstract tasks are helpful and can affect extreme responding (Ross et al., 2009). The group could run alongside individual CBTp sessions or be attended prior to CBTp, which may facilitate change in participants who are resistant. It may also be helpful for participants with lower delusional conviction to educate them about JTC. It appeared a small group size was optimal and having a closed group with the same members facilitated cohesion and may have positively affected outcomes. The group may not be suitable for some people who are grieving, as highlighted by one participant who had loss of a parent as a 'upsetting thought' which the tips could not be applied to, therefore illustrating the utility of an

individual session first to plan the goal. The group may also not be suitable for some people with social anxiety, as one person dropped out and one did not consent to the group as a result of this. Social anxiety maybe a moderator of engagement to the group and affect its feasibility. However with support and encouragement some people who were anxious about the group setting were able to engage. A further clinical implication is that it is possible to develop group therapeutic alliance with people with paranoia and delusions and groups could improve access to psychological therapies and cost-effectiveness. Lecomte et al., (2008) found novice therapist mental health workers successfully conducted a group with help of a manual. Therefore this could possibly be a low intensity intervention with training, or implemented with one skilled therapist and one novice therapist, to increase cost-effectiveness, efficacy and access (Wykes et al., 2005).

6.10 Summary

Pilot results suggest a brief group reasoning intervention is acceptable and feasible and can result in change in some outcomes after a brief intervention with participants who are typically difficult to engage and resistant to change (Mizrahi et al., 2006; Garety et al., 2008). The group holds promise in improving conviction, belief flexibility and JTC, as well as affect, self-schemas and activity levels. Qualitative feedback illustrates the group was well received and the perceived benefits of group processes. Pilot results indicate this intervention like Waller et al., (2011) maybe more effective than interventions targeting many reasoning biases (van Oosterhout et al., 2014; Moritz & Woodward, 2007), abstract interventions targeting JTC (Ross et al., 2009) and some interventions of generic group CBTp (Barrowclough et al., 2006; Gumley et al., 2003; Hall & Tarrier, 2003). There was still a subset of participants who did not change despite group therapeutic processes and exploration of the factors contributing to lack of change is required. The group is however cost-effective, may improve access to therapies compared to the individual interventions and qualitative results indicate participants benefitted from group therapeutic processes. Future trials powered to detect change are warranted to conclude if changes are robust and if they are maintained at follow-up.

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Appendix One: Letters of Ethical Approval

NRES Committee London - West London

Wandsworth Research Ethics Committee

St George's Hospital
South London REC Office (1) Room 1.14
1st Floor, Jenner Wing
St Georges University of London
Cranmer Terrace
Tooting, London
SW17 0RE

Telephone: 0208 725 2621

Facsimile: 0208 725 1980

17 October 2007

Professor Philippa A Garety
Professor of Clinical Psychology
Institute of Psychiatry, Kings College, London.
Department of Psychology, PO77
Institute of Psychiatry, De Crespigny Park, Denmark Hill,
London.
SE5 8AF

Dear Professor Garety

Full title of study: **Cognitive, emotional and social causes of psychosis: a translational research programme**

REC reference number: **07/H0803/140**

Thank you for your letter of 26 September 2007, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information was considered at the meeting of the Committee held on 15th October 2007. A list of the members who were present at the meeting is attached.

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.

Ethical review of research sites

The favourable opinion applies to the research sites listed on the attached form. Confirmation of approval for other sites listed in the application will be issued as soon as local assessors have confirmed they have no objection.

Conditions of approval

The favourable opinion is given provided that you comply with the conditions set out in the attached document. You are advised to study the conditions carefully.

Approved documents

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

<i>Document</i>	<i>Version</i>	<i>Date</i>	
Application	5.4	19 July 2007	
Investigator CV	2	18 July 2007	
Protocol	1	18 July 2007	
Covering Letter		19 July 2007	
Compensation Arrangements		10 May 2007	
Questionnaire			
Questionnaire: Sensations and Perceptions			
Questionnaire: Brief Core Schema Scales			
Questionnaire: BDI-II			
Questionnaire: BAI			
GP/Consultant Information Sheets	1	26 September 2007	
Participant Information Sheet: Study 5	II	26 September 2007	
Participant Information Sheet: Study 4	II	26 September 2007	
Participant Information Sheet: Study 3	II	26 September 2007	
Participant Information Sheet: Study 2	II	26 September 2007	
Participant Information Sheet: Study 1	II	26 September 2007	
Participant Consent Form: Study 1	1	18 July 2007	
Participant Consent Form: Study 5	1	18 July 2007	

Participant Consent Form: Study 4	1	18 July 2007	
Participant Consent Form: Study 3	1	18 July 2007	
Participant Consent Form: Study 2	1	18 July 2007	
Response to Request for Further Information		26 September 2007	
Article			
Brief Report			
Article			
Psychotic Symptom Rating Scale			
Auditory Hallucination Scale			
SAPS			
Scan Record Booklet			
SPQ-R Brief Version			
Card 2			
Card 1			
Article-Development of Scale			
Article			
Explanation of Experiences Record Sheet			
Maudsley Assessment			
Article			
Article-Neuropsychological Assessment			
Article-LEE			
Article-Pilot Validation Study			
Brief Measure of Social Support			
Article-Psychometric			
Article-Effects of Emotional Salience, Cognitive Effort			

R&D approval

All researchers and research collaborators who will be participating in the research at NHS sites should apply for R&D approval from the relevant care organisation, if they have not yet done so. R&D approval is required, whether or not the study is exempt from SSA. You should advise researchers and local collaborators accordingly.

Guidance on applying for R&D approval is available from <http://www.rdforum.nhs.uk/rdform.htm>.

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 Website > After Review

Here you will find links to the following

- a) Providing feedback. You are invited to give your view of the service that you have received from the National Research Ethics Service on the application procedure. If you wish to make your views known please use the feedback form available on the website <https://www.nationalres.org.uk/AppForm/Modules/Feedback/EthicalReview.aspx>.
- b) Progress Reports. Please refer to the attached Standard conditions of approval by Research Ethics Committees.
- c) Safety Reports. Please refer to the attached Standard conditions of approval by Research Ethics Committees.
- d) Amendments. Please refer to the attached Standard conditions of approval by Research Ethics Committees.
- e) End of Study/Project. Please refer to the attached Standard conditions of approval by Research Ethics Committees.

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@nationalres.org.uk .

07/H0803/140	Please quote this number on all correspondence
---------------------	---

With the Committee's best wishes for the success of this project

Yours sincerely

Dr Christine Heron

Chair

Email: recwand@stgeorges.nhs.uk

Enclosures: List of names and professions of members who were present at the meeting.

Standard approval conditions

Site approval form

Copy to: Ms S Jolly, King's College, London.

A Withers, R&D Office at St George's, University of London (SGUL)

NRES Committee London - West London

Nottingham REC Centre
The Old Chapel
Royal Standard Place
NG1 6FS

Tel: 0115 8839309
25 January 2013

Suzanne Jolley
Research Clinical Psychologist
PO77 Department of Psychology
Kings College London
Institute of Psychiatry
Denmark Hill
London SE5 8AF

Dear Suzanne

Study title:	Cognitive, emotional and social causes of psychosis: a translational research programme
REC reference:	07/H0803/14007/
Amendment number:	
Amendment date:	21 December 2012

Thank you for your email of 21 December 2012, notifying the Committee of the above amendment.

The Committee does not consider this to be a “substantial amendment” as defined in the Standard Operating Procedures for Research Ethics Committees. The amendment does not therefore require an ethical opinion from the Committee and may be implemented immediately, provided that it does not affect the approval for the research given by the R&D office for the relevant NHS care organisation.

Documents received

The documents received were as follows:

Document	Version	Date	
Notification of a Minor Amendment		21 December 2012	

Statement of compliance

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

07/H0803/140: **Please quote this number on all correspondence**

Yours sincerely



Wendy Rees
Assistant Committee Co-ordinator

E-mail: NRESCCommittee.London-WestLondon@nhs.net

Copy to: *P Garety, Chief Investigator*

Nottingham REC Centre
The Old Chapel
09 July 2013

Dr Amy Hardy
Research Clinical Psychologist
P077 Department of Psychology
King's College, London.
Institute of Psychiatry,
De Crespigny Park, Denmark Hill,
London.
SE5 8AF
Dear Dr Hardy

Study title:	Cognitive, emotional and social causes of psychosis: a translational research programme
REC reference:	07/H0803/140
Amendment date:	05 July 2013
IRAS project ID:	

Thank you for your letter of 05 July 2013, notifying the Committee of the above amendment.

The Committee does not consider this to be a “substantial amendment” as defined in the Standard Operating Procedures for Research Ethics Committees. The amendment does not therefore require an ethical opinion from the Committee and may be implemented immediately, provided that it does not affect the approval for the research given by the R&D office for the relevant NHS care organisation.

Documents received

The documents received were as follows:

Document	Version	Date	
Notification of a Minor Amendment		05 July 2013	

Statement of compliance

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

07/H0803/140:

Please quote this number on all correspondence

Yours sincerely



Vic Strutt

Assistant Committee Co-ordinator

E-mail: NRESCommittee.London-WestLondon@nhs.net

Copy to:

Thinking Well Group

Making sense of situations

Thinking Well Group Project

What is the project about?

Paranoia is common symptom of psychosis. It has a significant effect on wellbeing and quality of life, and often persists despite treatment. Current cognitive-behavioural treatments for psychosis have only small to modest effects on paranoia. Developing more effective interventions is therefore a priority.

Previous research has shown that paranoia is maintained by reasoning biases such as jumping to conclusions (i.e. not gathering enough data before arriving at a conclusion) and reduced belief flexibility (having fixed beliefs and not believing there is a possibility they are mistaken). Our research team has shown that a computerised individual intervention targeting these reasoning biases is effective reducing the severity of paranoia and improving coping (Waller et al 2010; Garety et al., in preparation).

What does the project involve?

Part One

Anyone can be referred who has a schizophrenia-spectrum diagnosis. We will ask them to attend a one-off meeting to complete a number of questionnaires. These include measures of psychotic symptoms, mood and general functioning.

Do they get paid? Yes, £10 **How long does it take?** About an hour

Part Two

Suitable participants will be invited to attend a group. Participants will be randomised 2:1 to receive group intervention straight away or in a few months. 75% of participants will receive the intervention straight away. Outcomes will be taken pre-group, post-group and at two week follow-up. Outcomes will include HONOS and CORE-10.

Do they get paid? Yes, £20

How will my client benefit?

The computerised intervention has been shown to be helpful in reducing paranoia severity, with service users' reporting they found it interesting and helpful. Research suggests that there may be additional benefits from delivering the intervention in a group format, as people have the chance to share experiences and learn from others. Participants will also be paid for their involvement.

What does the group involve

The six week group is for people with a schizophrenia-spectrum diagnosis who are experiencing paranoia. *It is an adaptation of the individual computer intervention targeting reasoning biases that has previously been found to be helpful.* The group will involve discussion, CBT techniques as well as modules from a computerised therapy package which targets reasoning biases. The group aims to help people manage upsetting situations by;

- Learning coping strategies
- Learning about what can influence our first thoughts and judgements
- Work towards a personal goal
- Learning different ways of reacting in upsetting situations
- Discussing and sharing experiences

Participants Experience

'I learned to slow down and think carefully about the situation and be more hesitant. In the future I will be very hesitant about coming to a fixed conclusion.'

'When I see people laughing and talking about me I try thinking that I'm jumping to conclusions. When I see people with mobiles I've been trying to give them the benefit of the doubt – they might be taking pictures of me, but they might not. It's less distressing thinking like this...'

'I noticed myself jumping to conclusions. A woman was walking round the estate. Under normal circumstances I would have found this really dodgy, but I asked a neighbour who'd been out gardening and she told me she was looking for her lost cat. I felt a lot better then.'

Who can be referred?

Anyone aged 18-65 with a schizophrenia-spectrum diagnosis.

How can you refer?

- Contact Alison Jones, Clinical Psychologist in Training, (07455519447) (Alison.a.jones@kcl.ac.uk) to make a referral.

When and Where?

Meets for 6 weeks at SHARP, Friday 11.30-1pm.

Part of Doctorate in Clinical Psychology research

Staff involved; Alison Jones, Dr Helen Waller, Dr Amy Hardy, Dr Suzanne Jolley, Prof Phillipa Garety.

Thinking Well Group

Making sense of situations

What is the Thinking Well Study?

There are two parts to the research:

Part One:

First, we are asking anyone to attend a one-off meeting to complete a number of questionnaires looking at your beliefs and how you think and feel.

You will be paid £10 for taking part.

Part Two:

We are offering a brief talking group to some of the people who complete part one. We have staff in your service to help deliver the group and we wish to compare this with your usual treatment.

The group aims to help people manage upsetting situations by;

- Learning coping strategies
- Learning about what can influence our first thoughts and judgements
- Work towards a personal goal
- Learning different ways of reacting in upsetting situations
- Discussing and sharing experiences

In the past people who have received the therapy individually have found it interesting and helpful. We wish to look at whether it can be delivered in a group format.

What would the Group involve?

- **Questionnaires:** You will be asked to complete some questionnaires on 3 occasions
- **Therapy:** You will meet with a group of about 5 other service users and 2 therapists. The group will include discussion and activities from a computer programme. There are 6 weekly sessions. You will either have therapy straight away or in around three months.
- You will be paid £20 for taking part in the study.
- You will have free transport and free refreshments

How do you take part in the Thinking Well study?

If you are interested in finding out more about the study please tell someone in your service that you are interested, or contact the study team who will be happy to hear from you!

Alison Jones: 07455519447
(alison.jones2@slam.nhs.uk)

Helen Waller: 020 7848 4016
(helen.waller@kcl.ac.uk)

Appendix Four: Participant Consent Form

Institute of
Psychiatry

at The Maudsley

Alison Jones
Trainee Clinical Psychologist
Addiction Sciences Building
Institute of Psychiatry
De Crespigny Park
Denmark Hill
London SW9 6AA

Tel: 07455519447

Email:
Alison.jones2@slam.nhs.uk

KING'S
College
LONDON
Founded 1829

University of London

CONSENT FORM - Version 1 (16th February 2013)

The Thinking Well Group

Participant Identification number for this project:

Please initial boxes:

1. I confirm that I have read the information sheet dated February 2013 for the above study, have had the opportunity to consider the information and ask questions. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without my medical care or legal rights being affected. ☐

3. I am willing for the researcher to contact my team with any information relevant to my care, should this become apparent while I am taking part in the study. ☐

4. I am willing for the researchers to record this information in my electronic notes. ☐

5. I am willing for researchers to access sections of my medical notes, if it is relevant to my taking part in this research (for example, to get an address, age or confirm clinical information). I give permission for these individuals to have access to my records for this purpose. ☐

6. I am willing for my meetings with the researcher to be audio-recorded.

7. I am willing for my meetings with my therapist or care co-ordinator to be audio-recorded. ☐

8. I understand that information relating to me taking part in this study will be stored on an electronic database for up to 7 years. ☐

9. I agree to take part in the above study. ☐

Name of participant

Date

Signature

10. I have explained the study to this participant and answered their questions honestly and fully. ☐

Name of person taking consent
(if different from researcher)

Date

Signature

Name of researcher

Date

Signature

Appendix Five; Participant Summary and Homework Sheets

Some common ways of coping with upsetting thoughts:

Module 1: Understanding Upsetting Thoughts

Talking yourself through it:

- Trying to think more positively
- For example:
 - Thinking about times when you have managed in the situation and things have gone well.
 - Not letting the worries get in the way of you doing what you want or need to do.
 - Thinking of how you will feel once you have completed the task.



Module 1: Understanding Upsetting Thoughts

Distraction

- Sometimes it can help to distract ourselves from the upsetting thoughts going through our minds.
- Some common examples include:
 - Listening to music
 - Looking carefully at your surroundings
 - Focussing on the task in hand
 - Reading a magazine or paper
 - Counting things



Module 1: Understanding Upsetting Thoughts

Compassion and Kindness:

- When we feel afraid or low, we tend to think about upsetting or scary times
- It can help to think through what someone who cares for you might say to you if they knew you were feeling this way.
- E.g. 'My cousin always tells me that I'll be ok and things will start to feel better.'



Module 1: Understanding Upsetting Thoughts

Relaxation:

- Different people find different things relaxing, so it's helpful to think about what might work best for you.
- Some common examples are:
 - Slow breathing
 - Thinking about happy memories
 - Having a warm bath
 - Listening to calming music
 - Reading a book or magazine



Goal for the meetings:

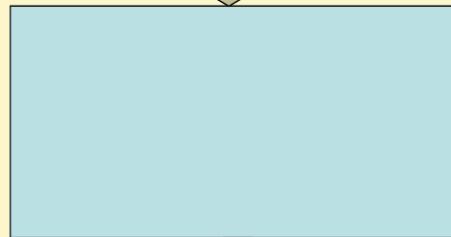
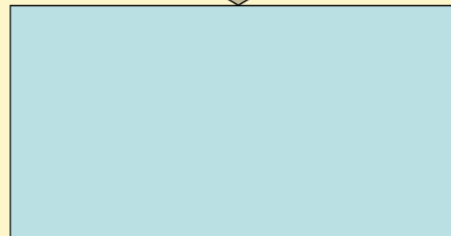
What happens to make me feel upset, scared or angry?



What is my first, upsetting reaction?



What does this stop me from being able to do?

A large, empty, light blue rectangular box for notes.A large, empty, light blue rectangular box for notes.A large, empty, light blue rectangular box for notes.

Thinking Well Tips: Week 2

- o All of us 'jump to conclusions' sometimes.
- o We come to a conclusion or make a decision very quickly, without enough information.
- o This can lead us to make mistakes.
- o Using the skills learnt in the training package we can try to reduce our jumping to conclusions.

As we discussed today, our first reactions can sometimes lead to us feel upset or can stop us from doing the things we want to do.

So it can help to try out slightly different ways of reacting in these situations.

When you have an upsetting thought, try out the following tips:

Tip 1: Try to use a coping strategy

- o Is there something nice / relaxing I can do to take my mind off it?
- o How might a trusted friend or family member try to help me if they knew I was feeling this way?
- o OR How might I help someone I care about who was feeling this way?



Try out a coping strategy!

Tip 2: Look for more information

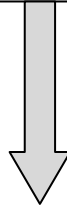
- o It can be difficult to understand something and come to a conclusion without having all the information.
- o Looking for more information means we are more likely to have a better understanding of what might be going on. This means that we are less likely to make mistakes.



Look for more evidence before reaching an upsetting conclusion

Practicing Using the Thinking Well Tips: Week 2

PLAN: Where and when will I practice? (Try to practice in the situation you chose as your goal if possible)



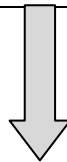
What thinking well tips can I try out?



Can you try to use a coping strategy?



If I look for more information is there a less upsetting way of looking at the situation?



How did it go? How did I feel after using the thinking well tips?

Thinking Well Tips: Week 3

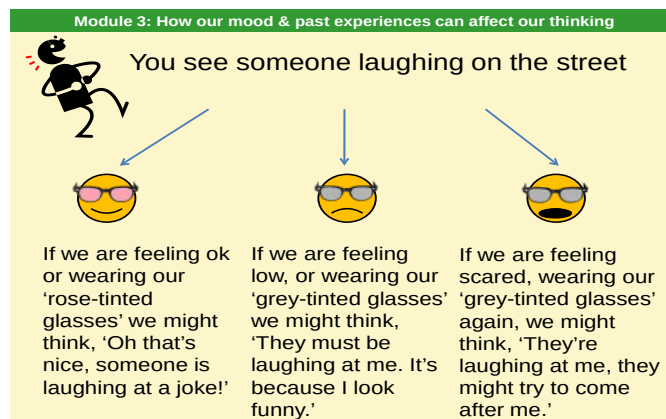
- o When we have upsetting thoughts it can be helpful to try to think through how our mood and past experiences might be affecting how we are seeing the situation – in case things are not as bad as we first thought.
- o When you have an upsetting thought, try out the following tips:

Tip 3: Your mood can affect how you see things



Think through how you might see the situation if you were feeling more calm, relaxed or happy

- o The same situation can be viewed in different ways depending on our mood at the time!
- o If we're in a good mood or feel good about ourselves, the way we think tends to match this! The same goes for if we are in a bad mood.



Tip 4: The past does not always predict the future



Think about how your past experiences might affect your thinking – remember that the past does not always predict the future

- o Sometimes we see things in a way that matches events from the past - if we've had similar experiences in the past, or experiences which have made us feel a similar way, we might worry that it is happening again.

- o Even small things can trigger off big feelings from the past and make us feel as if it is happening again.
- o Sometimes we can get 'stuck' in a certain way of thinking based on our past experiences - a bit like a train always going down the same tracks
- o But the past does not always predict the future - sometimes things are not as bad as we first thought!

Practicing Using the Thinking Well Tips: Week 3

PLAN: Where and when will I practice? (Try to practice in the situation you chose as your goal if possible)



What thinking well tips can I try out?



Think through how you might see the situation if you were feeling more calm, relaxed or happy



Think about how your past experiences might affect your thinking – remember that the past does not always predict the future



How did it go? How did I feel after using the thinking well tips?

Thinking Well Tips: Week 4

When you have an upsetting thought, try out the following tips: to check out if there is a chance that things weren't as bad as you first thought:

Tip 5:



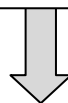
Could there be a less upsetting explanation?

- When we have strong ideas or first impressions it can sometimes it can be difficult to think of other possible explanations! BUT things are not always as they first seem
- There can be different ways of thinking about situations.
- When we are feeling low or having difficult past experiences we might be more likely to view the situation as negative, about us and a sign of danger.
- It can be helpful to think about whether there could be a less upsetting innocent, or even positive explanation for what is going on.

Module 4: Different ways of thinking about situations	Module 4: Different ways of thinking about situations
2. What a coincidence! - Could it be just a chance encounter? - Perhaps somebody just happened to be there at that time or they just happened to look over in your direction. 	1. Think Positive! - Could things be better than I first thought? - If I was feeling really good about myself, calm and relaxed how might I see the situation differently? 
Module 4: Different ways of thinking about situations 3. It's not me, it's you! - Could it be something to do with the situation or other person and not really about you? - Perhaps you just happened to be at the wrong place at the wrong time and it wasn't personal. - Could the person have made a mistake? - Could it be that they've had a really bad day or maybe they are just not a very polite person! 	

Practicing Using the Thinking Well Tips: Week 4

PLAN: Where and when will I practice? (Try to practice in the situation you chose as your goal if possible)



What thinking well tips can I try out?



Could there

How did



Thinking Well Tips: Week 5

When you have an upsetting thought, try out the following tips: to check out if there is a chance that things weren't as bad as you first thought:

Tip 5:



Look for evidence that your first thought might not be true, at least on this occasion.

- If we feel very strongly about something we often find it easier to build up more and more evidence to support it.
 - When we are looking out for things, we are more likely to find them!
 - We fit things into our theory, rather than checking out if there is an alternative.
- But we forget to look for any evidence that it might not fit in all situations or isn't quite right.
- This is something that we all do as human beings: even scientists do this!

Meeting 5

- There are lots of stories of scientists being so sure about their theory that they spend years searching for more and more evidence to support it.
- But in order to really test an idea we need to also look for evidence that goes against it!
- We need to think about any evidence that suggests the theory is not quite right or doesn't fit all situations.



- Think about an ongoing upsetting thought you might have that keeps coming up.
- Next time this comes up, how could you check out whether your first upsetting thought might not be 100% true, at least on this one occasion?
- Remember that we have a tendency to look for evidence to support strong ideas, but we often forget to look out for evidence that might go against our belief!

Practicing Using the Thinking Well Tips: Week 5

PLAN: Where and when will I practice? (Try to practice in the situation you chose as your goal if possible)



What thinking well tips can I try out?



Look for evidence that your first thought might not be true, at least on this occasion.



How did it go? How did I feel after using the thinking well tips?

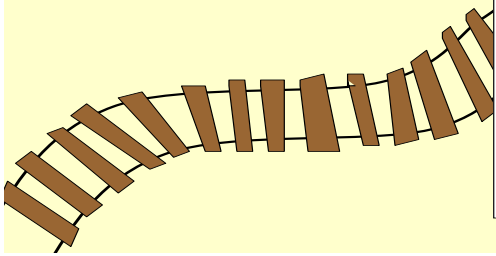
Thinking Well Tips: Week 6

When you have an upsetting thought, try out the following tips: to check out if there is a chance that things weren't as bad as you first thought:

Tip 6:

Meeting 6

Situation where I often have upsetting thoughts =



Where do the old train tracks lead me?

•

What is usually my first reaction to this situation?

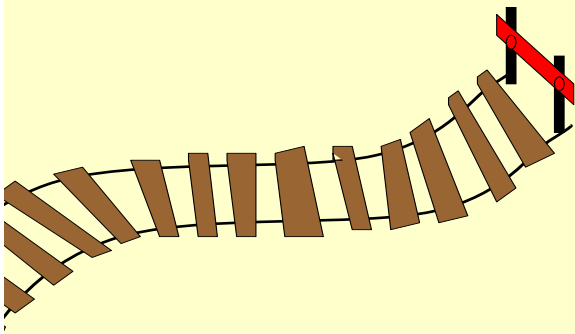
•

How does this make me feel and act?

•

Meeting 6

If I STOP, slow down and try reacting a different way, how does this make me feel?



Slow down and try different way of reacting:

•

•

•

•

•

•

How does this make me feel?

•

Thinking Well Tips

Tip One;



Try out a coping strategy!

- What do you remember about this tip?

.....

.....

How might the tip be helpful for you?

-
-

- How can you continue to use this tip in your life?

.....

.....

Tip Two;



Look for more

- What do you remember about this tip?

.....

.....

- How might the tip be helpful for you?

.....

.....

- How can you continue to use this tip in your life?

.....

.....

Tip Three;



**Remember: your mood
can affect how you see
things**

- What do you remember about this tip?

.....

.....

- How might the tip be helpful for you?

.....

.....

- How can you continue to use this tip in your life?

Tip Four;



**Remember: the past doesn't
always predict the future**

- What do you remember about this tip?

.....
.....

- How might the tip be helpful for you?

.....
.....

- How can you continue to use this tip in your life?

.....
.....

Tip Five;



**Could there be a less
upsetting explanation?**

- What do you remember about this tip?

.....
.....

- How might the tip be helpful for you?

.....
.....

- How can you continue to use this tip in your life?

.....
.....

Tip Six;



**Look for evidence that your first
thought might not be true, at least on
this occasion.**

- What do you remember about this tip?

.....
.....

- How might the tip be helpful for you?

.....
.....

- How can you continue to use this tip in your life?

.....
.....

Appendix Six: Outcome Measures

PRP

Funded by The Wellcome Trust

Participant number

Date

Add to this BAI/BDI/SAPS/WTAR/

Time Budget Measure

We are interested in finding out a bit more about how you spend your time. This would include activities outside the home, such as work, study, any groups or centres that you attend, how you spend your leisure time, as well as home-based things; for example, watching TV, reading, cooking and housework.

I'd also like to know about social activities- seeing or going out with friends, talking on the phone, chatting to neighbours or other people and so on.

Thinking about the past week, perhaps we could divide up each day and think about what you can remember doing? Has the past week been an average week for you?

N.B. Start with **yesterday**. Be aware where the weekend falls.

Morning	N	R	Middle of Day	N	R	Afternoon	N	R	Evening	N	R
Morning	N	R	Middle of Day	N	R	Afternoon	N	R	Evening	N	R
Morning	N	R	Middle of Day	N	R	Afternoon	N	R	Evening	N	R

Morning	N	R	Middle of Day	N	R	Afternoon	N	R	Evening	N	R

Morning	N	R	Middle of Day	N	R	Afternoon	N	R	Evening	N	R

Are any of the activities that you have just told me about things that you have recently taken up, or things that you had previously stopped doing but have recently restarted? By recently, I mean within the past six months? (go through each day of the week)

Are there any things that you are not doing at the moment, but have plans to do, or would like to do in the future?

Do you live with, or see a lot of, a family member or someone with whom you have a caring relationship? (Caring relationship: any family member living with ppt, inc. partners & spouse)

How much time each week do you spend in face to face contact with them? (prompt: Would you say you saw them for at least 10 hours a week?)

How satisfied are you with what you have been doing in the past week on a scale of 1-5, with 1 = not satisfied, and 5 = very satisfied?

1	2	3	4	5
---	---	---	---	---

Beliefs About Self and Others

This questionnaire lists beliefs that people can hold about themselves and other people. Please indicate whether you hold each belief (NO or YES). If you hold the belief then please indicate how strongly you hold it by circling a number (1-4). Try to judge the beliefs on how you have generally, over time, viewed yourself and others. Do not spend too long on each belief. There are no right or wrong answers and the first response to each belief is often the most accurate.

			Believe it slightly	Believe it moderately	Believe it very much	I believe it totally
<i>MYSELF</i>						
I am unloved	NO	YES→	1	2	3	4
I am worthless	NO	YES→	1	2	3	4
I am weak	NO	YES→	1	2	3	4
I am vulnerable	NO	YES→	1	2	3	4
I am bad	NO	YES→	1	2	3	4
I am a failure	NO	YES→	1	2	3	4
I am respected	NO	YES→	1	2	3	4
I am valuable	NO	YES→	1	2	3	4
I am talented	NO	YES→	1	2	3	4
I am successful	NO	YES→	1	2	3	4
I am good	NO	YES→	1	2	3	4
I am interesting	NO	YES→	1	2	3	4
<i>OTHER PEOPLE</i>						
Other people are hostile	NO	YES→	1	2	3	4
Other people are harsh	NO	YES→	1	2	3	4
Other people are unforgiving	NO	YES→	1	2	3	4
Other people are bad	NO	YES→	1	2	3	4
Other people are devious	NO	YES→	1	2	3	4
Other people are nasty	NO	YES→	1	2	3	4
Other people are	NO	YES→	1	2	3	4

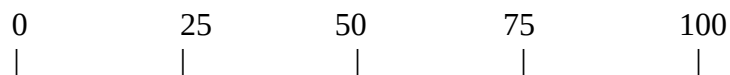
fair						
Other people are good	NO	YES→	1	2	3	4
Other people are trustworthy	NO	YES→	1	2	3	4
Other people are accepting	NO	YES→	1	2	3	4
Other people are supportive	NO	YES→	1	2	3	4
Other people are truthful	NO	YES→	1	2	3	4

Belief Ratings Scale – B1 (MADS)

Maudsley Questionnaire

A little while ago we talked about... (list current upsetting beliefs) – which do you think is the most upsetting at the moment?

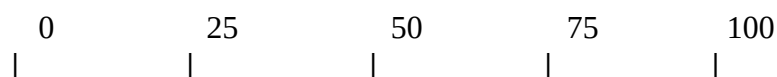
How much do you **believe this is true?**



*Believe
not at all*

*Believe
absolutely*

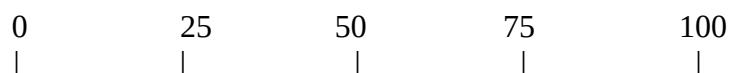
When you think about it now, is it at all **possible that you are mistaken** about this?
(Remember to write down if they are hesitant)



*Not at all
possible*

*Very
possible*

How much does this **upset** you?

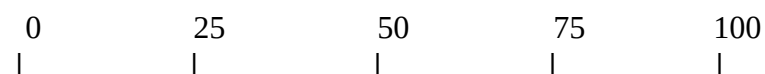


Not at all

Moderately

Totally

How much does this **occupy your mind?**



Not at all

Moderately

Totally

Could you tell me about the reasons why you continue to have this feeling?

Has anything happened in the last week?

Yes ☐ No ☐

Do you ever (in the last month) look for any evidence or information either to confirm your view or to test whether it may be mistaken?

Yes ☐ No ☐

Asking you to think about it now – can you think of anything at all that goes against X [insert main belief]?

Yes ☐ No ☐

Explanations of Experiences

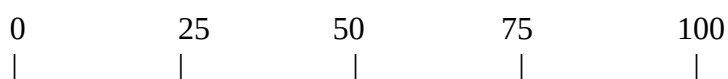
We've talked a bit about the things that led you to conclude.....You talked about.....that happened at the start and.....that has happened since. Asking you to think about it now can you think of any other explanations for the experiences that you have described? Are there any other reasons—other than.....that could possibly account for these experiences even if you think they are very unlikely?

Are there any other reasons that could possibly account for your experiences even if you think they are very unlikely?

Explanation 1 (main belief):

Explanation 2:

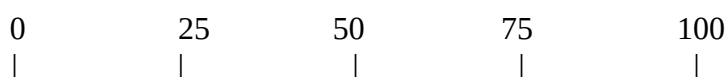
How much do you **believe this is true?**



*Believe
not at all*

*Believe
absolutely*

How much does this explanation **upset** you?

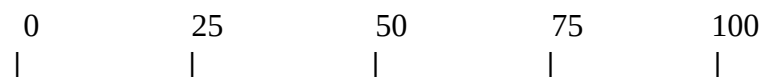


Not at all

Moderately

Totally

How much does this **occupy your mind?**



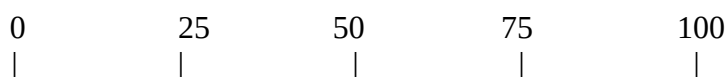
Not at all

Moderately

Totally

Explanation 3:

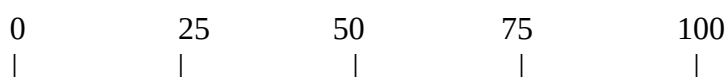
How much do you **believe this is true?**



*Believe
not at all*

*Believe
absolutely*

How much does this explanation **upset** you?

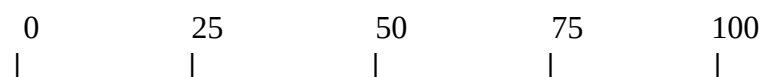


Not at all

Moderately

Totally

How much does this **occupy your mind?**



Not at all

Moderately

Totally

Let me suggest something to you – something that does not fit with your view and you could tell me how you think you would react right now.

Suggestion:

Response:

RTHC -	Ignores or rejects	3
	Accommodates	2
	Changes conviction	1
	Dismisses belief	0

JTC

Ok, we're now going to do a task using my laptop. Do JTC.

Trial 1

- Correct/Incorrect
- Number of beads taken.....

Trial 2

- Correct/Incorrect
- Number of beads taken.....

REFER TO REFERENCE BOOKLET OF SLIDES TO KEEP TRACK.

BDI-II

Date: _____

Name: _____

Marital Status: _____

Age: _____

Sex: _____

Occupation: _____

Education: _____

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the **one statement** in each group that best describes the way you have been feeling during the **past two weeks, including today**. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness

- 0 I do not feel sad.
- 1 I feel sad much of the time.
- 2 I am sad all the time.
- 3 I am so sad or unhappy that I can't stand it.

2. Pessimism

- 0 I am not discouraged about my future.
- 1 I feel more discouraged about my future than I used to be.
- 2 I do not expect things to work out for me.
- 3 I feel my future is hopeless and will only get worse.

3. Past Failure

- 0 I do not feel like a failure.
- 1 I have failed more than I should have.
- 2 As I look back, I see a lot of failures.
- 3 I feel I am a total failure as a person.

4. Loss of Pleasure

- 0 I get as much pleasure as I ever did from the things I enjoy.
- 1 I don't enjoy things as much as I used to.
- 2 I get very little pleasure from the things I used to enjoy.
- 3 I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings

- 0 I don't feel particularly guilty.
- 1 I feel guilty over many things I have done or should have done.
- 2 I feel quite guilty most of the time.
- 3 I feel guilty all of the time.

6. Punishment Feelings

- 0 I don't feel I am being punished.
- 1 I feel I may be punished.
- 2 I expect to be punished.
- 3 I feel I am being punished.

7. Self-Dislike

- 0 I feel the same about myself as ever.
- 1 I have lost confidence in myself.
- 2 I am disappointed in myself.
- 3 I dislike myself.

8. Self-Criticalness

- 0 I don't criticize or blame myself more than usual.
- 1 I am more critical of myself than I used to be.
- 2 I criticize myself for all of my faults.
- 3 I blame myself for everything bad that happens.

9. Suicidal Thoughts or Wishes

- 0 I don't have any thoughts of killing myself.
- 1 I have thoughts of killing myself, but I would not carry them out.
- 2 I would like to kill myself.
- 3 I would kill myself if I had the chance.

10. Crying

- 0 I don't cry any more than I used to.
- 1 I cry more than I used to.
- 2 I cry over every little thing.
- 3 I feel like crying, but I can't.

Subtotal Page 1

Continued on Ba

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Psych

Product Number 015

11. Agitation

- 0 I am no more restless or wound up than usual.
- 1 I feel more restless or wound up than usual.
- 2 I am so restless or agitated that it's hard to stay still.
- 3 I am so restless or agitated that I have to keep moving or doing something.

12. Loss of Interest

- 0 I have not lost interest in other people or activities.
- 1 I am less interested in other people or things than before.
- 2 I have lost most of my interest in other people or things.
- 3 It's hard to get interested in anything.

13. Indecisiveness

- 0 I make decisions about as well as ever.
- 1 I find it more difficult to make decisions than usual.
- 2 I have much greater difficulty in making decisions than I used to.
- 3 I have trouble making any decisions.

14. Worthlessness

- 0 I do not feel I am worthless.
- 1 I don't consider myself as worthwhile and useful as I used to.
- 2 I feel more worthless as compared to other people.
- 3 I feel utterly worthless.

15. Loss of Energy

- 0 I have as much energy as ever.
- 1 I have less energy than I used to have.
- 2 I don't have enough energy to do very much.
- 3 I don't have enough energy to do anything.

16. Changes in Sleeping Pattern

- 0 I have not experienced any change in my sleeping pattern.
- 1a I sleep somewhat more than usual.
- 1b I sleep somewhat less than usual.
- 2a I sleep a lot more than usual.
- 2b I sleep a lot less than usual.
- 3a I sleep most of the day.
- 3b I wake up 1-2 hours early and can't get back to sleep.

17. Irritability

- 0 I am no more irritable than usual.
- 1 I am more irritable than usual.
- 2 I am much more irritable than usual.
- 3 I am irritable all the time.

18. Changes in Appetite

- 0 I have not experienced any change in my appetite.
- 1a My appetite is somewhat less than usual.
- 1b My appetite is somewhat greater than usual.
- 2a My appetite is much less than before.
- 2b My appetite is much greater than usual.
- 3a I have no appetite at all.
- 3b I crave food all the time.

19. Concentration Difficulty

- 0 I can concentrate as well as ever.
- 1 I can't concentrate as well as usual.
- 2 It's hard to keep my mind on anything for very long.
- 3 I find I can't concentrate on anything.

20. Tiredness or Fatigue

- 0 I am no more tired or fatigued than usual.
- 1 I get more tired or fatigued more easily than usual.
- 2 I am too tired or fatigued to do a lot of the things I used to do.
- 3 I am too tired or fatigued to do most of the things I used to do.

21. Loss of Interest in Sex

- 0 I have not noticed any recent change in my interest in sex.
- 1 I am less interested in sex than I used to be.
- 2 I am much less interested in sex now.
- 3 I have lost interest in sex completely.

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on of copyright laws.

Subtotal Page 2

Subtotal Page 1

1. again
2. address
3. cough
4. preview
5. although
6. most
7. excitement
8. know
9. plumb
10. decorate
11. fierce
12. knead
13. aisle
14. vengeance
15. prestigious
16. wreath
17. gnat
18. amphitheatre
19. lieu
20. grotesque
21. iridescent
22. ballet
23. equestrian
24. porpoise
25. aesthetic
26. conscientious
27. homily
28. malady
29. subtle
30. fecund
31. palatable
32. menagerie
33. obfuscate
34. liaison
35. exigency
36. xenophobia
37. ogre
38. scurrilous
39. ethereal
40. paradigm
41. perspicuity
42. plethora
43. lugubrious
44. treatise
45. dilettante
46. vertiginous
47. ubiquitous
48. hyperbole
49. insouciant
50. hegemony



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Meeting Your Assessment Needs

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A B C D E F 1 2 3 4 5 6



NAME _____

DATE _____

Below is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by each symptom during the PAST WEEK, INCLUDING TODAY, by placing an X in the corresponding space in the column next to each symptom.

	NOT AT ALL	MILDLY It did not bother me much.	MODERATELY It was very unpleasant, but I could stand it.	SEVERELY I could barely stand it.
1. Numbness or tingling.				
2. Feeling hot.				
3. Wobbliness in legs.				
4. Unable to relax.				
5. Fear of the worst happening.				
6. Dizzy or lightheaded.				
7. Heart pounding or racing.				
8. Unsteady.				
9. Terrified.				
10. Nervous.				
11. Feelings of choking.				
12. Hands trembling.				
13. Shaky.				
14. Fear of losing control.				
15. Difficulty breathing.				
16. Fear of dying.				
17. Scared.				
18. Indigestion or discomfort in abdomen.				
19. Faint.				
20. Face flushed.				
21. Sweating (not due to heat).				

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SCALE FOR THE ASSESSMENT OF POSITIVE SYMPTOMS (SAPS)

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INTRODUCTION

This scale is designed to assess positive symptoms, principally those that occur in schizophrenia. It is intended to serve as a complementary instrument to the Scale for the Assessment of Negative Symptoms (SANS). These positive symptoms include hallucinations, delusions, bizarre behavior, and positive formal thought disorder.

As in the case of the SANS, the investigator using this instrument will need to decide on an appropriate "time set". The instrument was developed with the exception that, in general, the time set will cover the past month as in the case of SANS. This scale can also be used in psychopharmacologic research in order to make weekly ratings and chart the subject's response to treatment.

Investigators using this instrument, particularly in combination with the SANS, will need to use a standard clinical interview in order to evaluate the subject's symptoms. Since positive formal thought disorder is an important positive symptom, it is recommended that, in doing this interview, the investigator begin talking with the subject on a relatively neutral topic for five to ten minutes in order to observe the subject's manner of speaking and responding. Thereafter, he can begin to ask specific questions about the various positive symptoms. Suggested probes are provided in the interview guide.

In addition to using a clinical interview, the investigator should also draw on other sources of information, such as direct observation, reports from the subject's family, reports from nurses, and reports from the subject himself. In general, the subject can usually be considered a relatively reliable informant concerning delusions and hallucinations if he is able to communicate clearly and will comply with a clinical interview. On the other hand, the interviewer will usually have to rely on observation and reports from outside sources in order to evaluate bizarre behavior and positive formal thought disorder.

The last item describing each major type of positive symptom is an overall global rating. This should be a true global rating based on taking into account both the nature and the severity of the various types of symptoms observed. In some cases, a single symptom (e.g., extremely severe persecutory delusions) may lead to a very high global rating, even if other symptoms of this type are not present.

HALLUCINATIONS

Hallucinations represent an abnormality in perception. They are false perceptions occurring in the absence of some identifiable external stimulus. They may be experienced in any of the sensory modalities, including hearing, touch, taste, smell, and vision. True hallucinations should be distinguished from illusions (which involve a misperception of an external stimulus), hypnogogic and hypnopompic experiences (which occur when the subject is falling asleep or waking up), or normal thought processes that are exceptionally vivid. If the hallucinations have a religious quality, then they should be judged within the context of what is normal for the subject's social and cultural background. Hallucinations occurring under the immediate influence of alcohol, drugs, or serious physical illness should not be rated as present. The subject should always be requested to describe the hallucination in detail.

Auditory Hallucinations

The subject has reported voices, noises, or sounds. The commonest auditory hallucinations involve hearing voices speaking to the subject or calling him names. The voices may be male or female, familiar or unfamiliar, and critical or complimentary. Typically, subjects suffering from schizophrenia experience the voices as unpleasant and negative. Hallucinations involving sounds rather than voices, such as noises or music, should be considered less characteristic and less severe.

Have you ever heard voices or other sounds when no one is around?

What did they say?

None	0	SS36
Questionable	1	
Mild: Subject hears noises or single words; they occur only occasionally	2	
Moderate: Clear evidence of voices; they have occurred at least weekly	3	
Marked: Clear evidence of voices which occur almost every day	4	
Severe: Voices occur often every day	5	

Voices Commenting

Voices commenting are a particular type of auditory hallucination which phenomenologists as Kurt Schneider consider to be pathognomonic of schizophrenia, although some recent evidence contradicts this. These hallucinations involve hearing a voice that makes a running commentary on the subject's behavior or thought as it occurs. If this is the only type of auditory hallucination that the subject hears, it should be scored instead of auditory hallucinations (No. 1 above). Usually, however, voices commenting will occur in addition to other types of auditory hallucinations.

Have you ever heard voices commenting on what you are thinking or doing?

What do they say?

None	0	SS37
Questionable	1	
Mild: Subject hears noises or single words; they occur only occasionally	2	
Moderate: Clear evidence of voices; they have occurred at least weekly	3	
Marked: Clear evidence of voices which occur almost every day	4	
Severe: Voices occur often every day	5	

Voices Conversing

Like voices commenting, voices conversing are considered a Schneiderian first-rank symptom. They involve hearing two or more voices talking with one another, usually discussing something about the subject. As in the case of voices commenting, they should be scored independently of other auditory hallucinations.

Have you heard two or more voices talking with each other?

What did they say?

None	0	SS38
Questionable	1	
Mild: Subject hears noises or single words; they occur only occasionally	2	
Moderate: Clear evidence of voices; they have occurred at least weekly	3	
Marked: Clear evidence of voices which occur almost every day	4	
Severe: Voices occur often every day	5	

Somatic or Tactile Hallucinations

These hallucinations involve experiencing peculiar physical sensations in the body. They include burning sensations, tingling, and perceptions that the body has changed in shape or size.

Have you ever had burning sensations or other strange feelings in your body?

What were they?

Did your body ever appear to change in shape or size?

None	0	SS39
Questionable	1	
Mild: Subject experiences peculiar physical sensations; they occur only occasionally	2	
Moderate: Clear evidence of somatic or tactile hallucinations; they have occurred at least weekly	3	
Marked: Clear evidence of somatic or tactile hallucinations which occur almost every day	4	
Severe: Hallucinations occur often every day	5	

Visual Hallucinations

The subject sees shapes or people that are not actually present. Sometimes these are shapes or colors, but most typically they are figures of people or human-like objects. They may also be characters of a religious nature, such as the Devil or Christ. As always, visual hallucinations involving religious themes should be judged within the context of the subject's cultural background. Hypnagogic and hypnopompic visual hallucinations (which are relatively common) should be excluded, as should visual hallucinations occurring when the subject has been taking hallucinogenic drugs.

Have you had visions or seen things that other people cannot?

What did you see?

Did this occur when you were falling asleep or waking up?

None	0	SS41
Questionable	1	
Mild: Subject experiences visual hallucinations; they occur only occasionally	2	
Moderate: Clear evidence of visual hallucinations; they have occurred at least weekly	3	
Marked: Clear evidence of visual hallucinations which occur almost every day	4	
Severe: Hallucinations occur often every day	5	

Global Rating of Severity of Hallucinations

This global rating should be based on the duration and severity of hallucinations, the extent of the subject's preoccupation with the hallucinations, his degree of conviction, and their effect on his actions. Also consider the extent to which the hallucinations might be considered bizarre or unusual. Hallucinations not mentioned above, such as those involving taste, should be included in this rating.

None	0	SS42
Questionable	1	
Mild: Hallucinations definitely present, but occur infrequently; at times the subject may question their existence	2	
Moderate: Hallucinations are vivid and occur occasionally; they may bother him to some extent	3	
Marked: Hallucinations are quite vivid, occur frequently, and pervade his life	4	
Severe: Hallucinations occur almost daily and are sometimes unusual or bizarre; they are very vivid and extremely troubling		

DELUSIONS

Delusions represent an abnormality in content of thought. They are false beliefs that cannot be explained on the basis of the subject's cultural background. Although delusions are sometimes defined as "fixed false beliefs," in their mildest form delusions may persist only for weeks to months, and the subject may question his beliefs or doubt them. The subject's behavior may or may not be influenced by his delusions. The rating of severity of individual delusions and of the global severity of delusional thinking should take into account their persistence, their complexity, the extent to which the subject acts on them, the extent to which the subject doubts them, and the extent to which the beliefs deviate from those that normal people might have. For each positive rating, specific examples should be noted in the margin.

Persecutory Delusions

People suffering from persecutory delusions believe that they are being conspired against or persecuted in some way. Common manifestations include the belief that one is being followed, that one's mail is being opened, that one's room or office is bugged, that the telephone is tapped, or that police, government officials, neighbors, or fellow workers are harassing the subject. Persecutory delusions are sometimes relatively isolated or fragmented, but sometimes the subject has a complex set of delusions involving both a wide range of forms of persecution and a belief that there is a well-designed conspiracy behind them. For example, a subject may believe that his house is bugged and that he is being followed because the government wrongly considers him a secret agent for a foreign government; this delusion may be so complex that it explains almost everything that happens to him. The ratings of severity should be based on duration and complexity.

Have people been bothering you in any way?

Have you felt that people are against you?

Has anyone been trying to harm you in any way?

Has anyone been watching or monitoring you?

None	0 SS43
Questionable	1
Mild: Delusional beliefs are simple and may be of several different types; subject may question them occasionally	2
Moderate: Clear, consistent delusion that is firmly held	3
Marked: Consistent, firmly-held delusion that the subject acts on	4
Severe: Complex well-formed delusion that the subject acts on and that preoccupies him a great deal of the time; some aspects of the delusion or his reaction may seem quite bizarre	5

Delusions of Jealousy

The subject believes that his/her mate is having an affair with someone. Miscellaneous bits of information are construed as "evidence". The person usually goes to great effort to prove the existence of the affair, searching for hair in the bedclothes, the odor of shaving lotion or smoke on clothing, or receipts or checks indicating a gift has been bought for the lover. Elaborate plans are often made in order to trap the two together.

Have you ever worried that your husband (wife) might be unfaithful to you?

What evidence do you have?

None	0 SS44
Questionable	1
Mild: Delusion clearly present, but the subject may question it occasionally	2
Moderate: Clear consistent delusion that is firmly held	3
Marked: Consistent, firmly-held delusion that the subject acts on	4
Severe: Complex, well-formed delusion that the subject acts on and that preoccupies him a great deal of the time; some aspects of the delusion or his reaction may seem quite bizarre	

Delusions of Sin or Guilt

The subject believes that he has committed some terrible sin or done something unforgivable. Sometimes the subject is excessively or inappropriately preoccupied with things he did wrong as a child, such as masturbating. Sometimes the subject feels responsible for causing some disastrous event, such as a fire or accident, with which he in fact has no connection. Sometimes these delusions may have a religious flavor, involving the belief that the sin is unpardonable and that the subject will suffer eternal punishment from God. Sometimes the subject simply believes that he deserves punishment by society. The subject may spend a good deal of time confessing these sins to whomever will listen.

Have you ever felt that you have done some terrible thing that you deserve to be punished for?

None	0	SS45
Questionable	1	
Mild: Delusional beliefs may be simple and may be of several different types; subject may question them occasionally	2	
Moderate: Clear, consistent delusion that is firmly held	3	
Marked: Consistent, firmly-held delusion that the subject acts on	4	
Severe: Complex, well-formed delusion that the subject acts on and that preoccupies him a great deal of the time; some aspects of the delusion or his reaction may seem quite bizarre		

Grandiose Delusions

The subject believes that he has special powers or abilities. He may think he is actually some famous personage, such as a rock star, Napoleon, or Christ. He may believe he is writing some definitive book, composing a great piece of music, or developing some wonderful new invention. The subject is often suspicious that someone is trying to steal his ideas, and he may become quite irritable if his ideas are doubted.

Do you have any special or unusual abilities or talents?

Do you feel you are going to achieve great things?

None	0	SS46
Questionable	1	
Mild: Delusional beliefs may be simple and may be of several different types; subject may question them occasionally	2	
Moderate: Clear, consistent delusion that is firmly held	3	
Marked: Consistent, firmly-held delusion that the subject acts on	4	
Severe: Complex, well-formed delusion that the subject acts on and that preoccupies him a great deal of the time; some aspects of the delusion or his reaction may seem quite bizarre		

Religious Delusions

The subject is preoccupied with false beliefs of a religious nature. Sometimes these exist within the context of a conventional religious system, such as beliefs about the Second Coming, the Antichrist, or possession by the Devil. At other times, they may involve an entirely new religious system or a pastiche of beliefs from a variety of religions, particularly Eastern religions, such as ideas about reincarnation or Nirvana. Religious delusions may be combined with grandiose delusions (if the subject considers himself a religious leader), delusions of guilt, or delusions of being controlled. Religious delusions must be outside the range considered normal for the subject's cultural and religious background.

Are you a religious person?

Have you had any unusual religious experiences?

What was your religious training as a child?

None	0	SS47
Questionable	1	
Mild: Delusional beliefs may be simple and may be of several different types; subject may question them occasionally	2	
Moderate: Clear, consistent delusion that is firmly held	3	
Marked: Consistent, firmly-held delusion that the subject acts on	4	
Severe: Complex, well-formed delusion that the subject acts on and that preoccupies him a great deal of the time; some aspects of the delusion or his reaction may seem quite bizarre		

Somatic Delusions

The subject believes that somehow his body is diseased, abnormal, or changed. For example, he may believe that his stomach or brain is rotting, that his hands or penis have become enlarged, or that his facial features are unusual (dysmorphophobia). Sometimes somatic delusions are accompanied by tactile or other hallucinations, and when this occurs, both should be rated. (For example, the subject believes that he has ballbearings rolling around in his head, placed there by a dentist who filled his teeth, and can actually hear them clanking against one another.)

Is there anything wrong with your body?

Have you noticed any change in your appearance?

None	0	SS48
Questionable	1	
Mild: Delusional beliefs may be simple and may be of several different types; subject may question them occasionally	2	
Moderate: Clear, consistent delusion that is firmly held	3	
Marked: Consistent, firmly-held delusion that the subject acts on	4	
Severe: Complex, well-formed delusion that the subject acts on and that preoccupies him a great deal of the time; some aspects of the delusion or his reaction may seem quite bizarre		

Ideas and Delusions of Reference

The subject believes that insignificant remarks, statements, or events refer to him or have some special meaning for him. For example, the subject walks into a room, sees people laughing, and suspects that they were just talking about him and laughing at him. Sometimes items read in the paper, heard on the radio, or seen on television are considered to be special messages to the subject. In the case of ideas of reference, the subject is suspicious, but recognizes his idea is erroneous. When the subject actually believes that the statements or events refer to him, then this is considered a delusion of reference.

Have you ever walked into a room and thought people were talking about you or laughing at you?

Have you seen things in magazines or on TV that seem to refer to you or contain a special message for you?

Have people communicated with you in any unusual ways?

None	0	SS49
Questionable	1	
Mild: Occasional ideas of reference	2	
Moderate: Have occurred at least weekly	3	
Marked: Occurs at least two to four times weekly	4	
Severe: Occurs frequently		

Delusions of Being Controlled

The subject has a subjective experience that his feelings or actions are controlled by some outside force. The central requirement for this type of delusion is an actual strong subjective experience of being controlled. It does not include simple beliefs or ideas, such as that the subject is acting as an agent of God or that friends or parents are trying to coerce him to do something. Rather, the subject must describe, for example, that his body has been occupied by some alien force that is making it move in peculiar ways, or that messages are being sent to his brain by radio waves and causing him to experience particular feelings that he recognizes are not his own.

Have you ever felt you were being controlled by some outside force?

None	0	SS50
Questionable	1	
Mild: Subject has experienced being controlled, but doubts it occasionally	2	
Moderate: Clear experience of control, which has occurred on two or three occasions in a week	3	
Marked: Clear experience of control, which occurs frequently; behavior may be affected	4	
Severe: Clear experience of control which occurs frequently, pervades the subject's life, and often affects his behavior		

Delusions of Mind Reading

The subject believes that people can read his mind or know his thoughts. This is different than thought broadcasting (see below) in that it is a belief without a percept. That is, the subject subjectively experiences and recognizes that others know his thoughts, but he does not think that they can be heard out loud.

Have you ever had the feeling that people could read your mind?

None	0 SS51
Questionable	1
Mild: Subject has experienced mind reading, but doubts it occasionally	2
Moderate: Clear experience of mind reading which has occurred on two or three occasions in a week	3
Marked: Clear experience of mind reading which occurs frequently; behavior may be affected	4
Severe: Clear experience of mind reading which occurs frequently, pervades the subject's life, and often affects his behavior	5

Thought Broadcasting

The subject believes that his thoughts are broadcast so that he or others can hear them. Sometimes the subject experiences his thoughts as a voice outside his head; this is an auditory hallucination as well as a delusion. Sometimes the subject feels his thoughts are being broadcast although he cannot hear them himself. Sometimes he believes that his thoughts are picked up by a microphone and broadcast on the radio or television.

Have you ever heard your own thoughts out loud, as if they were a voice outside your head?

Have you ever felt your thoughts were broadcast so other people could hear them?

None	0 SS52
Questionable	1
Mild: Subject has experienced thought broadcasting, but doubts it occasionally	2
Moderate: Clear experience of thought broadcasting which has occurred on two or three occasions in a week	3
Marked: Clear experience of thought broadcasting which occurs frequently; behavior may be affected	4
Severe: Clear experience of thought broadcasting which occurs frequently, pervades the subject's life, and often affects his behavior	5

Thought Insertion

The subject believes that thoughts that are not his own have been inserted into his mind. For example, the subject may believe that a neighbor is practicing voodoo and planting alien sexual thoughts in his mind. This symptom should not be confused with experiencing unpleasant thoughts that the subject recognizes as his own, such as delusions of persecution or guilt.

Have you ever felt that thoughts were being put into your head by some outside force?

Have you ever experienced thoughts that didn't seem to be your own?

None	0 SS53
Questionable	1
Mild: Subject has experienced thought insertion, but doubts it occasionally	2
Moderate: Clear experience of thought insertion which has occurred on two or three occasions in a week	3
Marked: Clear experience of thought insertion which occurs frequently; behavior may be affected	4
Severe: Thought insertion which occurs frequently, pervades the subject's life and affects behavior	

Thought Withdrawal

The subject believes that thoughts have been taken away from his mind. He is able to describe a subjective experience of beginning a thought and then suddenly having it removed by some outside force. This symptom does not include the mere subjective recognition of alogia.

Have you ever felt your thoughts were taken away by some outside force?

None	0 SS54
Questionable	1
Mild: Subject has experienced thought withdrawal, but doubts it occasionally	2
Moderate: Clear experience of thought withdrawal which has occurred on two or three occasions in a week	3
Marked: Clear experience of thought withdrawal which occurs frequently; behavior may be affected	4
Severe: Clear experience of thought withdrawal which occurs frequently, pervades the subject's life and often affects his behavior	

Global Rating of Severity of Delusions

The global rating should be based on duration and persistence of delusions, the extent of the subject's preoccupation with the delusions, his degree of conviction, and their effect on his actions. Also consider the extent to which the delusions might be considered bizarre or unusual. Delusions not mentioned above should be included in this rating.

None	0 SS55
Questionable	1
Mild: Delusion definitely present but, at times, the subject questions the belief	2
Moderate: The subject is convinced of the belief, but it may occur infrequently and have little effect on his behavior	3
Marked: The delusion is firmly held; it occurs frequently and affects the subject's behavior	4
Severe: Delusions are complex, well-formed, and pervasive; they are firmly held and have a major effect on the subject's behavior; they may be somewhat bizarre or unusual	

BIZARRE BEHAVIOR

The subject's behavior is unusual, bizarre, or fantastic. For example, the subject may urinate in a sugar bowl, paint the two halves of his body different colors, or kill a litter of pigs by smashing their heads against a wall. The information for this item will sometimes come from the subject, sometimes from other sources, and sometimes from direct observation. Bizarre behavior due to the immediate effects of alcohol or drugs should be excluded. As always, social and cultural norms must be considered in making the ratings, and detailed examples should be elicited and noted.

Clothing and Appearance

The subject dresses in an unusual manner or does other strange things to alter his appearance. For example, he may shave off all his hair or paint parts of his body different colors. His clothing may be quite unusual; for example, he may choose to wear some outfit that appears generally inappropriate and unacceptable, such as a baseball cap backwards with rubber galoshes and long underwear covered by denim overalls. He may dress in a fantastic costume representing some historical personage or a man from outer space. He may wear clothing completely inappropriate to the climatic conditions, such as heavy wools in the midst of summer.

Has anyone made comments about your appearance?

None	0 SS56
Questionable	1
Mild: Occasional oddities of dress or appearance	2
Moderate: Appearance or apparel are clearly unusual and would attract attention	3
Marked: Appearance or apparel are markedly odd	4
Severe: Subject's appearance or apparel are very fantastic or bizarre	5

Social and Sexual Behavior

The subject may do things that are considered inappropriate according to usual social norms. For example, he may masturbate in public, urinate or defecate in inappropriate receptacles, or exhibit his sex organs inappropriately. He may walk along the street muttering to himself, or he may begin talking to people whom he has never met about his personal life (as when riding on a subway or standing in some public place). He may drop to his knees praying and shouting in the midst of a crowd of people, or he may suddenly sit in a yoga position while in the midst of a crowd. He may make inappropriate sexual overtures or remarks to strangers.

Have you ever done anything that others might think unusual or that has called attention to yourself?

None	0 SS57
Questionable	1
Mild: Occasional instances of somewhat peculiar behavior	2
Moderate: Frequent instances of odd behavior	3
Marked: Very odd behavior	4
Severe: Extremely odd behavior which may have a fantastic quality	5

Aggressive and Agitated Behavior

The subject may behave in an aggressive, agitated manner, often quite unpredictably. He may start arguments inappropriately with friends or members of his family, or he may accost strangers on the street and begin haranguing them angrily. He may write letters of a threatening or angry nature to government officials or others with whom he has some quarrel. Occasionally, subjects may perform violent acts such as injuring or tormenting animals, or attempting to injure or kill human beings.

Have you ever done anything to try to harm animals or people?

Have you felt angry with anyone?

How did you express your anger?

None	0 SS58
Questionable	1
Mild: Occasional instances	2
Moderate: For example, writing angry letters to strangers	3
Marked: For example, threatening people, public harangues	4
Severe: For example, mutilating animals, attacking people	5

Repetitive or Stereotyped Behavior

The subject may develop a set of repetitive actions or rituals that he must perform over and over. Frequently, he will attribute some symbolic significance to these actions and believe that they are either influencing others or preventing himself from being influenced. For example, he may eat jelly beans every night for dessert, assuming that different consequences will occur depending on the color of the jelly beans. He may have to eat foods in a particular order, wear particular clothes, or put them on in a certain order. He may have to write messages to himself or to others over and over; sometimes this will be in an unusual or occult language.

Are there any things that you feel you have to do?

None	0 SS59
Questionable	1
Mild: Occasional instances of ritualistic or stereotyped behavior	2
Moderate: For example, eating or dressing rituals lacking symbolic significance	3
Marked: For example, eating or dressing rituals with a symbolic significance	4
Severe: For example, keeping a diary in an incomprehensible language	5

Global Rating of Severity of Bizarre Behavior

In making this rating, the interviewer should consider the type of behavior, the extent to which it deviates from social norms, the subject's awareness of the degree to which the behavior is deviant, and the extent to which it is obviously bizarre.

None	0	SS60
Questionable	1	
Mild: Occasional instances of unusual or apparently idiosyncratic behavior; subject usually has some insight	2	
Moderate: Behavior which is clearly deviant from social norms and seems somewhat bizarre; subject may have some insight	3	
Marked: Behavior which is markedly deviant from social norms and clearly bizarre; subject may have some insight	4	
Severe: Behavior which is extremely bizarre or fantastic; may include a single extreme act, e.g., attempting murder; subject usually lacks insight.		

Tangentiality

Replying to a question in an oblique, tangential or even irrelevant manner. The reply may be related to the question in some distant way. Or the reply may be unrelated and seem totally irrelevant. In the past tangentiality has sometimes been used as roughly equivalent to loose associations or derailment. The concept of tangentiality has been partially redefined so that it refers only to answers to questions and not to transitions in spontaneous speech.

Example: Interviewer: "What city are you from?"
Subject: "That's a hard question to answer because my parents . . . I was born in Iowa, but I know that I'm white instead of black, so apparently I came from the North somewhere and I don't know where, you know, I really don't know whether I'm Irish or Scandinavian or I don't, I don't believe I'm Polish but I think I'm, I think I might be German or Welsh."

None	0	SS62
Questionable	1	
Mild: One or two oblique replies	2	
Moderate: Occasional oblique replies (three to four times)	3	
Marked: Frequent oblique replies (more than four times)	4	
Severe: Tangentiality so severe that interviewing the subject is extremely difficult	5	

POSITIVE FORMAL THOUGHT DISORDER

Positive formal thought disorder is fluent speech that tends to communicate poorly for a variety of reasons. The subject tends to skip from topic to topic without warning, to be distracted by events in the nearby environment, to join words together because they are semantically or phonologically alike even though they make no sense, or to ignore the question asked and ask another. This type of speech may be rapid, and it frequently seems quite disjointed. It has sometimes been referred to as "loose associations." Unlike alogia (negative formal thought disorder), a wealth of detail is provided, and the flow of speech tends to have an energetic, rather than an apathetic, quality to it.

In order to evaluate thought disorder, the subject should be permitted to talk at length on some topic, particularly a topic unrelated to his psychopathology, for as long as five to ten minutes. The interviewer should observe closely the extent to which his sequencing of ideas is well connected. In addition, the interviewer should insist that he clarify or elaborate further if the ideas seem vague or incomprehensible. He should also pay close attention to how well the subject can reply to a variety of different types of questions, ranging from simple (Where were you born?) to more complicated (How do you think the present government is doing?)

The anchor points for these ratings assume that the subject has been interviewed for a total of approximately forty-five minutes. If the interview is shorter, the ratings should be adjusted accordingly.

Derailment (Loose Associations)

A pattern of spontaneous speech in which the ideas slip off one track onto another which is clearly but obliquely related, or onto one which is completely unrelated. Things may be said in juxtaposition which lack a meaningful relationship, or the subject may shift idiosyncratically from one frame of reference to another. At times there may be a vague connection between the ideas, and at others none will be apparent. This pattern of speech is often characterized as sounding "disjointed." Perhaps the commonest manifestation of this disorder is a slow, steady slippage, with no single derailment being particularly severe, so that the speaker gets farther and farther off the track with each derailment without showing any awareness that his reply no longer has any connection with the question which was asked. This abnormality is often characterized by lack of cohesion between clauses and sentences and by unclear pronoun references.

None	0 SS61
Questionable	1
Mild: Occasional instances of derailment, with only slight topic shifts	2
Moderate: Several instances of derailment; subject is sometimes difficult to follow	3
Marked: Frequent instances of derailment; subject is often difficult to follow	4
Severe: Derailment so frequent and/or extreme that the subject's speech is almost incomprehensible	

Example: Interviewer: "Did you enjoy college?"
Subject: "Um-hum. Oh hey well, I oh, I really enjoyed some communities I tried it, and the, and the next day when I'd be going out, you know, um, I took control like uh, I put, um, bleach on my hair in, in California. My roommate was from Chicago, and she was going to the junior college. And we lived in the Y.M.C.A., so she wanted to put it, um, peroxide on my hair, and she did, and I got up and looked at the mirror and tears came to my eyes. Now do you understand it, I was fully aware of what was going on but why couldn't I, I . . . why, why the tears? I can't understand that, can you?"

Incoherence (Word Salad, Schizophrenia)

A pattern of speech which is essentially incomprehensible at times. Incoherence is often accompanied by derailment. It differs from derailment in that in incoherence the abnormality occurs within the level of the sentence or clause, which contains words or phrases that are joined incoherently. The abnormality in derailment involves unclear or confusing connections between larger units, such as sentences or clauses.

This type of language disorder is relatively rare. When it occurs, it tends to be severe or extreme, and mild forms are quite uncommon. It may sound quite similar to Wernicke's aphasia or jargon aphasia, and in these cases the disorder should only be called incoherence when history and laboratory data exclude the possibility of a past stroke, and formal testing for aphasia is negative.

Exclusions: Mildly ungrammatical constructions or idiomatic usages characteristic of particular regional or ethnic backgrounds, lack of education, or low intelligence.

Example: Interviewer: "What do you think about current political issues like the energy crisis?" Subject: "They're destroying too many cattle and oil just to make soap. If we need soap when you can jump into a pool of water, and then when you go to buy your gasoline, my folks always thought they should, get pop but the best thing to get, is motor oil, and, money. May, may as well go there and, trade in some, pop caps and, uh, tires, and tractors to group, car garages, so they can pull cars away from wrecks, is what I believed in."

None	0 SS63
Questionable	1
Mild: Occasional instances of incoherence	2
Moderate: Frequent bursts of incoherence	3
Marked: At least half of the subject's speech is incomprehensible	4
Severe: Almost all of the subject's speech is incomprehensible	

Illogicality

A pattern of speech in which conclusions are reached which do not follow logically. This may take the form of non-sequiturs (= it does not follow), in which the subject makes a logical inference between two clauses which is unwarranted or illogical. It may take the form of faulty inductive inferences. It may also take the form of reaching conclusions based on faulty premises without any actual delusional thinking.

Exclusions: Illogicality may either lead to or result from delusional beliefs. When illogical thinking occurs within the context of a delusional system, it should be subsumed under the concept of delusions and not considered a separate phenomenon representing a different type of thinking disorder. Illogical thinking which is clearly due to cultural or religious values or to intellectual deficit should also be excluded.

Example: "Parents are the people that raise you. Any thing that raises you can be a parent. Parents can be anything -- material, vegetable, or mineral -- that has taught you something. Parents would be the world of things that are alive, that are there. Rocks -- a person can look at a rock and learn something from it, so that would be a parent."

None	0 SS64
Questionable	1
Mild: Occasional instances of illogicality	2
Moderate: Frequent instances of illogicality (three or four times)	3
Marked: Much of the subject's speech is illogical (more than four times)	4
Severe: Most of the subject's speech is illogical	

Circumstantiality

A pattern of speech which is very indirect and delayed in reaching its goal idea. In the process of explaining something, the speaker brings in many tedious details and sometimes makes parenthetical remarks. Circumstantial replies or statements may last for many minutes if the speaker is not interrupted and urged to get to the point. Interviewers will often recognize circumstantiality on the basis of needing to interrupt the speaker in order to complete the process of history-taking within an allotted time. When not called circumstantial, these people are often referred to as "long-winded."

Exclusions: Although it may coexist with instances of poverty of content of speech or loss of goal, it differs from poverty of content of speech in containing excessive amplifying or illustrative detail and from loss of goal in that the goal is eventually reached if the person is allowed to talk long enough. It differs from derailment in that the details presented are closely related to some particular goal or idea and that the particular goal or idea must be, by definition, eventually reached.

None	0 SS65
Questionable	1
Mild: Occasional instances of circumstantiality	2
Moderate: Frequent instances of circumstantiality	3
Marked: At least half of subject's speech is circumstantial	4
Severe: Most of the subject's speech is circumstantial	5

Pressure of Speech

An increase in the amount of spontaneous speech as compared to what is considered ordinary or socially customary. The subject talks rapidly and is difficult to interrupt. Some sentences may be left uncompleted because of eagerness to get on to a new idea. Simple questions which could be answered in only a few words or sentences are answered at great length so that the answer takes minutes rather than seconds and indeed may not stop at all if the speaker is not interrupted. Even when interrupted, the speaker often continues to talk. Speech tends to be loud and emphatic. Sometimes speakers with severe pressure will talk without any social stimulation and talk even though no one is listening. When subjects are receiving phenothiazines or lithium, their speech is often slowed down by medication, and then it can be judged only on the basis of amount, volume, and social appropriateness. If a quantitative measure is applied to the rate of speech, then a rate greater than 150 words per minute is usually considered rapid or pressured. This disorder may be accompanied by derailment, tangentiality, or incoherence, but it is distinct from them.

None	0	SS66
Questionable	1	
Mild: Slight pressure of speech; some slight increase in amount, speed, or loudness of speech	2	
Moderate: Usually takes several minutes to answer simple questions, may talk when no one is listening, and/or speaks loudly and rapidly	3	
Marked: Frequently talks as much as three minutes to answer simple questions; sometimes begins talking without social stimulation; difficult to interrupt	4	
Severe: Subject talks almost continually, cannot be interrupted at all, and/or may shout to drown out the speech of others	5	

Distractible Speech

During the course of a discussion or interview, the subject stops talking in the middle of a sentence or idea and changes the subject in response to a nearby stimulus, such as an object on a desk, the interviewer's clothing or appearance, etc.

Example: "Then I left San Francisco and moved to . . . where did you get that tie? It looks like it's left over from the 50's. I like the warm weather in San Diego. Is that a conch shell on your desk? Have you ever gone scuba diving?"

None	0	SS67
Questionable	1	
Mild: Is distracted once during an interview	2	
Moderate: Is distracted from two to four times during an interview	3	
Marked: Is distracted from five to ten times during an interview	4	
Severe: Is distracted more than ten times during an interview	5	

Clanging

A pattern of speech in which sounds rather than meaningful relationships appear to govern word choice, so that the intelligibility of the speech is impaired and redundant words are introduced. In addition to rhyming relationships, this pattern of speech may also include punning associations, so that a word similar in sound brings in a new thought.

Example: I'm not trying to make a noise. I'm trying to make sense. If you can make sense out of nonsense, well, have fun. I'm trying to make sense out of sense. I'm not making sense (cents) anymore. I have to make dollars."

None	0	SS68
Questionable	1	
Mild: Occurs once during an interview	2	
Moderate: Occurs from two to four times during an interview	3	
Marked: Occurs five to ten times during an interview	4	
Severe: Occurs more than ten times, or so frequently that the interview is incomprehensible.		

Global Rating of Positive Formal Thought Disorder

In making this rating, the interviewer should consider the type of abnormality, the degree to which it affects the subject's ability to communicate, the frequency with which abnormal speech occurs, and its degree of severity.

None	0	SS69
Questionable	1	
Mild: Occasional instances of disorder; subject's speech is understandable	2	
Moderate: Frequent instances of disorder; subject is sometimes hard to understand	3	
Marked: Subject is often difficult to understand	4	
Severe: Subject is incomprehensible	5	

Appendix Seven: Interview Schedule

Interview Schedule and Optional Prompts
How did you find the group?
What can you remember from the group?
Did you learn anything new? Did you try out any of the tips?
Did you notice any change in your thinking or mood? Any examples of noticing when Jumping to Conclusions? Any change in your worries?
What was most useful about the group?
Was anything unhelpful?
Could the meetings be improved in any way?
How did you find the therapy being in a group format?
9) Were there any positives of the therapy being in a group format?
Did you find any negatives with it being in a group format?
Anything else you would like to add?

Appendix Eight: Participants main beliefs and evidence

Main Belief	Evidence
A media company is stalking and watching me. There are 100s actors involved.	Strangers acting suspiciously
People on street and neighbours don't like me.	Strange looks on the street, noises in home, voices tell me.
Police are monitoring me, due to crimes committed 20 years ago.	Voices tell me, see police and people on the street looking twice at me and whispering.
Neighbours persecuting me and annoying me on purpose because they don't like me.	Noises in flat, children stamping on the floor, knock on my door, throw food at my house, talk about me.
I am being filmed by people and this is put on the internet.	People come outside house, hears whispers, people come into my house and things go missing or breaks.
Freemasons are following me, spiked my drink which made me get schizophrenia.	Saw two boys dressed as Freemasons around college. secret society and still follow me.
I am being manipulated by old friends from the past, they have cursed and control me.	Voices are from my friends and get physical pains.
An old neighbour is coming into her house and stealing and breaking things.	Things have gone missing, my voices tell me it's my old neighbour, once had an argument with neighbour
Was attacked in the past and believe the guy is following me still, intending to cause harm.	Visual distortions, feelings, hear people whisper in crowds.
A group of 3-4 people follow me outside, they comment (re: divorce and intend to annoy)	People in shopping centres have thrown things, bump into me and hears comments about being divorced.
1 part of me committed rapes against	Has voices and intense anxiety,

women 10 years ago, now being controlled, followed and punished by the victims' families.	evidence the families are controlling his feelings, thoughts and behaviour.
Conspiracy against me, friends and neighbours targeting me, witchcraft	Neighbours make noises, give looks, hears comments and gets feeling of being persecuted (buzzing noise, strange feelings)
Neighbour making noises on purpose as he does not like me and wants me to move out	Hear banging from downstairs flat
Government bodies have information on me and are deliberately discriminating me	Linked to housemate's strange behaviour and an attack 3 years ago.
I am being started on and looked at by people on the street	Intimidating looks from people on the street, men follow me into the toilets.
Neighbours and friends turn against me, do not like me and threaten me.	Strangers look at me in an intimidating persecutory way, people on street, on transport.
People on the street and bus make critical comments about me, and can hear my thoughts.	Thoughts feel loud, get looks from people on the street, hear derogatory voices and comments on buses.
I am a messiah (Christian), Muslims know this and are trying to convert me aggressively - following and shouting at me.	Ate food at a Mosque and since then they follow me, shout and bump into me on the street and on the bus.
I am in a game show, people follow me and communicate telepathically, call me names, intend to annoy me	Hears voices and people commenting, people follow me.
Believes I am being watched by strangers and that I am going to be harmed.	How people look at me when I am outside.
There is a conspiracy against me at work where the secretary is trying to get me fired.	Secretary is rude to me, talks about me behind my back and says things to my manager about me.

Appendix Nine: Clinical Observations in the group

Module 4: Different ways of thinking about situations

Module 4: Different ways of thinking about situations

Effect of past experience; examples we came up with

Past Experience 	Situation 	First thought <i>1st</i> 
Been in fights in the past	Got nudged, someone looks over	Think it's happening again, 'they are trying to start a fight'
Overheard housemates talking about me	See housemates talking	They are talking about me
Ex boyfriend cheated on me	Current boyfriend meeting a female colleague	He is cheating on me too.
Saw a big fight, feel area not safe	See people there looking over	It is going to happen again
Best friend chained self to me	New friend getting close	Feel new friend is getting possessive, they are not giving me social freedom

Situation 	First Reaction <i>1st</i> 	Later Information 
Heard name being called	Someone is testing me, it is something to do with mental health – stressed me out	Don't know! Dismissed it and felt better. Could be someone else called Lee. Looked around, no one there
Told I've been discharged from the team	Thought I'd been a 'bad patient', that I was being ignored. Felt gutted and upset	Gathered more info; it's not this, I'm just having a break. Not personal- felt better
Felt a pain in my ear	Fiona put a wheel in my head – she is listening to me, - felt panicked	Might just be a pain or strange sensation
Saw sister with another man	Thought she was cheating -	Asked and found out she split with her husband.

Meeting 6

Imagine someone has had a difficult upbringing and believes other people don't like them. They go on a bus journey.

What might they look out for and notice?

- People not sitting next to them
- Notice others' body language (people not looking them in the eye, looking out the window)
- People not moving their bag from their seat
- Looks that might seem intimidating
- Listen out for any comments - think they are aimed at them

How might this make them feel?

- Feel more depressed, anxious, upset
- Feel even more sure that people hate them

Meeting 6

But what might they have missed?

Looking for signs that suggest that not everyone appears to dislike them on this occasion:

- Some people being nice
- Some people moved their bag
- Someone may have smiled; made eye contact
- Lots of other people might be in their own world, not paying any attention to the person e.g. looking out the window, texting, reading the paper, listening to music.

How might this make them feel?

- Feel more positive
- Feel more liked by others / less sense of being 'hated'
- Be able to get on with their day and do the things they need to

Module 4: Different ways of thinking about situations

Upsetting thoughts

- When I remember what happened to me
- Visual problems
- Being looked at
- Some people look dangerous when I am walking around
- When I hear the enemy
- Other people think I'm boring
- Getting off trains
- People are laughing at me
- Feeling people are talking about me and not liking me wanting to harm me
- Voices bringing in negative thoughts
- Confusion what is true or false
- I'm going to be mugged
- People stealing my things
- Being judgemental
- Feeling paranoid when outside and thinking other people are looking at me
- Other people thinking I am racist
- Being in a group and thinking what I have to say is stupid

Meeting 3:

Jumping to Conclusions; examples we came up with

Situation 	First Reaction <i>1st</i> 	What found out later 
In the house alone and hear upstairs door banging	There is someone in the house	The window was open and it was just the breeze
Favourite mug had a chip on	My housemate did it on purpose	When I thought more I realised it was probably a coincidence
Route on journey was changed	They've done it on purpose because they knew I was going that way	Don't know, but moved on
Friend doesn't answer the phone	I've done something wrong	Maybe they are busy
On public transport, woman talking	They are talking about me,	They could be talking about someone else
Someone moves away on the bus	They are thinking something bad about me	Might be something else, they might want more space
Watching TV and my name is mentioned	They are talking about me	Could be about someone else with same name
Knock at door	It's a drug dealer	I was ok I protected myself

Appendix Ten: Further qualitative data

Theme	Examples
Group General	<i>'I think they were excellent groups, really good. I think it was relaxed enough but got through things and discussed stuff and summarised it in a hand out.'</i> <i>'It was all very well organised, clear and well presented.'</i> <i>'It was pitched at our level.'</i> <i>'Well run, got though what needed to do, relaxed attempt to put people at ease, good interaction between experts and service users, interacting with each other.'</i> <i>'Slow pace was nice, not loads of info in your face, gradual.'</i> <i>'Thought it was excellent, I liked the experience the people there the people running the group, all honest and talked about problems and how to solve them in my mind.'</i>
Positive Group Process: Universality	<i>'Feel less isolated now, realise there are other people who have the same troubles as me.'</i> <i>'Others felt the same way, that I'm not mad, it's a natural part of the illness. Ok to feel the way I'm feeling nothing to be ashamed of.'</i> <i>'All the group leaders spoke about jumping to conclusions, it was helpful as it can happen to anyone anytime, we're all in the same boat together.'</i> <i>'Some people in the group experience the same things and that was helpful to hear not alone in that, see some similarities and feel same as peers, not on our own or as isolated.'</i> <i>'Good for team work and communicating with people. Best to be in a group format, 1 to 1 would not be very good, don't get other people experiences who are similar to you.'</i> <i>'It was nice to hear some common conversations between schizophrenics. Not just me someone else as well has schizophrenia and same thoughts.'</i>
Positive group process; Interpersonal learning	<i>'Time to talk about own issues listen to each other and understand others issues and empathise with them and try to help them and give the benefits of our experience and help and support each other.'</i> <i>'Everybody had own experience to share was able to compare experiences with other people that meant I didn't feel I was being judged, as if it was only me and friends or me and a group of professionals, only H and C were and they spoke about them self, otherwise would have been more difficult to share so much about myself.'</i> <i>'Everyone in the group felt comfortable and expressed themselves and said about what was challenging them and talking, it was interesting to listen and I related to what the other people were saying. Being out and around other people and discussing issues was the most helpful bit.'</i> <i>'Now think of the ideas when it's happening and I think if others in the group could see this what would they say.'</i> <i>'Felt relaxed and I liked going to the sessions. It helped being with other people with different perspectives and on same level. Found group perfect, positive hearing many points of views other than only one and dealing with the same subject.'</i>

Positive Group Process: Cohesion	<i>'The friends I made from the group was a positive thing, everyone enjoyed the time together.'</i> <i>'It was good very helpful, being with others who have the same problems as me, made me think we are a group. It made me believe in myself more.'</i> <i>'Most useful was the group setting and everyone able to share their own experiences.'</i> <i>'It was stressful at first going to meet with strangers but definitely gained from it, we quickly started to bond and support each other.'</i> <i>'It was very useful, I don't feel so isolated and lonely, it was nice to talk to others and relax, it was enjoyable. I've been more peaceful and less stressed, it was nice making friends.'</i> <i>'Really good, got on with others, good connection.'</i> <i>'50% time talk about our thoughts, issues and could comfort and felt safe in there to do that'</i>
Negative group process	<i>'At first felt uncomfortable, didn't like being a group with other people, got paranoid.'</i> <i>'Some things a bit personal I didn't like to say when others were there but I liked listening to others really enjoyable.'</i> <i>'Sometimes in group format you don't get all focus on yourself, have to focus on everyone in the room, can feel desperate for stuff.'</i> <i>'I have been thinking about the group last week, been worried about what I said in the group (abuse) said too much. Also I ate all the chocolate rolls I should have left some for other people.'</i> <i>'Some things are a bit personal I didn't like to say when others were there.'</i>
Suggestions for improvement	<i>'Ok but bit long sessions sometimes should just be one hour.'</i> <i>'Could have been good to have more number of sessions to go deeper into it, to go through the same situations we went through but more, more follow up and recap on ideas.'</i> <i>'Feel it repeated itself toward the end, I had it in my memory.'</i> <i>'Could have given us questions before everything started.'</i> <i>'Unsure how to apply what I learnt. I started ACT and is more transparent what it's trying to teach me. Sometimes I haven't remembered and unsure how useful it was. more explicit links to real life. Not quite sure how to put it into practice, how to apply it to life, think ACT group is more applicable, uses check lists and is easy to practically apply it.'</i>
Knowledge of tips	Using coping strategies <i>'Felt more relaxed, been having lots of baths... made me feel clean and relaxed when I have been getting paranoid when I am out on the streets, come home and listen to music to relax.'</i> Looking for more information <i>'Take away from group getting more information before making a decision. Most useful was looking at things in more detail before decide what is happening.'</i>

	Alternative Explanations <i>‘I apply that course all the time now, think of an alternative explanation that is more manageable.’</i> <i>‘I jumped to conclusions that people were out to get me. I learnt a lot about jumping to conclusions, 1st thoughts might not be what it is, to stand back, hold on and think of evidence, stand back to get a different side of the story, weighing up the evidence was useful.’</i> <i>‘When I go back and analyse things analyse it and come up with a negative then I say to myself think about it more and come up with a positive and I will eventually.’</i> Looking for evidence <i>‘Thinking about what is true and not true and knowing how to cope better. I jumped to conclusions about the man in the walking group, I know I’m doing that as he didn’t say anything out of order.’</i> <i>‘I get feelings people are targeting me, feeling not in a good way, but with the course is different now, I reassess how I feel I stop and look at situation how feeling at home, I look for evidence they are targeting me and there isn’t any.’</i> JTC <i>‘I try to hold back and not get v upset quickly. I didn’t jtc I just think before. I try even more to ignore them and not be affected by people’s comments. I keep reading the notes I have written down especially when I don’t feel well.’</i> <i>‘There are better ways of looking at things, seeing through the psychosis. Been thinking that other people makes mistakes just as much as I do and jump to conclusions.’</i> <i>‘I think take time and try not jumping to conclusions when things happen (hear comments), so I’m more peaceful.’</i> <i>“I have put a block on it now, jumping to conclusions”</i>
Improved mental health	<i>Before it was unbearable, feel I can cope now since done the course I cope with the feelings now, it hasn’t gone away but i don’t care so much now. ‘</i> <i>‘Since the group... my paranoid thoughts have been less.’</i> <i>‘It has changed my mood and thinking and jumping to conclusions’</i> <i>‘Instead of waking up and think how my mood and anxiety going to be today, how bad is it going to be, I have been taking a step back and not just think how bad it is going to be. Been feeling better the last two weeks. Has had an effect on what I do, help get out a little bit and to stay out, bit of a change when outside, normal go out and feel very anxious and get v bad, last few weeks anxiety has not been as bad.’</i> <i>‘I calm myself down a lot easier and don’t flare up like I used to. Calmed down a bit with my cousin, a lot. I was jumping t conclusion with my cousin .’</i> <i>‘..helped you to feel better and the course had lots to do with me starting to feel better and calmer and it has helped me not just to change my mind but to feel less upset, het up with it.’</i> <i>‘I feel more relaxed and I’m doing more activity’</i> <i>‘I’ve been gardening since the course, was going to the course for a few weeks then I just decided to do it. ‘</i>
Application of tips	<i>‘Things with my cousin, realised he and my family not out to harm me, thought these things then thought more and realised I thought wrong’.</i>

	<i>'I'm blaming people coming into my flat and it may be the case, it may be the devil had it removed or I lost it. I notice, the group taught me not to JTC, look at the pros and cons and look at it from different angles. This morning was about to exit and thought someone was there, why would they come in? Got to keep open about things,'</i> <i>'To look around at the situation better and not JTC, realised I'm not on loud speaker and people may not think of me negatively'</i> <i>'Before... needed to get away from them flat and the area, still feel this for a few minutes daily but less stressed about the noises upstairs, I don't think they're trying to get my brain waves or get my attention to influence me. I feel less stressed I don't immediately go to a panic mode, now think of the ideas when it's happening...main thing was them targeting me with their minds and now stop thinking obviously they can't be/that can't be right thinking and I go to the booklet and it gives you the feelings of relaxation and wellbeing and triggers the feelings of being in the class what that felt like and to talk through the issues. .. I remember the tips ingrained in us 5, problem is not them targeting you but problem is just stress. '</i> <i>'I looked at it, my thoughts about going outside, and the Freemasons following me, and I think why am I anxious they can't do anything anyway, I have been dismissing it now instead of reacting to it'.</i> <i>'Being in a group makes you think it is sabotage from someone done it to us on purpose, but that is me just being paranoid, Ill dismiss that in a minute.'</i> <i>'I look at the expression on their face I used to think I was disliked...but it may just be them they're having a bad time or they may be intimidated in that area'</i> <i>'... My mind works in a certain way...I've built up a story and a view my mind leaps and latches to assumptions.'</i> <i>'Been thinking about it maybe it is not deliberate what I think is maybe happening. I try and think of different reasons for it, people may have their own things going on, feel negative themselves and I try not to worry about it so much sometimes'.</i> <i>'I look at TV and what's going on and think there's less going on TV, at first thought they were giving me messages now it has gone very quiet... Have improved, there are immeasurably less people than originally thought involved and less people doing it than used to be, a realisation'</i> <i>'I've been thinking a little bit differently about worries just that my old friends may not want to be doing it all the time. It may be an hallucination of something that doesn't exist. I've been out and socialised with my friends this week friends who I thought were bad for me they were there when I called them so maybe I was wrong. I need to go out and find more information....What I first thought is not always right... I found it helpful speaking about my thought about my friend putting a wheel in my head and then I thought it could be something else.'</i> <i>'I've been JTC and I think why I did I JTC with the lady in Mac Donald's, (I thought she said why do i eat it so much) maybe she doesn't mean it. I also thought a person on street called me unemployed, but then thought how do they know? or they may have said it to someone else?'</i> <i>'One person spat in my shadow, thought he was being aggressive on purpose, then thought it was just a coincidence that it landed in my shadow and just dismissed it'.</i>
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Appendix Eleven; Table of Demographics for each group conducted separately

	Group One (n=5)	Group Two (n=6)	Group Three (n=3)
Age	44.80	39.67	47.67
Ethnicity	White British = 2 British Indian = 1 Mixed Asian = 1 White and black Caribbean = 1	White British = 3 Black British = 2 Caribbean = 1	White British = 1 (42.9%) Black British = 1 (21.4%) White and black African = 1
Sex	Males = 3 Female = 2	Males = 3 Female = 3	Male = 1 Female = 2
EPJ Diagnosis	Schizophrenia = 3 (50%) Paranoid Schizophrenia = 1 Schizo-affective = 1	Schizophrenia = 2 (50%) Paranoid Schizophrenia = 2 Other schizophrenia = 1 (7.1%) Acute transient psychotic disorder = 1 (7.1%)	Schizophrenia = 2 (50%) Paranoid Schizophrenia = 1
Duration of Illness	9.5 sd (3.5)	6.3 sd (3.9)	9.8 sd (9.93)
Medication	No = 1 Yes = 4	No = 2 Yes = 4	No = 2 Yes = 4
CBT in last year	Yes = 2 No = 3	Yes = 3 No = 3	Yes = 2 No = 1
Hospital Admissions in last year	Mean = 1.2	Mean = 0.83	Mean = 0.67
Marital Status	Divorced = 1	Divorced = 0	Divorced = 0

	Married = 0 Single = 4	Married = 0 Single = 6	Married = 0 Single = 3
Employment	Unemployed =5 (100%) Employed = 0 (0%)	Unemployed =6 (100%) Employed = 0 (0%)	Unemployed =3 (100%) Employed = 0 (0%)
Team Recruited	Specialist Psychology Service: 0 Research Register: 3 CMHT: 2 (1d/o)	Specialist Psychology Service: 1 (1 d/o) Research Register: 5 CMHT: 0	Specialist Psychology Service: 0 Research Register: 0 CMHT: 3
WTAR Estimated IQ	Mean = 93.2	102.8	98.67
BDI total Score	20.8	27.2	24.5
BAI total Score	23	30	13
SAPS Score	Hallucinations = 3.2 Delusions = 4.2 Thought Disorder = 0.2 Behavioural Disturbance = 0.2	Hallucinations = 3.2 Delusions = 4.2 Thought Disorder = 1.17 Behavioural Disturbance = 1.16	Hallucinations = 2.3 Delusions = 3.6 Thought Disorder = 1.3 Behavioural Disturbance = 1.3

Appendix Twelve; Descriptives for each primary outcome measure for each group separately

Measure	Time	Group One			Group Two			Group Three		
		Mean	SD	Range	Mean	SD	Range	Mean	SD	Range
Belief conviction	T1	95	11.18	75-100	95.83	10.21	75-100	66.67	28.87	50-100
	T2	65.4	28.5	25-100	72	36.8	10-100	41.6	38.2	0-75
	T3	65	28.5	25-75	80	32.5	25-100	68.3	54.8	5-100
Belief PM	T1	0	0	0	16.6	30.27	0-75	4	6.9	0-12
	T2	40	41.8	0-100	13.3	21.6	0-50	33.3	28.9	0-50
	T3	35	41.8	0-100	10	22.3	0-50	1.6	2.8	0-5
VAS-P Total	T1	345	182.3	75-500	342.5	88.5	225-465	59	37.9	25-100
	T2	302	160.1	50-500	334.2	153.96	50-500	58.3	62.9	0-125
	T3	280	125.5	175-450	277	170.4	75-500	91.7	158.7	0-275
JTC 85:15	T1	3	1	2-4	3.5	1.64	2-6	5.6	2.3	3-7
	T2	6.2	2.9	4-11	4	1.2	3-6	9.6	1.5	8-11
	T3	5.2	2.3	3-8	5.2	0.83	4-6	9.6	2.3	7-11
JTC 60:40	T1	5.4	2.7	3-10	5.3	2.3	1-8	11.3	1.15	10-12
	T2	9.8	4.1	6-16	9.6	2.6	10-17	13.3	3.5	10-17
	T3	8.2	2.2	5-11	9	2.5	5-12	11.7	4	11-16
RTHC	T1	2	1	1-3	2.8	0.44	1-3	2	1	1-3
	T2	1.6	1.1	1-3	2.4	0.54	2-3	1.3	0.57	1-2
	T3	1.6	0.89	1-3	2.6	0.54	2-3	2	1.7	0-3
EoE	T1	0.8	0.84	0-2	0.5	0.55	0-1	0.67	1.2	0-2
	T2	0.6	0.54	0-1	0.67	0.51	0-1	0.33	0.57	0-1
	T3	0.6	0.55	0-1	0.67	0.81	0-2	0.3	0.57	0-1

Appendix Thirteen; Statistics, p-values and effect sizes for the primary outcome measures for each group separately

Measure (outcome)	Time	Group One			Group Two			Group Three		
		Z	P	Effect Size	Z	P	Effect Size	Z	P	Effect Size
Belief	T2	-1.573	0.102	-1.019	-0.687	0.298	-0.405	-1.19	0.183	-0.812
Conviction	T3	-1.615	0.121	-1.115	-0.233	0.576	-0.141	-0.284	0.417	-0.191
PBM	T2	-2.456	0.013	-2.011	-0.530	0.340	-0.297	-2.130	0.033	-1.823
	T3	-1.674	0.067	-1.169	-0.563	0.327	-0.345	-0.130	0.476	-0.087
JTC 85:15	T2	-1.161	0.144	-0.712	-1.001	0.198	-0.604	-2.300	0.017	-2.119
	T3	-1.308	0.113	-0.858	-1.588	0.084	-1.091	-2.384	0.012	-2.295
JTC 60:40	T2	-2.052	0.021	-1.471	-2.376	0.009	-1.885	-0.929	0.217	-0.615
	T3	-1.127	0.162	-0.723	-1.666	0.056	-1.162	-0.134	0.452	-0.090
VAS-P	T2	-0.976	0.183	-0.587	-0.571	0.314	-0.321	-0.115	0.500	-0.073
	T3	-0.365	0.396	-0.212	-0.183	0.465	-0.106	-0.775	0.274	-0.535

Measure (outcome)	Time	Group One			Group Two			Group Three		
		X ²	P	Cramers V	X ²	P	Cramers V	X ²	P	Cramers V
EoE	T2	f/e	0.311	0.314	f/e	0.209	0.381	f/e	0.71	0.048
	T3	f/e	0.392	0.267	f/e	1.0	0.309	f/e	0.77	0
RTHC	T2	f/e	0.364	0.293	f/e	0.583	0.255	f/e	0.18	0.524
	T3	f/e	0.061	0.671	f/e	0.5	0.302	f/e	0.33	0.5

Service Evaluation Project

The Care Plan Approach at Snowsfields Adolescent Unit: The Experiences and Views of Young People's Carers.

Supervised by Dr Rachel Zwi

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Abstract

Snowsfield Adolescent Unit (SAU) provides specialist inpatient care for young people (YP) with complex mental health problems. The Care Plan Approach (CPA) is the way in which care is planned and coordinated with clinicians, YP, third sector agencies and YP's carers. Carers are a vital component in the YP's care and wellbeing and it is stipulated in national and trust policies that carers should be involved in the CPA. The South London and Maudsley (SLaM) NHS Foundation Trust policy also delineates standards in which it is expected for CPA to adhere. This service evaluation explores carer's views of the CPA process. Responses from 15 carers to a structured questionnaire exploring their experience of the CPA meeting revealed the service is adhering to trust CPA guidelines, as well as national guidelines. The majority of carers attended the CPA and reported they felt listened to, supported, and involved in the YP's care. Carers experience is significantly more positive than previous research. Some responses lead to recommendations, which include reducing the number of people attending, providing pre-CPA information so carers know what to expect, clearly introducing clinician's roles, maintaining a sensitive interpersonal style and allowing time for the carer to raise further issues at the meeting.

1. Introduction

The Care Programme Approach (CPA) is a form of case management which coordinates support for people with severe mental health problems in the community (Simpson, Miller & Bowers, 2003). This service evaluation will explore the experiences of carers of YP on an adolescent psychiatric inpatient ward of the CPA process. It is essential to explore carer's experiences in order to determine whether CPA meetings are adhering to national and trust policy and to highlight whether any processes can be improved. The following service evaluation is a continuation of previous work which explored YP's views of the CPA process on SAU (Janssen, 2013). This introduction will highlight the need for an evaluation of carer's experiences, outline the implementation of the CPA and review current literature on carer's experiences of the process.

1.1 The Importance of Carers

The CPA is a way to ensure care planning is integrated across agencies (e.g. carers, school, social services, healthcare), assess the service user's needs and liaise closely with carers (DoH, 1989). The views of carers are an important area to explore for many reasons. Firstly, carers views can be explored to determine if the service is adhering to local and national policy guidelines. A number of UK government policies have highlighted the importance of involving carers in the CPA process (DoH 1999, DoH 2000). SLaM CPA policy stipulate trust guidelines, that carers needs should be considered and where possible involved in the service users care (SLaM et al, 2000). Carers are integral to the CPA, especially in the planning of post discharge treatment and aftercare (Allen, 1998). Families are the main agency providing shelter and support to individuals (Goldman, Garirozi, & Taube, 1981; Falloon et al, 1985; Bebbington & Kuipers, 1994) with approximately 75% of service users returning home after discharge from a psychiatric hospital (Shankar & Muthuswamy, 2006; Newton & Birchwood, 2005). Carers play a significant role in the recovery and support of YP with mental health problems. A supportive, warm and low expressed emotion environment can influence recovery in a number of mental health problems such as depression (Vaughen & Leff, 1976) bipolar (Miklowitz & Otto, 2006) and psychosis (Kuipers, 2006; Tarrier, Lownson & Barrowclough, 1991). However families report they lack the knowledge and skills to cope effectively. Birchwood, Jackson & Barton (2004) revealed 54% carers

are considerably dissatisfied with mental health services due to lack of information and support, which they desire (Soloman & Draine, 1995). As a result many families experience a considerable 'burden of care'. It has been found that approximately two thirds of carers experience substantial emotional distress, health problems and impaired social functioning (Fadden, 1997; Hatfield, 1978; Falloon et al, 1985). This 'burden of care' can impact on the care they can provide to the YP and can increase the level of expressed emotion and the course of the young person's illness. It is also important to explore carers experience of the CPA process as there is a limited literature on the topic with only a few small scale qualitative studies (Simpson et al, 2003) as hospital admission has been deemed too stressful a time for families to participate in research (Clarke & Winsor, 2010). A further reason it is important to explore carers experiences is that it could be the YP's first psychiatric admission and the carers first contact with mental health services, therefore this meeting may set the foundation for future interactions between carers and health care providers (Clarke & Winsor, 2010; Scharer, 2000). In summary, it is important to explore carers experiences of the CPA process, as their inclusion in the CPA is best practice and is stipulated in a variety of policies (DoH 1999; DoH 2000; SLAM et al, 2000). They have a significant influence on the care of the young person and course of the illness (Allen, 1998; Kuipers, 2006). There is also a substantial impact of care on carer's mental health and a lack of previous research (Fadden, 1997; Vaughn & Leff, 1976; Falloon et al, 1985).

1.2 History of the CPA

The CPA was introduced to England in 1991, as it appeared community care was not meeting the needs of people with mental health problems (Wallace, 1986) as considerable numbers of service users were losing contact with services. The health authorities recommended each individual should have a care package and a case manager to co-ordinate input from various agencies and liaise closely with the individual's family (DoH, 1989). A circular by the Department of Health in 1990 required all local and health authorities to implement a CPA for individuals with a mental health problem who were referred to specialist psychiatric services (DoH, 1990). The DOH (1990) recommended that certain fundamentals of the CPA were implemented nationally; however it stated that the characteristics could be determined locally. The fundamentals of the CPA were set out to ensure that there are systematic arrangements for assessing health and social needs, care plans are written and regularly

reviewed, care is monitored and co-ordinated by a key worker, service users and carers are involved in the planning and provision of care and that there is inter-professional and inter-agency collaboration. CPA meetings became the forum which enabled these DOH recommendations to be implemented. These meetings typically included a representative of the different agencies involved, service users and carers, and became routine practice. The frequency of the CPA meetings varied according to the individual's needs and length of hospital stay.

1.3 SLAM CPA guidelines

The South London and Maudsley NHS Foundation Trust CPA policy (2000) includes recommendations for how the CPA is implemented locally and stipulates standards to ensure the care delivered adheres to government guidelines. It aims to ensure that care is integrated across social and health services and to minimise distress for the service user and carers. The policy specifies that there should be a care coordinator who provides the main link to services for the service user and carer, and monitors the care plan. The care coordinator also identifies who attends the CPA review meeting. The purpose of the CPA review meeting is for the care coordinator and other professionals to collaborate with the service user and carer about the service users care plan. Care plans are a written agreement stating what the service user can expect from care. The care plan should include the different responsibilities of clinicians involved, interventions and anticipated outcomes. The policy states that service users and carers should be involved in producing care plans collaboratively with clinicians at CPA meetings and that they should feel listened to and comfortable. The frequency the care plan is reviewed and evaluated depends on the service user's needs. The care plan should also include a crisis plan, which should detail who can help and how to contact them. This should also be agreed with the carer so they are aware who to contact should they need more help and support when the YP is discharged.

1.4 Effectiveness of the CPA

Research on carers views of the CPA process and its implementation have highlighted areas where the process is working well, as well as caveats and areas for improvement. The Cochrane review (Marshall, Gray, Lockwood & Green, 1998) has shown that the introduction of the CPA has improved clinical outcomes. There has been increased maintenance of contact with service users, reduced suicides, length of hospital

admissions and increased patient satisfaction (Simmonds et al, 2001). Service users and carers are more satisfied with services when CPA arrangements are more successfully administered (Beeforth, Conlan, & Graley, 1994; Webb et al, 2000) and good information is correlated with service users and carers satisfaction of mental health services (Rose, 2001). Comprehensive involvement of carers at discharge has also been shown to instil hope and improve continuity and consistency of care which are important for the service users recovery (Chambers Ryan, & Connor, 2001). Carpenter et al (2001) found carers were more likely to be listened to and involved in care planning if the service users were on a CPA, which would have a variety of benefits for the service user and carer. Schneider et al (2001) used the 'Experience of Care Giving Scale' to compare experiences in districts with different integration of health and social care agencies. They found in the districts where health and social care worked closely together, that carers worried significantly less, felt less need to back up services and a reduced burden of care. This further illustrates the service organisation and CPA implementation can affect carers, clinical outcome and reduce carer burden.

1.5 Carers views on the CPA

Research which has explored carer's views of the CPA meeting has highlighted there are a number of aspects which carers value. Research has highlighted carers value the meeting being a forum to ask questions, give and exchange information, be listened to and their worries and concerns addressed (Magorrian, 2001). Allen (1998) conducted a qualitative survey of nine carer's views and experiences of the CPA in an inner city area. Carers were asked about their understanding of the CPA, the extent they felt involved, and ways the process could be improved. Allen's (1998) findings illustrated that some carers felt informed, listened to, supported and sensitively included in the care process. Carers emphasised the meeting was a good forum to ask questions and stated the giving and exchanging of information was of paramount importance, and that they valued knowing what is expected of them. Carers wanted information of who is involved, the nature of the mental health problem, prescribed medication and plan of care. Carers felt some professionals were very patient and clear and they did not feel information was being withheld. A few carers understood the CPA process, appreciated support, felt less isolated and valued discussing their concerns with staff.

Research also highlighted areas where the CPA may not be successful and indicated aspects carers were not satisfied with. The Royal College Psychiatrists (Secretary of

State for Health, 1994) highlighted problems with the implementation of the CPA including low levels of patient and carer involvement and poor quality care plans. A survey commissioned by the DoH (North, Ritchie & Ward 1993; Schneider, 1993) indicated service users and carer's involvement was minimal, with service users and carers infrequently receiving assessments or invited to attend reviews. Research conducted more recently highlights there is still a divergence between CPA policy and practice in carer involvement. Schneider, Carpenter & Brandon's (1999) review of the implementation of CPA found just 55% of carers attended the CPA sometimes, 31% often and 4% always, (5% rarely and 1% never). There were also significant differences of carer involvement across NHS trusts. Carpenter & Sbaraini (1996) looked at improving service user and carer involvement in a South East CMHT. Initial observations of the team showed staff lacked skills to involve carers and that carers passively agreed to professional's recommendations. Carers complained they were given little information about the treatment or diagnosis, but felt expected to provide care when the service user was discharged. Carers also felt that professionals should actively encourage their participation. In summary, some research reveals carers attendance at the CPA is low, staff do not actively involve carers and that little information was provided to carers about treatment or diagnosis.

An exploration of carer's views of the CPA process was conducted by Allen (1998) and highlighted some areas which could be improved. Carers stated they felt professionals should meet their needs, provide more time for information, explanation and opportunity to ask questions. Carers felt excluded, isolated and that their views were not taken seriously. It was also identified that soon there would be too many people in the room with charities and private sectors now involved. A majority of carers were also unsure who to contact in case of need. Clarke & Winsor (2010) explored parent's perceptions and their practical and emotional needs during a YP's first psychiatric hospitalisation. It was identified parents experienced shock and disbelief when learning the YP's diagnosis. This could be associated with the natural process of grieving for an altered future. Carers also felt isolated, excluded from involvement in care and felt they were not acknowledged by staff during discharge. Some parents stated discharge decision was not collaborative and that they only received notice on the day which did not allow them time to prepare. Parents also stated they found the meeting intimidating, did not feel listened to and wanted more opportunity to express their concerns and receive advice. Carers were not familiar with the purpose or process of the CPA. The

information and support received appeared to be ad-hoc and vary dependant on the clinician with no standard procedure. Carers stated the clinician would make a significant difference with some being dismissive and portraying them as the experts and others being supportive and patient.

Further research also highlights carers did not find mental health providers helpful or supportive (Ferriter & Huband, 2003; Doornbos, 2002; Cradock, Young & Forquer, 2002). Carpenter & Sbaraini (1996) reported that there was minimal support for carers, and staff did not ask how they were coping or consider their needs (Macpherson, Collins-Atkins, Gregory, Slade, & Lerescu, 2008). Some carers felt the confidentiality policy was used to avoid giving information (Carpenter & Sbaraini, 1996; Shankar, & Muthuswamy, 2007), despite generic information being allowed or the option of consent being sought from the patient. Carpenter & Sbaraini (1996) found carers wanted their expertise to be recognized about early signs of relapse or side effects of medication. Chambers et al (2001) found carer's friends and support groups were their main source of support and information, not clinicians. Carers suggested staff should acknowledge and involve the family more and remember that although it is a routine process for them it is stressful for the family, which would help them with the process of hospitalization and diagnosis. They also felt staff should offer coping mechanisms, more information, assist with problem solving and recommend a local support group to reduce isolation (Chambers et al 2001; Magorrian, 2001). The families involved recommended that support for carers should be an outcome measure of a mental health program (Chambers et al, 2001). Magorrian (2001) also highlighted carers felt it would have been helpful to inform them of what they may experience during hospital admission to help validate their experiences. This may improve coping and reduce burden of care. It has been found support programs for carers have reduced the cost of social care, frequency of admission and the need for crisis support (Dixon and Lehman, 1995). Shankar & Muthuswamy (2007) identified burden of care is exacerbated by brief inpatient stay, poor follow-up care and lack of supportive services, such as crisis information and counselling. At illness onset and discharge carers felt let down by services and helpless. Carers stated they also sometimes felt invalidated in interactions with mental health professionals and excluded from decisions.

In summary, the literature indicates that where the CPA is well implemented there are better health outcomes and higher carer and service user satisfaction. Carers also valued

the CPA as an opportunity to express concern, be listened to, exchange information and receive support. However the extent carers felt valued and involved varied. Some research indicated attendance was low at the CPA meeting, that little information was exchanged, that diagnosis can be a shock and that carers feel excluded and unsupported in the CPA process. Information and support available at admission and discharge especially seemed significant. Further themes involved carers not feeling listened to or validated and finding the meeting intimidating and that decisions were not made collaboratively. Some research indicates carers did not understand the CPA purpose or process. Based on previous literature these are themes which could be important to explore in carers of YP on SAU. The experiences will be explored to determine if the CPA adheres to policy and to determine if any responses could lead to recommendations which would improve carer's experience. Every YP in (SAU) has a CPA before they are discharged, unless admission is very short. Some YP have more than one CPA during their admission if they have a long admission or their case is complex and CPAs are planned in advance. All members of a YP's care team at SAU and agencies involved in their future care are invited, as well as caregivers and the YP themselves. This is a continuation of a service evaluation which explored YP experiences of the CPA (Janssen, 2013) and results will be compared, which may emphasize further any recommendations.

2. Method

2.1 Design

A survey methodology was employed to explore carer's views and experience of the CPA process. A semi-structured questionnaire was used with a mix of open and closed questions (see appendix 1). This enabled responses of participants to be easily compared, as well as the opportunity for participants to expand and give detailed answers. The data will be analysed using a mix of inferential statistics and content analysis.

2.2 Materials

The materials required were fifteen copies of the questionnaire, a pen and sealable envelopes. The room where the CPA meeting took place was used for participants to complete the questionnaire. A box file which was clearly labelled in the room where the CPA took place was available for participants to leave the completed questionnaires.

2.3 Participants

The aim of the service evaluation was to explore carers views of the CPA process. To ensure a representative sample the aim was to obtain a completed questionnaire from fifteen carers from fifteen consecutive CPAs. Carers of YP on SAU who had a CPA meeting between February 2012 and May 2012 were invited to participate in the evaluation. The main carer of the young person was asked to complete the questionnaire. In cases with more than one carer present at the CPA meetings, participants could choose who completed the questionnaire.

2.4 Procedure

In the previous service evaluation two questionnaires were developed to assess YP's experience of the CPA process, one for YP who attended their CPA meeting and one for YP who did not attend. This was because some YP did not attend their CPA and it was important to capture this samples view. The survey developed for YP who attended their CPA was adapted to ask carers about their experience of attending the CPA process. It was decided not to develop a questionnaire for carers who did not attend; this was because in the majority of CPAs a carer did attend. For practical reasons it may also have been difficult to ask a carer who did not attend and who may not have much

involvement in the young person's care to complete a questionnaire. Therefore just one questionnaire for carers who attended was developed.

Items from the original questionnaire considered relevant to carers were adapted, and items specific to YP were discarded. Additional issues which were considered important to carers were discussed and consultations were held with different members of the SAU team to assess topics clinicians considered important. A consultation was also held with a parent of a service user to discuss areas she considered important. These areas were congruent with areas included in the questionnaire. The format of the questionnaire was preserved to enable comparison of results from YP and parents. Items were a mix of open and closed questions which used a three point likert scale.

A pilot questionnaire was completed by three carers. This was to ensure the questions were understood. All three questionnaires were completed correctly and carers reported they understood the questions and that it was simple to complete. Therefore no adaptations to the questionnaire after the pilot were made. A record of all CPAs scheduled to occur from February 2012 to May 2012 was kept in a database. Information was recorded on the date and time of the CPA, if carers had been invited, the length of admission of the young person and whether a questionnaire had been completed. After the CPA meeting a team member offered the parent or carer the opportunity to complete the questionnaire. The carer was asked if they would like to complete it in the room where the meeting took place. The questionnaire contained information about the evaluation and instructions of where to leave the completed questionnaire. Carers were provided with an envelope to put the completed questionnaire into. There was a clearly labelled box file in the office for participants to leave their questionnaire; these were collected by the researcher after the CPA meeting. No identifying information was on the questionnaire. Questionnaires were only identifiable by a number, which corresponded to information on the young person in their care on a database. Participants could request to speak to a member of staff if they wished by leaving their name and contact number at the bottom of the questionnaire. The researcher would then ask a member of staff to contact the carer to discuss what the carer wished. Questionnaires were anonymous and responses were only seen by the researcher and no other members of the team.

The data was analysed using a mix of descriptive statistics and content analysis. The responses to open ended questions were analysed for any emerging themes. They were

then grouped together in these themes, with the original quote next to them. To assess reliability of the themes, a second rater, a qualified clinical psychologist then analysed the results, to determine if the themes were consistent with their ideas.

3. Results

Fifteen carers of YP on an in-patient psychiatric unit for 12-18 years olds within the National and Specialist CAMHS directorate of SLAM completed surveys between February 2012 and May 2012. A demographic summary of the YP whose carers completed these surveys is presented in Table 1.

Table1. Demographic summary of YP who had CPAs at SAU between February and May 2012

	Clients	Carers
Gender		
Female	13	9
Male	2	6
Primary diagnosis relating to admission		
Adjustment disorder	1	
Developmental disorder	1	
Depression/ bipolar disorder	0	
Eating Disorder	3	
Personality disorder	4	
OCD	1	
Other reactions to severe stress	3	
Psychosis	1	
Reactive Disorder	1	
Weeks since admission		
<4	3	
<8	10	

<12	0	
<16	1	
16+	1	

During the period between February and May 2012 in which the fifteen surveys were completed, a total of seventeen CPA meetings took place at SAU. Out of the seventeen which took place there were two CPA's where a carer did not attend. A demographic summary of the carers of the fifteen YP for whom these CPAs were held is presented in Table 1. Of all carers offered a survey there was a 100% response rate. None of the carers requested to discuss the survey or the CPA process further with staff.

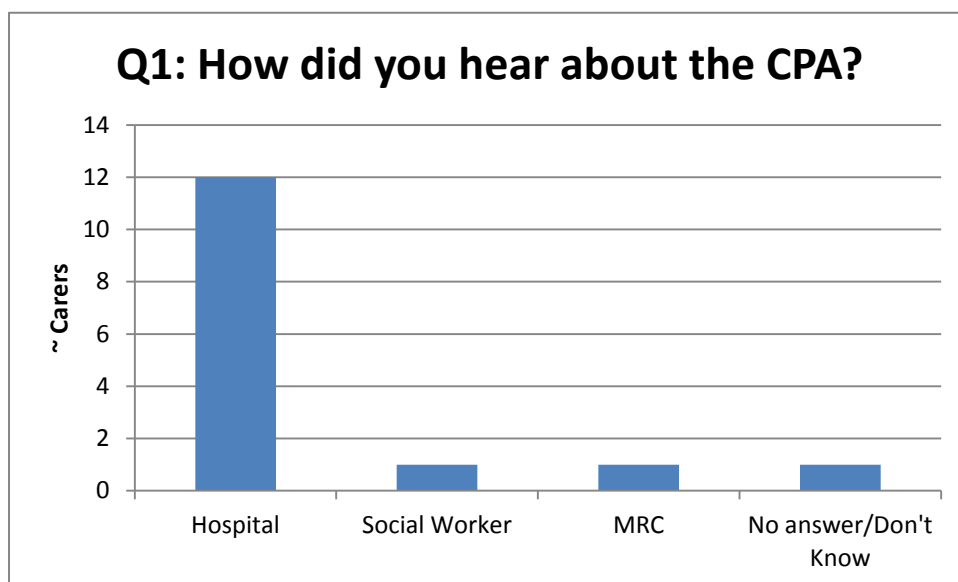
3.1 Content Analysis

The completed surveys reflect a range of perspectives from the fifteen carers of YP. A brief summary of the responses is presented for each question in the survey. The survey comprised of fixed and open ended questions. For fixed response questions where the carers choose an answer from a range of options, the frequencies of each response are presented. All carers completed the questions with fixed response options and a small proportion completed the open ended questions. Some of the open responses are recorded in verbatim in the results section below and for other items responses categories were developed. Coding reliability was assessed by triangulation; a colleague was asked if they agreed with the categories developed and reliability was 100%. Some of the themes which emerged from the open ended questions will be highlighted and discussed. The responses of the carers did not seem to differ according to gender or primary diagnosis of the YP, but the numbers in the categories were small so it is not possible to subject this to formal analysis. A proportion of the questions asked in the survey for carers were also asked to YP in a separate service evaluation (Janssen, 2013); where questions were the same YP responses are also given.

3.2 Survey Results

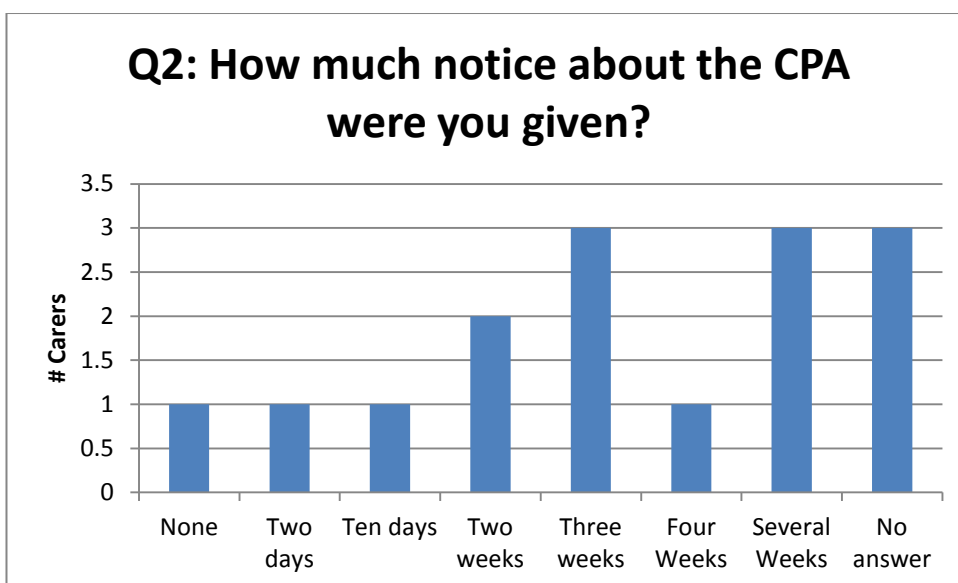
1. How did you hear about your CPA?

Responses indicated most carers heard about the CPA from a member of staff at SAU. One carer indicated they found out about it from a specialist team who work closely with SAU. No carers gave further details about the process of finding out about the meeting. This corresponds with the results from the project looking at YP's experience of the CPA, with the majority of YP finding out from staff at SAU also.



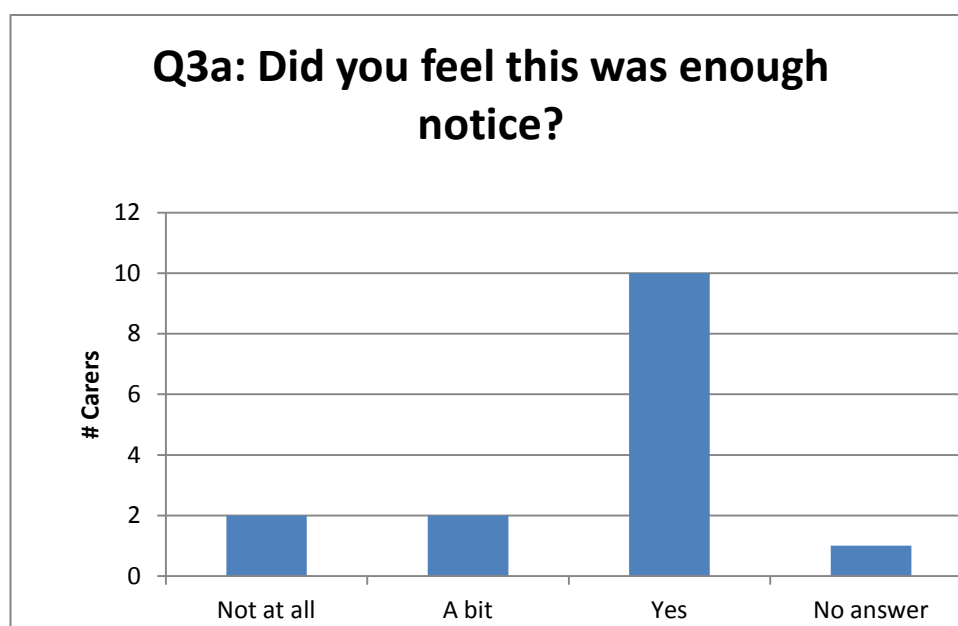
2. How much notice were you given about the CPA?

Responses indicated there was variation in the amount of notice given about the CPA, from two days to several weeks.



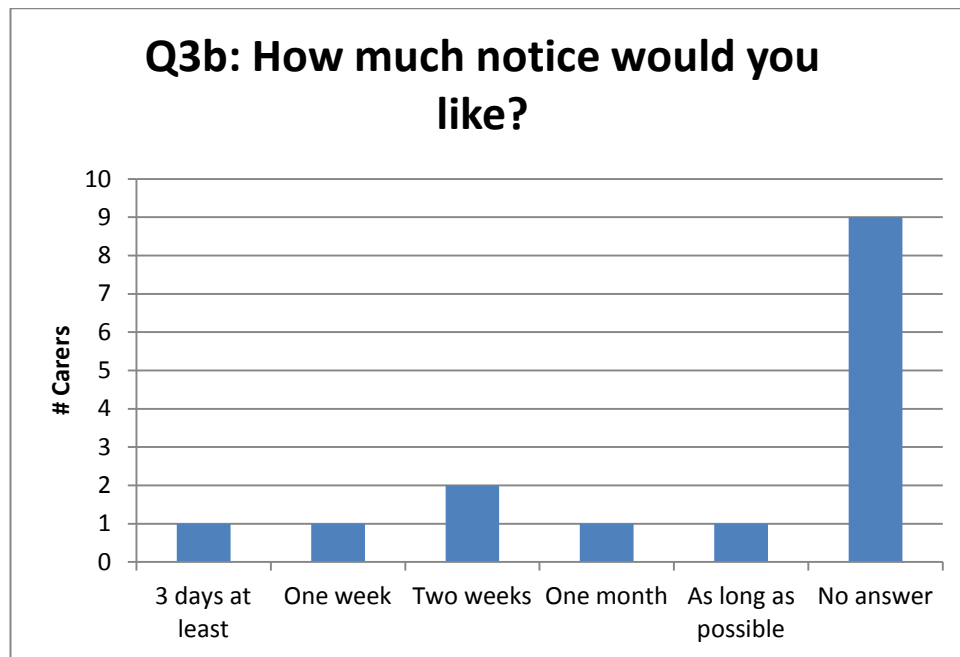
3a. Did you feel this was enough notice?

Only two carers indicated they felt they were not given enough notice. One of these was the carer who reported they were not given any notice. It is unclear why this was the case. The other carer who reported there was not enough notice stated they were only given two days' notice, it is unclear why they were only given two days' notice and this is not usual practice.



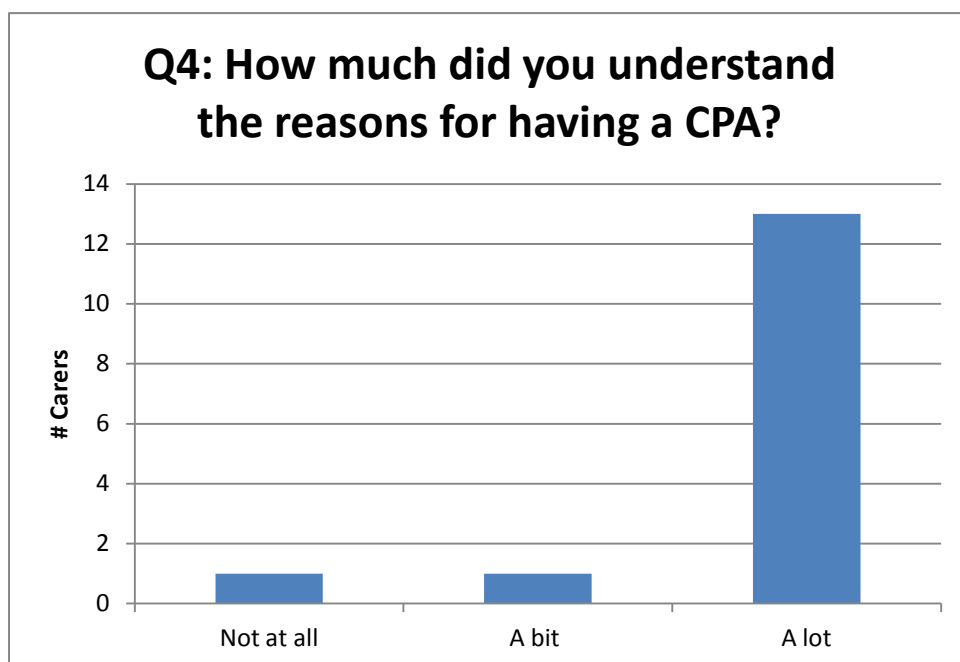
3b. How much notice would you like?

There were no answers to this question from 60% of the carers. This indicates they may be satisfied with the amount of notice they received or did not have strong opinions they wanted to express about the topic. Two carers stated they would like two weeks' notice and only one carer specified that they would like one month.



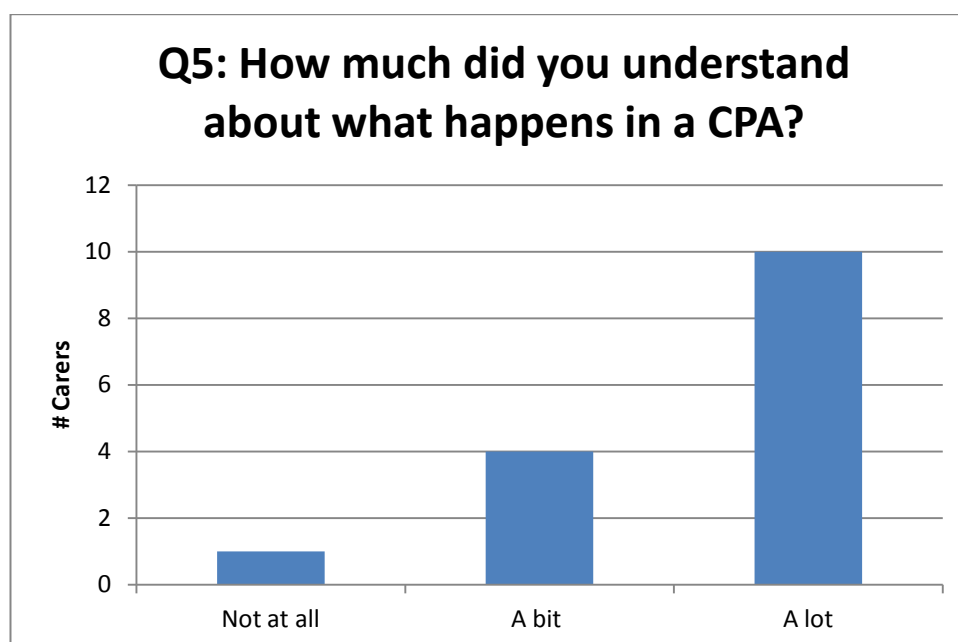
Q4: How much did you understand the reasons for having a CPA?

The majority of carers stated they understood the purpose of having a CPA. The carer who stated they did not understand was negative overall in her comments about the CPA. 53% of YP stated they understood 'a lot' the reasons for having a CPA, where as 86% of carers stated they understood 'a lot' the reasons for having a CPA (Janssen, 2013).



5: How much did you understand what happens in a CPA?

Responses indicated 66% of carers understood the process of the CPA. The carer who did not understand the process at all generally described her experience of the CPA negatively. 69% of YP understood ‘a lot’ what happens in a CPA. 15% of YP understood a bit what happens in the CPA compared to 26% of carers who completed the survey (Janssen, 2013).



Q6: What did you like about the CPA?

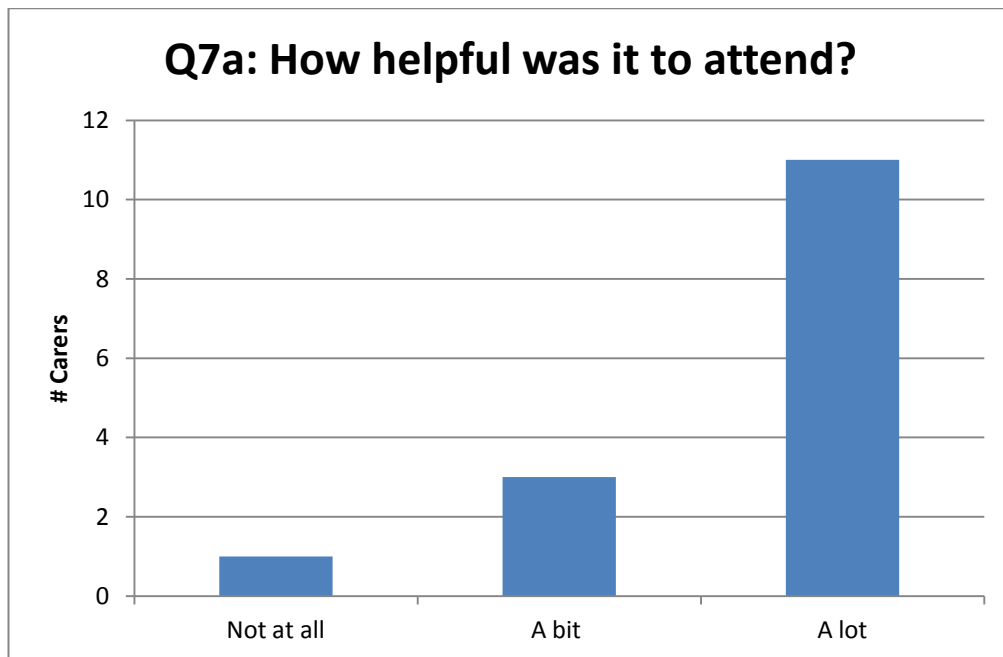
Open ended responses were provided by 80% of the carers. Of the respondents 73% identified one or more aspect they found positive about the CPA. Themes emerging from the responses reflected that carers valued the opportunity to discuss and plan the young person’s care, that there were people who care, they could ask questions, and that they valued being listened to. One carer stated there was ‘nothing’ she liked about the CPA, this carer generally described her experience of the CPA negatively in the survey. Almost half of YP stated that there was nothing they liked about the CPA process. Being discharged was a category which emerged from 30% of the YP, and a focus on help, needs and desires by 15% of the YP (Janssen, 2013).

Theme	Number of carers	Example				
Discuss and plan the young person's care	8	<i>'Very informative and gave us good understanding of what was happening'</i>	<i>Open discussion, good information'</i>	<i>'Clear pathway of care on discharge'</i>	<i>'Openness about the services available'</i> <i>'Covered all areas of care'</i>	<i>'Plan care'</i> <i>'All'</i> <i>'Discuss'</i>
People who care	2	<i>To hear what others think and feel XX's needs are'</i>	<i>'People who care'</i>			
Could ask questions	2	<i>'Opportunity to ask questions and voice concerns'</i>	<i>'Ask questions'</i>			
Valued being listened to	4	<i>That different people including me and XX able to view opinion'</i>	<i>'Listened to'</i>	<i>'Structured, proceeded at a calm pace'</i>	<i>'Listened'</i>	

Q7a: How helpful was it to attend?

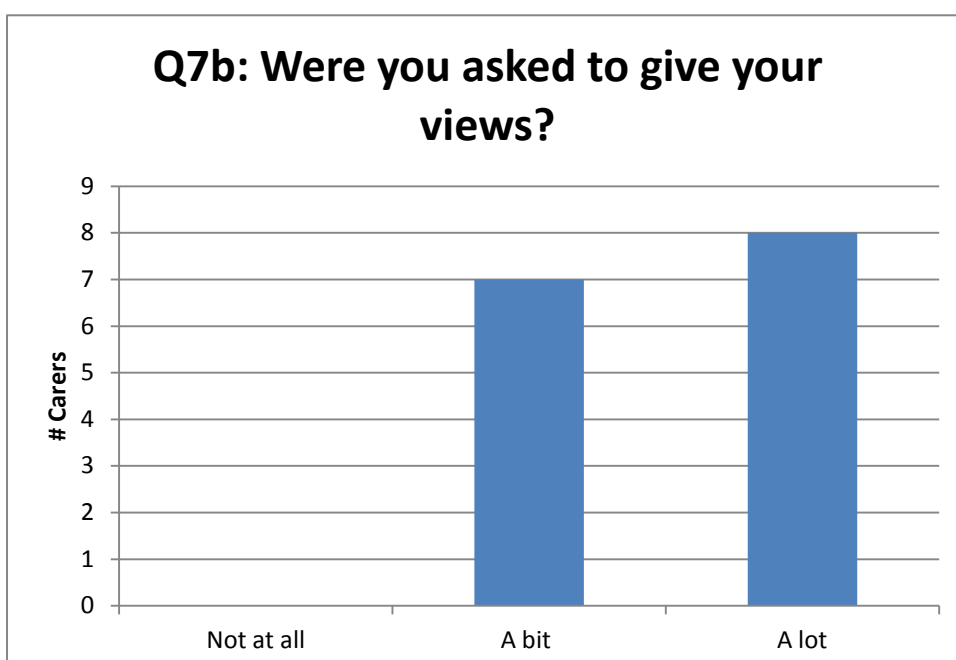
73% of carers stated that it was very helpful to attend the CPA and 20% said it was a bit helpful to attend. Of those who stated it was a bit helpful to attend, their relative had been admitted for less than 4 weeks. Three quarters of YP stated that it was at least somewhat helpful to attend and 20% stated it would not have been/was not helpful to attend (Janssen, 2013).

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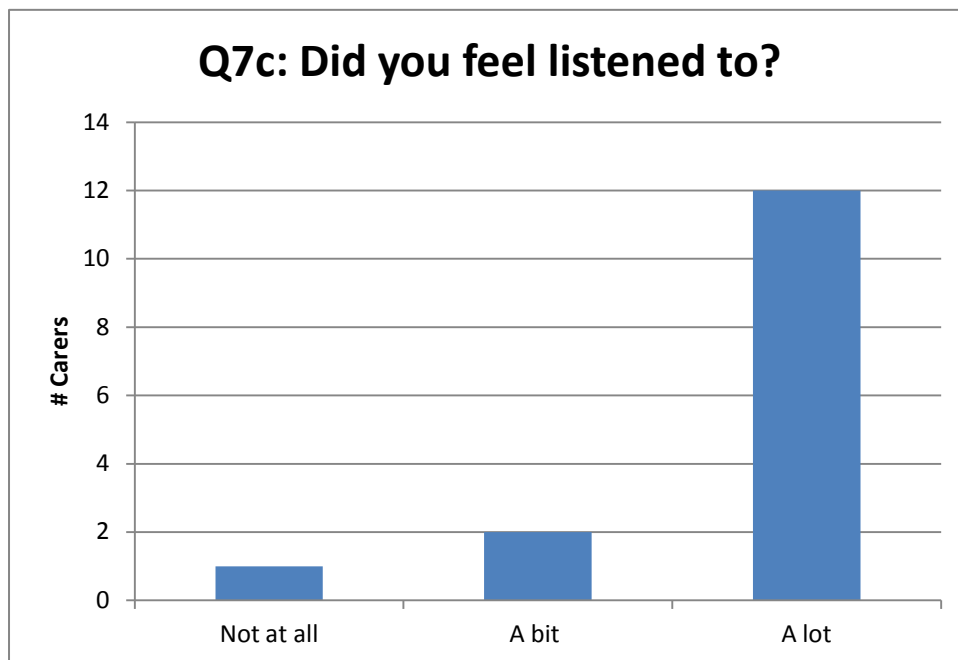
Q7b: Were you asked to give your views?

Responses indicated that all carers felt that they were invited to express their views. 53% stated they felt they were invited to give their views 'a lot' and 47% felt they were invited to give their views 'a bit'. 33% of YP stated they felt they were asked to give their views 'a lot' and 66% of YP reported they felt asked to give their views 'a bit' (Janssen, 2013).



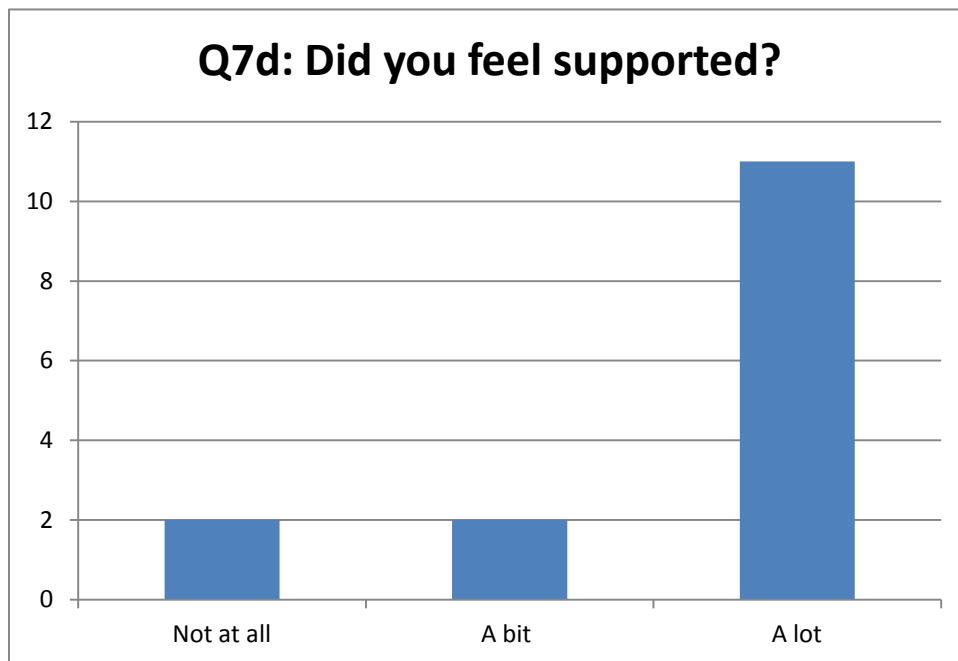
Q7c: Did you feel listened to?

Responses indicated that all carers apart from one felt that they were listened to. Of those 80% of carers stated they felt listened to 'a lot'. The carer who stated she did not feel listened to at all was generally negative about the CPA process in her survey. Of the YP surveyed 46% indicated they felt listened to 'a lot', 31% 'a bit' and 23% 'not at all'. Of the three who indicated they did not feel listened to 'at all' were all female and 2 had a diagnosis of emerging unstable personality disorder (Janssen, 2013).



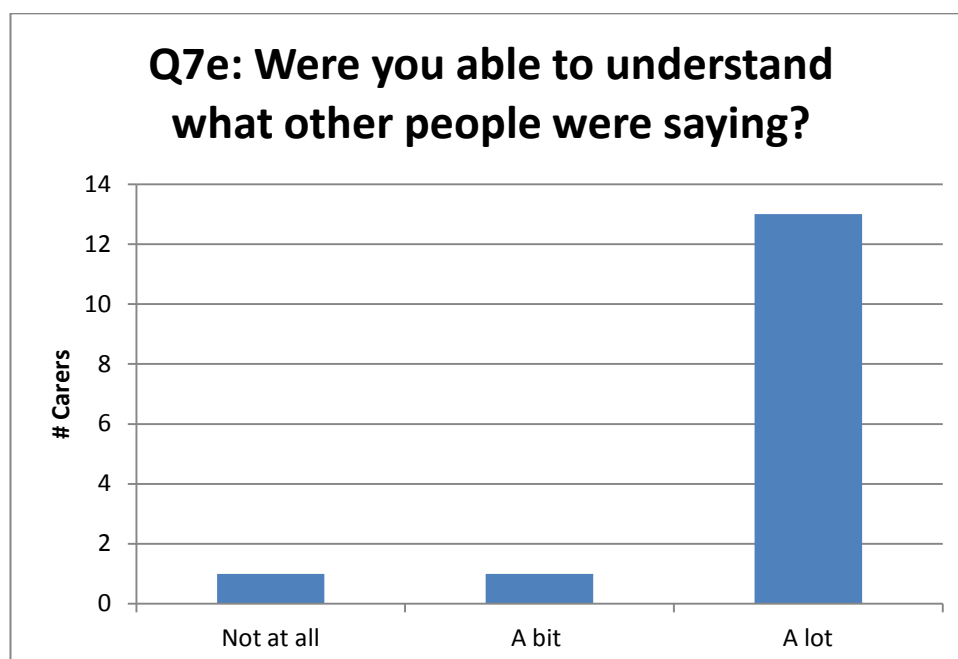
Q7d: Did you feel supported?

Responses indicated that 87% of participants felt supported and of those 73% stated they felt supported 'a lot'. Two carers indicated that they did not feel at all supported; one of those was negative about the CPA process in general. 46% of YP indicated they felt supported 'a lot', 31% 'a bit' and 23% 'not at all' (Janssen, 2013).



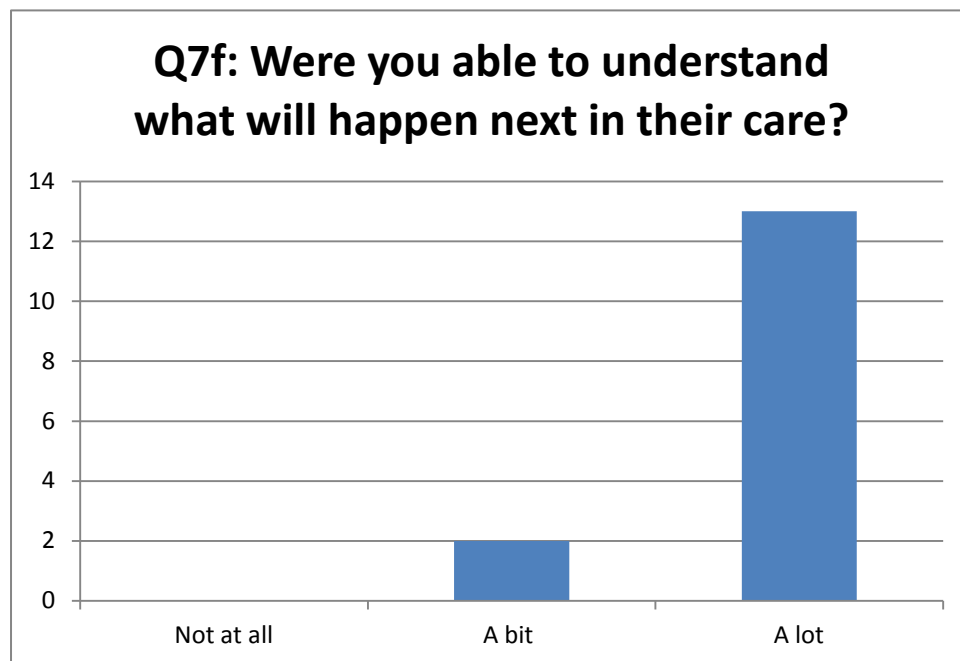
Q7e: Were you able to understand what other people were saying?

Responses indicated that 93% of carers understood, at least to some extent, what other people at the CPA meeting were saying and 86% indicated they understood 'a lot'. One respondent stated they did not understand at all what people were saying, but were generally negative about the CPA experience. When compared to YP 54% stated they understood 'a bit' of what was being said and 30% stated they understood 'a lot' (Janssen, 2013).



Q7f: Were you able to understand what will happen next in their care?

Responses indicated that the CPA helped carers to understand what will happen next in their young person's care. The majority of carers, 87% stated they understood 'a lot' the young person's care plan. Responses from YP indicated they were also very clear what will happen next in their care (Janssen, 2013).

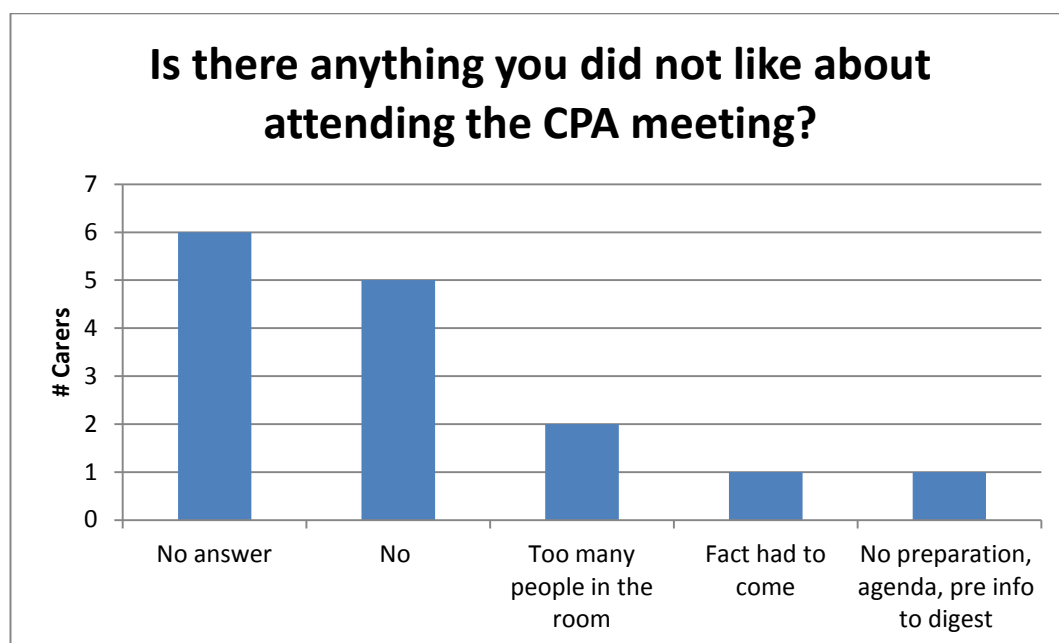


Q8: Is there anything that you didn't like about attending the CPA meeting?

Five carers stated that there was nothing that they did not like about attending the CPA meeting. Six carers did not answer the question, which indicates there is nothing specific that they did not like about attending the CPA. Two carers stated that there were lots of people in the room, when their roles were not apparent or when they were expecting just 3 or 4. One carer did not like that she had to attend. This carer was generally negative about the CPA process. Another carer stated that they would have liked some preparation, an agenda and information before the CPA meeting to digest. Results from the YP surveyed indicated that a third felt nervous and that there were too many people that they did not know in the room. One young person stated they did not

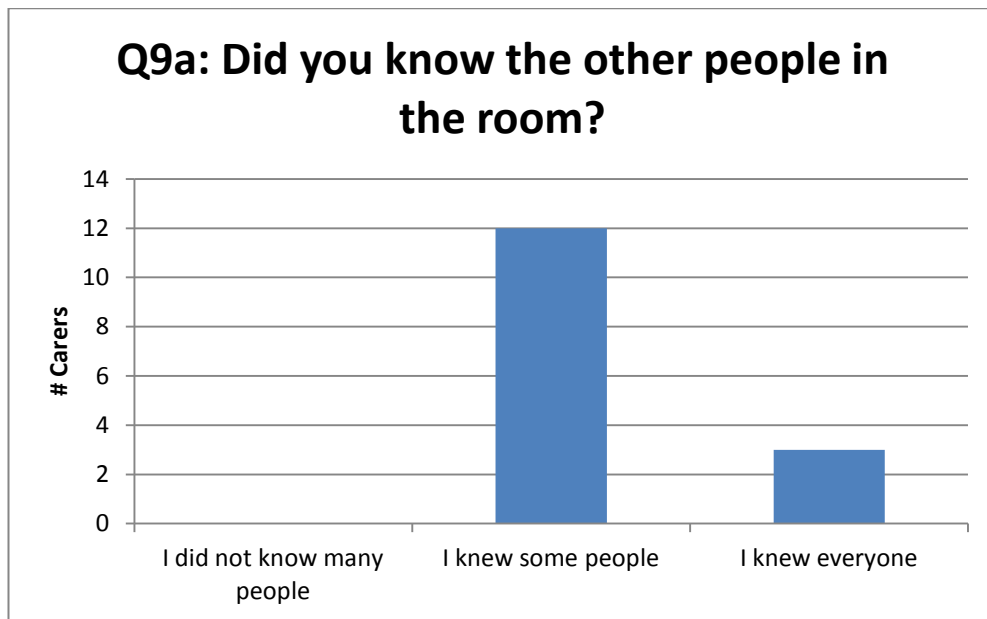
like that things were said and not done and two YP stated that they did not like anything (Janssen, 2013).

Theme	Number of Carers	Qualitative Response	
Too many people in the room	2	<i>'Too many attendees who's role was not apparent and who seemed not to contribute'</i>	<i>'Not knowing be 12 people in room, expected 3-4'.</i>
Preparation, agenda, pre info to digest	1	<i>'Preparation, agenda, pre info to digest'</i>	
Fact had to come	1	<i>'Fact had to come'</i>	



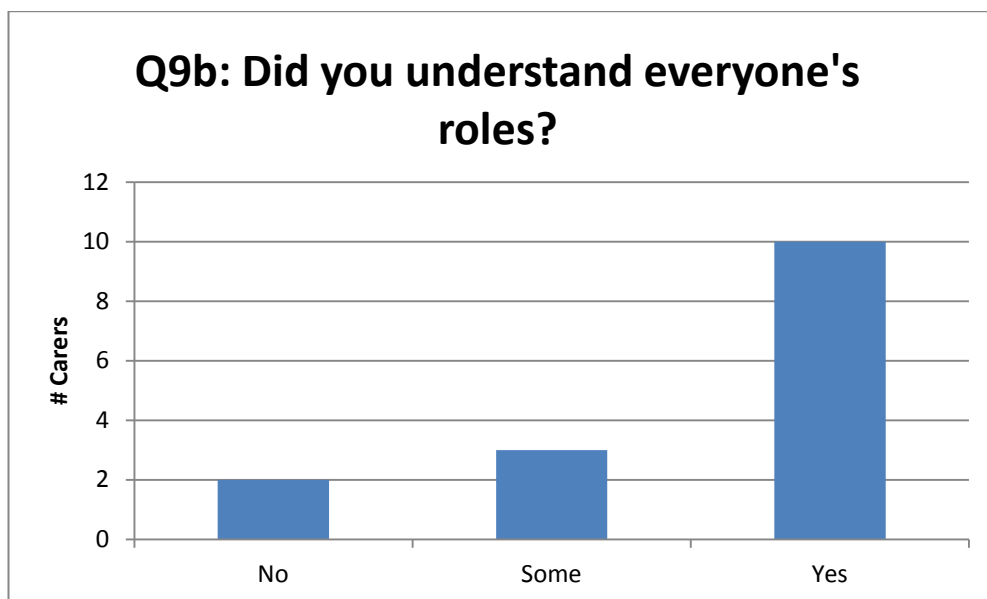
Q9a: Did you know the other people in the room?

The majority of carers, 80%, stated that they knew some people in the room, and only 20% stated they knew everyone.



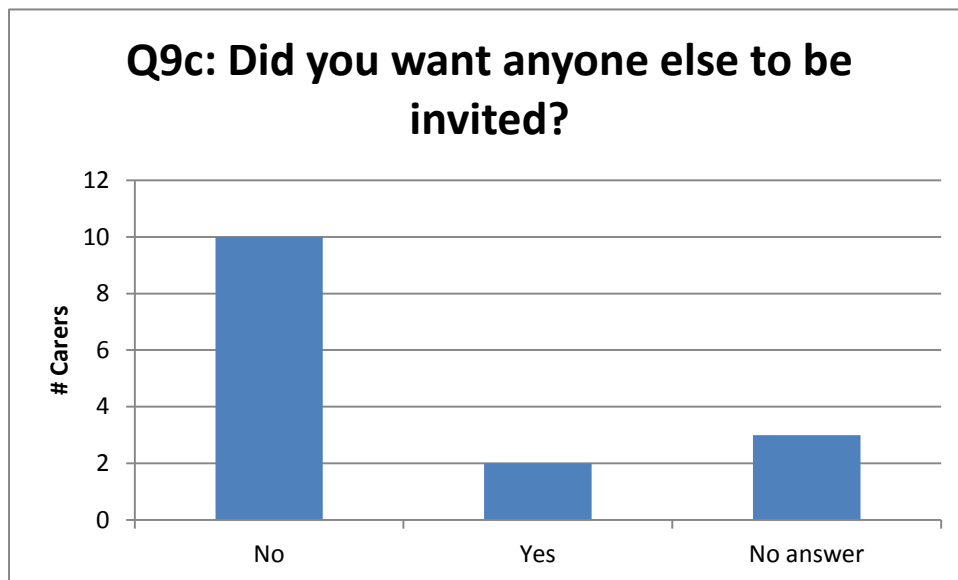
Q9b: Did you understand everyone's roles?

Responses indicated that 66% of carers understood everyone's roles but that 44% of carers did not understand everyone's roles,



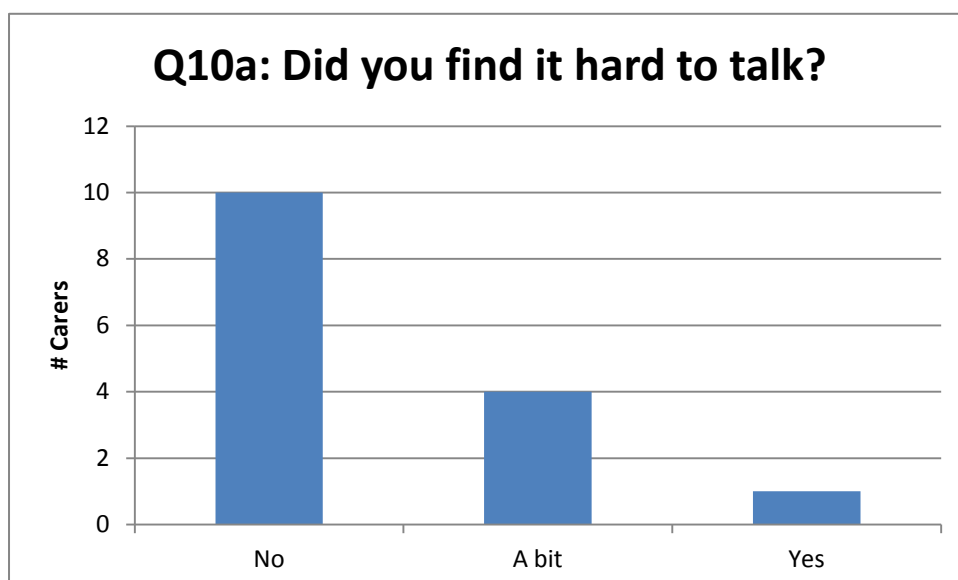
Q9c: Did you want anyone else to be invited?

Responses indicated that only 13% of carers wanted someone else to be invited. These were the local school/CAMHS team and a specific a staff member from another team.



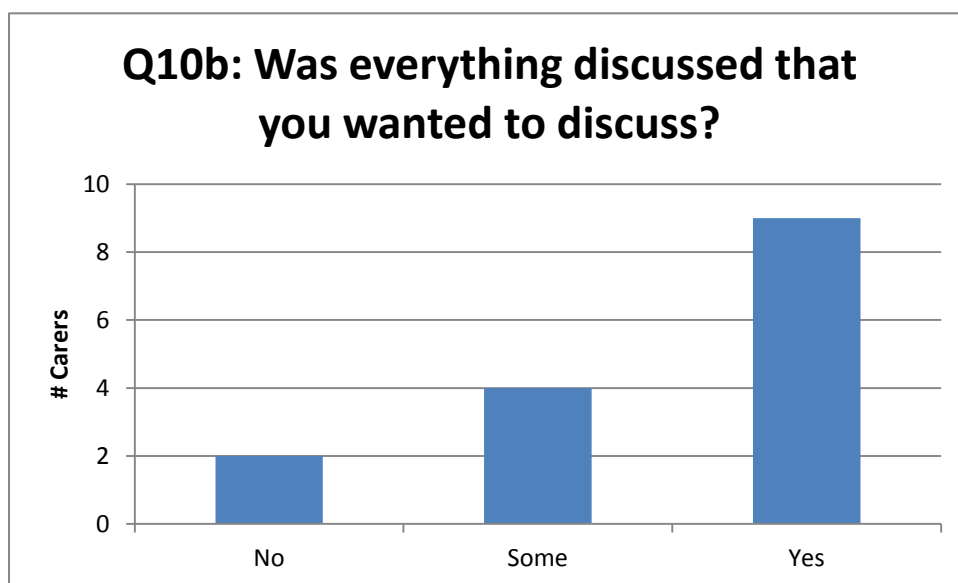
Q10a: Did you find it hard to talk?

Responses indicated that 66% of carers found it easy to talk in the meeting. 26% carers stated they found it a bit hard to talk and one person stated they found it hard to talk, however she was negative about the whole CPA process. Two thirds of YP had difficulty expressing their thoughts; however the majority of these were admitted for less than 8 weeks. One young person stated she found the people and formality of the process intimidating (Janssen, 2013).



Q10b: Was everything discussed that you wanted to discuss?

60% of carers stated that everything they wanted to discuss was discussed. However 40% of carers responses indicated they wanted to discuss something which was not discussed.

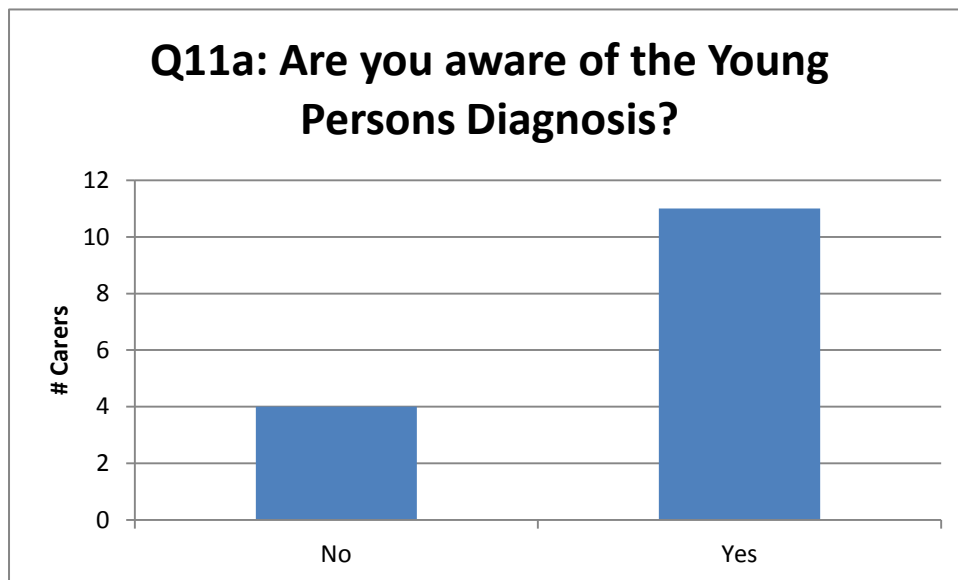


Q10b: If no what was missed?

No carers identified specific areas which they felt were missed.

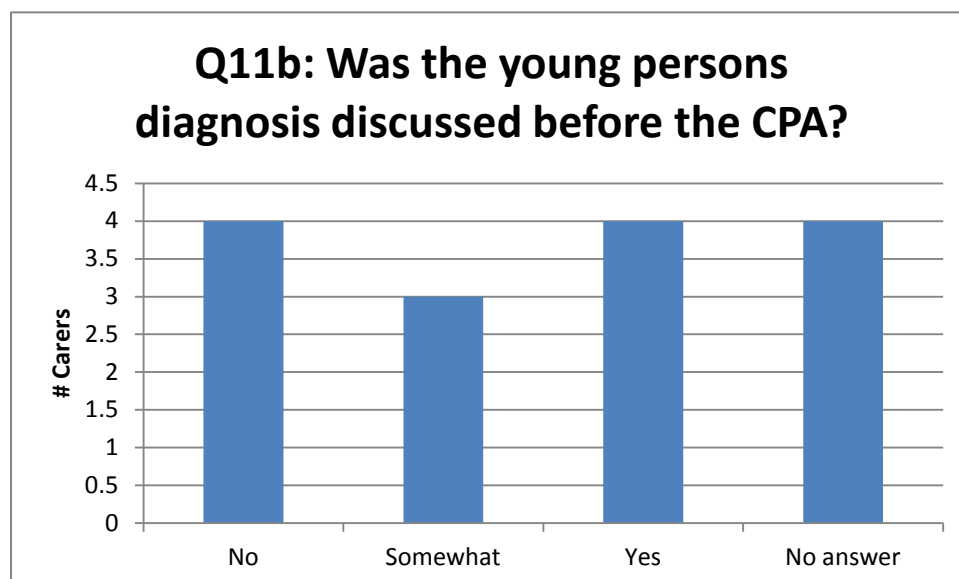
Q11a: Are you aware of the Young Persons Diagnosis?

73% of carers stated they were aware of the young person's diagnosis, of these two of them stated it was not discussed before the CPA meeting and two stated it was somewhat spoken about before the CPA meeting. This indicates 28% of carers who were aware of the young person's diagnosis were not made fully aware of it before the CPA. 27% of carers also stated they were not aware of the young person's diagnosis.



Q11b: Was the young person's diagnosis discussed before the CPA?

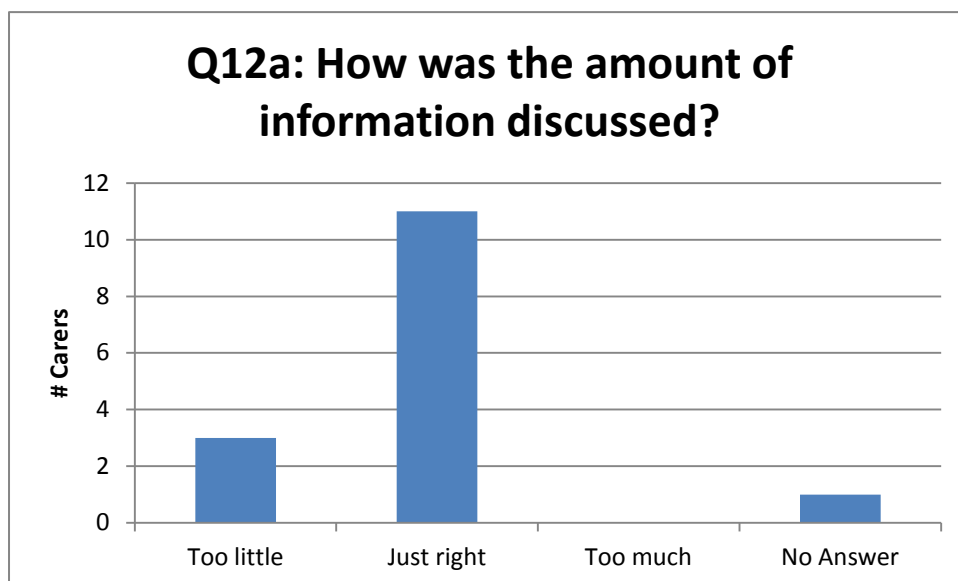
27% of carers stated that the young person's diagnosis was not discussed before the CPA meeting. A further 20% were unclear about the young person's diagnosis. However it is not known how carers felt about being unclear on the young person's diagnosis.



Q12 a: How was the amount of information discussed?

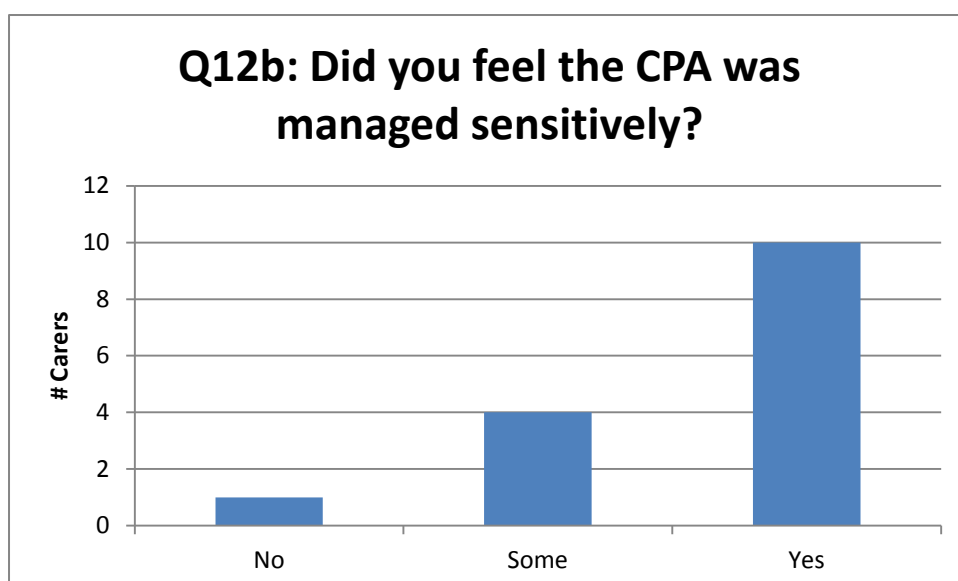
Of the three carers who felt too little information was discussed, in response to question 10b one carer stated not everything they wanted discussed at the meeting was discussed

and two stated a bit of what they wanted to discuss was discussed. No carer stated that too much information was discussed.



Q12b: Did you feel the CPA was managed sensitively?

Responses indicated that one carer felt that the CPA was not managed sensitively; this carer was generally negative about her CPA experience. 66% of carers stated they felt the CPA was managed sensitively and 27% stated some aspects of it were managed sensitively.



Q12c: Are there any ways it could have been managed more sensitively?

Of the 26% of carers who stated the CPA was managed somewhat sensitively, 2 gave qualitative responses about how it could have been managed more sensitively. One carer stated there was confusion about whether the questions were for the patient or for them; another carer stated they wanted to be able to discuss topics without the client being present.

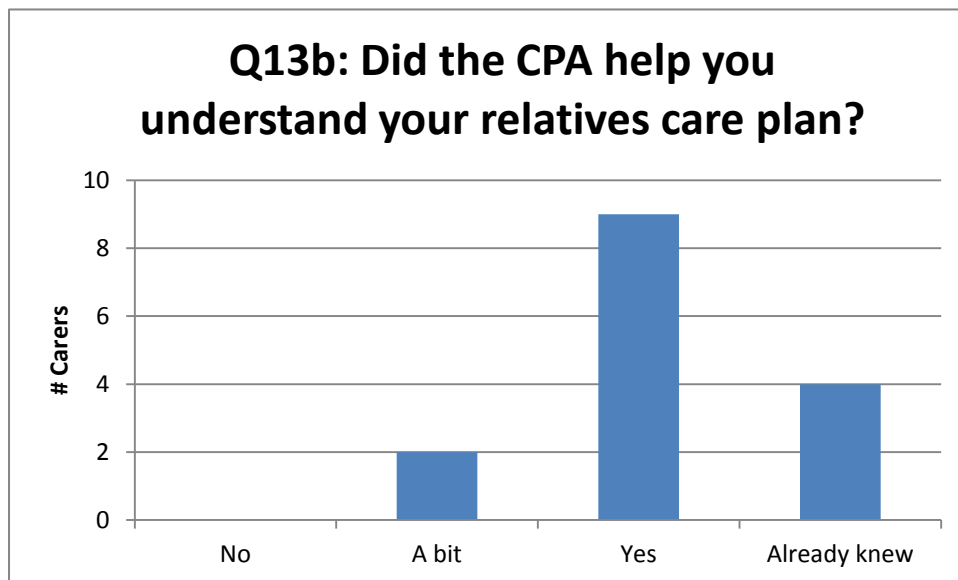
Q13a: Did the CPA help you understand why your relative was in hospital?

Responses indicated that 40% of carers already knew why their relative was in hospital. Responses indicated that the CPA helped 40% of carers understand why their relative was in hospital and 13% stated it helped them understand 'a bit' why their relative was in hospital. One carer indicated that it did not help them understand why their relative was in hospital; however this carer was generally negative about the CPA process. 61% of YP stated they already understood why they were in hospital 13% stated it helped them understand 'a lot' and 13% stated 'a bit' (Janssen, 2013).

Q13b: Did the CPA help you to understand your relatives care plan?

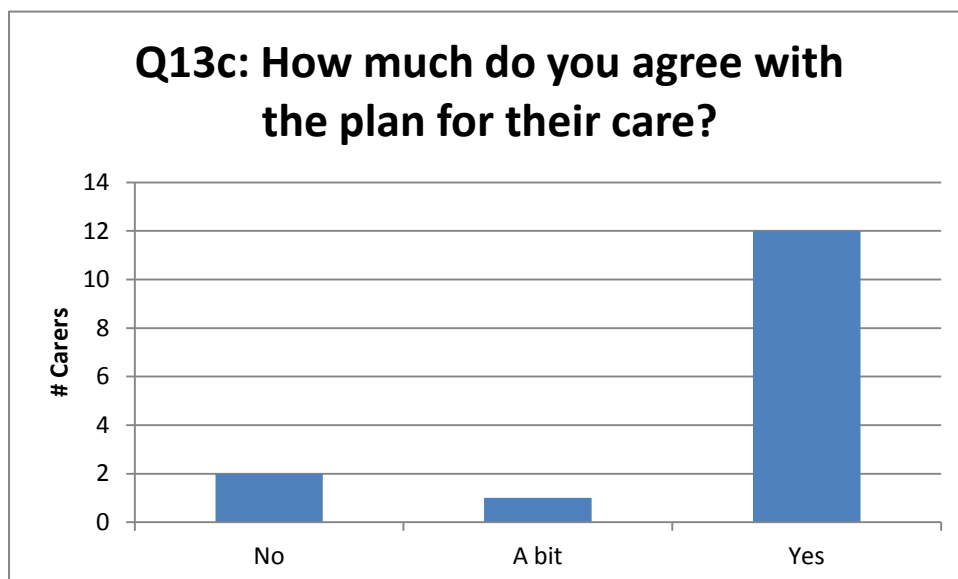
Responses indicated 60% of carers found the CPA helped carers to understand their relatives care plan and 26% of carers already understood their relatives care plan. 13% of carers stated it helped them understand their relatives care plan 'a bit'. The CPA assisted over half of YP to understand their care plan and most YP admitted to the ward for over 8 weeks understood their care plan (Janssen, 2013).

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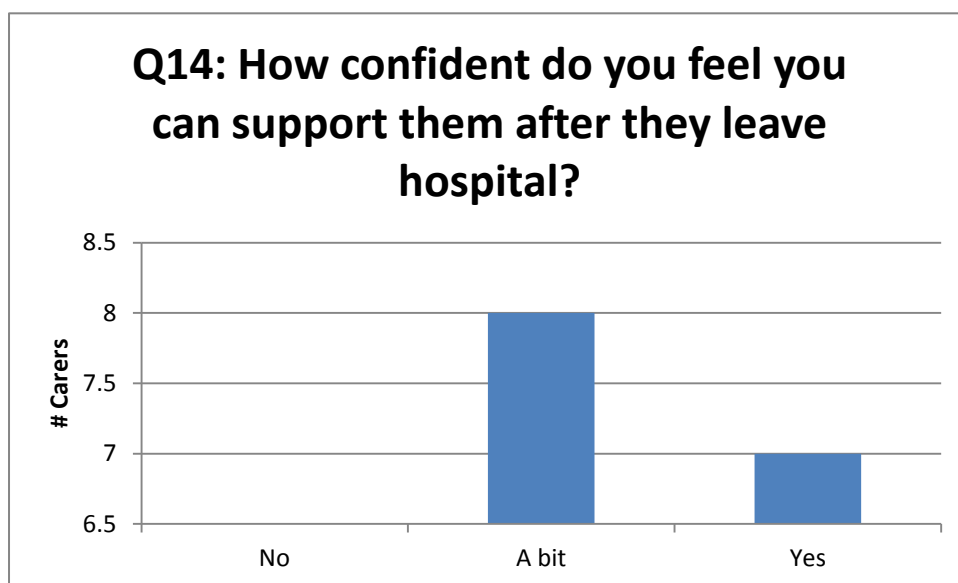
Q13c: How much do you agree with the plan for their care?

Responses indicated 80% of carers agreed with the plan for their relatives care. 13% indicated they did not agree and one of these respondents was negative about the general CPA process. The majority of YP agree to some extent with their care plans. Approximately one quarter agree a lot and one quarter were unsure or did not agree (Janssen, 2013).



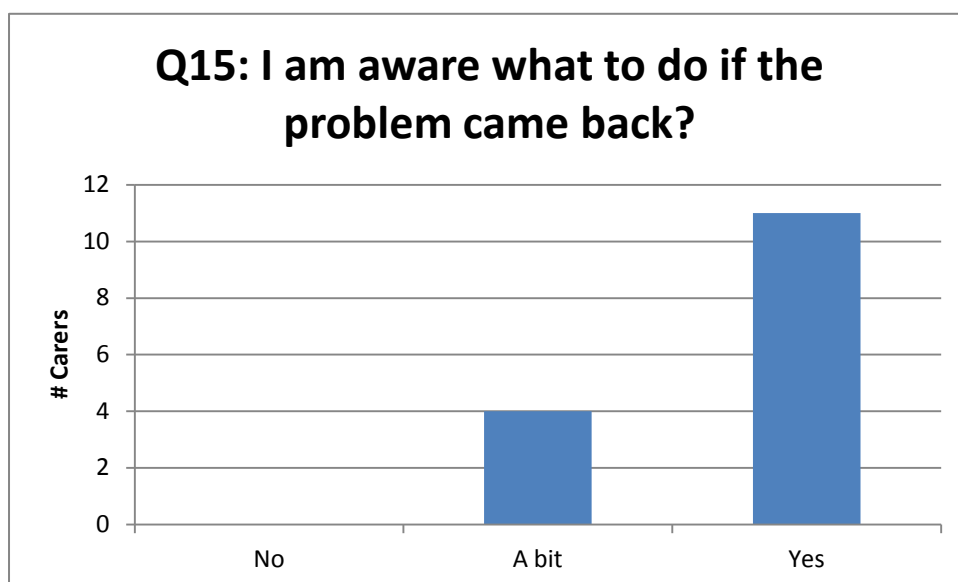
Q14: How confident do you feel you can support your relative after they leave hospital?

Responses indicated 53% of carers felt somewhat confident they could support their relative after they leave hospital and 47% stated they do feel confident to support their relative once they leave hospital.



Q15: I am aware of what to do if the problem came back?

Responses indicated 73% of carers were aware of what to do if the problem came back and 27% indicated they were a bit aware of what to do if the problem came back.



4. Discussion

This service evaluation aimed to explore the views of carers of YP on an adolescent psychiatric inpatient ward of the CPA process. Carers are extremely important in supporting YP with mental health problems and can influence the course of the illness (Vaughen & Leff, 1976; Miklowitz & Otto, 2006; Kuipers, 2006; Tarrier, Lownson & Barrowclough, 1991; Falloon et al, 1985). Research also suggests a large proportion of carers experience a high carer burden (Fadden, 1997; Hatfield, 1978; Falloon et al, 1985). The purpose of exploring carer's views was to see if improvements could be made to the service they receive, add to a limited research base and to explore if the service is adhering to SLaM CPA policy (2000). This discussion will focus on the positive and negative aspects of the carers experience with reference to the literature and with reference to the service evaluation exploring YP's views of the CPA process (Janssen, 2013). This discussion will also highlight a few recommendations which could be made to improve carers experience.

4.1 Summary of Results

A large proportion of YP's carers attended the CPA, higher than services in previous research (North, Ritchie & Ward 1993; Schneider, 1993; Schneider, Carpenter & Brandon, 1999) which suggests SAU is involving carers, adhering to SLaM CPA policy (2000) and government policy (DoH 1999, DoH 2000). The carers surveyed highlighted a significant number of positive aspects. Carers felt they received sufficient notice and the majority understood the reason for the CPA, which were areas some research highlighted carers were not satisfied with (Allen, 1998). Carers highlighted they liked the CPA meeting as it was a forum to discuss and plan care and they valued being listened to and supported. This is consistent with factors some literature has highlighted carers value about the CPA (Allen, 1998; Clarke & Winsor 2010; Rose, 2001; Magorrian, 2001; Simmonds et al, 2001). Carers also reported they understood the information, that the right amount was discussed and the majority of carers stated they knew and agreed with the YP's care plan. The majority of carers also stated everyone who they wanted to attend the CPA was invited. Most carers understood at the point of CPA why their relative is in hospital. The extent the CPA helped carers to understand

the purpose could be influenced by the length of their admission and communication prior to the CPA. Further positive findings were that although carers reported feeling unconfident on discharge, they knew how to support the YP and what to do if the problem came back. This suggests that a relapse prevention plan is discussed and agreed with the carers and that perhaps carers are more confident in managing post discharge than they feel. These results contrast with previous research which found that carers were unsure what to do upon discharge and felt unsupported (Allen, 1998; Shankar, & Muthuswamy, 2007; Rose, 2001; Chambers et al 2001). Overall these positive results indicate carers feel involved in the process, supported and work collaboratively with staff. This illustrates the service is adhering to SLAM CPA guidelines which stipulate carers should be invited, involved, care discussed collaboratively, carers should feel listened to, comfortable, supported and a discharge plan agreed (SLAM, 2000). These results contrast with some research which found carers often feel excluded, devalued, ignored, disrespected and unsure of the CPA process and care plan (Shankar & Muthuswamy, 2007; Macpherson et al, 2008; Allen 1998; Clarke & Winsor 2010; Rose, 2001; Carpenter; Ferriter & Huband, 2003; Doornbos, 2002; Magorrian, 2001; Chambers et al, 2001; Cradock, Young & Forquer, 2002), indicating this service is performing well in comparison.

Responses from some carers however indicate that small amendments could improve their experience. Nearly half of carers stated they were only asked to give their views ‘a bit’, indicating they perhaps felt they could be invited to give their views more. It was also indicated by some carers that not everything was discussed that they wanted and a fifth of carers stated they found it hard to talk. No qualitative reasons were given by any carers detailing issues they wanted to discuss or why they found it difficult to talk, however other responses in the survey indicate factors which may have contributed to this. It was reported by some carers that they were unsure about what happens in a CPA and one carer reported it could be helpful to have been prepared about what to expect, have an agenda and be provided with information before the CPA to digest. This is consistent with results from Allen (1998) who found some carers were unsure what was expected and could have contributed to carers finding it difficult to talk. Previous literature also highlights carers can find the CPA meeting intimidating (Carpenter & Sbaraini, 1996; Clarke & Winsor 2010). Some carers explicitly stated they did not like the number of people in the room and nearly half stated they were unsure of people’s roles. A further factor which may have contributed to carers finding it difficult to talk

was that some reported they felt the meeting could have been managed more sensitively. Chambers et al (2001) highlighted carers felt that staff forgot the CPA was not routine for carers and therefore were not as sensitive. Nearly a third of carers were only made fully aware of the YP diagnosis in the CPA meeting. Research has highlighted the experience of finding out a child's diagnosis can be one of shock and grief and should be done sensitively (Clarke & Winsor, 2010; Ferriter & Huband, 2003; Doornbos, 2002) and therefore could impair communication at the CPA. Carers own beliefs, stigma, images of mental illness and perceived access to social roles may also influence carers reaction (Schulze & Angermeyer, 2003; Link et al, 1997). These factors, carers' being unsure what happens in a CPA and what was expected, the large number of people in the room, sensitivity of staff, finding out a diagnosis and carers being unsure of peoples roles, could result in carers finding it hard to talk, not giving their views or discussing everything that they wished.

4.2 Comparison to views of Young People

The views of carers can also be compared to views of YP of the CPA process, which were explored in a separate service evaluation (Janssen, 2013). This comparison can highlight similarities and differences and can add further justification for any recommendations. There are a few positive aspects highlighted by both carers and YP. Both carers and YP felt they were asked to give their views and that they understood and agreed with the care plan. Most carers and YP understood prior to the CPA the reason for the admission and indicate this is not a primary use of the CPA. There are however a few areas highlighted by both carers and YP which could lead to recommendations. Both YP and carers stated there were lots of people in the room which they were not expecting, some of who they did not know or were unsure of their roles, which may have also contributed to some YP and carers finding it difficult to talk. In terms of differences between the views of YP and carers, carers commented on more aspects that they liked about the CPA, with almost half of YP stating that there was nothing they liked about the process. Carers also reported it was more useful to attend and felt they were asked to give their views more. Carers also reported they understood the purpose of the CPA more than YP, but that YP understood the process more. Further differences are that carers understood the content of the CPA meeting, which could be a result of language used by attendees. Carers however may have responded more positively overall as they are more removed from the system or due to response bias.

However a tendency for YP to report their experience more negatively could be influenced by their mental health problem. Biases in attention, interpretation and memory are transdiagnostic processes which maintain many mental health problems (Harvey, 2004) and YP's responses may also be biased by these processes.

4.3 Recommendations

These findings could lead to recommendations to improve the experience of the carers and YP. Responses indicated that some carers and YP found it difficult to talk in the CPA. Although no qualitative reasons were provided, other responses in the survey indicate factors which may have contributed to carers finding this difficult. Although just speculation, carers may have found it difficult to talk as they found the environment intimidating due to the number of people in the room, being unsure of people's roles or not being prepared about what to expect. It could also be due to being given the child's diagnosis in the CPA meeting, which could be unexpected or a shock. A few changes could be implemented which may facilitate carers feeling able to give their views. Reducing the number of people at the CPA or ensuring people's roles are explained clearly could help and clinicians could discuss diagnosis prior to the CPA. A pre-CPA information leaflet or conversation could explain the process and purpose and highlight that carers views are valued. It could also prepare carers and YP on the number of people attending. A proportion of carers also indicated something they wanted to discuss was missed and they felt they could be asked to give their views more. This indicates explicitly asking and making time on the agenda for the carer to highlight any further issues in the CPA maybe beneficial. One carer felt unclear if questions were directed at the YP or them which could be clarified in future by being clearer. One other carer also stated they would have liked the opportunity to discuss issues without the young person present. Provisions could be made outside the CPA for this. A few carers also reported that the meeting could have been managed more sensitively. Ensuring clinicians adopt a sensitive interpersonal style could be important (Chambers et al, 2001) as research highlights it is easy for professionals to forget hospital admission is a new experience for carers (Chambers et al, 2001). Support groups could also increase how supported carers feel (Chambers et al 2001; Dixon & Lehman 2001; Magorrian, 2001) and their needs could be kept in mind in future by developing outcome measures (chambers et al, 2001).

- A pre-CPA information leaflet or conversation could be provided. This could explain the process and reiterate the purpose of the CPA, increasing carers understanding. It could prepare carers what to expect, the number of people attending and emphasize that carer's views and input are valued.
- The CPA could include fewer people in the room, with just those who are integrally involved in the YP's care invited.
- More time introducing and explaining attendee's roles could reduce carer's anxiety.
- Clinicians could encourage carers to give their views and emphasize that their views are welcome. They could be clear who they are addressing their questions to and that they can speak to staff outside the meeting about issues they did not want to discuss with the YP present. Clinicians can also ask carers at the end of the meeting if there are any issues they would like to discuss which were not addressed.
- Clinicians can ensure they have a conversation with carers about the YP diagnosis prior to the CPA meeting.
- Clinicians to be mindful that the CPA is a routine process for them but not for the carer, who may also be experiencing considerable carer burden. This could help ensure all interactions are considerate and sensitive.
- Carers stated they knew what to do upon discharge but did not feel very confident. Normalising this feeling and carers experience, or providing more support on discharge could be helpful, for example carers groups or third sector support agencies (Chambers et al 2001; Dixon & Lehman 2001; Magorrian, 2001)
- For an outcome measure to be developed which includes carers and for carer satisfaction with the service to be monitored or carers being invited to join service user panels (Chambers et al, 2001).

4.4 Limitations

This service evaluation asked carers about their experience of the CPA meeting. There are however a number of methodological limitations which could affect the validity and

reliability of the research findings and recommendations. Firstly the survey included many closed ended questions, which means carers could not expand on the majority of their answers and their responses could not be explored. There were some opportunities for carers to give qualitative feedback, however carers did not qualitatively state why they found it difficult to talk, or what issues they wanted to discuss which were not and due to the design this was not possible to explore. Therefore it is only possible to speculate from previous research and from other responses in the survey about factors which may have contributed to this. Carers may however have found it difficult to talk and have not discussed issues that they wanted to discuss due to a number of reasons not related to the CPA process, such as due to the emotive nature of the issues discussed, complex relationships with the young person, individual factors such as social anxiety or carer mental health problems. Interviews could have obtained richer more detailed qualitative data and more specific recommendations, rather than some which maybe based on speculation. Demand effects may have also influenced carer's responses. Carers completed the questionnaire at the unit and may have not wanted to be too critical about a service providing support for their child or may have worried that their child's care may have been compromised. They were asked to complete the questionnaire straight after the meeting, they may have had time pressures or their responses may have been different if they had been asked to complete the questionnaire at another time. Carers responses may also be influenced by the specific clinicians involved in their child's care or at the CPA and not be representative (Clarke & Windsor, 2010). Carers experience of the CPA may have been impacted by other factors such as heterogeneity in the diagnosis of the YP, the YP's psychiatric history, the amount of contact they have had with services and the YPs length of stay and whether this was the YPs first admission. Their responses may also have been impacted by the individual level of support they had (Hatfield, 1997) and how acute the YP illness. These factors were not explored and may have affected carers needs, experience and responses.

4.5 Conclusions

Carers experience of the CPA was important to explore due to a limited research base, high rates of carer burden, policies detailing the importance of their involvement and research revealing that carers can affect the course of a YP's illness. In conclusion the majority of carers are involved in the CPA and the responses indicate that the CPA at

SAU is adhering to national and SLAM CPA guidelines. There was a large consensus in carers experience and their views were largely positive, revealing they felt included, listened to, understood the process, reason for the CPA and information discussed. Responses also illustrated the majority of carers found it a helpful and supportive forum to plan care and share information and most carers agreed with the care plan. The majority of carers felt that there was enough notice and that the right amount of information was discussed. This is significantly more positive than previous research on carer's experience. There were however some responses which could lead to recommendations about preparing carers and YP for the CPA. It was indicated providing information and support and spending more time introducing and explaining peoples roles maybe valued. Reducing the number of people present and not revealing a diagnosis in the meeting was also recommended. Ensuring carers are asked if there are any further issues they would like to discuss could also improve experience. These are issues which were also raised in the service evaluation which explored YP's experiences of the CPA (Janseen, 2013) and adds further merit to recommendations. More detailed information about carers and YP could be obtained by conducting qualitative interviews and by exploring if other factors such as length of stay and previous hospital admissions affected carers experience.

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Appendix 1; Semi Structured Questionnaire

The CPA at Snowfields Adolescent Unit– Tell Us What You Think!

At Snowfields, care for young people is planned and reviewed regularly at a meeting called a Care Plan Approach (CPA). The meeting is attended by health care professionals on the Snowfields unit, young people and young people's carers or parents.

Hopefully you have recently attended one of these meetings with the young person you care for.

It would be helpful if you could tell us your views about the CPA process. Your responses will be seen by Alison Jones (researcher) and will be used to help us improve care and how we manage the CPA process.

Please could one carer who attended the CPA complete the form. There are no right/wrong answers. It's your views that are important. Please feel welcome to be completely honest.

**PLEASE PLACE THE COMPLETED QUESTIONNAIRE IN THE FOLDER
LABELLED 'COMPLETED QUESTIONNAIRES' IN THE ROOM WHERE
THE MEETING TOOK PLACE
or
HAND IT TO A MEMBER OF STAFF.**

a) What is your gender (*please circle*); M F

b) What is your age (*please circle*);
under 18 18-24 24-35 36-45 46-60 60+

c) Does he/she live with you (*please circle*); Yes No Some of the time

d) Are you his/her main carer (*please circle*); Yes No Some of the time

The following questions are about things that took place before the CPA:

1. How did you hear about the CPA?

2. How much notice were you given about the CPA?

3a) Did you feel this was enough notice?

Not at all

A bit

Yes

3b) How much notice would you like?

4) How much did you understand about the reasons for having a CPA?

not at all

a bit

a lot

5) How much did you understand about what happens in a CPA?

not at all

a bit

a lot

The following questions are about how you felt during the CPA

6) What did you like about the CPA?

7a) How helpful was it to attend?

not at all

a bit

a lot

7b) Were you asked to give your views?

not at all

a bit

a lot

7c) Did you feel listened to?

not at all

a bit

a lot

7d) Did you feel supported?

not at all

a bit

a lot

7e) Were you able to understand what other people were saying?

not at all

a bit

a lot

7f) Were you able to understand what will happen next in their care?

not at all

a bit

a lot

8. Is there anything that you didn't like about attending the CPA meeting?

9a) Did you know the other people in the room?

I did not know many people

I knew some people

I knew everyone

**9b)
Did**

you understand everyone's roles?

No

Some

Yes

9c) Would you have wanted anyone to be invited to the meeting who was not invited? (please circle)

Yes

No

9d) If yes, who else would you have wanted to have been invited?

10a) Did you find it hard to talk in the meeting?

No

A bit

Yes

10b
)
Wa

s everything you wanted to discuss at the meeting discussed?

No

A bit

Yes

10c) If no, what was missed?

11a) Are you aware of his/her diagnosis? (please circle)

Yes

No

11b) If so was this discussed before the CPA? (please circle)

Yes

No

12a) How did you feel about the amount of information discussed?

Too little

Just right

Too much

12b) Did you feel the meeting was managed sensitively?

No

Some

Yes

12c) Are there any ways it could have been managed more sensitively?

The following questions are about how you felt after your CPA

13a) Did his/her CPA help you understand why they are in hospital?

not at all

a bit

a lot

I already understand why my relative is in hospital

13b) Did his/her CPA help you to understand the care plan?

not at all

a bit

a lot

I already understand my relatives care plan

13c). How much do you agree with the plan for his/her care?

not at all

a bit

a lot

14. How confident do you feel you can support him/her after they leave hospital?

not at all

a bit

a lot

15. I am aware what to do if his/her problems came back?

not at all

a bit

a lot

16. Is there anything we can do to make the CPA more helpful for you or the young person you care for?

If you did not understand any aspect of the CPA or would like to discuss anything further, please let a member of staff know and they would be happy to talk with you.

PLEASE PLACE THE COMPLETED QUESTIONNAIRE IN THE FOLDER LABELLED 'COMPLETED QUESTIONNAIRES' IN THE ROOM WHERE THE MEETING TOOK PLACE or HAND IT TO A MEMBER OF STAFF.
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