Doctoral thesis

An investigation into imagery rescripting for social anxiety in people with psychosis: A case series design

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Abstract

Background and aims

Social anxiety is common in people with psychosis. Recent evidence suggests that cognitive behavioural interventions can be used with this population to reduce distress and increase functioning. Imagery rescripting is effective for a range of psychological problems including social anxiety. This study aimed to investigate whether imagery rescripting is effective for social anxiety in people with psychosis.

Method

A single case series, multiple baseline design was used. Ten participants were recruited from Early Intervention in Psychosis (EIP) and Integrated Delivery Team (IDT) services in Norfolk and Suffolk. The intervention was replicated from previous work in the social anxiety field (Wild et al., 2008; Wild & Clark, 2011). Throughout the study participants completed measures related to social anxiety, beliefs, memory and imagery, psychotic symptoms, depression, social functioning and quality of life. Each participant attended seven sessions including a one month follow-up assessment. Data were analysed using visual inspection and the calculation of reliable and clinical change. Exploratory group statistics and effect sizes were also calculated.

Results

Five participants achieved reliable and clinical change in social anxiety and were classified as 'recovered' (Wise, 2004). Improvements in belief, memory and imagery ratings were observed for most participants following imagery rescripting. Psychotic symptoms, depression, social functioning and quality of life remained largely stable. Those who didn't recover had more complex needs or comorbid difficulties. Group

analyses revealed significant improvements and medium to large effect sizes. However, this should be interpreted with caution due to the small sample size.

Conclusion

The study offers some support for the use of imagery rescripting for social anxiety in people with psychosis. Those with less complex presentations are likely to benefit most and it may offer a brief yet effective intervention for these individuals. Those with complex difficulties may require longer and more intensive input.

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Acknowledgements

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CHAPTER ONE

1. Introduction

1.1 Overview

This thesis aims to investigate whether imagery rescripting is effective for social anxiety in people with psychosis. This chapter will provide definitions of terms and explanations of psychological theories and models for psychosis, social anxiety and social anxiety in people with psychosis. The role of imagery in these populations will be discussed, followed by a description of imagery rescripting, theories regarding mechanisms of change and an outline of the evidence base. The evidence base for the use of cognitive behavioural interventions for anxiety in people with psychosis will be considered, presented as a systematic review of the literature. Finally, a rationale for the study will be provided together with research hypotheses and questions.

1.2 Psychosis

1.2.1 Definition of psychosis

The term 'psychosis' refers to disorders characterised by impairment in perception, thinking, mood and behaviour (National Institute for Health and Care Excellence [NICE], 2014). It involves positive symptoms, such as hallucinations and delusions, and negative symptoms including diminished emotional expression, a lack of desire to initiate goals (avolition), poverty of speech (alogia), a decrease in the ability to experience pleasure (anhedonia) and reduced interest in social interaction (asociality; American Psychiatric Association [APA], 2013). Psychotic disorders include schizophrenia, bipolar disorder and schizoaffective disorder, which affect around 1%, 2% and 0.5% of the population, respectively. When other conditions are included (e.g. psychotic depression, delusional disorder) psychosis affects over two million people in the United Kingdom (Morrison, Renton, French & Bentall, 2008).

The symptoms and the potential for recovery from psychosis vary. Some will recover well whereas others will experience repeated episodes (NICE, 2014). The onset of psychosis begins with a pre-morbid period followed by a 'prodomal' stage where an individual displays a reduction in functioning. This is followed by a 'first-episode' (Yung & Jackson, 1999). Psychotic experiences can be precipitated by stress and are associated with comorbid issues such as anxiety and depression (British Psychological Society [BPS], 2014). The 'Early Intervention in Psychosis' (EIP) movement is based on the idea that providing support during the early stages of psychosis can reduce long-term impairment and distress (Department of Health [DH], 2000).

1.2.2 Models of psychosis

1.2.2.1 Vulnerability-stress models

Vulnerability-stress models suggest that a number of factors are involved in the development of psychosis (Garety, Bebbington, Fowler, Freeman & Kuipers, 2007). The role of genetics, socioeconomic status, urbanicity, adversity (e.g. abuse, neglect, trauma) and drug use has been highlighted (e.g. Binbay et al., 2012; Varese et al., 2012). Traumatic brain injury, migration, psychosocial stress, impaired social functioning and being male are also associated (Cornblatt et al., 2012; Molloy, Conroy, Cottor & Cannon, 2011; O'Donoghugh et al., 2015; Pruessner, Iyer, Faridi, Joober, & Malla, 2011; van Os, Linscott, Myin-Germeys, Delespaul & Krabbendam, 2009).

1.2.2.2 Cognitive-behavioural models

Whilst vulnerability-stress models go some way to explain the onset of psychosis, cognitive-behavioural models propose that cognitive and emotional factors are important to consider in the development and maintenance of symptoms. Garety, Kuipers, Fowler, Freeman, & Bebbington (2001) hypothesise that people with psychosis experience cognitive disturbance. This leads to anomalous experiences (e.g.

thoughts interpreted as voices, heightened perception) which the individual then attempts to explain. From this, additional cognitive factors may maintain psychosis. This might include biased reasoning processes (e.g. 'jumping to conclusions'; Freeman, Garety & Philips, 2000), external attributions about others' behaviour, and dysfunctional beliefs about the self, others and the world. Core beliefs are likely to be negative and associated with difficult or traumatic experiences. For instance, paranoia is often associated with self-beliefs about being weak or vulnerable and beliefs about others being threatening or bad (Fowler et al., 2006; Smith et al., 2006).

Garety et al. (2001) also highlight the role of emotion, explaining that the processes observed in anxiety may also apply to psychosis. For example, biases in information processing (e.g. attentional bias; Freeman et al., 2000) may provide evidence for a psychotic belief, safety behaviours may prevent an individual from obtaining evidence contrary to a belief (Freeman & Garety, 2000) and meta-cognitive beliefs (e.g. thought uncontrollability) may increase anxiety (Freeman & Garety, 1999), leading to further interpretations that are based on threat.

Morrison (2001) highlights the similarity between psychosis and anxiety. In particular, Morrison's model considers the role of intrusions into awareness (i.e. hallucinations, delusions) and suggests the interpretation of these intrusions causes distress. As with anxiety, misinterpretations in psychosis are likely to be influenced by cognitive processing, emotional and physiological states and safety behaviours. The interpretations are likely to be based on dysfunctional knowledge about the self and others, associated with experiences such as trauma and significant life events.

1.2.3 Summary of psychosis section

People with psychosis experience symptoms that can cause significant functional impairment. A number of psychological theories have been proposed for the

development and maintenance of psychosis including vulnerability-stress and cognitive behavioural models (e.g. Garety et al., 2001; Morrison, 2001). The role of anxiety is highlighted and this has the potential to perpetuate symptoms over time. Given its potentially disabling nature, research investigating interventions for people with psychosis is warranted. This will be considered in greater detail below.

1.3 Social anxiety

1.3.1 Definition of social anxiety disorder

Social anxiety involves "marked fear or anxiety about one or more social situations in which the individual is exposed to possible scrutiny by others…The individual fears that he or she will act in a way or show anxiety symptoms that will be negatively evaluated" (APA, 2013, p. 202). It is the most common type of anxiety disorder, affecting 12% of the population (Kessler et al., 2005).

The terms social phobia and social anxiety disorder tend to be used interchangeably and it is argued that social anxiety is likely to be distributed within the general population on a continuum, from more mild forms (that still affect functioning) to diagnosable social phobia (Rapee & Spence, 2004). Both terms will be used throughout this study as it involves those with social phobia and those with significant levels of social anxiety but who may not have a diagnosis of social phobia.

1.3.2 Models of social anxiety

1.3.2.1 The development of social anxiety

Social anxiety is likely to arise from a combination of factors including biological, psychological and environmental elements (Rapee & Spence, 2004). The role of genetics has been highlighted (e.g. Fyer, Mannuzza, Chapman, Martin & Klein, 1995; Lieb et al., 2000; Nelson et al., 2000; Stein, Jang & Livesley, 2002), together with physical or sexual abuse, bereavement, parental conflict and divorce, socio-economic

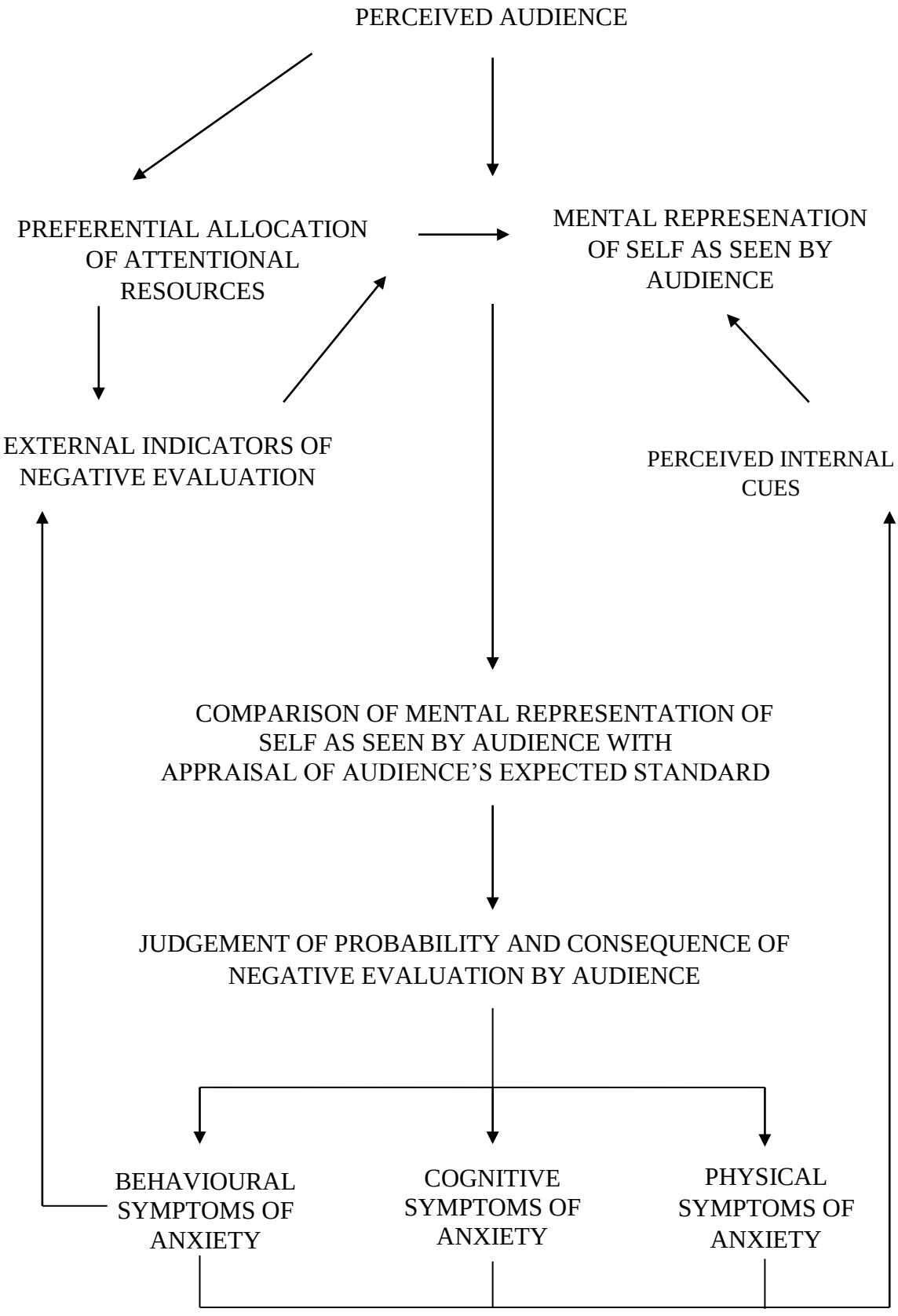
difficulties, bullying, criticism and rejection (Hackmann, Clark & McManus, 2000; Kimbrel, 2008; Rapee & Spence, 2004).

1.3.2.2. Cognitive-behavioural models

Clark and Wells (1995) suggest that individuals with social phobia fear social situations because they are concerned that they will behave unacceptably leading to rejection. Central to the model is the idea that when an individual with social phobia enters a social situation they experience a shift in attention towards themselves. This increases awareness of their anxiety making it difficult for them to process the situation correctly. This results in negative cognitions, an increase in anxiety and the use of safety behaviours, creating a vicious cycle of fear and response.

Rapee and Heimberg (1997) suggest that in social situations individuals with social phobia form a mental representation of how they believe they appear to others. This is based on negative information from both internal sources (e.g. blushing, sweating) and external sources (e.g. verbal and non-verbal information from others). Attention is directed towards this representation and any perceived threats in the environment, preventing the individual from gaining accurate information about performance. They are also likely to predict how others expect them to act. This is contrasted with how the person assumes they come across, leading to an estimate of how others will perceive their social performance. Anxiety follows, including physical (e.g. shaking), cognitive (e.g. negative thoughts) and behavioural (e.g. reduced eye contact) elements. Performance suffers as a result of this anxiety and the negative representation is reinforced. The model is shown in Figure 1.1.

Figure 1.1. Rapee and Heimberg's (1997) cognitive-behavioural model of social phobia



1.3.3 Summary of social anxiety section

Social anxiety is the most common anxiety disorder (Kessler et al., 2005) and it can have a significant impact on functioning. Theories regarding development have been proposed and cognitive behavioural models (e.g. Clark & Wells, 1995; Rapee & Heimberg, 1997) highlight the role of cognitive and affective elements. The following section will consider the nature of social anxiety in people with psychosis.

1.4 Psychosis and social anxiety

1.4.1 Prevalence and nature of social anxiety in psychosis

Social anxiety is found in people with psychosis more than any other comorbid problem (Cassano, Pini, Saettoni, Rucci and Dell'Osso, 1998). Sixty percent of those with first-episode psychosis are likely to experience social anxiety, with 31% meeting criteria for social phobia (Voges and Addington, 2005). Romm, Melle, Thoresen, Andreassen and Rossberg (2012) found that those with first-episode psychosis and severe social anxiety demonstrated impairment in social functioning, premorbid adjustment, self-esteem and quality of life. Social anxiety has also been found to increase the risk of depression in those with psychosis (Voges & Addington, 2005). This is clearly an important issue that warrants further investigation.

1.4.2 Models of psychosis and social anxiety

1.4.2.1 Michail and Birchwood's (2009) pathways model

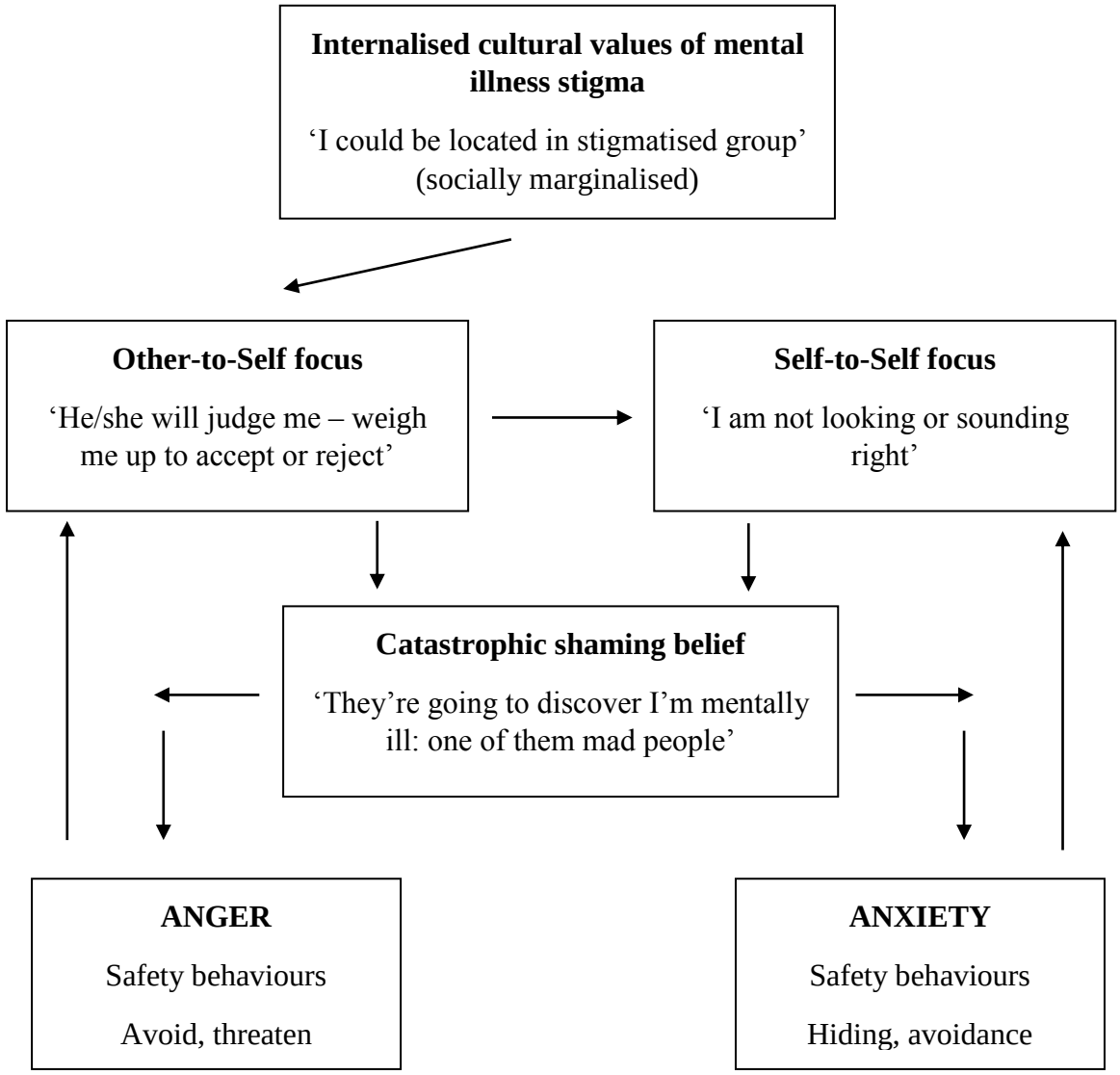
Michail and Birchwood (2009) hypothesise that there are three pathways in the development of social anxiety and psychosis. Firstly social anxiety might develop before persecutory beliefs, precipitating and maintaining such thinking styles in those with psychosis. The second pathway suggests that social anxiety and persecutory beliefs develop at the same time during the early stages of psychosis. The final pathway in the model suggests that paranoid thinking styles might lead to the development of

social anxiety in those with psychosis. For example, delusions may lead to social anxiety through a 'jumping to conclusions' bias. An individual might interpret ambiguous social situations as threatening, leading them to make negative attributions about others' behaviour (Freeman et al., 2000).

1.4.2.2 Birchwood et al's (2007) stigma processing model

Birchwood et al. (2007) describe a stigma processing model of psychosis and social anxiety (See Fig. 1.2). They suggest that those with psychosis are aware of a pre-existing societal stigma leading them to feel devalued. They experience anxiety about others judging and rejecting them (also known as other-to-self focus). As a result the individual focuses their attention on an image of themselves related to how they might appear to others (also known as self-to-self focus). For instance, an individual may have thoughts about looking 'weird' because they feel tense and shaky. This leads to a 'catastrophic shaming belief' that others will regard them as mentally unwell. In response to anger and anxiety, safety behaviours such as hostility and avoidance are used. Unfortunately this causes the individual to withdraw from social contact, leading to reinforcement of their negative beliefs about social performance.

Figure 1.2. Birchwood et al's (2007) stigma processing model of psychosis and social anxiety

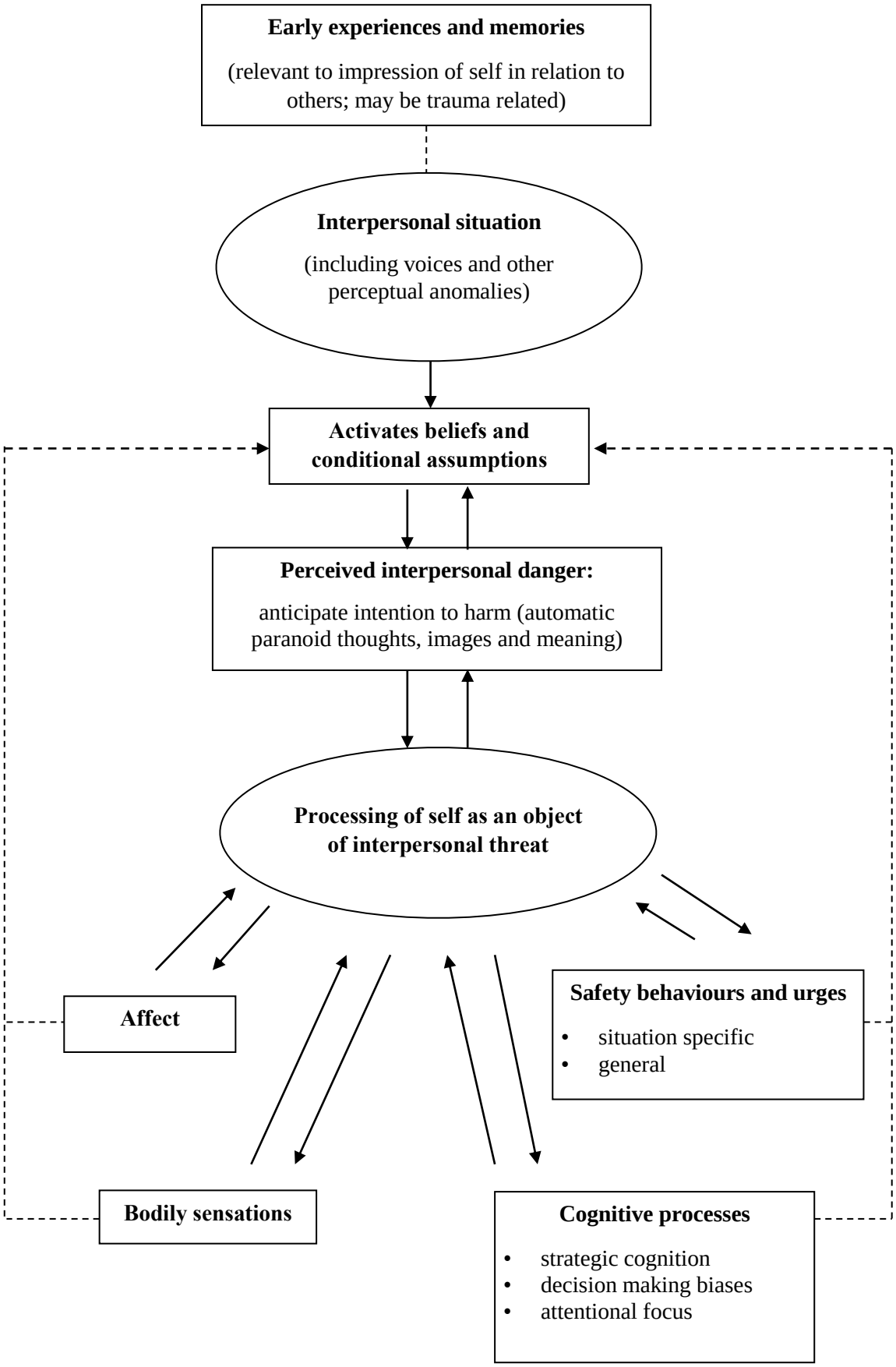


1.4.2.3 Newman-Taylor and Stopa's (2013) model of paranoia

Newman-Taylor and Stopa (2013) argue that a common theme in social anxiety and paranoia is a fear of others. They suggest a model that draws on existing theories of paranoia (e.g. Bentall, Corcoran, Howard, Blackwood & Kinderman, 2001; Freeman et al., 2005, Freeman et al., 2008; Morrison, 2001; Trower and Chadwick, 1995) within a social phobia framework. Early experiences and memory (e.g. trauma, stressful life

events) are included, with an emphasis on how these factors influence self-impression in relation to others. Self-processing as a response to perceptions of interpersonal threat are central to the model, with a focus on beliefs about being inadequate, inferior and having an increased level of self-consciousness. This processing can occur in verbal or imaginal form and involves an individual concluding that cognitions, images and other internal experiences are accurate and based in reality. This leads to changes in cognition, affect, physiology and behaviour. For instance, an individual may display worry, rumination and behavioural avoidance (see Fig. 1.3).

Figure 1.3. Newman-Taylor and Stopa's (2013) model of paranoia



1.4.3 Summary of psychosis and social anxiety section

The prevalence of social anxiety in people with psychosis is high (Cassano et al., 1998; Voges & Addington, 2005) and it has the potential to negatively impact functioning and quality of life (Romm et al., 2012). A number of theories related to social anxiety and psychosis have been proposed. Michail and Birchwood (2009) suggest that there are a number of pathways to social anxiety in psychosis. Birchwood et al. (2007) highlight the role of social anxiety in the maintenance of psychotic experiences, focusing on the role of stigma and loss of social status. Newman-Taylor and Stopa (2013) suggest that both social anxiety and paranoia involve a fear of others and they present a model focussed on self-processing in response to perception of interpersonal threat. The role of social anxiety in people with psychosis is clearly an important issue that warrants further investigation.

Birchwood et al. (2007) note that people with psychosis who also experience social anxiety hold an image of how they might appear to others. This appears to be related to the 'intrusions into awareness' suggested by Morrison (2001) in relation to psychotic symptoms and anxiety, or the 'mental representation' referred to by Rapee and Heimberg (1997) in their model of social phobia. Due to the overlap between these models the role of imagery in people with psychosis and social anxiety may be an important area of investigation. This is considered in more detail below.

1.5 Imagery

1.5.1 Definition of imagery

Mental images are "cognitive representations of perceptual information that are not in the product of current external sensory input." (Hirsch and Clark, 2007, pp. 448). They involve visual information but can also involve auditory, olfactory and kinaesthetic elements (Kossyln, Ganis & Thompson, 2001) and lead to greater

emotional arousal than verbal material (Holmes, Arntz & Smucker, 2007). As a result negative imagery can maintain psychological problems (Serruya & Grant, 2009).

1.5.2 Imagery in psychosis

Morrison et al. (2002) found that 69% of people with psychosis reported recurrent images related to paranoia, past trauma and auditory hallucinations. In support, Schulze, Freeman, Green & Kuipers (2013) investigated mental imagery in participants with persecutory delusions and found that 72.5% reported images related to paranoia. Sixty percent of the sample were able to identify negative autobiographical events that were related to paranoid images. Morrison et al. (2002) note that imagery may maintain psychosis and that it should therefore be a focus of intervention.

1.5.3 Imagery in social anxiety

Imagery has also been found to be important in the context of social anxiety (Clark & Wells, 1995, Wells, 1997). Using a semi-structured interview, Hackmann, Surawy and Clarke (1998) found that 77% of participants with social phobia reported imagery. The images commonly represented fears about performance in social situations (e.g. blushing, sweating or shaking). Wells & Papageorgiou (1999) note that images in social anxiety usually occur from the perspective of an 'observer' with the individual seeing themselves from another's point of view. This encourages an inaccurate impression of actual performance based on subjective and introspective information (Clark and Wells, 1995). As with psychosis, self-imagery in social phobia is often based on memories of difficult experiences (Hirsch, Clark & Mathews., 2006). This can maintain social phobia as the individual focusses on their symptoms and ignores evidence likely to refute their beliefs (Clark & Wells, 1995).

1.5.4 Imagery in psychosis and social anxiety

Lockett et al. (2012) used the semi-structured interview developed by Hackmann et al. (1998) to investigate imagery in participants with psychosis and social anxiety. Although similar themes were identified between people with psychosis and social anxiety and those with social phobia without psychosis (e.g. fear of negative evaluation, lost social status) there were also differences. Rather than using an observer perspective, individuals with psychosis often observed an 'other' from a field perspective who was exaggerated and threatening (e.g. imagining others staring at them). Furthermore, imagery was more likely to be characterised by fear and paranoia rather than social anxiety. For example, some participants described feeling intimidated by others. As with psychosis and social anxiety alone, negative imagery might maintain social anxiety in those with psychosis. Research investigating interventions for distressing imagery in this population may therefore be warranted.

1.5.5 Summary of imagery section

Negative imagery has the potential to maintain psychological problems (Serruya & Grant, 2009), including psychosis (Morrison et al., 2002) and social anxiety (Clark & Wells, 1995). An investigation into imagery in those with psychosis and social anxiety highlighted similar themes as those experienced in social phobia but also differences (e.g. feeling threatened, paranoia; Lockett et al., 2012). This suggests that although there is overlap between psychosis and social anxiety those experiencing both conditions are a distinct population. In their work on the processes underlying social anxiety and paranoia, Newman-Taylor and Stopa (2013) argue that imaginal experience is under investigated in people with psychosis. Given the potential for imagery to maintain psychological distress, further investigation is warranted.

1.6 Imagery rescripting

1.6.1 Definition of imagery rescripting

Imagery rescripting is a psychological intervention designed to change the meaning of images and associated memories and reduce emotional distress (Holmes et al., 2007). It involves asking an individual to think about an image or memory and imagine the content changing in a way that is helpful (Arntz, 2012). Holmes et al. (2007) explain that "if the image were a painting, we would be working directly on the canvas interacting with the image itself in some way – such as examining the picture, re-painting parts of it, and so on" (pp. 301). This allows an individual to challenge beliefs about being powerless or hopeless and encourages mastery, control and self-compassion (Gilbert & Irons, 2004; Rusch, Grunert, Mendelson and Smucker, 2000).

1.6.2 Arntz and Weertman's (1999) imagery rescripting procedure

Arntz and Weertman (1999) provide a description of an imagery rescripting procedure that focuses on rescripting traumatic memories. Although their work involves the treatment of childhood sexual abuse they suggest that the procedure can be used with memories associated with a range of psychological problems.

Arntz and Weertman's (1999) procedure is divided into three stages. First, the individual is asked to imagine and describe a past event (in as much detail as possible) as if they were their younger self. They are then asked to imagine the event as their adult self (i.e. as a bystander) and describe their thoughts, feelings and behaviours at the time of the event. At this point the adult self is invited to intervene in any way that is helpful. The final stage involves asking the individual to describe the event as their younger self whilst having the opportunity to receive further intervention from their adult self. The younger self is able to ask the adult self to provide anything else that they feel is needed at the time (e.g. comfort or reassurance). This allows new

information to be introduced to the younger representation as there is similarity between this perspective and the developmental level of the original event (see Arntz & Weertman (1999) for a more detailed account of the procedure). Further theories regarding the mechanisms of change for imagery rescripting are discussed below.

1.6.3 Theories related to imagery rescripting

1.6.3.1 Foa and Kozak's (1986) emotional processing theory

Foa and Kozak (1986) suggest that emotional processing is required in order to modify memory. This works on the basis that prolonged exposure to feared stimuli activates the fear memory and offers opportunity for new and corrective information to be introduced. Increased physiological arousal and habituation to anxiety-inducing stimuli allows the fear network to be modified, leading to a reduction in emotional distress. As imagery rescripting has an element of imaginal exposure it arguably encourages emotional processing in this way (Krakow et al., 2001).

1.6.3.2 Teasdale and Barnard's (1993) interacting cognitive subsystems theory

Teasdale and Barnard (1993) highlight the role of propositional (i.e. explicit "knowing" meaning) and implicational (i.e. implicit "feeling" meaning) subsystems. When information moves from the propositional to the implicational system there is a change in meaning. Imagery rescripting has the potential to activate the implicational subsystem through the elicitation of memories and emotion. Introducing new information to memory allows the event to be re-appraised and given new meaning.

1.6.3.3 Learning theory

Arntz (2012) suggests that memories related to distressing events, also known as representations of the unconditioned stimulus (US), are re-activated in different situations. This leads to concerns that the event will occur again. Arntz (2012) suggests that imagery rescripting may involve changing the meaning of an event through a

process of US revaluation. It can be used to activate the representation of the US and modify its underlying meaning so that it no longer leads to a fear response. The modification of the US representation through imagery rescripting allows generalisation to other contexts (Arntz, 2011). This is more likely to induce change than extinction which requires repeated learning over different contexts so that the conditioned response (CR) and the US are not associated. Furthermore, if a positive image is paired with the original image systematically the memory will be focussed on the positive image leading to a reduction in distress (Arntz, 2012).

1.6.3.4 Brewin's (2006) retrieval competition hypothesis

Brewin (2006) suggests that there are multiple representations of self including real life and imagined representations. In a situation an individual uses a representation of self based on different factors including environmental cues and the frequency, distinctiveness and valance of past representations. There is competition for representations of the self and positive representations are increased by allowing them to become stronger than negative representations. Imagery rescripting attempts to achieve this, not by replacing memories but updating them with new information.

1.6.4 Imagery rescripting for psychosis

Imagery interventions appear to be beneficial for people with psychosis. Morrison (2004) presents a case study of a man experiencing a recurrent image of being put into a van and being assaulted by an armed gang. The man pretended the image was a video so that fast forwarding and rewinding could be used. He also introduced a 'rescuer', used humour through the use of a cartoon character and developed a 'safe' image of being somewhere comfortable (i.e. at home). Reductions in belief and distress ratings were observed over the course of treatment.

Serruya & Grant (2009) describe a man who experienced images related to fears that the Central Intelligence Agency (CIA) and the devil were out to get him. They encouraged the patient to rescript the images allowing him to gain control over his delusions and reduce his anxiety. More recently, Ison, Medoro, Keen and Kuipers (2014) used imagery rescripting with four people who were hearing voices. In three participants the intervention led to significant reductions in distress, negative affect, the conviction of beliefs and control over a memory associated with the negative imagery.

1.6.5 Imagery rescripting for social anxiety

A number of studies support the use of imagery rescripting with people with social anxiety. Wild, Hackmann and Clark (2007) used 45 minutes of imagery rescripting with 14 participants with social phobia. Prior to rescripting, a semi-structured interview (Hackmann et al., 2000) was used to identify an image of a social situation. A distressing memory associated with the image was also identified. The meaning of the image and memory was summarised into one or two sentences and referred to as an 'encapsulated belief'. Intervention to rescript the memory led to improvements in beliefs, memory distress, imagery distress and vividness and social anxiety. Although their procedure was based on Arntz and Weertman's (1999) protocol, Wild et al. (2007) made some changes. All three stages of the rescripting were delivered at once rather than taking breaks in between. Also, immediately before the rescripting, the memory was updated using 30 minutes of cognitive restructuring. This allowed the encapsulated belief to be challenged (Wild & Clark, 2011).

Wild, Hackmann and Clark (2008) used imagery rescripting with 11 participants with social phobia. This differed from the intervention provided by Wild et al. (2007) in that two sessions were used one week apart; a control session that involved discussing the participant's image and memory without attempting to change them, and

an experimental session that included cognitive restructuring and the rescripting of the memory. Following the control session no significant change in negative beliefs, memory distress or social anxiety was observed. However, following the experimental session and at a follow-up assessment, there were significant reductions on each of these measures and measures of imagery distress, vividness and frequency.

More recently, Nilsson, Lundh and Viborg (2012) found that imagery rescripting led to reductions in distress, fear of social interaction, negative evaluation from others and negative self-perceptions in participants with social anxiety. Lee and Kwon (2013) demonstrated that imagery rescripting led to greater improvements in social anxiety when compared to a control group. Frets, Kevenaar and van der Heiden (2014) used a single case series design to investigate imagery rescripting for social phobia in six participants. All participants demonstrated improvements in social anxiety and fear of negative evaluation following intervention.

1.6.6 Summary of imagery rescripting section

Imagery rescripting involves changing the meaning of imagery and memory to reduce emotional distress (Holmes et al., 2007). A number of theories have been hypothesised for this including similarity between a younger perspective and the developmental level of the original event (Arntz & Weertman, 1999); modification of the fear network through the introduction of new information (Foa & Kozak, 1986); changes in the meaning of information through re-appraisal (Teasdale & Barnard, 1993); US revaluation (Arntz, 2012); and increasing the strength of positive representations of self by introducing new information (Brewin, 2006).
Imagery interventions appear to be useful for people with psychosis (Ison et al., 2013; Morrison, 2004; Serruya & Grant, 2009) and for people with social anxiety (e.g. Frets et al., 2008; Lee & Kwon, 2013; Nilsson et al., 2012; Wild et al., 2007; Wild et al., 2008).

To the author's knowledge, no research has been conducted investigating whether imagery rescripting is effective for social anxiety in people with psychosis. Considering that social anxiety has the potential to cause significant distress and impairment in those with psychosis this could be worthwhile. Existing cognitive behavioural interventions for anxiety in the context of psychosis are considered below.

1.7 Cognitive behavioural interventions

1.7.1 Cognitive Behavioural Therapy (CBT) for anxiety in people with psychosis

It is clear that research investigating suitable interventions for social anxiety in people with psychosis is justified. A systematic review is presented below, offering information about the efficacy of CBT for anxiety in people with psychosis. Whilst including CBT for social anxiety, the review investigates whether CBT is an effective treatment for 'anxiety' in people with psychosis. This allows for a more comprehensive search of the literature, highlighting whether anxiety is a suitable target of intervention for those with psychosis. It also allows for an investigation into whether CBT for anxiety for people without psychosis is effective and feasible for those with psychosis.

In 2013, Braga, Reynolds and Siris published a review of the epidemiology, course and treatment of anxiety in participants with schizophrenia spectrum disorders (e.g. schizophrenia, schizoaffective disorder). The anxiety disorders included were social phobia, obsessive compulsive disorder (OCD), generalised anxiety disorder (GAD), panic disorder, specific phobia, post-traumatic stress disorder (PTSD) and acute stress disorder. Although there was no restriction on the type of intervention most studies reported the use of medication or CBT. The authors conclude that although there is some support for the use of these treatments further research is required.

Although this review is worthwhile it has some limitations. First, only one database was used meaning that some studies are likely to have been missed. The review searched for studies published up until July 2012 and additional studies have been published since this time. In addition to the specified anxiety disorders the only search term used was 'schizophrenia'. Given that the literature often uses a transdiagnostic approach, studies referring to 'psychosis' might have also been excluded. Perhaps most importantly, effect sizes were not presented. This makes it difficult to fully evaluate the efficacy of CBT for anxiety in this population. With these limitations in mind, it was deemed appropriate to conduct an updated review.

1.7.2 CBT for anxiety in people without psychosis

Throughout the review, effect sizes for CBT for anxiety in people without psychosis will be compared with studies using CBT for anxiety with psychosis populations. Wolitzky-Taylor, Horowitz, Powers and Telch (2008) conducted a meta-analysis of CBT for specific phobia, reporting effect sizes of 1.05, 0.98 and 0.57 for CBT with exposure, CBT without exposure and placebo treatments, respectively. Mean effect sizes of 0.77 and 0.95 for post-test and follow-up are reported for CBT for social phobia (Gil, Carrillo & Meca, 2001). An effect size of 0.64 has been found for both panic disorder and GAD (Haby, Donnelly, Corry & Vos, 2005) and an effect size of 1.26 has been found for OCD (Eddy, Dutra, Bradley and Westen, 2004). For PTSD, Bradley, Greene, Russ, Dutra & Westen (2005) note effect sizes of 1.65 and 1.26 for pre versus post-treatment and treatment versus wait-list control, respectively. Cohen (1988) referred to effect sizes as 'small' (d=0.2), 'medium' (d=0.5) and 'large' (d=0.8) and this will be used throughout the review to evaluate treatment efficacy.

1.7.3 Systematic review of CBT for anxiety in people with psychosis

1.7.3.1 Search strategy

A search was performed using the PsycINFO, MEDLINE (EBSCO) and Web of Science databases on 21st June 2014. All years were searched using three groups of terms; one relating to CBT, one relating to psychosis and one relating to anxiety. The search terms used were: CBT OR "cognitive behavio* therap*" OR "cognitive therap*" AND psychosis OR psychotic OR schizo* OR hallucination* OR delusion* AND anxi* OR "anxiety disorder*" OR OCD OR "obsessive compulsive" OR obsession* OR compulsion* OR panic OR agoraphobia OR PTSD OR "post-trauma*" OR "posttrauma*" OR "acute stress" OR GAD OR "generali?ed anxiety" OR worr* OR phobi* OR "social* anxi*" OR "social* phobi*".

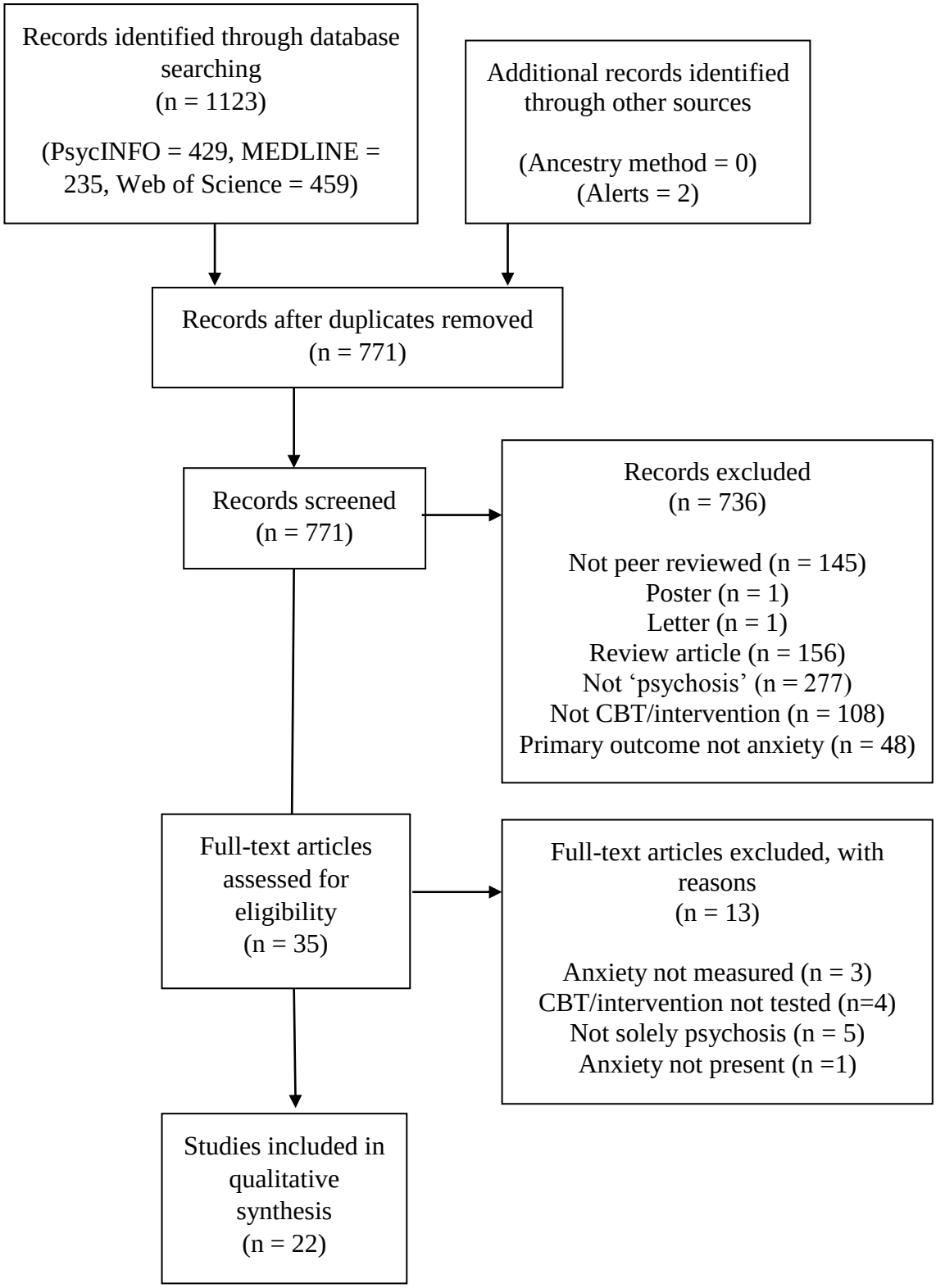
Titles, abstracts and methodologies were scrutinised to select 20 papers for review. To ensure studies published since the search date were included, automatic alerts were set up for all databases used. Two studies (Foster, Startup, Potts & Freeman, 2010; Tundo et al., 2014) were found using this method. In total, 22 studies were reviewed. The ancestry method was used to investigate articles missed by the electronic search but none were found.

1.7.3.2 Inclusion and exclusion criteria

Studies were included if they were written in English and reported on a sample with psychosis and anxiety and the use of CBT. Studies that included participants with a diagnosis of 'psychosis', 'schizophrenia' (any type) and 'schizoaffective disorder' were included. Studies were also included if they made reference to any of the anxiety disorders or symptoms specified in the terms above and if they used CBT, regardless of the format of intervention. Studies with all ages were used, including those that recruited children and adolescents.

Only full articles were included so that the methodological quality of the studies could be assessed. Letters, review articles and non-peer reviewed results such as books, conference abstracts and posters were excluded. Studies that did not include participants with psychosis or those with 'mixed' groups of participants with severe mental illness that did not report specifically on those with psychosis (e.g. those that included mood or personality disorders without psychosis) were also excluded. Studies that did not use CBT and stand-alone experimental studies such as Cognitive-Bias Modification (CBM) and Virtual Reality (VR) were excluded. Studies were also excluded if anxiety was not the primary outcome, if anxiety was not present in the sample or if anxiety was not measured using psychometric instruments. See Figure 1.4 for information about the number of studies excluded at each stage.

Figure 1.4. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) diagram (Liberati et al., 2009)



1.7.3.3 Type of studies included

Twelve of the studies were single or multiple case study or small N methodology designs (Callcott, Standart & Turkington, 2004; Dudley, Dixon & Turkington, 2005; Ekers, Carman & Schlich, 2004; Good, 2002; Gruber, Dordević, Biočina-Martić & Agius, 2006; Hagen, Solem & Hansen, 2014; Hofmann, Bufka, Brady, Du Rand & Goff, 2000; Kevan, Gumley & Coletta, 2007; Kobori, Sato, Katsukura & Harada, 2008; Marcello, Hilton-Lerro & Mueser, 2009; Nakamura, Schiffman, Lam, Becker & Chorpita, 2006; Tully & Edwards, 2009), six were open trials (Arlow, Moran, Bermanzohn, Stronger & Siris, 1997; Frueh, et al., 2009; Gega, White, Clark, Turner & Fowler, 2013; Trappler & Newville, 2007; Tundo et al., 2014; Welfare-Wilson & Newman, 2013) and four were randomised controlled trials (RCTs; Foster et al., 2010; Freeman et al., 2015; Halperin, Nathan, Drummond & Castle, 2000; Kingsep, Nathan & Castle, 2003).

In terms of diagnosis, one study focused on 'anxiety' (Welfare-Wilson & Newman, 2013), four focused on OCD (Ekers et al., 2004; Hagen et al., 2014; Kobori et al., 2008; Tundo et al., 2014), three focused on panic disorder with or without agoraphobia (Arlow et al., 1997; Gruber et al., 2006; Hofmann et al., 2000), five focused on PTSD (Callcott et al., 2004, Frueh et al., 2009; Kevan et al., 2007; Marcello et al., 2009; Trappler & Newville, 2007), two focused on 'worry' (Foster et al., 2010; Freeman et al., 2015), two focused on specific phobia (Dudley et al., 2005; Nakamura et al., 2006) and five focused on social phobia/anxiety (Gega et al., 2013; Good, 2002; Halperin et al., 2000; Kingsep et al., 2003; Tully & Edwards, 2009).

1.7.3.4 Evaluation of literature

Details of the 20 papers included in the final review are displayed in Table 1.1. Fifteen of these studies (Callcott et al., 2004; Dudley et al., 2005; Ekers et al., 2004;

Freeman et al., 2015; Foster et al., 2010; Gega et al., 2013; Good, 2002; Gruber et al., 2006; Hagen et al., 2014; Kevan et al., 2007; Marcello et al., 2009; Nakamura et al., 2006; Tully & Edwards, 2009; Tundo et al., 2014; Welfare-Wilson & Newman, 2013) were not included in the review conducted by Braga et al. (2013). This review therefore adds to the current literature.

As suggested by Crombie (1996), studies were evaluated in reference to the use of adequate sample size, reliable and valid measures, baseline assessments and follow-up periods, randomization, blinding and appropriate data analyses. They were also scrutinised for their consideration of confounding factors, treatment fidelity and potential clinical implications. Where possible, effect sizes were calculated and reviewed using Cohen's (1988) criteria.

Table 1.1

Studies investigating CBT for anxiety in psychosis, presented alphabetically by author

Author	Study design	N/Gender	Diagnosis (psychosis)	Diagnosis (anxiety)	Mean age (SD)	Therapy (Length)	Outcome	Effect size (*d*, *r)*
Arlow et al. (1997)	Open trial	2F 6M	Schizophrenia Schizoaffective disorder	Panic disorder	38 (*)	CBGT (16 weeks)	Significant improvement	Baseline to post-treatment; WASPA (*d*=0.68)
Callcott et al. (2004)	Multiple case report	2F	Psychosis	PTSD	39.5 (*)	CBT (*)	Improvement	*
Dudley et al. (2005)	Case study	1M	Paranoid schizophrenia	Specific phobia	38 (*)	CBT: Systematic desensitisation (38 sessions)	Improvement	*
Ekers et al. (2004)	Case report	1M	Schizophrenia	OCD	31 (*)	CBT: ERP (20 hours)	Clinically significant change	*

Author	Study design	N/Gender	Diagnosis (psychosis)	Diagnosis (anxiety)	Mean age (SD)	Therapy (Length)	Outcome	Effect size (*d*, *r)*
Foster et al. (2010)	RCT	14M 10F	Schizophrenia Schizoaffective disorder Delusional disorder	Worry	39.60 (*)	CBT (Four sessions)	Significant improvement	Post-treatment PSWQ, treatment vs. TAU; baseline to post-treatment (*d*=0.56), two-month follow-up (*d*=0.74)
Freeman et al. (2015)	RCT	86M 64F	Schizophrenia Schizoaffective disorder Delusional disorder	Worry	40(*)	CBT (Six hour-long sessions)	Significant improvement	Post-treatment PSWQ, treatment vs. standard care (*d*=0.47)
Frueh et al. (2009)	Open trial	5M 15F	Schizophrenia Schizoaffective disorder	PTSD	42.30 (8.40)	CBT: Exposure-based (11 weeks)	Significant improvement	Pre to post-treatment; CAPS (*d*=0.54), PCL (*d*=0.54) Pre-treatment to three month follow-up; CAPS (*d*=0.84), PCL (*d*=0.78)

Author	Study design	N/Gender	Diagnosis (psychosis)	Diagnosis (anxiety)	Mean age (SD)	Therapy (Length)	Outcome	Effect size (*d*, *r)*
Gega et al. 2013)	Open trial	6M	Psychosis	Social phobia	*(*)	CBT (12 weeks)	Significant improvement (24-week follow-up)	SIAS; pre to post-treatment (*d*=0.73), post-treatment to follow-up (*d*=1.02), pre-treatment to follow-up (*d*=0.87)
Good (2002)	Case study	1M	Schizophrenia	Social phobia	*(*)	CBT (24 weeks)	Improvement	*
Gruber et al. (2006)	Case report	1M	Psychosis	Panic disorder with agoraphobia	*(*)	CBT (19 sessions)	Clinically significant change	*
Hagen et al. (2014)	Case study	1M	Paranoid schizophrenia	OCD	*(*)	CBT including ERP (9 hour-long sessions)	Clinically significant change	*
Halperin et al. (2000)	RCT	13M 3F	Schizophrenia	Social anxiety	39.6 (*)	BGT (8 two-hour sessions)	Significant improvement	Post-treatment, treatment vs. control; SIAS (*d*=0.30), BSPS (*d*=0.11)

Author	Study design	N/Gender	Diagnosis (psychosis)	Diagnosis (anxiety)	Mean age (SD)	Therapy (Length)	Outcome	Effect size (*d*, *r)*
Hofmann et al. (2000)	Multiple case study	3M 1F	Schizophrenia	Panic disorder	38 (*)	CBT (15-17 sessions)	Improvement	*
Kevan et al. (2007)	Single N	1F	Schizophrenia	PTSD	31 (*)	Trauma elaboration and cognitive restructuring (9 one-hour sessions)	Improvement	*
Kingsep et al. (2003)	RCT	23M 10F	Schizophrenia	Social anxiety	*(*)	CBGT (12 one-hour sessions plus one follow-up session)	Significant improvement	Mean for all measures (*d*=0.64), SIAS (*d*=0.69), BSPS (*d*=0.17), BFNE (*d*=1.05)
Kobori et al. (2008)	Case report	1M	Schizophrenia	OCD	26(*)	CBT (18 sessions)	Improvement	*
Marcello et al. (2009)	Case study	1M	Schizoaffective disorder	PTSD	*(*)	CBT: Cognitive restructuring (16 one-hour sessions)	Clinically significant change	*

Author	Study design	N/Gender	Diagnosis (psychosis)	Diagnosis (anxiety)	Mean age (SD)	Therapy (Length)	Outcome	Effect size (*d*, *r)*
Nakamura et al. (2006)	Multiple baseline single case	1M	Schizophrenia (Disorganised type)	Specific phobia	14(*)	CBT (22 weeks)	Improvement	*
Trappler & Newville (2007)	Open trial	24*	Schizophrenia Schizoaffective disorder	PTSD	*(*)	CBGT (12 weeks)	Significant improvement	IES; CBT (*r*=0.71), supportive group therapy (*r*=0.02)
Tully and Edwards (2009)	Case report	1M	Paranoid schizophrenia	Social anxiety	45(*)	CBT (11 sessions)	Improvement (diagnosis) No improvement (ratings)	*
Tundo et al. (2014)	Open trial	13M 8F	Schizophrenia Schizoaffective disorder	OCD	29(*)	CBT and ERP	Significant improvement	*d*=0.80 (Y-BOCS Total)
Welfare-Wilson and Newman (2013)	Open trial	4M 3F	Psychosis	Anxiety	25(*)	CBGT	Significant improvement	Baseline to three month follow-up; Anxiety subscale of DASS-21 (*d*=1.26)

Note. BFNE = Brief Fear of Negative Evaluation Scale; BSPS = Brief Social Phobia Scale; CAPS = Clinician-Administered PTSD Scale; CBT = Cognitive-behavioural therapy, CBGT = Cognitive-behavioural group therapy, DASS-21 = Depression, Anxiety Stress Scale, Short Form; ERP =

Exposure and response prevention, IES = Impact of Events Scale; OCD = obsessive-compulsive disorder, PCL = Post-traumatic Stress Disorder (PTSD) Checklist; PSWQ = Penn State Worry Questionnaire; PTSD = post-traumatic stress disorder, RCT = randomised controlled trial; SIAS = Social Interaction Anxiety Scale; TAU = treatment as usual; WASPA = Westergaard Assessment Scale for Panic Attacks; Y-BOCS = Yale-Brown Obsessive Compulsive Scale; * = not reported/not-applicable.

1.7.3.5 Case study and small N methodology designs

Callcott et al. (2004) describe two patients with psychosis and PTSD who were treated with CBT. On the Impact of Events scale (IES; Horowitz, Wilner & Alvarez, 1979) scores for one patient reduced from 41 to 10, moving from the 'high' (>19) to 'medium' (8.6-19) range (Horowitz, 1982). This patient also experienced a reduction in negative symptoms. Unfortunately data for the other patient were not reported.

Dudley et al. (2005) describe a 38 year-old man with schizophrenia and dog phobia who received 38 sessions of CBT with systematic desensitisation. Improvements were observed on the Mobility Inventory for Agoraphobia (Chambless, Caputo, Jasin, Gracely & Williams, 1985) after treatment and at six-month follow-up. Improvements were also observed on the Psychotic Symptoms Rating Scales (PSYRATS; Haddock, McCarron, Tarrier & Faragher, 1999). However, indirect treatment for psychosis was provided making it difficult to observe the true effect.

Ekers et al. (2004) treated a 31 year-old man with schizophrenia and OCD with 20 hours of Exposure and Response Prevention (ERP). A reduction in OCD was observed using a self-report version of the Yale-Brown Obsessive Compulsive Scale (Y-BOCS; Steketee, Frost & Bogart, 1996), with scores reducing from 31 pre-treatment to 16 at discharge and 9 at six-month follow-up. Based on a cut-off score of 16, (Steketee et al., 1996) the client achieved clinical change. Although the authors claim that psychotic symptoms remained stable, this was based on clinical judgment only.

Good (2002) discusses a man with schizophrenia and social phobia who was treated with 24 weeks of CBT. The Modified Fear Questionnaire (Marks & Mathews, 1979) was used to demonstrate a reduction in social anxiety and the Krawiecka-Goldberg-Vaughan (KGV) scale (Krawiecka, Goldberg & Vaughan, 1977) was used to

demonstrate a reduction in psychosis. From this it is suggested that anxiety can increase psychotic symptoms.

Gruber et al. (2006) describe a man with psychosis and panic disorder with agoraphobia who was treated with 19 sessions of CBT. The Beck Anxiety Inventory (BAI; Beck & Steer, 1990) demonstrated a reduction in scores from 40 at baseline to 17 post-treatment and 10 at three-month follow-up. Based on a suggested cut-off score of 14 (Eack, Singer & Greeno, 2008), clinically significant change was observed.

Hagen et al. (2014) used 9 hour-long sessions of manualised CBT (including ERP) with a man who had schizophrenia and OCD. Reductions in OCD symptoms were observed using the self-report version of the Y-BOCS (Steketee et al., 1996) and the Obsessive Compulsive Inventory-Revised (OCI-R; Huppert et al., 2007). Scores on the Y-BOCS reduced from 24 at pre-treatment to five at six-month follow-up. Based on the suggested cut-off score of 16 (Steketee et al., 1996), the client achieved clinically significant change. On the OCI-R, scores reduced from 38 to 10, which is below the recommended clinical cut-off score of 21 (Foa et al., 2002).

Hofmann et al. (2000) conducted 15-17 sessions of CBT with four patients with schizophrenia and panic disorder. Diagnostic assessments and severity ratings showed improvements in panic symptoms in all four patients. Reductions were also observed in ratings related to the intensity of paranoia and delusions, leading the authors to conclude that treating panic may also improve symptoms of psychosis.

Kevan et al. (2007) used single N methodology to investigate trauma elaboration and cognitive restructuring in a 31 year-old female with schizophrenia and PTSD. A battery of measures demonstrated a reduction in PTSD from pre-treatment to discharge. However, the patient was diagnosed with schizophrenia two years before the study and

no symptoms were observed at assessment. The findings may therefore not be applicable to those with active psychosis.

Kobori et al. (2008) used CBT to treat OCD in a 26 year-old man with schizophrenia. The Y-BOCS was used to demonstrate symptom improvement over the course of treatment, with scores reducing from 31 to 18. Unfortunately the client did not achieve clinical change (<16; Steketee et al., 1996). However, a follow-up assessment after two years indicated no relapse. Despite reporting that there was no deterioration in psychosis over time, this was not explicitly measured.

Marcello et al. (2009) describe a man with schizoaffective disorder and PTSD who was treated with 16 one-hour sessions of cognitive restructuring. A clinically significant reduction in PTSD was observed using the stressor specific version of the PTSD Checklist (PCL; Weathers, Litz, Herman, Huska & Keane, 1993), with scores reducing from 57 in the first session to 30 at session 16 (whereby scores greater than 45 indicate 'severe' PTSD; Blanchard, Jones-Alexander, Buckley, & Forneris, 1996). However, the patient experienced 'cognitive deficits' and modifications were made to the treatment protocol. This means that the findings may not be applicable to those without cognitive impairments.

Nakamura et al. (2006) describe a 14 year-old with schizophrenia with a specific phobia of water. Over 22 weeks of CBT reductions were observed in parent and patient fear ratings. Strengths of this study include the use of a multiple baseline design and parent and patient blinding. However, due to age-related modifications to treatment it is possible that the results are not applicable to adults with psychosis.

Tully and Edwards (2009) present a 45 year-old man with paranoid schizophrenia and social anxiety. Following 11 sessions of CBT the man no longer met diagnostic criteria for social anxiety. However, no improvement was observed on the

Social Phobia Rating Scale (SPRS; Wells, 1997). Although the authors make reference to the potential association between psychosis and social anxiety no measure of psychotic symptoms was used.

1.7.3.6 Summary of case study and small N methodology designs

The case studies and small N methodology designs have allowed various treatment protocols to be investigated in detail and clinically significant effects have been found. However, weaknesses were identified, including a lack of extended baselines (e.g. Gruber et al., 2006; Kobori et al., 2008), no follow-up assessments (e.g. Callcott et al., 2004; Ekers et al., 2004; Nakamura et al., 2006) and no assessor blinding (e.g. Hofmann et al., 2000). In some studies (Gruber et al., 2006; Hagen et al., 2014) treatment was delivered intensively or protocols were modified with little explanation of the approach used (e.g. Hofmann et al., 2000; Marcello et al., 2009). Although some studies claimed that CBT for anxiety could also improve symptoms of psychosis (e.g. Ekers et al., 2004; Kobori et al., 2008; Tully & Edwards, 2009), measures of psychosis were not used.

1.7.3.7 Open trials

Arlow et al. (1997) conducted an open trial of group CBT with eight patients with schizophrenia or schizoaffective disorder and panic disorder. Paired t-tests indicated that scores on the Westergaard Assessment Scale for Panic Attacks (WASPA; Westergaard, Block & DuBoff, 1994) improved over treatment (t=2.47, p=0.043). Based on this the calculated Cohen's d effect size for the baseline and post-treatment mean scores is 0.68. However, the sample included seven Caucasians, six of whom were men. This may mean that the findings do not generalise to the larger population.

Frueh et al. (2009) conducted an open trial of exposure-based CBT with 20 adults with schizophrenia or schizoaffective disorder and PTSD. Following 22 sessions

participants demonstrated significant symptom improvement on the Clinician-Administered PTSD Scale (CAPS); Blake et al., 1990) and the PCL. Cohen's *d* effect size for pre to post-treatment is 0.54 for both the CAPS and the PCL. From pre-treatment to three month follow-up, Cohen's *d* effect sizes are 0.84 for the CAPS and 0.78 for the PCL. A manualised treatment package was used and treatment fidelity was measured by taping and rating sessions. The authors note that PTSD can perpetuate psychosis. However, psychotic symptoms were not measured.

Gega et al. (2013) report on the use of 12 weeks of CBT for six clients with psychosis and social phobia. Significant reductions in social anxiety and paranoia were observed at 24-week follow-up, as measured by the Social Interaction Anxiety Scale (SIAS; Mattick & Clarke, 1998) and the Green et al. Paranoid Thought Scales (GPTS; Green et al., 2008). Effect sizes for improvement on the SIAS are as follows; pre-post treatment (d=0.73), post-treatment to follow-up (d=1.02) and pre-treatment to follow-up (d=0.87). Significant improvements were not found post-treatment (at 12-week assessment). This suggests that other factors (e.g. spontaneous recovery, delayed benefit) might have been involved in the participants' improvement at follow-up.

Trappler and Newville (2007) used 12 weeks of group-based CBT with 24 patients with schizophrenia or schizoaffective disorder and PTSD. Progress was compared to an age-matched group provided with supportive group therapy. Wilcoxon-signed rank tests were used to demonstrate improvements on the IES in the CBT group (z=-3.47, p=0.001) but not the supportive therapy group (z=-0.008, p=NS). Improvements were also observed on the Brief Psychiatric Rating Scale (BPRS; Overall & Gorham, 1988) for the CBT group (z=-4.20, p<0.001) but not the supportive therapy group (z=-0.01, p=NS). Effect sizes for the IES were as follows; CBT (r=0.71) and supportive group therapy (r=0.02). Unfortunately a follow-up period was not used.

Tundo et al. (2014) provided CBT for OCD in 21 patients with schizophrenia and schizoaffective disorder. The Y-BOCS was used to demonstrate significant improvements in OCD at six months (p<0.001) and 12 months (p=0.017). Cohen's *d* effect size for the total Y-BOCS score was 0.80 (A. Tundo, personal communication, January 12, 2015). However, the CBT was adapted and treatment frequency, medication and follow-up visits varied between patients. This makes replication in clinical practice difficult.

Welfare-Wilson and Newman (2013) report on the use of a 12-week CBT group programme for 11 clients with psychosis and anxiety. The Depression, Anxiety and Stress Scale, Short-Form (DASS-21; Lovibond & Lovibond, 2004) was used to demonstrate significant improvement in anxiety at three-month follow-up (t(7)=4.285, two-tailed p=.005). The Cohen's *d* effect size for the anxiety subscale of the DASS-21 from baseline to three month follow-up is 1.26. Unfortunately the authors did not specify the type of anxiety experienced by the participants making it difficult to ascertain whether the intervention was beneficial for those with specific disorders or anxiety generally.

1.7.3.8 Summary of open trials

Despite some positive findings most of the open trials used limited outcome measures (e.g. Arlow et al., 1997; Welfare-Wilson & Newman, 2013) or did not use assessment blinding (e.g. Frueh et al., 2009; Tundo et al., 2014). Power analyses were not used to calculate sample size resulting in small numbers of participants. Furthermore, the lack of randomisation or control groups make it difficult to ascertain whether the interventions led to the improvements observed or whether there were other factors involved (e.g. spontaneous recovery; Gega et al., 2013).

Effect sizes for the open trials range from 0.54 to 1.26 ('medium' to 'large'). Although most studies provide effect sizes comparable to those found for CBT for anxiety in people without psychosis, some do not. Specifically, CBT for OCD in people with psychosis (Tundo et al., 2014) demonstrated a 'medium' effect (0.80), whereas a study for people without psychosis found a 'large' effect (1.26; Eddy et al., 2004). Although one study investigating CBT for PTSD in people with psychosis found a 'large' pre-treatment to three-month follow-up effect size of 0.84 (Freuh et al., 2009), a study with people without psychosis found a greater pre-post effect size of 1.65 (Bradley et al., 2005). This might highlight the complexity of providing effective treatment for these conditions in people with psychosis.

1.7.3.9 Randomised controlled trials (RCTs)

Foster et al. (2010) used an RCT to investigate CBT for worry in 24 participants with persecutory delusions. The participants were allocated to a four session intervention or treatment as usual (TAU). Compared to TAU a significant reduction in worry was observed in the CBT group using the Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger & Borkovec, 1990). This was maintained at two month follow-up. A significant reduction in delusional distress was also observed using the PSYRATS. Based on data provided for the PSWQ, Cohen's *d* effect size is 0.56 post-treatment and 0.74 at two month follow-up.

Strengths of this study include the use of a randomisation procedure and a power analysis to calculate the sample size. However, the final sample was small and four participants were not included in the follow-up analysis. It is therefore difficult to generalise the findings to a larger population. Baseline levels of worry were higher in the CBT group than the TAU group and assessor blinding and measures of treatment

fidelity were not used (Foster et al., 2010). This makes it difficult to observe the true effect of the intervention.

Freeman et al. (2015) conducted a RCT investigating a six session CBT intervention for worry in 150 participants with persecutory delusions. The participants were assigned to a CBT group or to standard care, which included regular input from a psychiatrist and a mental health worker. The PSWQ was used to demonstrate a significant reduction in worry in the CBT group compared to standard care. A significant reduction was also found in persecutory delusions using the PSYRATS. These findings were maintained at 24 week follow-up. Based on the group difference, the authors report a Cohen's *d* effect size of 0.47 for the PSWQ.

The study has a number of strengths including the use of power analysis, measurement of treatment fidelity and intention-to-treat analysis. However, the treatment was delivered by three therapists, meaning therapeutic style is likely to have varied between participants. This makes it difficult to generalise the findings to the wider population. In turn, the authors note the absence of a control condition investigating therapist contact. Finally, despite being a single-blind study the assessors were 'unmasked' in six assessments.

Halperin et al. (2000) conducted a pilot RCT of group CBT in 16 patients with schizophrenia and social anxiety. Treatment was provided over eight weeks and the Brief Social Phobia Scale (BSPS; Davidson et al., 1997) and the SIAS were used to demonstrate improvement in social anxiety at post-treatment and six week follow-up.

Although the randomised nature of this trial is a strength, Halperin et al. (2000) do not describe the randomisation procedure or blinding. The Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983) was used to measure psychosis and although score reduction was observed, the authors note that this did not measure psychosis fully.

No power or intention-to-treat analyses were reported meaning that the results may not be applicable to a larger population. Cohen's *d* effect size based on the post-treatment data for the treatment and control groups is 0.30 for the SIAS and 0.11 for the BSPS.

Kingsep et al. (2003) used an RCT consisting of 12 sessions of group CBT with 33 patients with schizophrenia and social anxiety. Significant improvements were observed using the BSPS, the SIAS and the Brief Fear of Negative Evaluation Scale (BFNE; Leary, 1983). Treatment was manualised, fidelity was measured and assessment blinding was used. A post-treatment mean effect size of 0.64 is quoted for all of the social anxiety measures used. For the SIAS, BSPS and BFNE the effect sizes are 0.69, 0.17 and 1.05, respectively.

This study did not use a power analysis to calculate sample size and as with Halperin et al's (2000) study, the BSI was used to assess psychosis. Participants attended a rehabilitation programme during treatment and follow-up data were unavailable for the control group. This makes it difficult to ascertain the true effect of the intervention.

1.7.3.10 Summary of RCTs

Although the RCTs have value there are a number of limitations. For those investigating CBT for social anxiety (Halperin et al., 2000; Kingsep et al., 2003), power analyses were omitted and a generalised measure of psychopathology was used to investigate psychotic symptoms. The sample sizes were generally small (Halperin et al., 2000; Kingsep et al., 2003; Foster et al., 2010) and assessor blinding was omitted or not fully adhered to (Foster et al., 2010; Freeman et al., 2015; Halperin et al., 2000). There were also issues with treatment, including treatment being offered in addition to CBT (Kingsep et al., 2003) and the omission of intention-to-treat analysis (Foster et al., 2010; Halperin et al., 2000; Kingsep et al., 2003).

The ‘medium’ effect sizes of 0.56 and 0.74 found by Foster et al. (2010) for CBT for ‘worry’ are similar to the ‘medium’ effect size of 0.64 found for GAD (Haby, Donnelly, Corry and Vos, 2005). However, Freeman et al. (2015) only found a ‘small’ effect size of 0.47 for CBT for worry. The ‘medium’ effect size of 0.64 quoted by Kingsep et al. (2003) is compared to a ‘large’ follow-up effect size of 0.95 found for CBT for social anxiety in people without psychosis (Gil et al., 2001). However, when the BFNE was used a ‘large’ effect size of 1.05 was found (Kingsep et al., 2003). The effect sizes for the two RCTs for social anxiety vary depending on the study and measure used, with ‘small’ effect sizes for the BSPS and ‘medium’ effect sizes for the SIAS. This highlights the need for adequate measures when investigating the effectiveness of CBT for anxiety in people with psychosis.

1.7.3.11 Discussion

All of the studies outlined in this review demonstrated improvement in anxiety following treatment. Based on Cohen’s (1988) criteria, the majority of effect sizes are within the ‘medium’ to ‘large’ range, suggesting that CBT is an effective treatment for anxiety in people with psychosis. However, five studies (Freeman et al., 2015; Freuh et al., 2009; Halperin et al., 2000; Trappler & Newville, 2007; Tundo et al., 2014) out of ten demonstrated smaller effect sizes than those presented for CBT for anxiety in people without psychosis. Although methodological limitations should be taken into account, this may highlight the complexity of treating anxiety in people with psychosis.

1.7.3.11.1 Research quality

Most studies used reliable and valid measures and in some cases measures of treatment fidelity (e.g. Arlow et al., 2007; Freeman et al., 2015; Kingsep et al., 2003) and follow-up sessions were used (e.g. Ekers et al., 2004; Foster et al., 2010; Freeman et al., 2015; Good, 2002; Gruber et al., 2006; Halperin et al., 2000; Kobori et al., 2008).

However, extended baseline periods, follow-up assessments and blinding were often omitted and randomisation was not used. This makes it difficult to observe the effect of the intervention accurately.

The majority of studies investigated the use of CBT for PTSD, social anxiety and OCD. However, variation was found in treatment content and process. This makes it difficult to observe whether CBT is beneficial for one type of anxiety over another. It also makes it difficult to ascertain whether CBT is effective for anxiety in psychosis in general or whether different components work with particular anxiety disorders. Although most studies provided descriptions of the intervention, some made modifications (e.g. Freeman et al., 2015; Hofmann et al., 2000; Marcello et al., 2009; Tundo et al., 2014) or provided treatment over short time periods (e.g. Freeman et al., 2015; Foster et al., 2010; Gruber et al., 2006; Hagen et al., 2014). This makes replication difficult.

There was also variation in research design across the studies and each of the anxiety disorders. Eighteen studies used a case study, small N methodology or open trial design. Four studies were RCTs and these focused on the treatment of social phobia and 'worry' only. It could therefore be argued that the most robust evidence supports the use of CBT for these particular types of anxiety. However, the RCTs had clear limitations and the findings should be interpreted with these in mind.

1.7.3.11.2 Considerations for future research

The number of studies available for each of the anxiety disorders was sparse. Although there are more studies focusing on PTSD, social anxiety and OCD, variation in study design and methodology makes it difficult to conclude whether CBT is more effective for one type of anxiety over another. More studies should be conducted, including RCTs that consider the limitations identified in this review.

In addition to focusing on the limitations identified, and improving the methodological rigour of the evidence base, future research should focus on the theoretical assumptions regarding anxiety and psychosis. Studies should ensure that they measure psychotic symptoms in addition to anxiety with a focus on symptom severity and reliable and valid measures. This will demonstrate whether CBT is effective for anxiety and psychosis or whether it is more effective for anxiety alone.

1.7.3.11.3 Conclusion

The systematic review suggests that CBT is an effective intervention for anxiety in people with psychosis. Although differences were found in effect sizes, the majority were in the 'medium' to 'large' range. Methodological limitations and complexity in treating anxiety in people with psychosis may account for differences in effect size between the studies reviewed and the literature for the use of CBT for people with anxiety who do not have psychosis. None of the studies included in the review examined imagery interventions for anxiety in people with psychosis. Considering that social anxiety is prevalent in psychosis and imagery rescripting is effective for social anxiety in people without psychosis, this warrants further investigation.

1.8 Summary of literature and rationale for study

It is clear from the theoretical models presented that anxiety has an important role in psychosis (e.g. Garety et al., 2001; Morrison, 2001). In particular, there is a high prevalence of social anxiety in people with psychosis and this can have a significant impact on functioning and quality of life. Models of psychosis and social anxiety highlight an association between the two conditions (e.g. stigma, loss of social status; Birchwood et al., 2007; fear of others; Newman-Taylor & Stopa, 2013) and suggest that they can precipitate and develop alongside one another (Michail & Birchwood, 2009). Therefore treating social anxiety in people with psychosis may be beneficial.

Negative imagery and memories have the potential to maintain social anxiety and imagery rescripting has been shown to be an effective intervention for people with social anxiety that do not have psychosis. A systematic review of CBT interventions for anxiety in psychosis revealed there are currently no studies that have investigated whether imagery rescripting is effective for social anxiety in people with psychosis. This study will investigate whether an existing imagery rescripting approach (Wild et al., 2008; Wild & Clark, 2011) is efficacious for rescripting traumatic memories associated with social anxiety in people with psychosis. This is an important issue as treating social anxiety in those with psychosis has the potential to reduce distress, increase functioning and ease pressure on the health service.

Existing research supports the use of cognitive behavioural interventions for anxiety in people with psychosis, including social anxiety. However, there are only a small number of studies and these have various methodological issues. This study will contribute to the evidence base by providing initial data on the efficacy and feasibility of imagery rescripting for social anxiety in people with psychosis. It will also highlight adaptations that should be considered for future research or clinical practice.

1.9 Research hypotheses

1.9.1 Primary hypotheses

1. There will be a reduction in social anxiety scores following imagery rescripting, measured one month after imagery rescripting
2. There will be a reduction in visual analogue scale ratings related to anxiety following imagery rescripting
3. There will be a reduction in encapsulated belief and memory distress ratings related to negative imagery following imagery rescripting

4. There will be a reduction in distress, vividness and frequency ratings related to negative imagery following imagery rescripting

1.9.2 Research questions

1. What is the effect of imagery rescripting on psychotic symptoms and paranoia in people with psychosis and social anxiety?
2. What is the effect of imagery rescripting on depression in people with psychosis and social anxiety?
3. What is the effect of imagery rescripting on social functioning and quality of life in people with psychosis and social anxiety?

CHAPTER TWO

2. Method

2.1 Overview

This chapter outlines the design and methodology for the study. A single case series multiple baseline approach was used and this is described together with the randomisation procedure. Participant inclusion and exclusion criteria, the recruitment strategy and information about the final sample is presented. The intervention and a treatment fidelity procedure are described, followed by an outline of the measures used to investigate the primary hypotheses and research questions. Ethical issues are considered and the study procedure and plan for data analysis are provided.

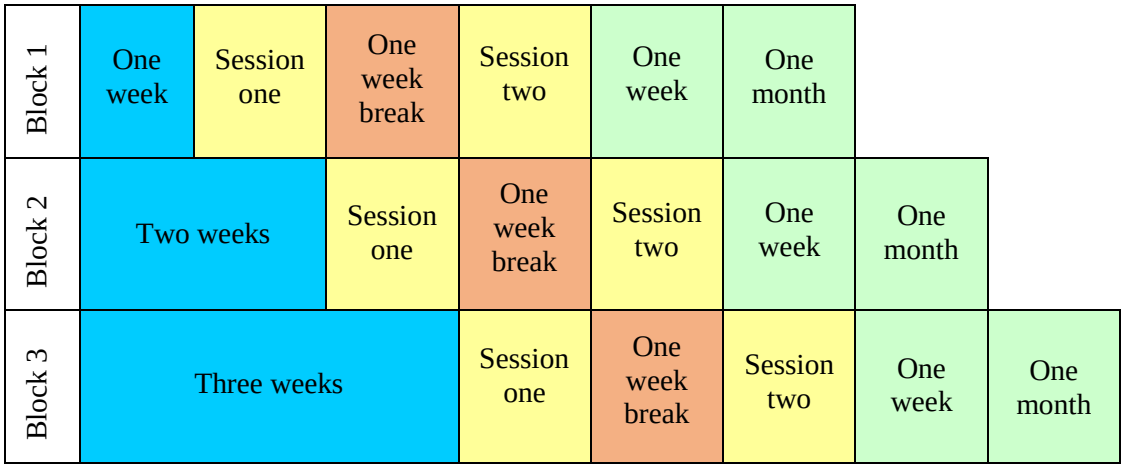
2.2 Design

A small scale feasibility and piloting approach is appropriate for investigations of novel interventions (Craig et al., 2013). This study used a single case series multiple baseline design. Continuous assessment was used to provide a baseline and track change before, during and after the introduction of the intervention. This investigated whether the participants' presentation was stable before the intervention and whether any change followed its introduction. This approach increased internal validity, allowing any changes to be attributed to the intervention rather than other factors (e.g. natural improvement in symptoms, other events; Kazdin, 2010).

The use of a multiple baseline approach allowed the feasibility of the intervention to be investigated by looking at change within and between participants. In line with guidance for multiple baseline designs (Anderson & Kim, 2003) the participants were randomised into blocks of varying length (one, two or three weeks; see Fig. 2.1). The intervention consisted of two sessions, separated by one week. Each participant was asked to complete measures related to social anxiety, psychosis, mood,

functioning and quality of life before, during and after the baseline period, before and after the intervention sessions and at one week and one month follow-up periods. This allowed individual progress to be monitored over the course of the study and allowed any change as a result of introducing the intervention to be observed.

Figure 2.1. Multiple baseline design for the current study



Note. The blue boxes indicate baseline periods, the yellow boxes indicate the intervention sessions, the orange boxes indicate the one week break (between intervention sessions) and the green boxes indicate follow-ups.

2.3 Randomisation

Participants were randomly allocated to one of the three blocks using sealed envelopes. The Chief Investigator was not involved in the design of the randomisation system and was only given the envelopes once sealed.

2.4 Participants

Participants were recruited from Early Intervention in Psychosis (EIP) and Integrated Delivery Team (IDT) services within Norfolk and Suffolk Foundation Trust (NSFT). In line with previous research investigating social anxiety in psychosis (e.g. Birchwood et al., 2007; Romm et al., 2012) all participants had experienced at least one episode of psychosis.

2.4.1 Inclusion criteria

Participants were included if they had a diagnosis of psychosis (e.g. schizophrenia, schizoaffective disorder, delusional disorder). A measure of social anxiety, the Social Interaction Anxiety Scale (SIAS; Mattick & Clark, 1998), was used to ensure that participants had clinically significant levels of social phobia, indicated by a score of 37 and above (Peters, 2000). To ensure that those recruited were able to provide informed consent, only individuals aged 18 years and over were approached. In line with EIP policy (Mental Health Network NHS Confederation, 2011) the maximum age of those included was 35 years.

2.4.2 Exclusion criteria

Those experiencing florid psychosis and those without the capacity to consent to take part were not approached. Individuals were excluded if they were not experiencing clinically significant levels of social anxiety (i.e. ≤36 on the SIAS). Individuals were also excluded if they scored above four on any of the positive items on the Positive and Negative Syndrome Scale (PANSS: Kay, Fiszbein & Opler, 1987), indicating more than 'moderate' impairment. Individuals scoring above this are likely to have found it too distressing or challenging to take part in the intervention. Individuals not fluent in English and those receiving other psychological interventions were not included to ensure that the true effect of the intervention could be investigated.

2.4.3 Recruitment

Following ethical approval the Chief Investigator presented the study to EIP and IDT teams in NSFT. Recruitment started in Norwich and was followed by Great Yarmouth and Bury St. Edmunds. The teams were provided with recruitment packs, including covering letters, participant information sheets and consent forms (see Appendices A-C). Case managers were asked to identify clients likely to be suitable.

They were then asked to provide them with a recruitment pack. Once a client had provided verbal consent to be contacted the Chief Investigator telephoned them to arrange an appointment.

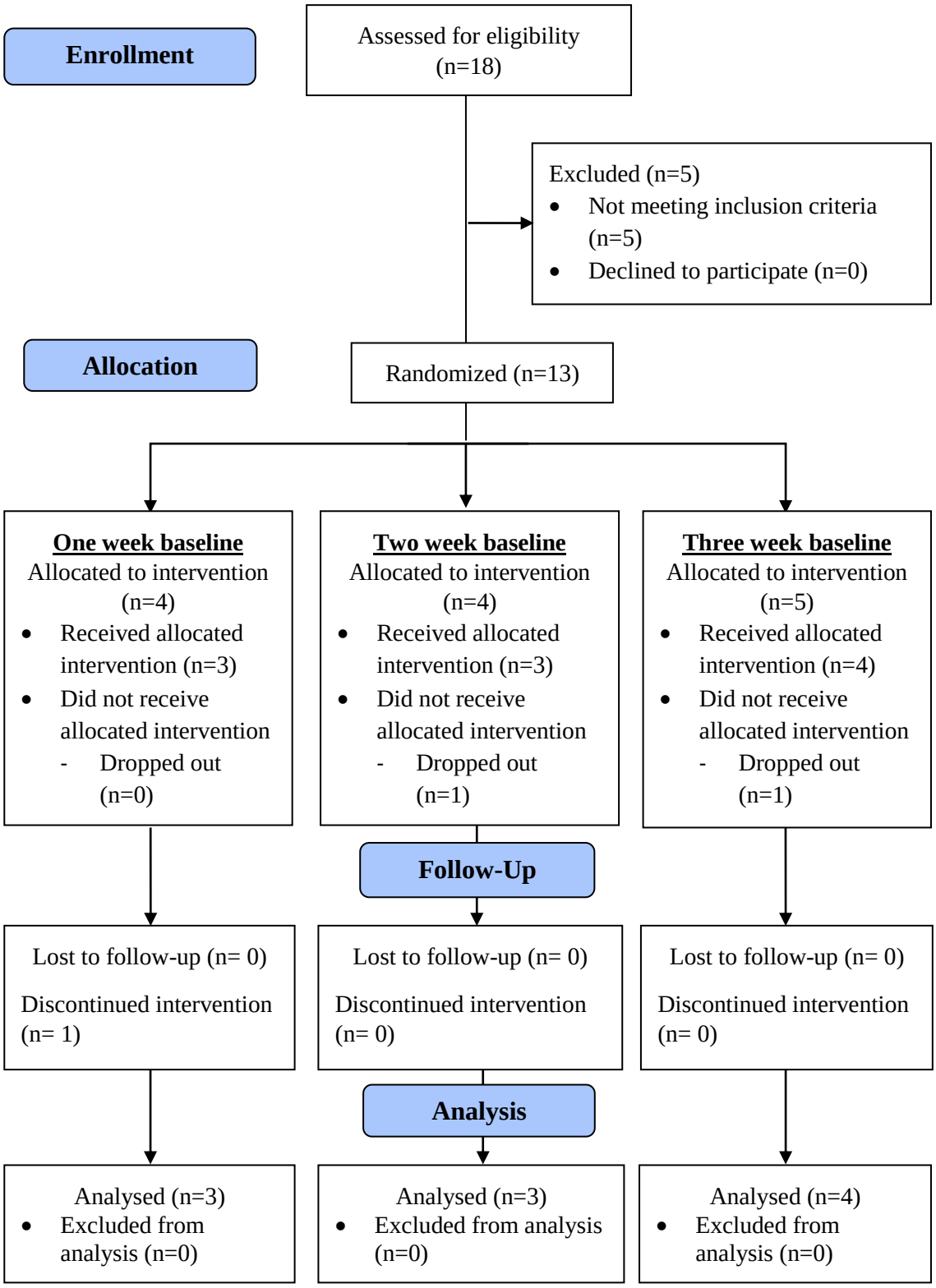
2.4.4 Sample

As a single case series involves testing an intervention for feasibility it was not necessary to conduct a power analysis to calculate sample size. Wild et al. (2007) used 14 participants in their study investigating imagery rescripting for social phobia. Wild et al. (2008) used 11 participants. Based on this, 13 participants were recruited for the current study. This is appropriate for a single case series (Kazdin, 2010).

Three of the 13 participants did not complete the study. One participant (one week baseline) completed the baseline period and the first session of the intervention but withdrew due to becoming unwell. Another participant (three week baseline) was excluded before completing the baseline period due to starting another intervention. One participant (two week baseline) completed the baseline period but experienced a bereavement before the intervention was introduced. Although this participant restarted the study at a later date some sessions were missed and he was subsequently excluded.

Further information regarding participant recruitment is included in Figure 2.2. Of the five participants who were excluded due to non-eligibility, two individuals did not meet the criteria for social anxiety (a score of ≤36 on the SIAS; Peters, 2000) and one individual scored above four points on positive scale items on the PANSS. One individual had a learning disability and another did not speak fluent English. It was assumed that these individuals would have found it too difficult to take part.

Figure 2.2. Consolidated Standard of Reporting Trials (CONSORT) diagram (Schulze, Altman & Moher, 2010)



2.5 Measures

Demographic information was obtained for each of the participants from their clinical notes including gender, age, ethnicity and diagnoses. Details of the measures used in the study, including the available psychometric properties, are presented below. All non-copyright measures are included in Appendix D.

2.5.1 Screening measures

2.5.1.1 Social Anxiety Interaction Scale (SIAS; Mattick & Clarke, 1998)

The SIAS is a self-report questionnaire that measures anxiety during social interaction (i.e. in the presence of other people). It was used to identify those appropriate for inclusion. The SIAS takes around five minutes to complete.

The SIAS has 20 items corresponding to a diagnostic description of social phobia (American Psychiatric Association [APA], 1987). Each item is scored on a five-point Likert scale from 'Not at all characteristic of me' to 'Extremely characteristic of me' (Mattick & Clarke, 1998). The SIAS has a maximum score of 80 and scores of 37 points or more are representative of social phobia (sensitivity = 0.93, specificity = 0.60, positive predictive value = 0.84, negative predictive value = 0.78; Peters, 2000). It has high internal consistency (social phobia sample, α=0.93) and test-retest reliability (α=0.92). Discriminant validity has been demonstrated by differences between participants with social phobia, agoraphobia and simple phobia and clinical and non-clinical samples. Construct validity has also been found (Mattick & Clarke, 1998).

2.5.1.2 Positive and Negative Syndrome Scale (PANSS; Kay et al., 1987)

The PANSS is a semi-structured interview that assesses psychotic symptoms. The PANSS was used as a screening tool to ensure that participants were well enough to take part. The PANSS has 30 items divided into three subscales and takes around 45-50 minutes to complete. Seven items constitute a positive syndrome scale and seven

constitute a negative scale. Sixteen items are included in a general psychopathology scale. Each item is scored on a 7-point scale, from 'Absent' to 'Extreme'.

The PANSS has internal consistency with alpha coefficients of 0.73, 0.83 and 0.79 for the positive, negative and general psychopathology subscales, respectively. Test-retest reliability has been found for the positive (r=.80, p<.001), negative (r=.68, p<.01) and general psychopathology (r=.60, p<.02) scales. The PANSS has criterion and construct validity (Kay, Opler & Lindenmayer, 1987) and interrater reliability (ICC=0.74, 0.69 and 0.64 for the positive, negative and general psychopathology scales, respectively; Bell, Milstein, Beam-Goulet, Lysaker & Cicchetti, 1994).

2.5.2 Semi-structured interview (Hackmann et al., 1998; Hackmann, et al., 2000, as cited in Cooke, 2012)

A semi-structured interview (Hackman et al., 1998; Hackmann et al., 2000, as cited in Cooke, 2012) was used to gain information about the images and memories participants experienced in relation to social events. This approach was adopted from previous work in the social anxiety field (Wild et al., 2007, Wild et al., 2008). The interview includes 22 questions and takes approximately 30 minutes to complete. A scale of -3 (field perspective) to +3 (observer perspective) is also used to gain information about the focus of the memory (Hackman et al., 1998; Hackmann et al., 2000, as cited in Cooke, 2012). As with Wild et al. (2007, 2008) participants were asked to provide one or two sentences to reflect the meaning of the image and memory (the 'encapsulated belief').

2.5.3 Primary outcome measures

In addition to being used as a screening measure, the SIAS (Mattick & Clarke, 1998) was used to investigate the hypothesis that there would be a reduction in social

anxiety following imagery rescripting, measured one month after imagery rescripting. The other primary outcome measures used in the study are described below.

2.5.3.1 Visual analogue scale for anxiety (VAS-A)

The VAS-A requires the participant to place a mark on a scale to indicate their level of anxiety. A 100mm scale ranging from zero ('Not anxious') to one ('Anxious') is used, allowing a score to be assigned to the mark provided (e.g. 0.50, 0.75). The VAS-A was used to investigate the hypothesis that there would be a reduction in ratings of anxiety following imagery rescripting. The VAS-A was also used to collect data during the baseline period to measure anxiety before the introduction of the intervention. The VAS-A takes approximately 30 seconds to complete.

2.5.3.2 Idiographic ratings (Wild et al., 2008)

Wild et al. (2008) asked participants to rate the 'encapsulated belief' from zero (not at all) to 100 (extremely). This scale was also used to rate 'memory distress' and the distress and vividness of the imagery. Image frequency was rated for the past week. The scales were used to investigate the hypotheses that that would be a reduction in encapsulated belief, memory and imagery ratings following imagery rescripting. The ideographic ratings take approximately two minutes to complete.

2.5.4 Secondary outcome measures

2.5.4.1 Schizotypal Symptoms Inventory (SSI; Hodgekins et al., 2012)

The SSI is a self-report questionnaire designed to measure schizotypal experiences that might also be classified as subthreshold psychotic experiences. It is more sensitive at detecting these experiences than the PANSS, which focusses on the presence of frank psychotic symptoms (Hodgekins et al., 2012). It was therefore deemed a more appropriate measure to use to investigate the effect of the imagery rescripting on psychotic symptoms.

The SSI consists of 20 items divided into three subscales; social anxiety (six items), paranoia (six items) and anomalous experiences (eight items). It measures symptom frequency over two weeks and items are scored on a five-point Likert scale from 'Not at all' to 'All of the time'. There is a maximum score of 80 and higher scores indicate more symptoms. It takes approximately five minutes to complete.

High internal consistency has been found for the total scale (α=0.92) and for the social anxiety (α=0.89), paranoia (α=0.90) and anomalous experiences (α=0.83) subscales. Test-retest reliability has been demonstrated for the total scale (ICC = 0.85, p<.001) and individual subscales (0.60-0.84, p<.001). Correlations with PANSS positive symptom scores has been found on the total (r=0.59, p<.001), social anxiety (r=0.35, p<.001), paranoia (r=0.55, p<.001) and anomalous experiences (r=0.60, p<.001) scales (Hodgekins et al., 2012).

2.5.4.2 Visual analogue scale for paranoia (VAS-P)

The VAS-P is a self-report scale 100mm in length ranging from zero ('Not paranoid') to one ('Paranoid'), allowing a score to be assigned to the mark provided (e.g. 0.50, 0.75). The VAS-P was used to investigate whether the imagery rescripting had an effect on paranoia. The VAS-P was also used to collect data during the baseline period to measure paranoia before the intervention. The VAS-P takes approximately 30 seconds to complete.

2.5.4.3 Depression subscale of the Depression Anxiety and Stress Scale – Short Form (DASS-21; DASS-D; Lovibond & Lovibond, 1995)

The DASS-21 is a self-report questionnaire that measures depression, anxiety and stress over a one week period. The DASS-D was used in the current study to examine the effect of the imagery rescripting on mood. The DASS-D takes approximately two minutes to complete.

The DASS-D consists of seven items. Each item is scored on a four-point Likert scale from 'Did not apply to me at all' to 'Applied to me very much, or most of the time' (Osman et al., 2012). It has a maximum score of 21 and higher scores indicate more symptoms. The DASS-D has high internal consistency (α=0.94). In addition, it has good concurrent validity (Antony, Bieling, Cox, Enns & Swinson, 1998) and convergent and discriminant validity (Henry & Crawford, 2005).

2.5.4.4 Time Use Survey (TUS; Hodgekins et al., 2015; Short, 2006)

The TUS is a clinician administered semi-structured interview that measures functioning. It was designed by the Office for National Statistics (Short, 2006) for measuring how people spend their time. However, it has been used with people with psychosis (Fowler et al., 2009; Hodgekins et al., 2015) and was therefore deemed appropriate to examine the effects of the intervention on social functioning.

The TUS obtains information related to time spent in employment, education and training, voluntary work, leisure activities, sports activities and hobbies, socialising, childcare and housework and chores over one month. It takes approximately 20-30 minutes to complete. 'Structured Activity' is calculated based on the number of hours per week over the month spent on each domain (Fowler et al., 2009). A higher frequency of hours spent in activity on the TUS indicates a higher level of functioning.

From a study comparing time use in people with psychosis and a non-clinical group, Hodgekins et al. (2015) suggest that less than 45 hours of structured activity per week is in the clinical range, less than 30 hours per week is in the social disability range and less than 15 hours per week is in the severe social disability range. These cut-off scores will be adopted in the current study to assess social functioning.

2.5.4.5 EuroQOL-5 Dimensions-5 Levels Visual Analogue Scale (EQ-5D-5L VAS; Herdman et al., 2011)

The EQ-5D-5L VAS is a self-report visual analogue scale that measures health status. It is also regarded as an index for quality of life. Respondents rate their current health status on a 20-cm vertical visual analogue scale from 0 (worst imaginable health state) to 100 (best imaginable health state; van Hout et al., 2012). It was used in the current study to examine the impact of the intervention on quality of life. The EQ-5D-5L VAS takes approximately 30 seconds to complete.

2.6 Intervention

The intervention used by Wild et al. (2008) was replicated in the current study. It consisted of two sessions with a one week break in-between.

2.6.1 Control session

The control session was designed to examine whether it is the imagery rescripting procedure (provided in the second intervention session) which leads to therapeutic change rather than just discussing the image and the memory (Wild et al., 2008). The control session lasted for 90 minutes and the aim was to listen to the participant and empathise and reflect on the image and memory elicited by the semi-structured interview (Hackmann et al., 1998, Hackmann et al., 2000). No attempt was made to change the memory at this stage (Wild et al., 2008).

2.6.2 Imagery rescripting session

The aim of the imagery rescripting session was to update the memory and place it in context. This session included 45 minutes of cognitive restructuring followed by 30-45 minutes of imagery rescripting. The cognitive restructuring involved challenging the meaning of the memory and how it related to the participant's current beliefs and experiences (e.g. alternative ways of thinking about the event, examples that

counteracted the memory; Wild et al., 2008). This was used in the imagery rescripting section (Wild et al., 2008). Wild & Clark (2011) describe an imagery rescripting procedure and this was used to create a script for the current study (see Appendix E).

2.6.3 Treatment fidelity

In 2004 the Behavior Change Consortium published guidelines for ensuring treatment fidelity in intervention studies (Bellg et al., 2004). In addition to using a script to deliver the imagery rescripting a rating scale was devised to monitor content (See Appendix F). A Clinical Psychologist provided training on how to use imagery rescripting and regular supervision was held to reduce 'drift'. With participant consent, sessions were audio recorded and rated by a Clinical Psychologist to measure adherence to the script. The control sessions were also recorded to ensure that no attempts were made to update the memory before the imagery rescripting session.

2.7 Ethical considerations

2.7.1 Ethical approval and guidance

Ethical approval was granted by London-Brent Research Ethics Committee and Research and Development (R&D) at NSFT (see Appendix G). British Psychological Society (2010) guidelines for research conduct were followed at all times.

2.7.2 Informed consent

Potential participants were provided with a recruitment pack by a member of their clinical team. The Participant Information Sheet outlined the study rationale and a discussion of confidentiality and risk issues. It also informed potential participants of their right to withdraw from the study at any point. Individuals were not approached by the research team until they had provided verbal consent for this to occur.

All participants were required to provide informed consent before entering the study. Potential participants were encouraged to discuss the study with their case

manager, family members or friends before making a decision. They were given at least 48 hours to read the information sheet and consent form and consider whether they wanted to take part.

Before providing consent potential participants were informed that they would not be able to take part if they did not meet the study criteria. If an individual was not eligible they were provided with an explanation and given the opportunity to ask questions. Their case manager was also informed. If suitable, participants were asked to provide consent for a letter to be written to their General Practitioner (GP; See Appendix H) outlining their involvement in the study.

2.7.3 Data storage and confidentiality

The Data Protection Act (Gov.uk, 2015) was followed, ensuring that data were used fairly and stored securely. Data anonymisation was ensured through the use of coding by allocating a number to completed measures instead of participants' names. Copies of signed consent forms were stored separately to the anonymised measures. Raw data were stored in locked filing cabinets at the relevant service for the duration of the study. Following study completion, raw data were stored at the University of East Anglia (UEA) in a locked filing cabinet. The data will be held at the UEA for 10 years following study completion, after which it will be destroyed.

An encrypted memory stick was used to transfer electronic data between computers. Data were only stored on NHS and university computers and these were protected with passcodes. A Dictaphone was used to record the intervention sessions (to assess treatment fidelity). Participant details were not included in the recordings and following the session they were uploaded to an NHS computer and erased from the device. Participant addresses and telephone numbers were stored on a mobile phone which was protected with a passcode. Following participation these data were erased.

Although participants were offered confidentiality the limits of this were outlined (i.e. if they disclosed any information that suggested they or others are were at risk).

2.7.4 Risks and benefits of participation

It was considered that the participants might experience distress when talking about negative images and memories. It was also considered that some participants might experience paranoia and fear of scrutiny from the Chief Investigator. Participants were informed about the potential for these issues before providing consent. They were also offered the opportunity to terminate sessions or withdraw from the study at any point. A debrief was provided at the end of each intervention session and at the end of the study and the participants were offered the opportunity to discuss any concerns. No significant ethical issues arose during the course of the study.

In an attempt to reduce burden participants were offered the opportunity to divide the intervention sessions or take regular breaks. Where possible, participants were seen at the service they were in contact with. When participants asked to be seen at their home address the service and university lone worker policies were followed. Following each appointment or contact with a participant an entry was made in the clinical notes and a research log.

The participants were informed that completion of the study might have led to improvements in social anxiety, psychosis, mood, functioning and quality of life, but this could not be guaranteed. They were offered a £15 shopping voucher for taking part. This was given to them on completion of the study.

2.8 Procedure

The measures administered at each stage of the study process are outlined in Table 2.1. Once a participant had provided verbal consent to be contacted, the Chief Investigator contacted them by telephone to discuss the study. An appointment was

made to meet the potential participant, complete the consent form and administer the SIAS and the PANSS (Time point 1).

Table 2.1

Time points and approximate completion time for measures

	Time point								
Measure	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
SIAS	X		X					X	X
PANSS	X								
SSInt				X					
VAS-A		X	X	X	X	X	X	X	X
Ratings				X	X	X	X	X	X
SSInv		X	X					X	X
VAS-P		X	X	X	X	X	X	X	X
DASS-D		X	X					X	X
TUS		X	X					X	X
EQ-5D-5L VAS		X	X					X	X
Approx. time taken to complete measures	55 mins	40 mins	45 mins	35 mins	5 mins	5 mins	5 mins	45 mins	45 mins

Note. Time points: 1 = Screening; 2 = Baseline; 3 = End of baseline; 4 = Before control session; 5 = After control session; 6 = Before imagery rescripting session; 7= After imagery rescripting session; 8 = One week follow-up; 9 = One month follow-up. Abbreviations: SIAS = Social Interaction Anxiety Scale; PANSS = Positive and Negative Syndrome Scale; SSInt = Semi-structured interview; VAS-A = Visual analogue scale for anxiety; Ratings = Ideographic ratings; SSInv = Schizotypal Symptoms Inventory; VAS-P = Visual analogue scale for paranoia; DASS-D = Depression subscale of the Depression Anxiety and Stress Scale, Short Form (DASS-21); TUS = Time Use Survey; EQ-5D-5L VAS = EuroQOL-5-Dimensions-5-Levels Visual Analogue Scale.

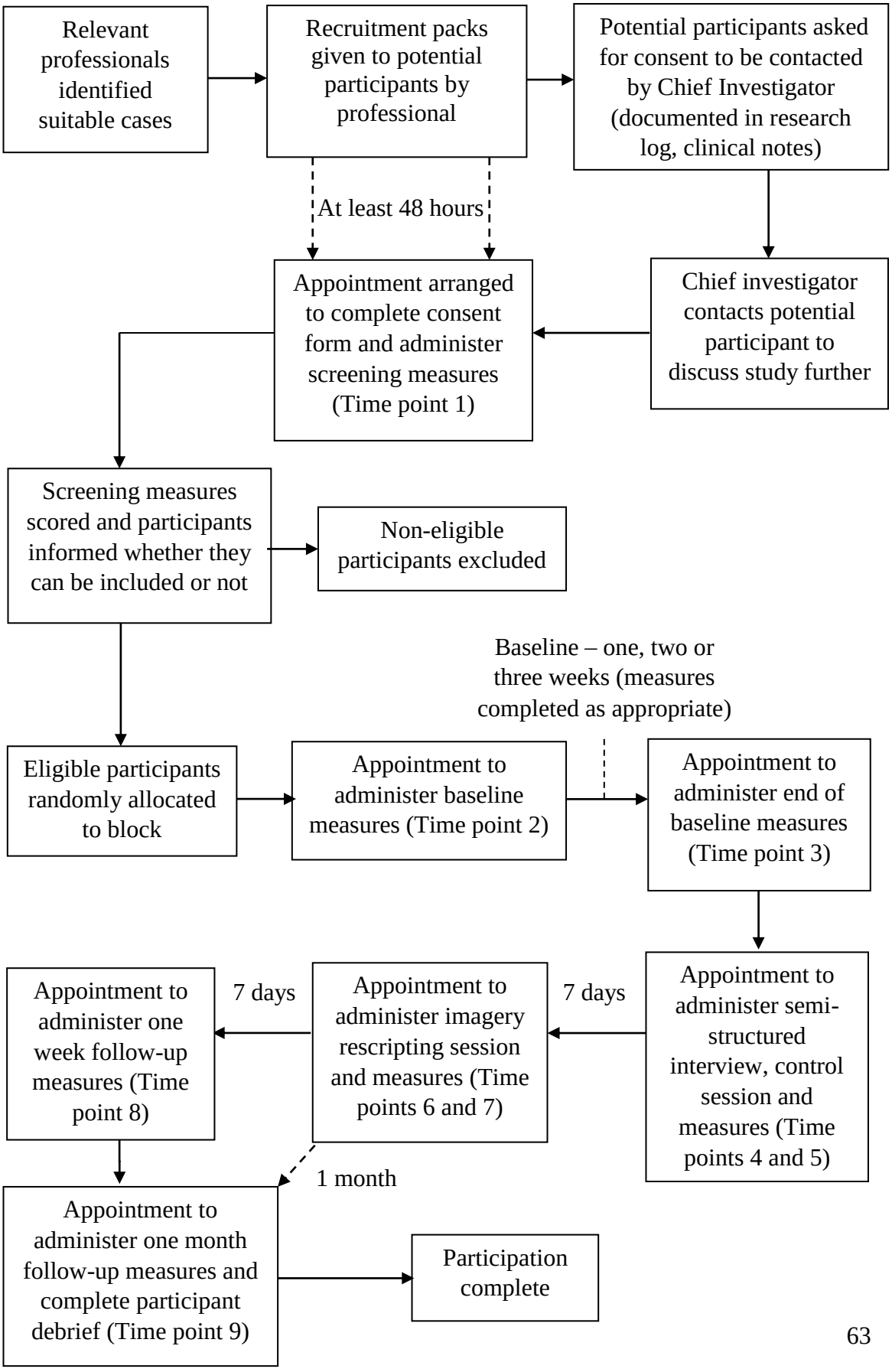
If the participant was eligible and consented to participate an envelope was chosen to randomly allocate them to one of the three blocks. The participant was informed of the block that they had been allocated to and an appointment was arranged to complete the baseline measures (Time point 2). During the baseline period the participants were asked to complete the VAS-A and the VAS-P on a daily basis. Participants in the two-week and three-week baseline conditions were also asked to complete the DASS-D and the EQ-5D-5L VAS on a weekly basis.

Following the appropriate baseline period an appointment was arranged to complete the end of baseline measures (Time point 3). The participant was then invited to attend the control session. At the beginning of this session participants were asked to complete the semi-structured interview, the VAS-A, the ideographic ratings and the VAS-P (Time point 4). Following the session they were asked to complete the VAS-A, the ideographic ratings and the VAS-P (Time point 5).

The imagery rescripting session was held one week after the control session. In addition to the 75-90 minutes allocated for the intervention, time was provided for participants to discuss any concerns that they had following the imagery rescripting. Before and after the imagery rescripting session participants were asked to complete the VAS-A, the ideographic ratings and the VAS-P (Time points 6 and 7). Within one week of the imagery rescripting session an appointment was made to complete the measures again (Time point 8). A final set of measures was administered one month after the imagery rescripting session (Time point 9).

At the final appointment participants were debriefed and given the £15 voucher. Throughout the study participants were asked to attend seven sessions lasting approximately eight hours in total. The study process is outlined in Figure 2.3.

Figure 2.3. Flowchart describing study process



2.9 Data preparation and analysis

2.9.1 Data entry

Data were entered into Microsoft Excel and line graphs were created for each measure for each participant. For exploratory statistical analyses the Statistical Package for the Social Sciences (SPSS) for Windows (Version 22) was used.

2.9.2 Missing data

As suggested by Arnold and Kronmal (2002), values for missing data were computed using the average score from the data obtained for a measure. Only five pieces of visual analogue scale data were missing for the study.

2.9.3 Individual analyses

2.9.3.1 Data presentation

For the SIAS, SSI, DASS-D, TUS and the EQ-5D-5L VAS the graphs were divided into three phases. For the VAS-A, the ideographic ratings and the VAS-P the graphs were divided into six phases. See Tables 2.2 and 2.3 for more information.

Table 2.2

Description of the phases for the SIAS, SSI, DASS-D, TUS and EQ-5D-5L VAS

Phase	Time points
Baseline	Baseline to end of baseline scores
Cont/ImRs	End of baseline to one week follow-up scores
Follow-up	One week to one month follow-up scores

Note. Cont/ImRs = Control/imagery rescripting.

Table 2.3

Description of the phases for the VAS-A, ideographic ratings and VAS-P

Phase	Time points
Baseline	Baseline to pre-control session scores
Control session	Pre to post-control session scores
Break	Post-control to pre-imagery rescripting scores
Imagery rescripting	Pre to post-imagery rescripting scores
One week follow-up	Post-imagery rescripting to one week follow-up scores
One month follow-up	One week to one month follow-up scores

Note. For the ideographic ratings baseline data were not available and are not included in analysis.

2.9.3.2 Visual inspection of data

Kazdin (2010) suggests using visual inspection of graphs to investigate the effect of an intervention at different time points. If a change in data is observed following the intervention then it can be attributed to this. Kazdin's (2010) criteria for visual inspection relevant to the current study are outlined in Table 2.4.

Table 2.4

Kazdin's (2010) criteria for visual inspection of case-series data

Criterion	Meaning
Changes in mean	Change in the mean score between different phases. Investigates whether means increase or decrease over phases.
Change in level	Change in shift from one phase to another. Investigates whether data shift up or down quickly from the end of one phase to the start of another.
Change in trend	Change in direction as a new phase is introduced. Investigates whether data show systematic increases or decreases over different phases.

In the current study change in level was quantified using the increase or decrease in scores from the preceding data point (e.g. a shift up of +2 points or shift down of -2 points). Change in trend was categorised as an 'increase', 'decrease' or 'no trend' in the slope of the line. Visual inspection is presented individually for each participant. See Appendix I for detailed visual inspection of the data for the research questions.

2.9.3.3 Kendall's tau

Kendall's *tau* (1970) was used to investigate whether the data obtained over the baseline period were stable. A significant trend suggested data instability. Kendall's tau was calculated for the VAS-A and the VAS-P for all participants and for the DASS-D and EQ-5D-5L VAS for participants in the two and three week baseline conditions.

2.9.3.4 Reliable change

Reliable change is achieved when a change in score is larger than the likely variation posed by a measure (Evans, Margison & Barkham, 1998). Reliable change of greater or less than 1.96 ($p<.05$) is unlikely without real change (Jacobson and Truax, 1991). The Reliable Change Index (RCI) was calculated using the standard error of the difference between measures taken before and after an intervention (whereby SD_1 = standard deviation of matched sample; r = test-retest reliability of the measure):

$$1.96*SD_1*\sqrt{2}*\sqrt{(1-r)}$$

Reliable change values are displayed for the SIAS (using data from Mattick & Clarke, 1998) and SSI (using data from Hodgekins et al., 2012) in Table 2.5. Reliable change over the baseline period was calculated from the first baseline score. Reliable change for the rest of the study phases was calculated from the mean baseline score.

Test-retest data for the VAS-A, ideographic ratings, VAS-P, DASS-D, TUS and EQ-5D-5L VAS were not available and reliable change could not be calculated.

Table 2.5

Reliable change data for the SIAS and the SSI

Measure	Matched sample mean	Matched sample SD	Test-retest reliability	Reliable change value
SIAS	34.6	16.4	.92	13
SSI	18.67	15.70	.85	17

Note. SD = standard deviation; reliable change value is rounded to the nearest whole number.

2.9.3.5 Clinical change

To achieve clinically significant change an individual is required to move from the dysfunctional range to the functional range (Jacobson, Follette & Revenstorf, 1984). Jacobson & Truax (1991) suggest a number of criteria for calculating clinical change. Where normative data are available and the distributions overlap they suggest the use of criterion c. This investigates whether performance following the intervention is closer to the mean of a functional rather than a dysfunctional population. The formula provided for calculating this is shown below (Evans et al., 1998):

$$(\text{meanclin}) \times (\text{SDnorm}) + (\text{meannorm} \times \text{SDclin}) / \text{SDnorm} + \text{SDclin}$$

This formula was used to calculate clinical change values for the SSI (using data from Hodgekins et al., 2012) and the DASS-D (using data from Antony et al., 1998) and these are displayed in Table 2.6. Pre-existing cut-off scores were used to assess clinical change for the SIAS (≤36; Peters, 2000) and the TUS (≥45 hours = non-clinical range; ≤30 hours = social disability; ≤15 hours = severe social disability; Hodgekins et al.,

2015). Clinical change was evaluated at the end of baseline and one week and one month follow-up. Normative data were not available for the VAS-A, ideographic ratings, VAS-P and EQ-5D-5L VAS and clinical change could not be calculated.

Table 2.6

Clinical change data for the SSI and the DASS-D

	Measure	
Data	**SSI**	**DASS-D**
Clinical sample mean	18.67	13.19
Clinical sample SD	15.70	9.28
Normative sample mean	9.54	2.12
Normative sample SD	9.22	3.64
Clinically significant change value	16	5

Note. SSI = Schizotypal Symptoms Inventory; DASS-D = Depression subscale of the Depression Anxiety Stress Scale – Short Form (DASS-21); SD = standard deviation; clinically significant change value is rounded to the nearest whole number.

Wise (2004) suggests using reliable and clinical change to categorise individuals following intervention. Those who achieve reliable and clinical change have 'recovered'. Those who achieve reliable change have 'improved'. Those who do not achieve either are 'unchanged' and those who achieve reliable change in the negative direction have 'deteriorated'. This was used for SIAS scores at one month follow-up.

2.9.4 Group analyses

Kazdin (2010) notes that statistical analyses can be used in addition to visual inspection and this was adopted in the current study. Due to the small sample size any statistical analyses were strictly exploratory and this should be considered.

2.9.4.1 Statistical analyses

Friedman's ANOVA was used on an exploratory basis to investigate change over time for each of the measures (further information is included in the results chapter under the relevant hypotheses). Following Wild et al. (2008), difference scores between the control and imagery rescripting sessions were compared for the VAS-A, the ideographic ratings and the VAS-P. Wilcoxon tests were used to investigate whether the imagery rescripting session achieved significant change in scores compared to any change observed in the control session.

2.9.4.2 Effect size

Morris and DeShon (2002, as cited in Lakens, 2013) report an appropriate effect size calculation for repeated measures designs. This was used in the current study and is presented below (whereby Cohen's d_{rm} = Cohen's *d* repeated measures, M_{diff} = Mean difference, SD_{diff} = SD of difference scores, *r* = correlation between measures):

$$\text{Cohen's } d_{rm} = M_{diff} / S_{diff} \times \sqrt{2(1-r)}$$

$$\text{Whereby } S_{diff} = \sqrt{SD_1^2 + SD_2^2 - 2 \times r \times SD_1 \times SD_2}$$

Effect sizes were calculated for each measure using data for the whole sample. For all measures, effect sizes were calculated for post-imagery rescripting and one month follow-up from the mean baseline value (or the pre-control value for the ideographic ratings). For the SIAS, SSI, DASS-D, TUS and EQ-5D-5L VAS the one week follow-up assessment was used as the post-imagery rescripting time point. For the VAS-A, ideographic ratings and VAS-P, effect sizes were also calculated for post-control from the mean baseline or pre-control value. Unfortunately a post-control effect

size could not be calculated for the SIAS, SSI, DASS-D, TUS and EQ-5D-5L as the required data were not available. The effect sizes for each measure were categorised as 'small' (d=0.2), 'medium' (d=0.5) or 'large' (d=0.8; Cohen, 1988).

CHAPTER THREE

3. Results

3.1 Overview

This chapter outlines the study findings. Descriptive statistics and information about each participant's image, image perspective, memory and encapsulated belief are outlined. Kazdin's (2010) guidelines for visual inspection of case series data were followed and data investigating the primary hypotheses and research questions are presented for each participant in graphs. Individual participant analyses are followed by group analyses of each hypothesis including a consideration of reliable and clinical change, exploratory non-parametric testing and the calculation of Cohen's *d* repeated measures effect sizes. Information related to treatment fidelity is also included.

3.2 Participant information

Table 3.1 includes descriptive statistics for all participants. Table 3.2 includes information about the image, the perspective of the image (as rated during the semi-structured interview; Hackman et al., 1998; Hackmann et al., 2000, as cited in Cooke, 2012), the memory and the encapsulated belief for each participant.

Table 3.1

Descriptive statistics for all participants

Characteristic	Value	Range
Mean age (SD)	24.90 (6.74)	19-35
Gender (Male/Female)	6/4	
Ethnicity		
White British	9	
Czech	1	
Diagnosis		
Brief psychotic disorder	3	
Bipolar affective disorder	1	
Psychosis NOS	1	
Psychotic disorder caused by multiple drug use	1	
Paranoid schizophrenia	2	
Severe depression with psychotic symptoms	1	
Unknown*	1	
Mean (SD) SIAS at screening	59.10 (6.10)	47-66
Mean (SD) SIAS at follow-up	42.50 (17.48)	24-76
Mean (SD) PANSS Positive Scale	10.90 (3.18)	7-18
Mean (SD) PANSS Negative Scale	10.20 (2.78)	7-15
Mean (SD) PANSS General Scale	29.50 (2.99)	27-37

Note. NOS = Not otherwise specified; PANSS = Positive and Negative Syndrome Scale; SIAS = Social Interaction Anxiety Scale; * = Client was receiving ongoing assessment for psychotic symptoms.

Table 3.2

Image, image perspective, memory and encapsulated belief data for each participant

Participant	Image	Image perspective	Memory	Encapsulated belief
1	Doing something embarrassing in a group and being laughed at	Field	Ex-girlfriend saying "You have a nice body but not a nice face"	"I'm not very handsome and people can be brutally honest"
2	Getting off the bus and people laughing and saying horrible things	Field	Girl at high school put chewing gum in hair and it had to be cut out	"I am weak, a victim and others are hostile, nasty and intimidating"
3	Saying the wrong thing in groups or public and people laughing at me	Field	Struggling to get money out of purse in front of cashier in shop	"I am a bad, horrible person likely to make a fool of myself"
4	Being in groups and looking quiet or saying something inappropriate	Field Observer	Father shouting at grandmother and not standing up for her	"I am anxious, I find it hard to talk and others are better than me"
5	Being in supermarket and having people stare at me and talk about me	Observer	Having a panic attack in town centre during a busy shopping day	"I am pathetic and disgusting and others will treat me like crap"
6	Talking to people and looking untidy or appearing unusual/rude	Field	Friend saying that they saw my girlfriend and she looked nice	"I am a freak, failure, smelly and others measure me up"
7	Feeling nervous in public, concerned that situation is unmanageable	Field	Waiting in queue, feeling anxious and listening to music	"Everything is too much, I will breakdown and lose control"
8	Having a conversation and anxiety causes me to sweat and wet myself	Field	Taking drugs with friends and feeling that I have wet myself	"I am pathetic, an embarrassment and others are up to no good"

9	Looking nervous in public and having people stare at me	Field	Cashier in Fish and Chip shop was rude to me in front of customers	"I look nervous, agitated, fidgety and others will make me look like a dick"
10	Being beaten up, seeing myself with bruises and scars on face	Observer	Being approached by past 'bully' and he asks if I am who he thinks I am	"I am the one and only (in a bad way) and others are against me"

Note. Participant 4 rated 'image perspective' as 'half field' and 'half observer'.

3.3 Individual analyses

3.3.1 Participant 1

Participant 1 is a 20 year-old white British male who experienced a brief psychotic episode when he was 14 years old. He continues to experience hallucinations but understands these as psychosis. He lives with his family and girlfriend and reported high levels of social anxiety daily, especially when out in public.

3.3.1.1 Social anxiety data

Figure 3.1. Scores on the SIAS for Participant 1

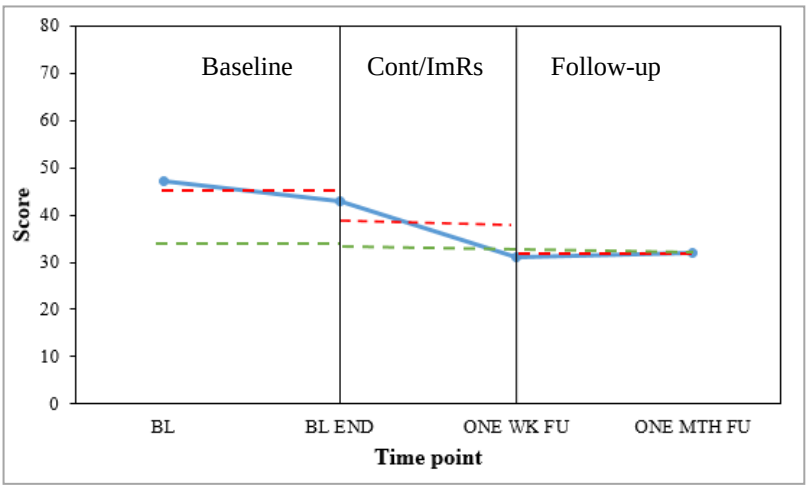
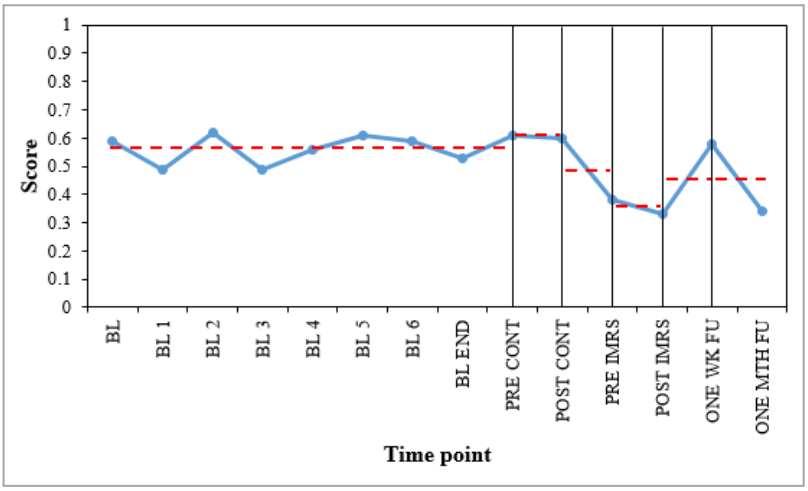


Figure 3.2. Scores on the VAS-A for Participant 1



Note. - - - - = Mean; - - - - = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Interpretation of the SIAS and VAS-A data is displayed in Tables 3.3 and 3.4. Kendall's *tau* indicated that VAS-A data were stable over the baseline period (*tau* = .145, p>.05).

Table 3.3

Visual inspection of SIAS data displayed in Figure 3.1.

Phase	Mean	Level	Trend	Reliable change	Clinical change
Baseline	45	-4	No trend	N	N
Cont/ImRs	37	-12	Decrease	Y	Y
Follow-up	32	+1	No trend	Y	Y

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; Y (Yes), N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table 3.4

Visual inspection of VAS-A data displayed in Figure 3.2.

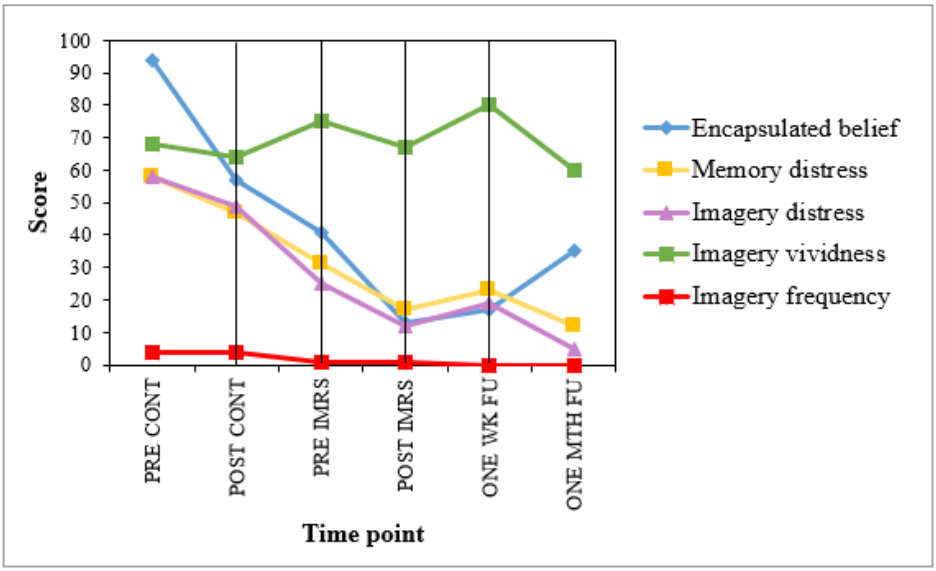
Phase	Mean	Level	Trend
Baseline	0.57	+0.02	No trend
Control	0.61	-0.01	No trend
Break	0.49	-0.22	Decrease
ImRs	0.36	-0.05	No trend
One Wk FU	0.46	+0.25	Increase
One Mnth FU	0.46	-0.24	Decrease

Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change.

Reliable and clinical change in social anxiety were observed following the control/imagery rescripting phase and at one month follow-up. For the VAS-A, no trend was observed over baseline or the control session. A decrease in scores was observed following the control session. A tape recording indicated that Participant 1 received cognitive restructuring during this session and this should be considered.

3.3.1.2 Encapsulated belief, imagery and memory data

Figure 3.3. Scores on the Ideographic Ratings (Wild et al., 2008) for Participant 1



Note. PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; Phases between control and imagery rescripting session and imagery rescripting session and follow-up indicate one week breaks.

Most scores decreased before imagery rescripting and the premature use of cognitive restructuring in the control session may have influenced this. Encapsulated belief and memory and imagery distress reduced over the course of the study (although there was a small increase in encapsulated belief at follow-up). There was little change in imagery vividness and frequency (although imagery frequency remained low and stable). Detailed visual inspection of the ratings is included in Appendix J.

3.3.1.3 Psychotic symptom and paranoia data

Figure 3.4. Scores on the SSI for Participant 1

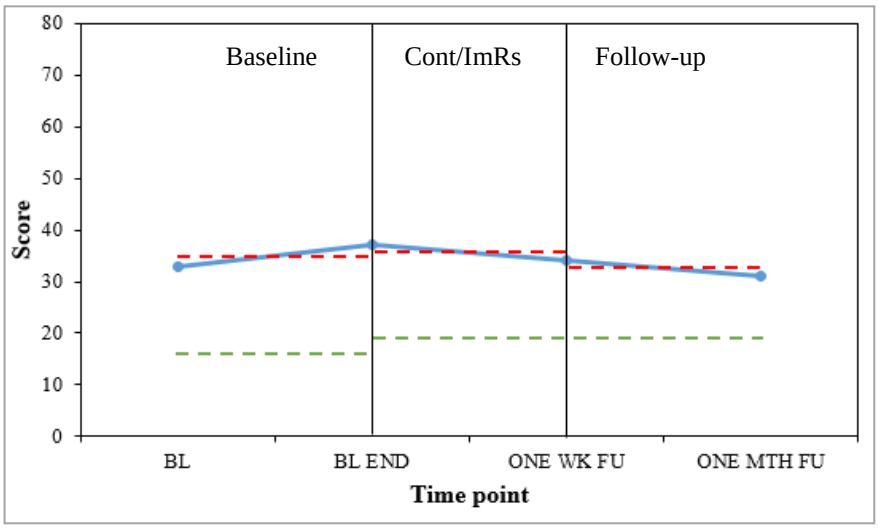
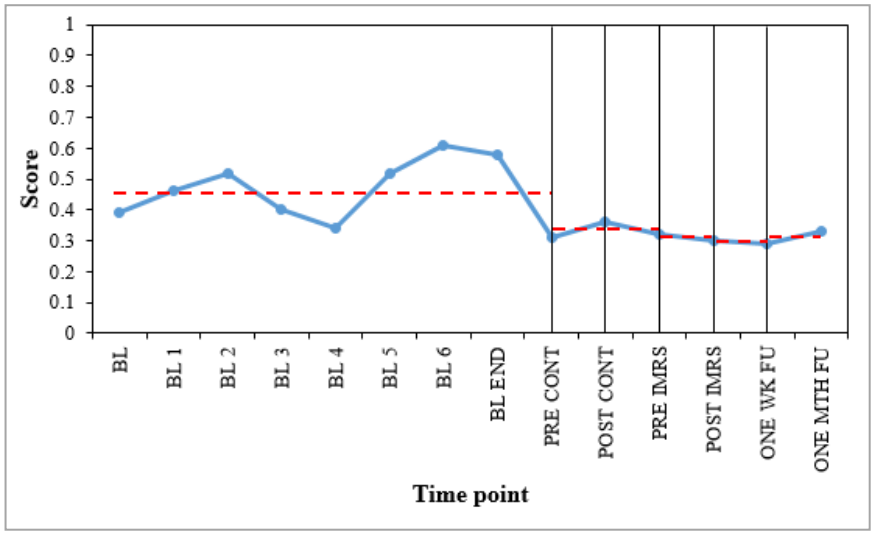


Figure 3.5. Scores on the VAS-P for Participant 1

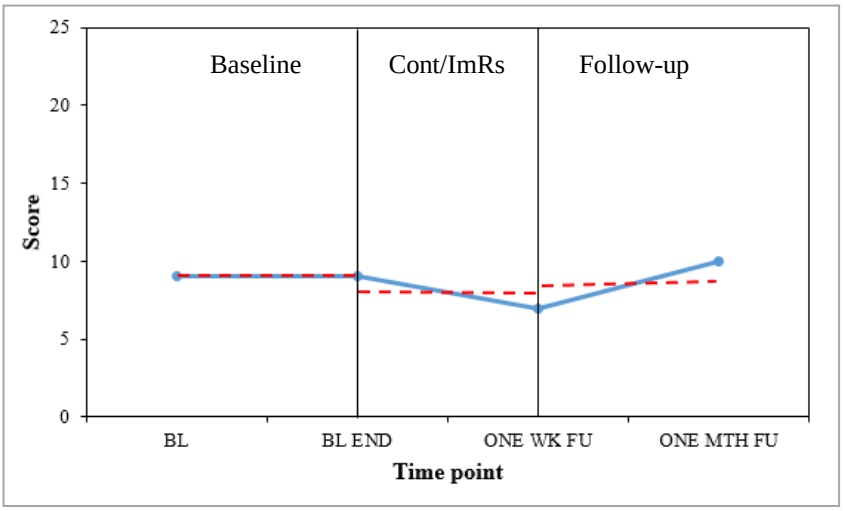


Note. – – – – = Mean; – – – – = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Psychotic symptoms were in the clinical range at baseline. They remained stable and reliable and clinical change were not found. Kendall's *tau* indicated that VAS-P data were stable over baseline (*tau* = .141, $p>.05$). Mean paranoia scores deceased from baseline and remained stable over the course of the study.

3.3.1.4 Depression data

Figure 3.6. Scores on the DASS-D for Participant 1

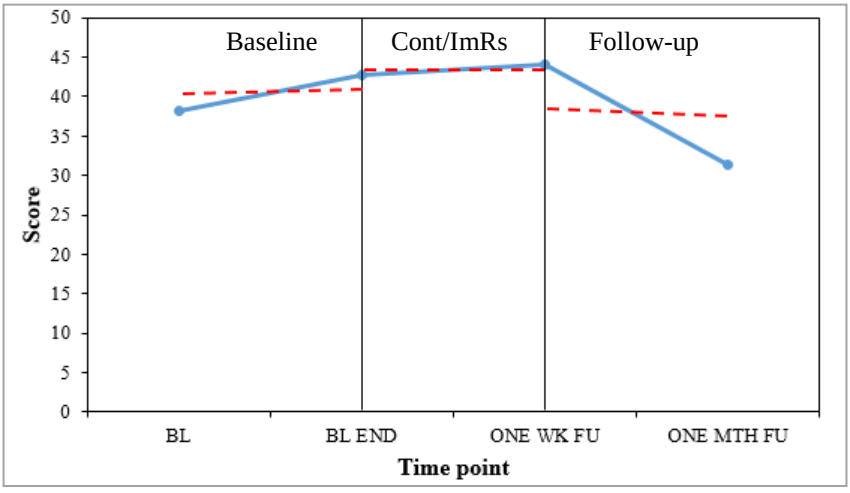


Note. – – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Depression was in the clinical range at baseline. There was a slight observed decrease in depression over the control/imagery rescripting phase but this was not clinically significant. There was a small increase in scores over follow-up.

3.3.1.5 Social functioning data

Figure 3.7. Scores on the TUS for Participant 1

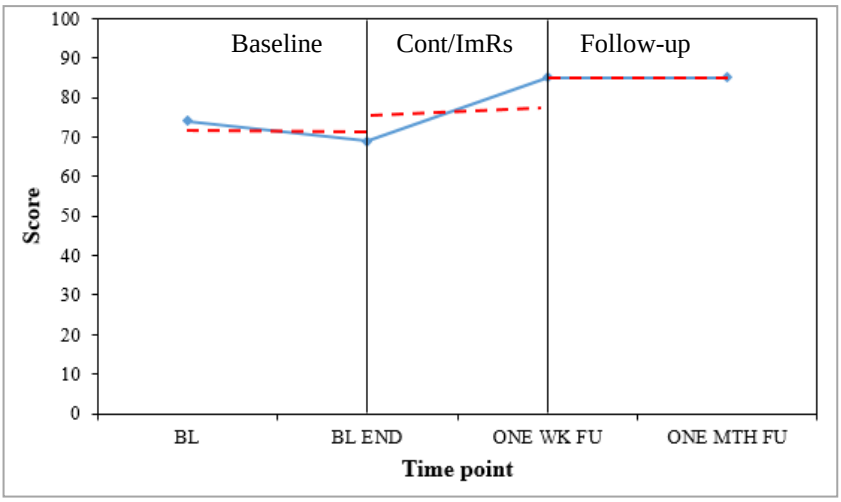


Note. – – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Social functioning was in the clinical range at baseline and it remained largely stable throughout the study. Although there was a decrease in scores over follow-up the participant did not move into the 'social disability' range.

3.3.1.6 Quality of life data

Figure 3.8. Scores on the EQ-5D-5L VAS for Participant 1



Note. - - - - = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

There was an increase in quality of life following the control/imagery rescripting phase and this was maintained at follow-up. However, quality of life was rated as high throughout.

3.3.1.7 Participant summary

Reliable and clinical change in social anxiety were achieved after the control/imagery rescripting phase and at one month follow-up. Visual analogue scale scores indicate that there was a decrease in anxiety between the control and imagery rescripting sessions and after imagery rescripting. A tape recording highlighted that cognitive restructuring was provided during the control session. This might explain the

change in scores following this session. Ideographic ratings decreased before imagery rescripting suggesting that the control session had an effect. There were reductions in encapsulated belief and memory and imagery distress ratings over the study. Although there was little change in imagery frequency, scores remained low and stable.

There was little change in psychotic symptoms and reliable and clinical change were not found. Paranoia decreased from baseline and remained stable. Depression and social functioning also remained stable and clinical change was not found. Quality of life increased following the control/imagery rescripting phase but this was high throughout the study.

Participant 1 reported finding the intervention helpful as it allowed him to think about his positive attributes and gain control over the chosen image and memory. He suggested that the comments made by his ex-girlfriend were unkind and that it was "her issue" rather than something he needed to be concerned about in future relationships.

3.3.2 Participant 2

Participant 2 is a 19 year-old white British female who experienced a brief psychotic episode when she was 17 years old. She lives alone, has few friends and little contact with her family. She has recently completed some part-time courses and is looking for employment. She reported experiencing high levels of social anxiety.

3.3.2.1 Social anxiety data

Figure 3.9. Scores on the SIAS for Participant 2

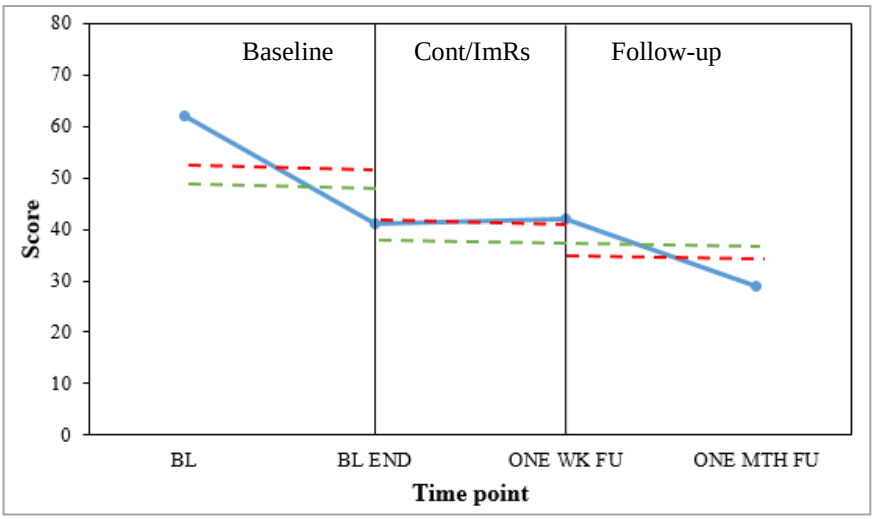
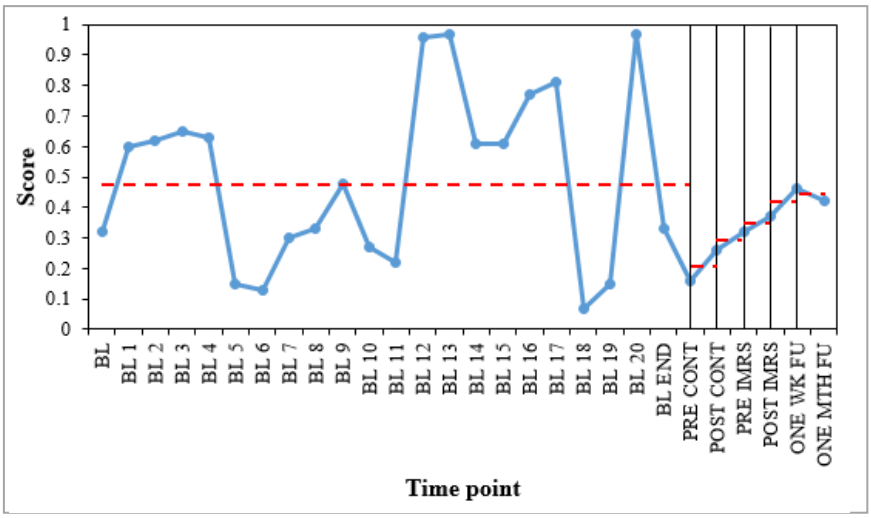


Figure 3.10. Scores on the VAS-A for Participant 2



Note. - - - - = Mean; - - - - = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Table 3.5

Visual inspection of SIAS data displayed in Figure 3.9.

Phase	Mean	Level	Trend	Reliable change	Clinical change
Baseline	51.5	-21	Decrease	Y	N
Cont/ImRs	41.5	+1	No trend	N	N
Follow-up	35.5	-13	Decrease	Y	Y

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; Y (Yes), N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table 3.6

Visual inspection of VAS-A data displayed in Figure 3.10.

Phase	Mean	Level	Trend
Baseline	0.48	-0.16	No trend
Control	0.21	+0.10	Increase
Break	0.29	+0.06	Increase
ImRs	0.35	+0.05	Increase
One Wk FU	0.42	+0.09	Increase
One Mnth FU	0.44	-0.04	No trend

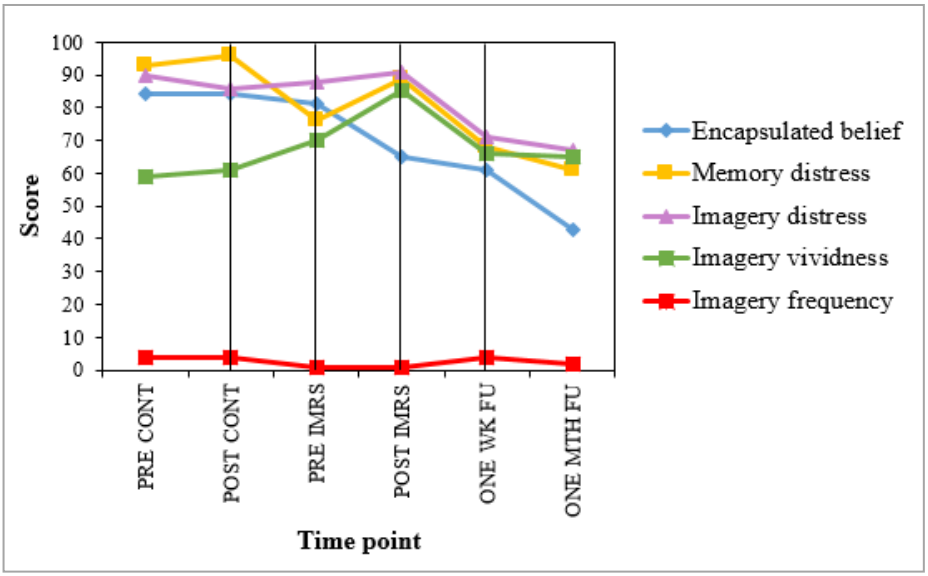
Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change.

Reliable and clinical change in social anxiety were observed at follow-up suggesting the intervention had an effect with time. However, reliable change was also observed over baseline and there was no trend over the control/imagery rescripting phase. This makes it difficult to attribute change to the intervention rather than natural improvement.

VAS-A data were stable over baseline (*tau* = .036, p>.05). Mean scores increased from the control phase through to follow-up. However, scores appear to stabilise slightly following the baseline phase.

3.3.2.2 Encapsulated belief, memory and imagery data

Figure 3.11. Scores on the Ideographic Ratings (Wild et al., 2008) for Participant 2



Note. PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; Phases between control and imagery rescripting session and imagery rescripting session and follow-up indicate one week breaks.

Although there was a small reduction in imagery distress, overall there was little change in scores over the control session suggesting that this did not have an effect. Encapsulated belief and memory and imagery distress ratings decreased following imagery rescripting. Encapsulated belief showed the greatest improvement. Although a reduction in imagery vividness ratings was also observed, scores remained high. Imagery frequency remained low and stable throughout the study. More detailed visual inspection of the ideographic ratings is included in Appendix J.

3.3.2.3 Psychotic symptom and paranoia data

Figure 3.12. Scores on the SSI for Participant 2

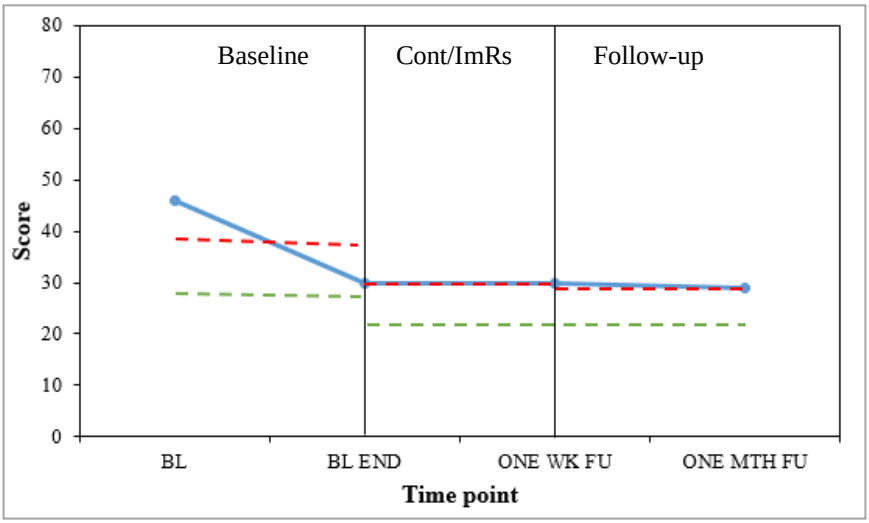
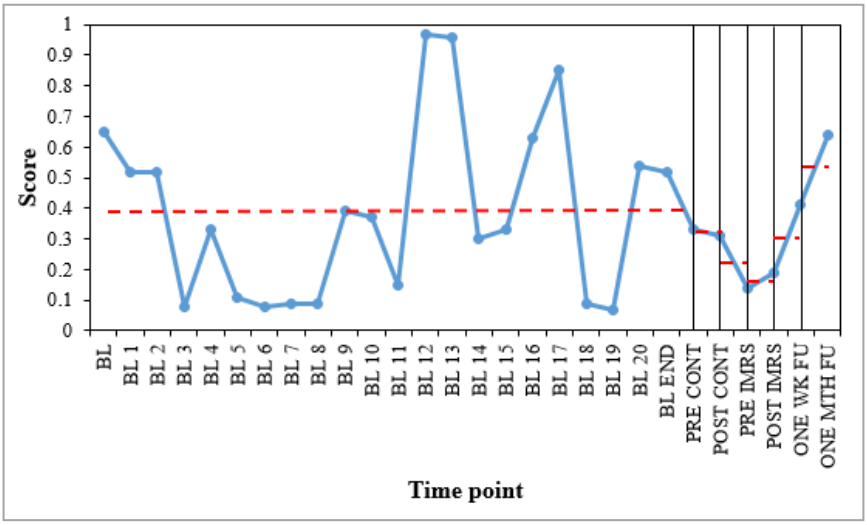


Figure 3.13. Scores on the VAS-P for Participant 2



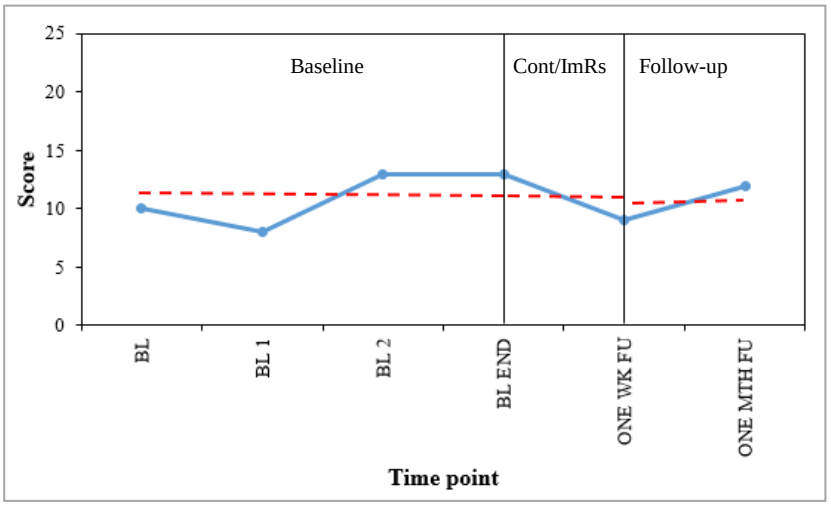
Note. – – – – = Mean; – – – – = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Despite a decrease in psychotic symptoms over the baseline phase, scores remained in the clinical range. Scores remained stable throughout the control/imagery rescripting and follow-up phases and reliable and clinical change were not found. VAS-P data were stable over baseline (*tau* = .044, $p>.05$). Mean scores decreased from the

control to the imagery rescripting phase but increased over the follow-up period. However, there was large variation in scores over the study.

3.3.2.4 Depression data

Figure 3.14. Scores on the DASS-D for Participant 2

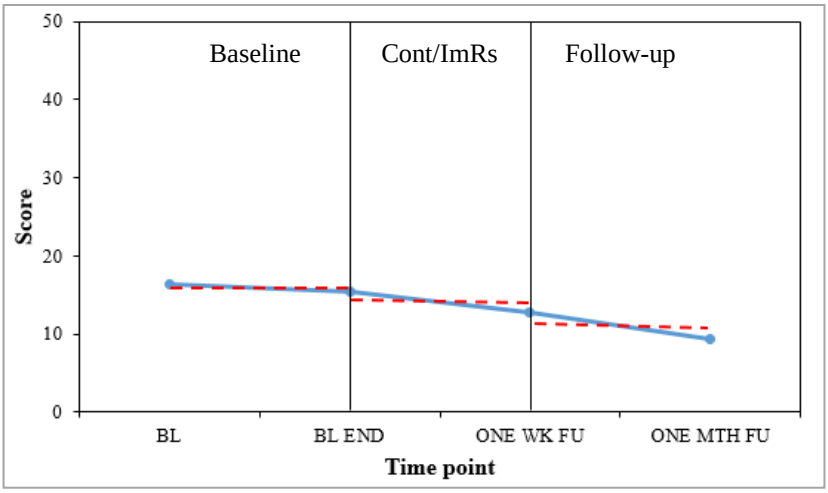


Note. – – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Over baseline, depression was stable (*tau* = .548, p>.05) and in the clinical range. Although it decreased over the control/imagery rescripting phase clinical change was not found.

3.3.2.5 Social functioning data

Figure 3.15. Scores on the TUS for Participant 2

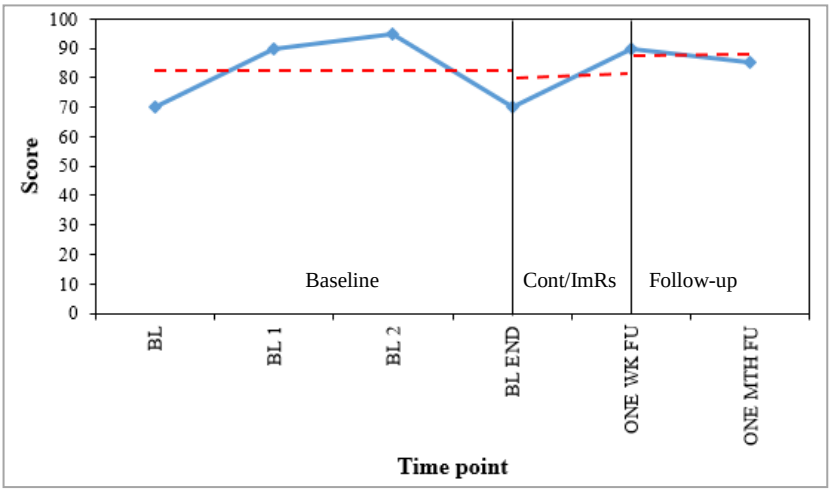


Note. – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Social functioning was in the 'social disability' range at baseline. Scores moved to the 'severe social disability' range following the control/imagery rescripting phase. Participant 2 completed some courses over baseline and this should be considered.

3.3.2.6 Quality of life data

Figure 3.16. Scores on the EQ-5D-5L VAS for Participant 2



Note. – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Although there was variation in scores, quality of life was stable over baseline (*tau* = .183, p>.05). Scores remained stable and high throughout the study.

3.3.2.7 Participant summary

Reliable and clinical change were observed in social anxiety at follow-up. However, reliable change was also observed over baseline and there was no trend over the control/imagery rescripting phase. This makes it difficult to attribute change to the intervention rather than natural improvement. Mean visual analogue scale scores for anxiety increased from the control phase to follow-up and returned to baseline level. However, scores appear to stabilise slightly following the baseline phase. For the ideographic ratings, encapsulated belief and memory and imagery distress ratings decreased following imagery rescripting. Encapsulated belief showed the greatest improvement. Although there was a small reduction in imagery distress, there was little change in ideographic ratings over the control session suggesting it had minimal effect.

Psychotic symptoms reduced over baseline and remained stable, but reliable and clinical change were not found. Mean paranoia scores decreased from the control to the imagery rescripting phase but increased through to follow-up. Depression decreased over the control/imagery rescripting phase but clinical change was not found. Social functioning moved to the 'severe social disability' range following the control/imagery rescripting phase. The participant was completing some courses over the baseline phase and this should be considered. Quality of life remained stable throughout the study.

Participant 2 reported that the intervention helped her to feel less victimised and more confident. She also stated that she realised people were there for her and that she did not have to cope alone. She was keen to continue with psychological input for her anxiety and explained that the imagery work had given her the confidence to do so.

3.3.3 Participant 3

Participant 3 is a 34 year-old white British female with paranoid schizophrenia. She lives with, and is employed by her mother and experiences ongoing psychosis which is treated using depot medication. She reported high levels of social anxiety and presented as quiet, only speaking when questions were asked.

3.3.3.1 Social anxiety data

Figure 3.17. Scores on the SIAS for Participant 3

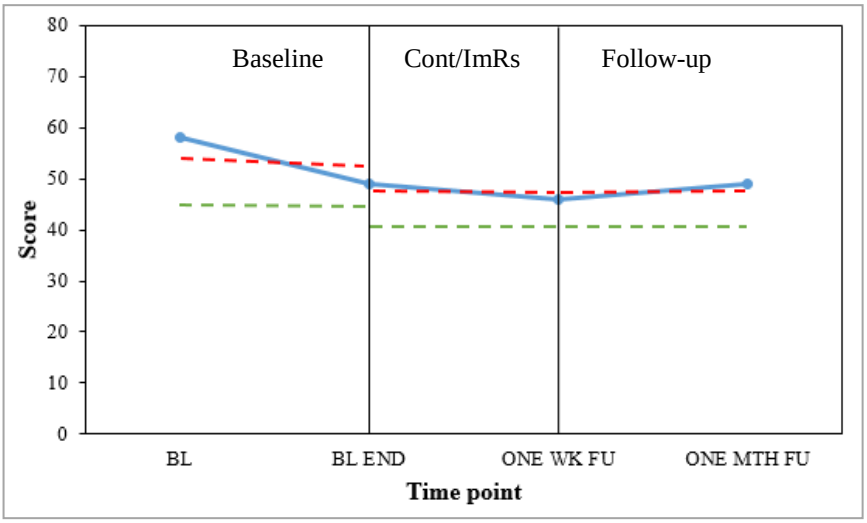
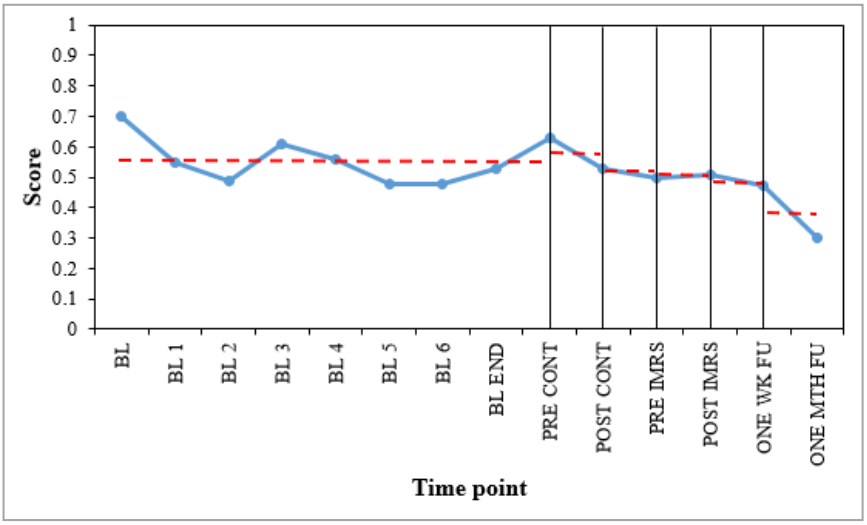


Figure 3.18. Scores on the VAS-A for Participant 3



Note. - - - - - = Mean; - - - - - = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Table 3.7

Visual inspection of SIAS data displayed in Figure 3.17.

Phase	Mean	Level	Trend	Reliable change	Clinical change
Baseline	53.5	-9	Decrease	N	N
Cont/ImRs	47.5	-3	No trend	N	N
Follow-up	47.5	+3	No trend	N	N

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table 3.8

Visual inspection of VAS-A data displayed in Figure 3.18.

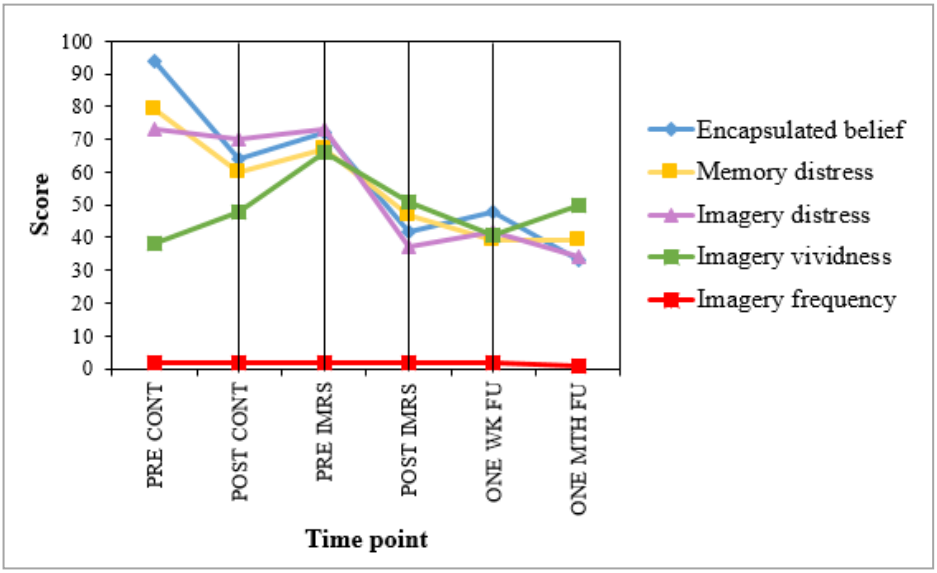
Phase	Mean	Level	Trend
Baseline	0.56	-0.07	No trend
Control	0.58	-0.10	Decrease
Break	0.52	-0.03	No trend
ImRs	0.51	+0.01	No trend
One Wk FU	0.49	-0.04	No trend
One Mnth FU	0.39	-0.17	Decrease

Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change.

Reliable and clinical change in social anxiety were not observed. VAS-A data were stable over baseline (*tau* = -.197, p>.05). There was a decrease in scores over the control session suggesting that this had an effect. Scores remained stable but decreased at follow-up. Although this suggests that the intervention may have had an effect with time, other factors may have been involved and this should be considered.

3.3.3.2 Encapsulated belief, memory and imagery data

Figure 3.19. Scores on the Ideographic Ratings (Wild et al., 2008) for Participant 3



Note. PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; Phases between control and imagery rescripting session and imagery rescripting session and follow-up indicate one week breaks.

Excluding imagery frequency (which remained low and stable throughout the study), all ratings decreased after imagery rescripting and further reductions were observed at one week and one month follow-up. However, reductions in encapsulated belief and memory distress ratings over the control session suggests that it may have had an effect. More detailed visual inspection is included in Appendix J.

3.3.3.3 Psychotic symptom and paranoia data

Figure 3.20. Scores on the SSI for Participant 3

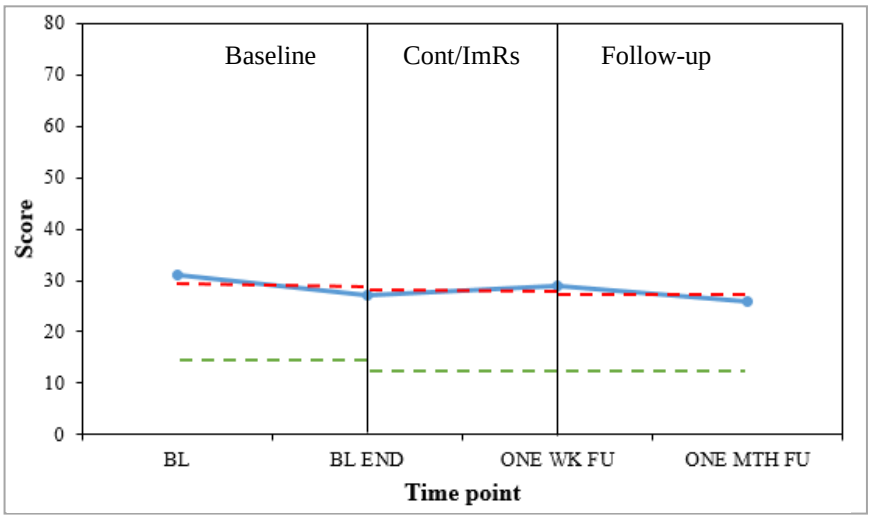
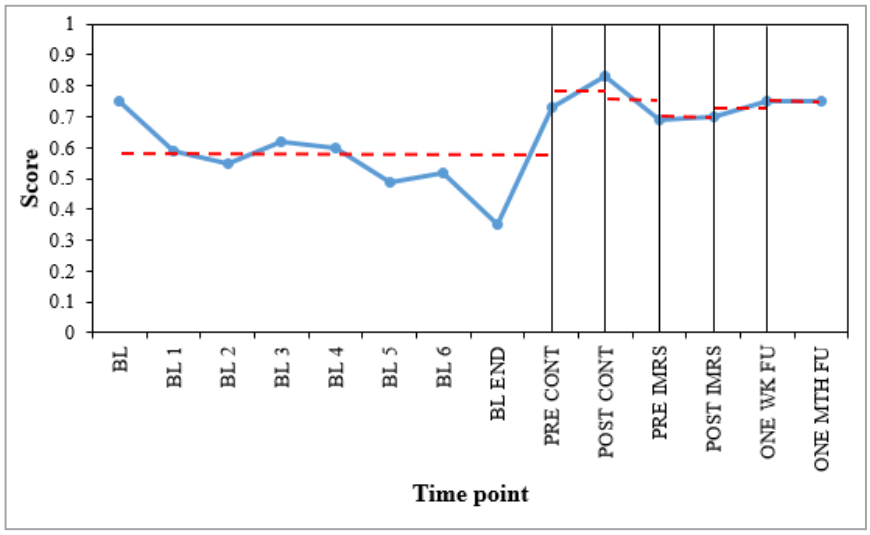


Figure 3.21. Scores on the VAS-P for Participant 3

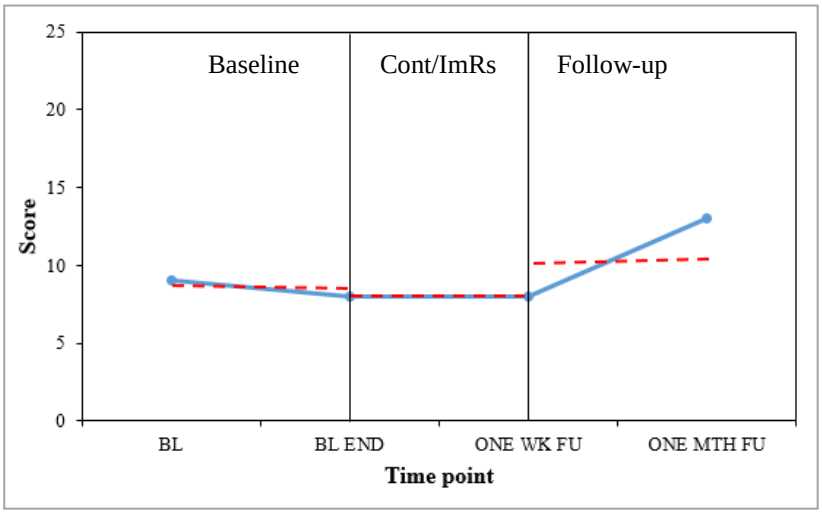


Note. – – – – = Mean; – – – – = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Psychotic symptoms were in the clinical range at baseline. They were stable for the duration of the study and reliable and clinical change were not found. VAS-P data were stable over baseline (*tau* = -.333, $p>.05$). Mean scores increased over the control phase and remained high. This suggests that the intervention did not have a positive effect on paranoia for this participant.

3.3.3.4 Depression data

Figure 3.22. Scores on the DASS-D for Participant 3

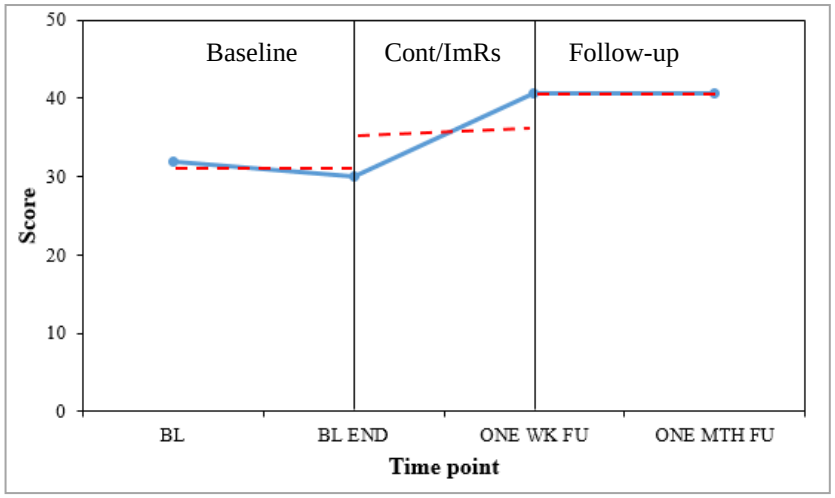


Note. – – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Depression was in the clinical range at baseline. An increase in trend was observed at follow-up. There was no trend over the control/imagery rescripting phase suggesting that other factors may have been involved (e.g. a natural decline in mood).

3.3.3.5 Social functioning data

Figure 3.23. Scores on the TUS for Participant 3

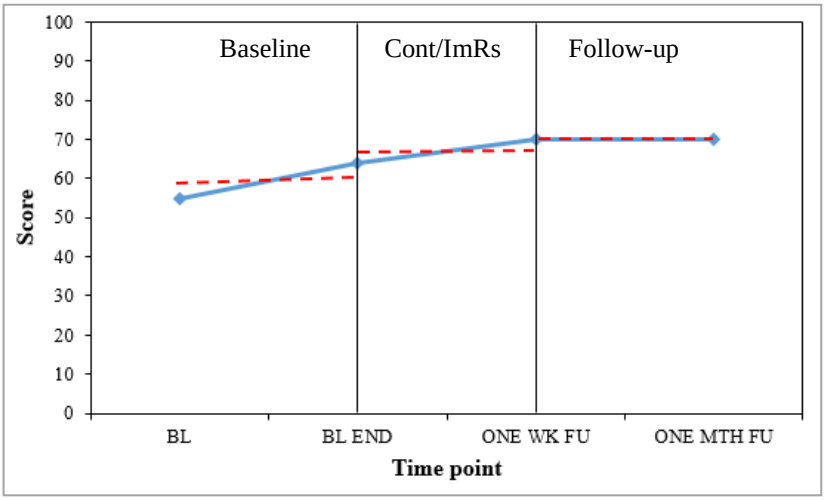


Note. – – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

At the second baseline assessment social functioning was in the 'social disability' range. There was an increase in social functioning following the control/imagery rescripting phase and this remained stable over follow-up. However, this was not clinically significant.

3.3.3.6 Quality of life data

Figure 3.24. Scores on the EQ-5D-5L VAS for Participant 3



Note. – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

There was a small increase in quality of life following the control/imagery rescripting phase and this remained stable. However, there was also an increase over baseline making it difficult to attribute change to the intervention rather than natural improvement.

3.3.3.7 Participant summary

Reliable and clinical change were not found for social anxiety. Visual analogue scale scores for anxiety decreased following the control session suggesting an effect. Scores decreased at follow-up suggesting the intervention had an effect with time.

However, other factors may have been involved and this should be considered. Excluding imagery frequency (which was low and stable), all ideographic ratings reduced following imagery rescripting. Further reductions were observed at follow-up. Encapsulated belief and memory distress ratings decreased over the control session suggesting that this might have had an effect.

Psychotic symptoms remained stable and reliable and clinical change were not found. There was an increase in paranoia scores over the control phase and mean scores remained high. Depression was in the clinical range and this increased at follow-up. However, no trend was observed over the control/imagery rescripting phases suggesting other factors (e.g. a natural decline in mood) may have been involved. Social functioning increased over the control/imagery rescripting phase and remained stable but this was not clinically significant. A small increase was observed in quality of life, but an increasing trend over baseline makes it difficult to attribute this to the intervention rather than natural improvement.

Participant 3 reported that the intervention helped her to feel more comfortable in public and realise that people would not laugh at her for making mistakes. She was less concerned about talking to shop assistants and more confident about paying for items. However, Participant 3 remained anxious about many different social situations.

3.3.4 Participant 4

Participant 4 is a 32 year-old white female from the Czech Republic with severe depression with psychotic symptoms. She moved to England to pursue employment but recently left her job as it was too demanding on her mental health. She experiences a high level of social anxiety and finds it difficult to socialise with friends.

3.3.4.1 Social anxiety data

Figure 3.25. Scores on the SIAS for Participant 4

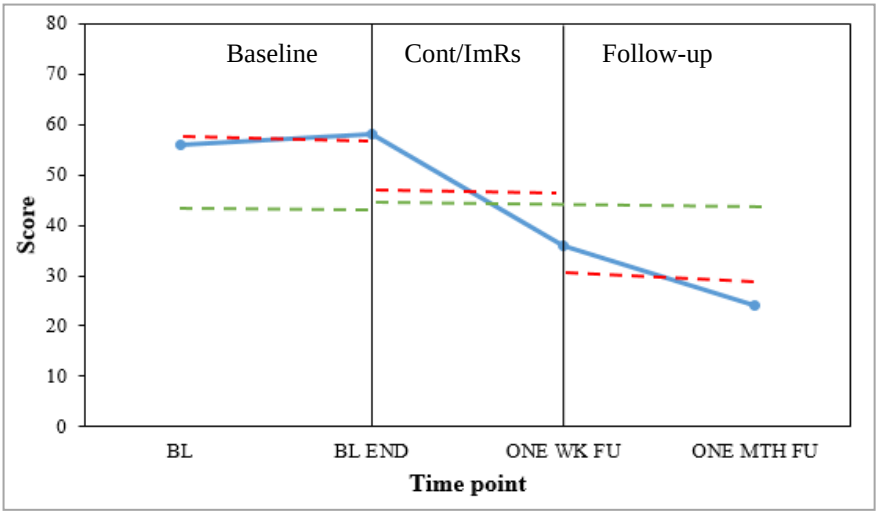
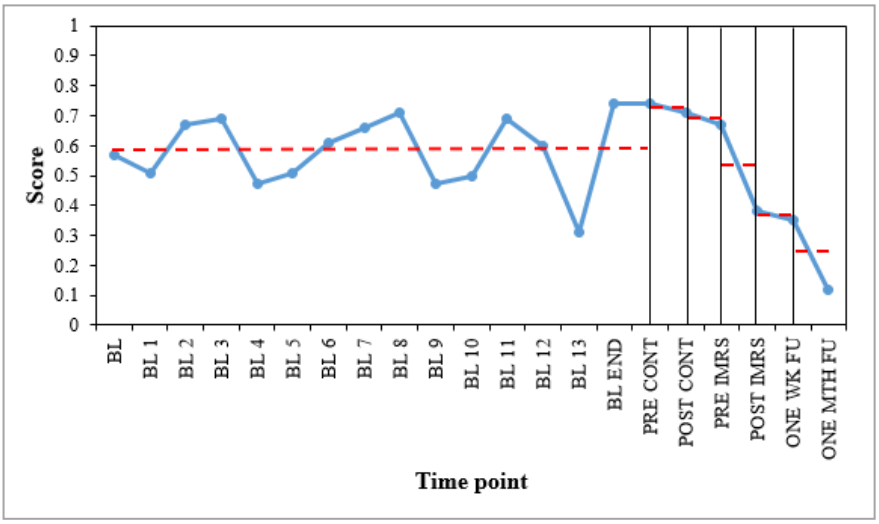


Figure 3.26. Scores on the VAS-A for Participant 4



Note. - - - - - = Mean; - - - - - = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Table 3.9

Visual inspection of SIAS data displayed in Figure 3.25.

Phase	Mean	Level	Trend	Reliable change	Clinical change
Baseline	57	+2	No trend	N	N
Cont/ImRs	47	-22	Decrease	Y	Y
Follow-up	30	-12	Decrease	Y	Y

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; Y (Yes), N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table 3.10

Visual inspection of VAS-A data displayed in Figure 3.26.

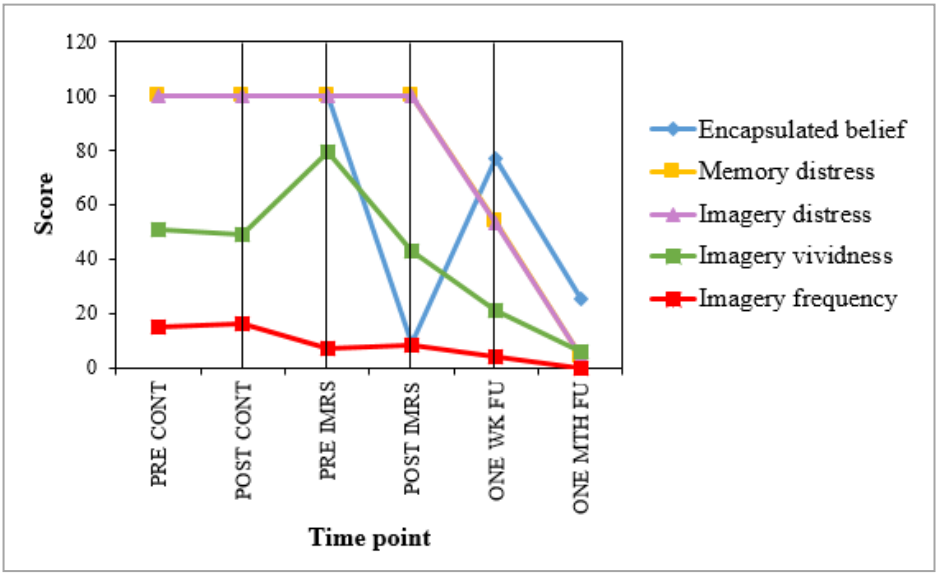
Phase	Mean	Level	Trend
Baseline	0.59	+0.17	No trend
Control	0.73	-0.03	No trend
Break	0.69	-0.04	No trend
ImRs	0.53	-0.29	Decrease
One Wk FU	0.37	-0.03	No trend
One Mnth FU	0.24	-0.23	Decrease

Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change**.**

Reliable and clinical change in social anxiety were observed following the control/imagery rescripting phase and at follow-up. VAS-A data were stable over baseline (*tau* = .170, p>.05). Scores were stable over the control phase and reduction in mean scores and decreasing trend was observed over the imagery rescripting and follow-up phases.

3.3.4.2 Encapsulated belief, memory and imagery data

Figure 3.27. Scores on the Ideographic Ratings (Wild et al., 2008) for Participant 4



Note. PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; Phases between control and imagery rescripting session and imagery rescripting session and follow-up indicate one week breaks.

All ratings decreased following imagery rescripting and scores were low at follow-up. Although encapsulated belief increased at one week follow-up this reduced at one month follow-up. There was no change in the ratings over the control session suggesting that it did not have an effect. See Appendix J for detailed visual inspection of the ratings.

3.3.4.3 Psychotic symptom and paranoia data

Figure 3.28. Scores on the SSI for Participant 4

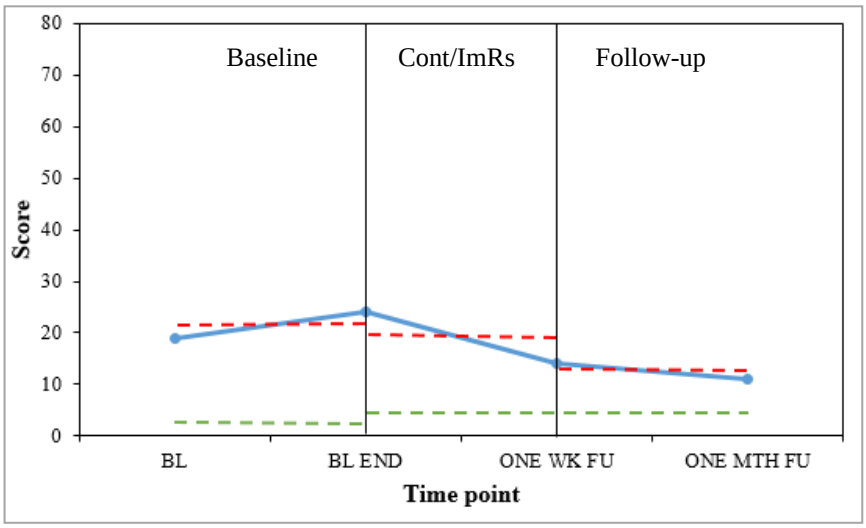
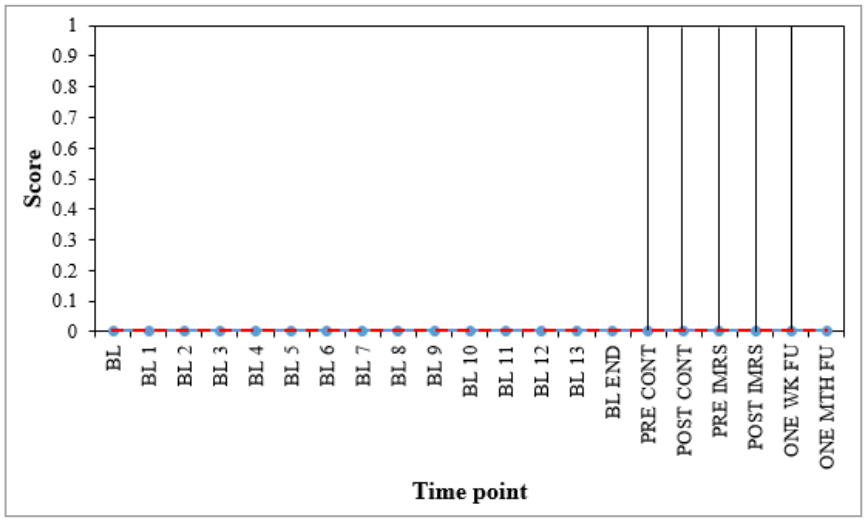


Figure 3.29. Scores on the VAS-P for Participant 4

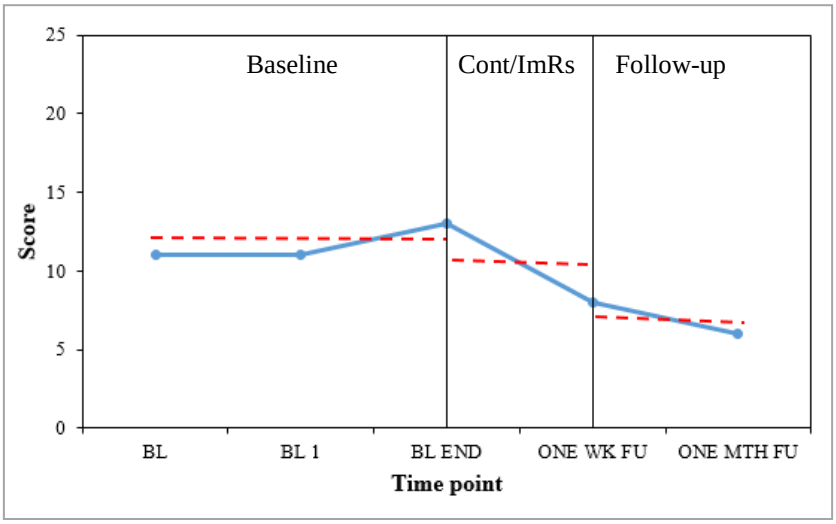


Note. = Mean; = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Psychotic symptoms increased over baseline and they were in the clinical range. Clinical change was observed following the control/imagery rescripting phase and this was maintained at follow-up. However, reliable change was not found. The participant had not experienced paranoia since starting anti-psychotic medication. No changes in mean, level or trend were observed for the VAS-P data over the course of the study.

3.3.4.4 Depression data

Figure 3.30. Scores on the DASS-D for Participant 4

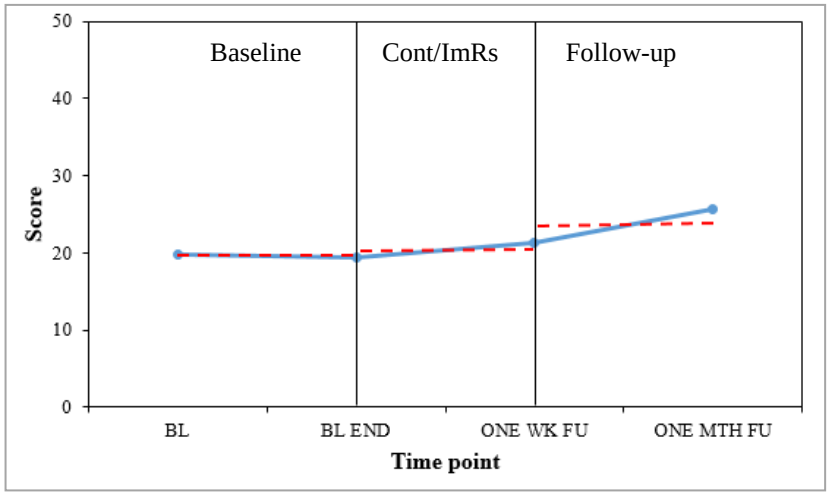


Note. – – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Over baseline, depression was stable (*tau* = .816, p>.05) and in the clinical range. Depression decreased over the control/imagery rescripting and follow-up phases but clinical change was not found.

3.3.4.5 Social functioning data

Figure 3.31. Scores on the TUS for Participant 4

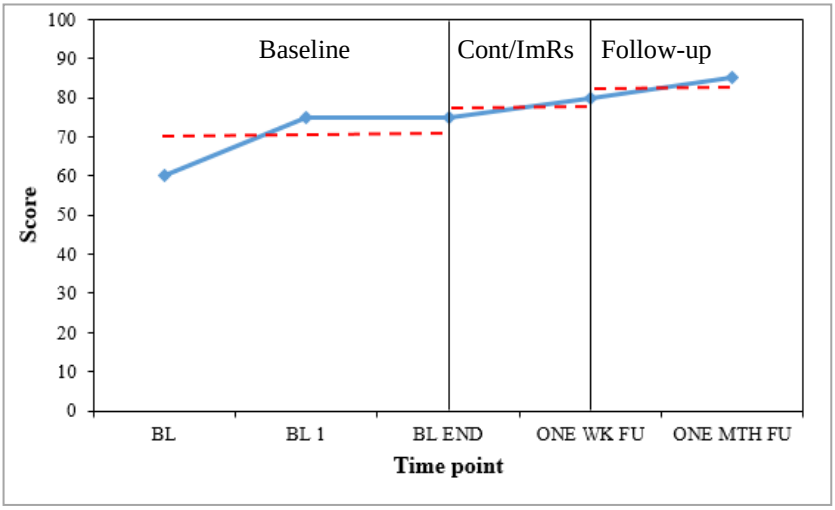


Note. – – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Social functioning was in the 'social disability' range at baseline. There was a small increase over the follow-up phase. However, this was not clinically significant.

3.3.4.6 Quality of life data

Figure 3.32. Scores on the EQ-5D-5L VAS for Participant 4



Note. – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Quality of life was stable over the baseline period (*tau* = .816, p>.05). There was a small increase over the control/imagery rescripting and follow-up phases. However, quality of life was rated highly throughout the study and this should be considered.

3.3.4.7 Participant summary

Reliable and clinical change were found for social anxiety following the control/imagery rescripting phase and at follow-up. Decreases in mean and trend were observed for visual analogue scale data for anxiety over the imagery rescripting and follow-up phases. Scores were stable over the control phase suggesting the imagery rescripting session had a specific effect. All ideographic ratings decreased after

imagery rescripting and scores were low at follow-up. Although encapsulated belief ratings increased at one week follow-up they decreased at one month follow-up. No change was observed over the control session suggesting that it did not have an effect.

Clinical change in psychotic symptoms was found after the control/imagery rescripting phase and this was maintained at one month follow-up. However, reliable change was not found. The participant did not report any paranoia throughout the study. Depression decreased over the control/imagery rescripting and follow-up phases but this was not clinically significant. There was a small increase in social functioning at follow-up, but this was not clinically significant and it remained in the 'social disability' range. An increase in quality of life was observed over the control/imagery rescripting phase but this was rated high throughout the study and should be considered.

Following the intervention, Participant 4 reported feeling less anxious about how she was perceived by others and more confident about being in groups. She also reported feeling less guilty about not having stood up to her father to protect her grandmother and stated that she was feeling more optimistic about her future.

3.3.5 Participant 5

Participant 5 is a 21 year-old white British female with bipolar disorder. She reported severe levels of social anxiety. She lives with her parents and rarely leaves the house. She experiences difficulties with interpersonal relationships and reported having no friends. Her mood fluctuates and she has made attempts to take her own life.

3.3.5.1 Social anxiety data

Figure 3.33. Scores on the SIAS for Participant 5

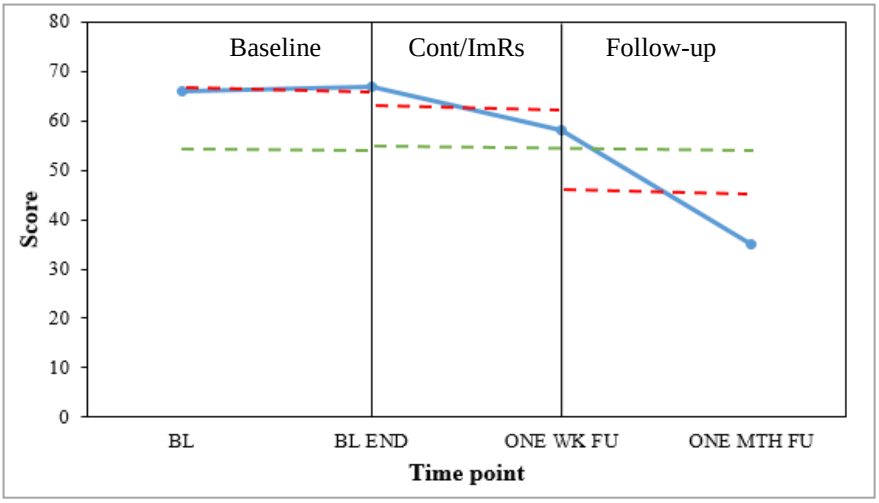
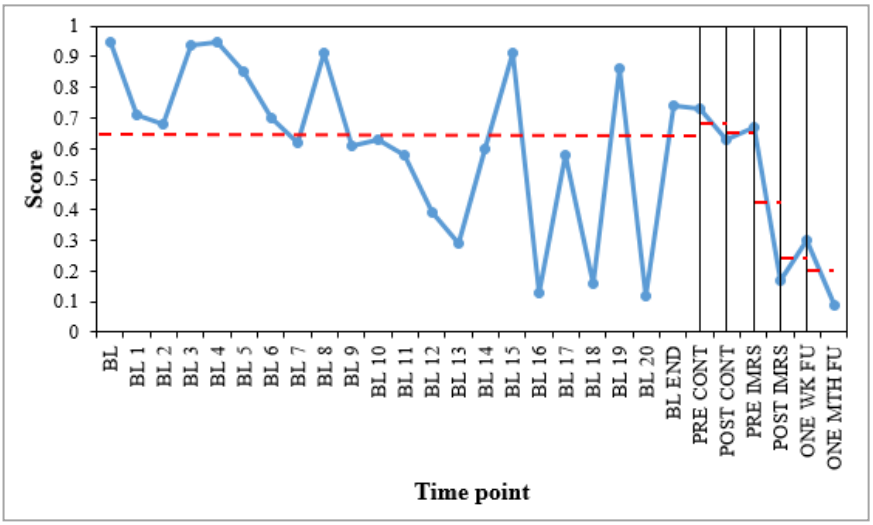


Figure 3.34. Scores on the VAS-A for Participant 5



Note. – – – – = Mean; – – – – = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Table 3.11

Visual inspection of SIAS data displayed in Figure 3.33.

Phase	Mean	Level	Trend	Reliable change	Clinical change
Baseline	66.5	+1	No trend	N	N
Cont/ImRs	62.5	-9	Decrease	N	N
Follow-up	46.5	-23	Decrease	Y	Y

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; Y (Yes), N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table 3.12

Visual inspection of VAS-A data displayed in Figure 3.34.

Phase	Mean	Level	Trend
Baseline	0.64	-0.22	Decrease
Control	0.68	-0.10	Decrease
Break	0.65	+0.04	Increase
ImRs	0.42	-0.50	Decrease
One Wk FU	0.24	+0.13	Increase
One Mnth FU	0.20	-0.21	Decrease

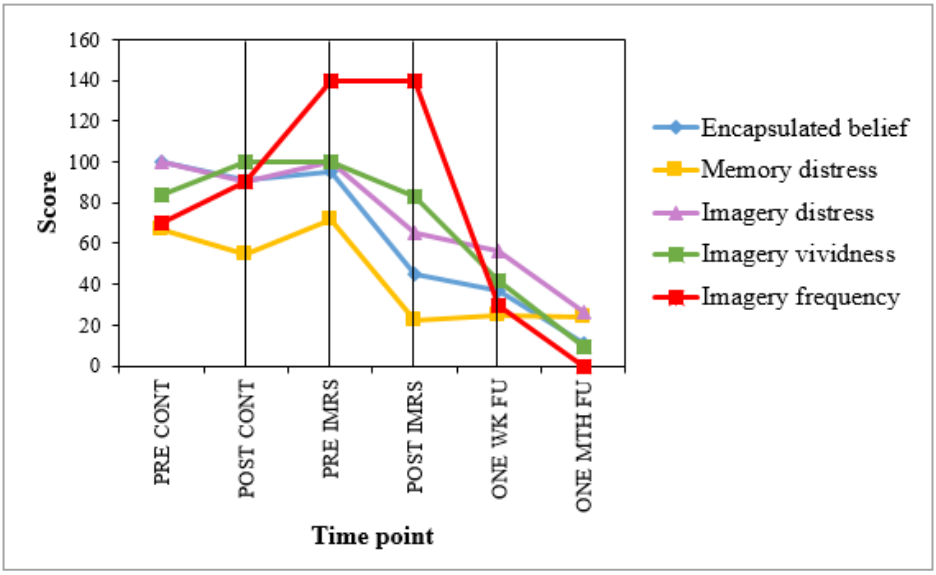
Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change.

Reliable and clinical change in social anxiety were observed at follow-up suggesting that the intervention had an effect with time. However, despite a decreasing trend in scores, reliable and clinical change were not found over the control/imagery rescripting phase. This suggests that other factors may have been involved in the change observed at follow-up. Mean VAS-A scores decreased from imagery rescripting

to follow-up and there was a large shift down in scores over the imagery rescripting phase (compared to a small decrease in scores over the control session). However, the VAS-A data were not stable over baseline (*tau* =-.398, p<0.01) making it difficult to conclude that the imagery rescripting led to the change observed.

3.3.5.2 Encapsulated belief, memory and imagery data

Figure 3.35. Scores on the Ideographic Ratings (Wild et al., 2008) for Participant 5



Note. PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; Phases between control and imagery rescripting session and imagery rescripting session and follow-up indicate one week breaks.

All ideographic ratings reduced over the imagery rescripting session or following imagery rescripting. Scores for all of the ratings were low at follow-up. There was a large shift down in image frequency scores between the imagery rescripting session and one week follow-up. There was a small reduction in encapsulated belief, memory distress and imagery distress over the control session, suggesting that it might have had some effect. See Appendix J for more detailed visual inspection.

3.3.5.3 Psychotic symptom and paranoia data

Figure 3.36. Scores on the SSI for Participant 5

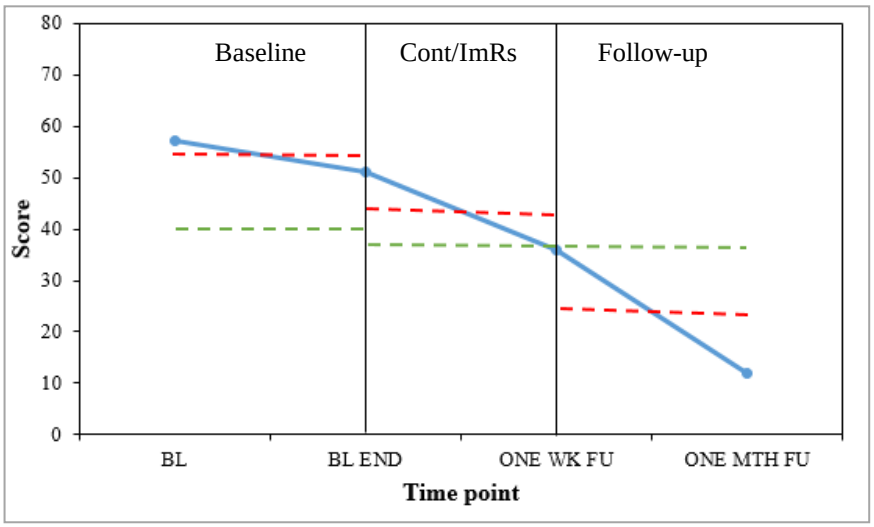
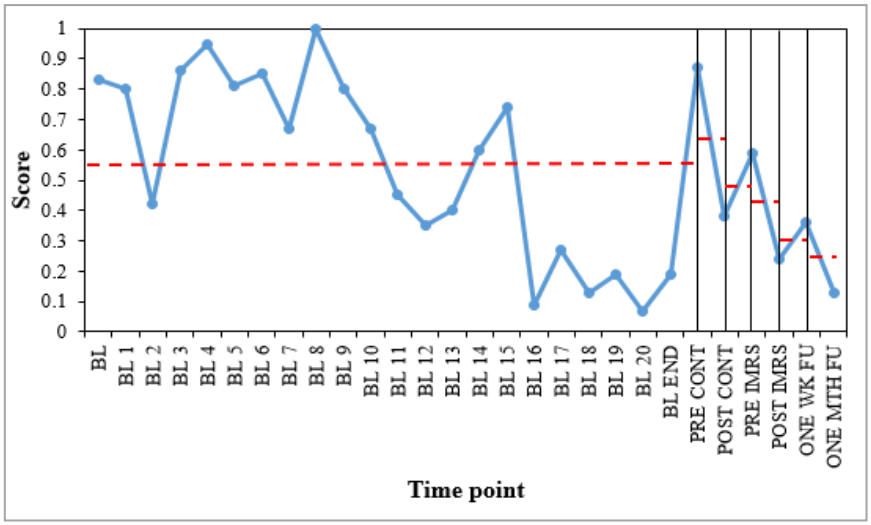


Figure 3.37 Scores on the VAS-P for Participant 5



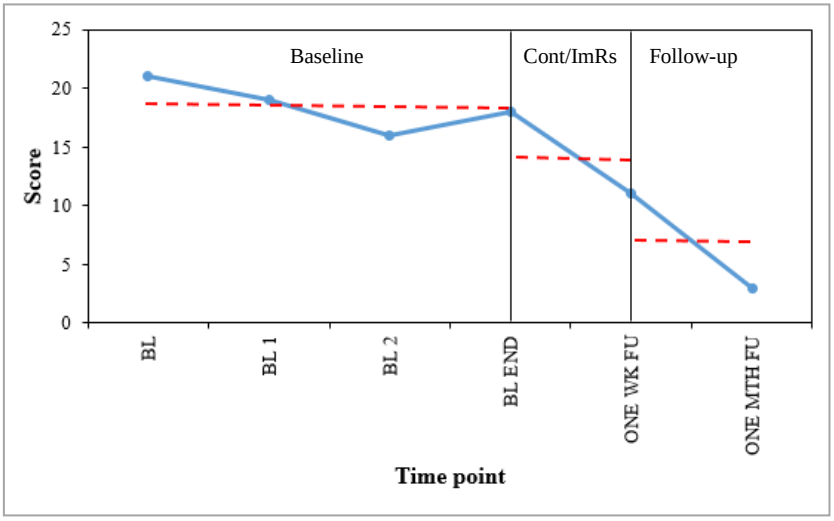
Note. – – – – = Mean; – – – – = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Psychotic symptoms were in the clinical range at baseline. Reliable change was found following the control/imagery rescripting and follow-up phases and clinical change was found at one month follow-up. However, a decreasing trend over baseline suggests some natural improvement. VAS-P data decreased over the imagery rescripting and follow-up phases. However, data were not stable over baseline (*tau* = -

.477, $p<.01$) and a decrease over the control session suggests this had an effect. There was also variation in scores across the study and this should be considered.

3.3.5.4 Depression data

Figure 3.38. Scores on the DASS-D for Participant 5

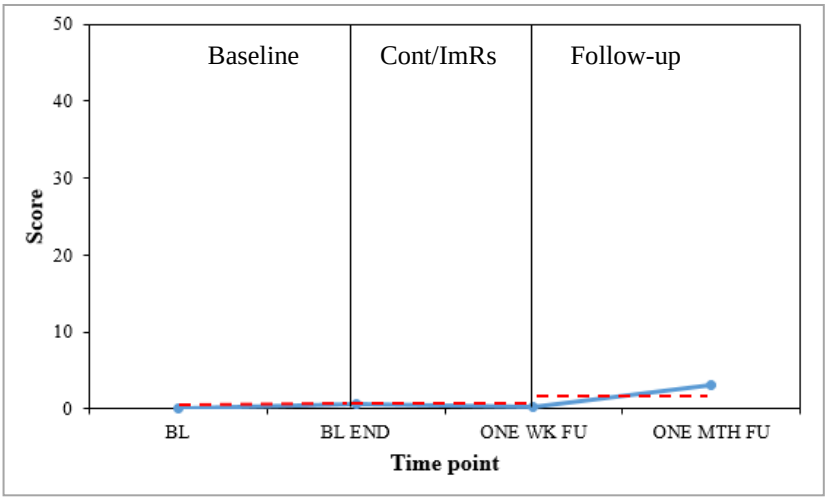


Note. – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Over baseline, depression was stable (*tau* = -.667, p>.05) and in the clinical range. There was a decrease in depression over the control/imagery rescripting and follow-up phases and clinical change was found at one month follow-up.

3.3.5.5 Social functioning data

Figure 3.39. Scores on the TUS for Participant 5

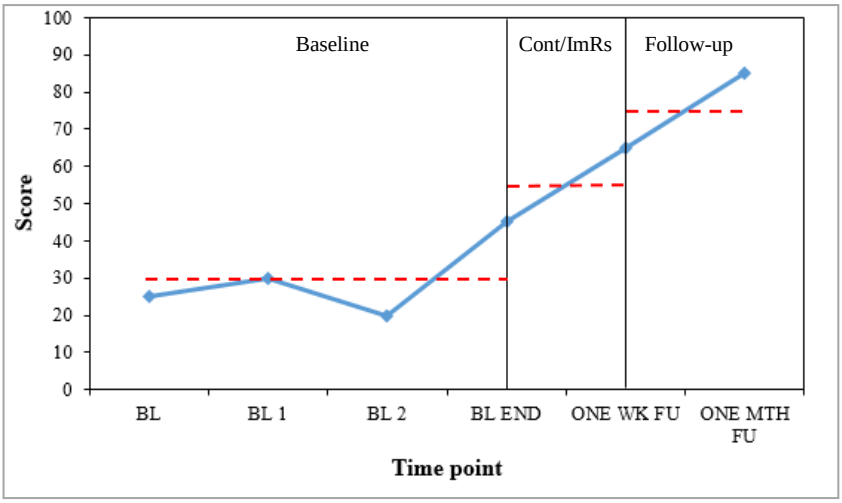


Note. – – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Social functioning was in the 'severe social disability' range over baseline. Social functioning remained low and clinical change was not found. There was a small increase over follow-up as the participant attended a meal with the EIP service.

3.3.5.6 Quality of life data

Figure 3.40. Scores on the EQ-5D-5L VAS for Participant 5



Note. – – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Quality of life was stable over baseline (*tau* = .333, p>.05). There was an increase in quality of life over the control/imagery rescripting and follow-up phases. However, there is an increasing trend in the data from the third baseline assessment until follow-up. This suggests that other factors (e.g. natural improvement) may have been involved.

3.3.5.7 Participant summary

Reliable and clinical change were found for social anxiety at follow-up suggesting the intervention had an effect with time. However, reliable and clinical change were not found following the control/imagery rescripting phase. This suggests that other factors may have been involved and this should be considered.

Mean visual analogue scale data for anxiety decreased from imagery rescripting through to follow-up. There was a greater reduction in anxiety over the imagery rescripting phase compared to the control phase. However, an unstable baseline makes it difficult to conclude that the imagery rescripting led to the changes observed. All ideographic ratings reduced over or following the imagery rescripting session and scores were low at follow-up. However, small reductions in encapsulated belief and memory and imagery distress were observed over the control session suggesting that it might have had some effect.

Psychotic symptoms declined and reliable change was found after the control/imagery rescripting and follow-up phases. Clinical change was also found at one month follow-up. However, a decreasing trend over baseline suggests some natural improvement. Decreases in paranoia were observed over the control and imagery rescripting sessions and the follow-up phase, but baseline data were unstable and there was variation in scores throughout the study. Depression decreased over the

control/imagery rescripting phase and clinical change was found at one month follow-up. Social functioning remained in the 'severe social disability' range. Although there was an increase in quality of life over the control/imagery rescripting and follow-up phases, an increasing trend from the third baseline assessment suggests that other factors (e.g. natural improvement) may be involved.

Participant 5 reported that the intervention helped her to realise that she has a lot to give and that she is not disgusting. She realised the importance of considering her personality more rather than focussing solely on what she looks like. Following her attendance at the EIP meal she said that she was looking forward to socialising more.

3.3.6 Participant 6

Participant 6 is a 35 year-old white British male with Asperger's syndrome and paranoid schizophrenia. He has previously spent time in an acute mental health hospital. He experiences high levels of social anxiety and reported difficulties in finding a relationship. He lives at home with his mother and is unemployed.

3.3.6.1 Social anxiety data

Figure 3.41. Scores on the SIAS for Participant 6

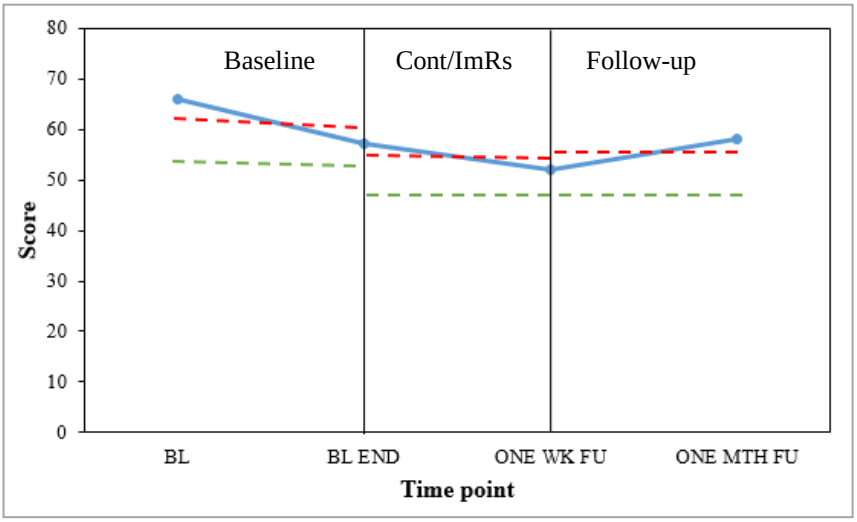
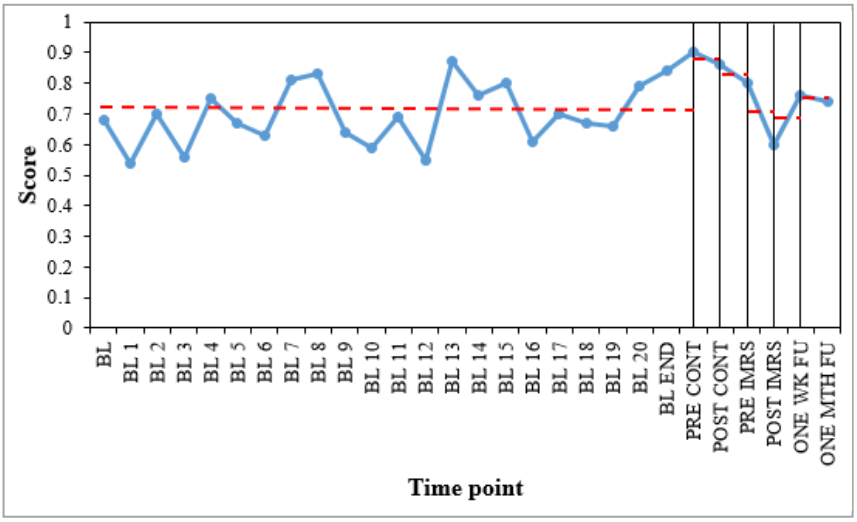


Figure 3.42. Scores on the VAS-A for Participant 6



Note. - - - - = Mean; - - - - = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Table 3.13

Visual inspection of SIAS data displayed in Figure 3.41.

Phase	Mean	Level	Trend	Reliable change	Clinical change
Baseline	61.5	-9	Decrease	N	N
Cont/ImRs	54.5	-5	Decrease	N	N
Follow-up	55	+6	Increase	N	N

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table 3.14

Visual inspection of VAS-A data displayed in Figure 3.42.

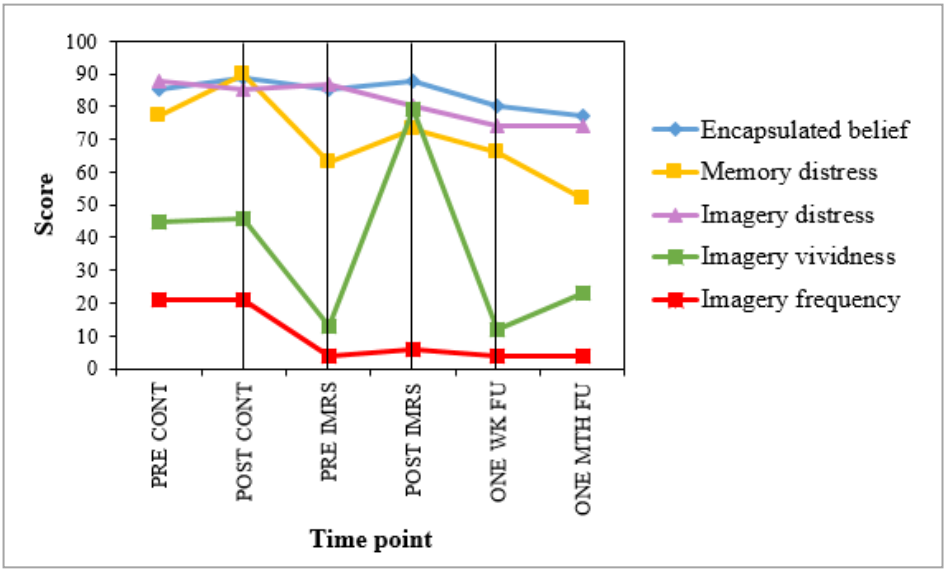
Phase	Mean	Level	Trend
Baseline	0.71	+0.22	No trend
Control	0.88	-0.04	No trend
Break	0.83	-0.06	No trend
ImRs	0.70	-0.20	Decrease
One Wk FU	0.68	+0.16	Increase
One Mnth FU	0.75	-0.02	No trend

Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change.

Social anxiety remained stable and reliable and clinical change were not found. VAS-A data were stable over baseline (*tau* =.282, p>.05). There was a decreasing trend in VAS-A data over the imagery rescripting phase (and no trend over the control session) but mean scores remained high and increased at one week follow-up.

3.3.6.2 Encapsulated belief, memory and imagery data

Figure 3.43. Scores on the Ideographic Ratings (Wild et al., 2008) for Participant 6



Note. PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; Phases between control and imagery rescripting session and imagery rescripting session and follow-up indicate one week breaks.

There was a small decrease in encapsulated belief and memory and imagery distress following imagery rescripting. Although there was an increase in imagery vividness over the imagery rescripting phase this decreased at one week follow-up. Imagery frequency reduced before the imagery rescripting session and remained low and stable. Although there was a small reduction in imagery distress, there was little change in ideographic ratings over the control session suggesting that this did not have an effect. Detailed visual inspection of the ratings is included in Appendix J.

3.3.6.3 Psychotic symptom and paranoia data

Figure 3.44. Scores on the SSI for Participant 6

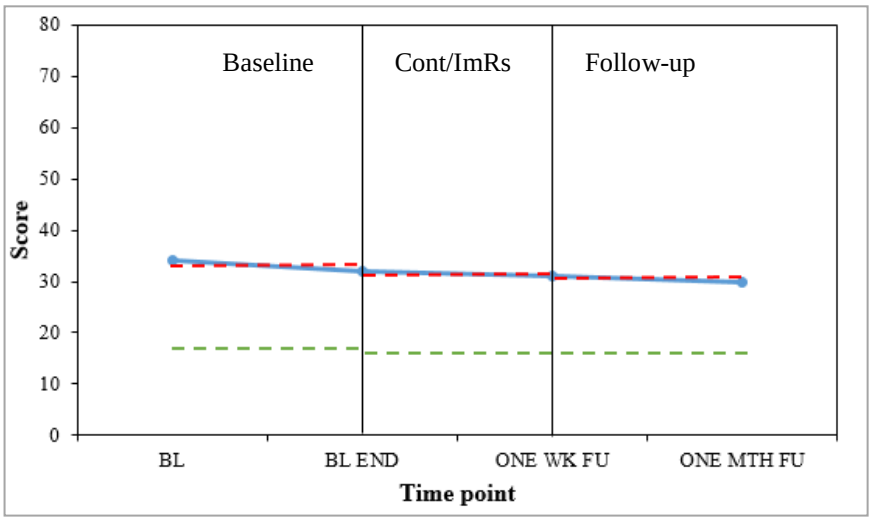
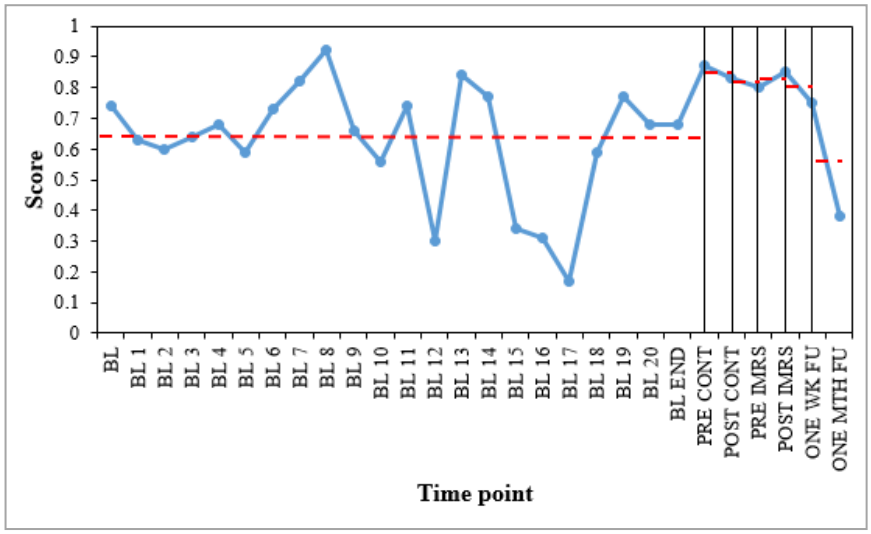


Figure 3.45. Scores on the VAS-P for Participant 6

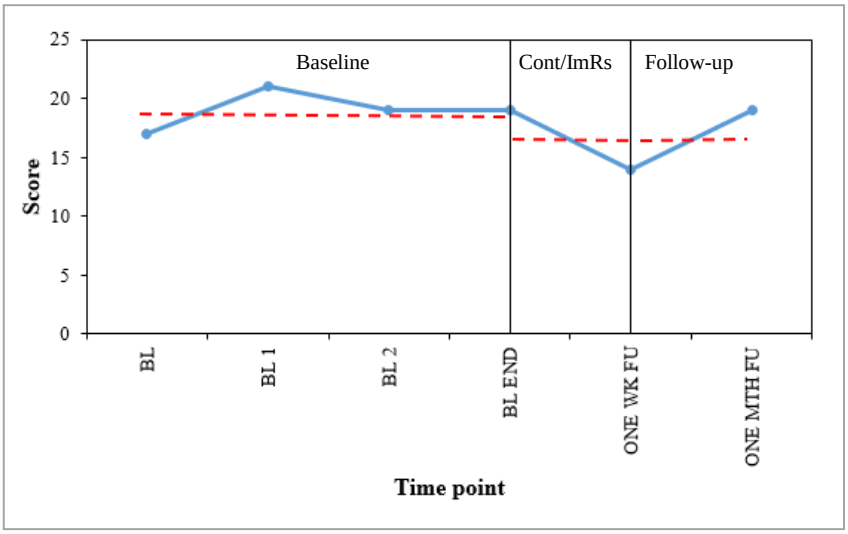


Note. – – – – = Mean; – – – – = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Psychotic symptoms were in the clinical range at baseline. They were stable over the study and reliable and clinical change were not found. VAS-P data were stable over baseline (*tau* = .012, *p*>.05). Paranoia remained high until one month follow-up where there was a decrease in mean score. However, there was variation in scores throughout the study and this should be considered.

3.3.6.4 Depression data

Figure 3.46. Scores on the DASS-D for Participant 6

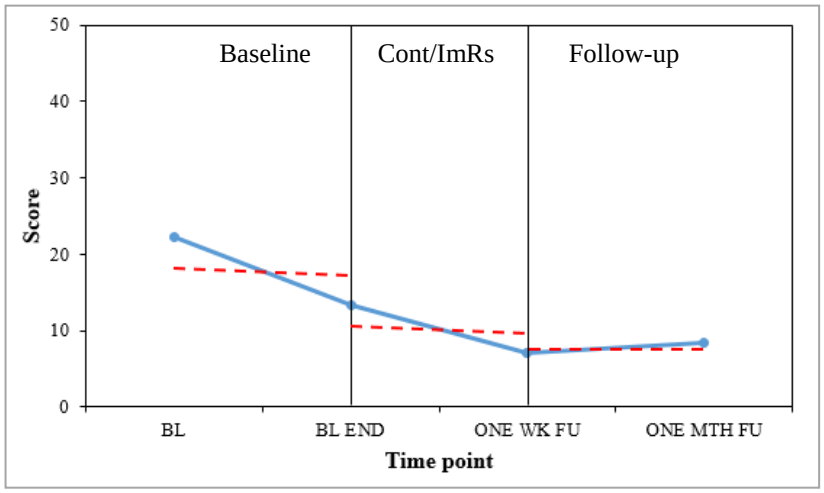


Note. – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Over baseline, depression was stable (*tau* = .183, p>.05) and in the clinical range. Despite a decrease over the control/imagery rescripting phase clinical change was not found. There was an increase at follow-up with a return to baseline level.

3.3.6.5 Social functioning data

Figure 3.47. Scores on the TUS for Participant 6

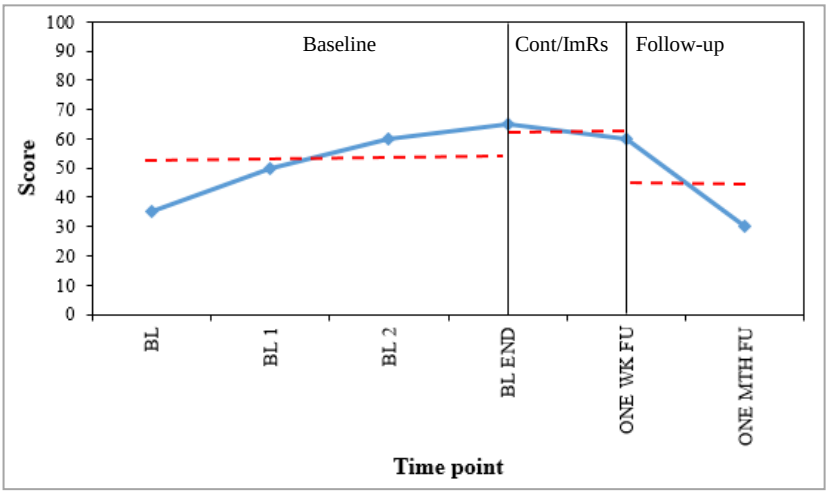


Note. – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

There was a decrease in social functioning over baseline and it was in the 'severe social disability' range at the second assessment point. There was a further decrease in social functioning over the control/imagery rescripting phase and this was stable at follow-up. The participant completed the follow-up assessments after Christmas and reported taking part in less activities. This should be considered.

3.3.6.6 Quality of life data

Figure 3.48. Scores on the EQ-5D-5L VAS for Participant 6



Note. - - - - = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Quality of life was unstable over baseline (*tau* = 1.00, p<.05) suggesting a significant change before the intervention was introduced. There was no change in trend over the control/imagery rescripting phase and a decrease over follow-up. This suggests that the intervention did not have a positive effect on quality of life.

3.3.6.7 Participant summary

Social anxiety remained stable and reliable and clinical change were not found. There was a decrease in visual analogue scale data for anxiety over the imagery

rescripting phase (and no trend over the control session) but mean scores remained high and increased at one month follow-up. For the ideographic ratings there was a small decrease in encapsulated belief and memory and imagery distress following imagery rescripting. There were also decreases in imagery vividness and frequency over the study. Although there was a small reduction in imagery distress, there was little change in ideographic ratings over the control session suggesting it had minimal effect.

Psychotic symptoms remained stable and reliable and clinical change were not found. There was a decrease in paranoia at one month follow-up but there was variation in scores throughout the study making it difficult to attribute this to the intervention. Depression decreased over the control/imagery rescripting phase but clinical change was not found. There was also an increase in scores at follow-up. Social functioning decreased over the baseline and control/imagery rescripting phases and this remained stable and in the 'severe social disability' range at follow-up. However, the follow-up assessments were completed after Christmas and this should be considered. There was no trend in quality of life over the control/imagery rescripting phase and it decreased over follow-up. This suggests the intervention did not have a positive effect on quality of life for this participant.

Participant 6 reported that the intervention helped him to see that he had "over-reacted" in the remembered event. He found it difficult to take part, explaining that he did not know how to describe the event from the third person. He also found it difficult to consider alternative viewpoints during the cognitive restructuring. This may have been influenced by the difficulties associated with his diagnosis.

3.3.7 Participant 7

Participant 7 is a 29 year-old white British male with Asperger's syndrome. He experienced a brief psychotic episode when he was 27 years old. He is currently unemployed. He lives alone but has a long-term partner and a small number of friends. He reported experiencing high levels of social anxiety in public.

3.3.7.1 Social anxiety data

Figure 3.49. Scores on the SIAS for Participant 7

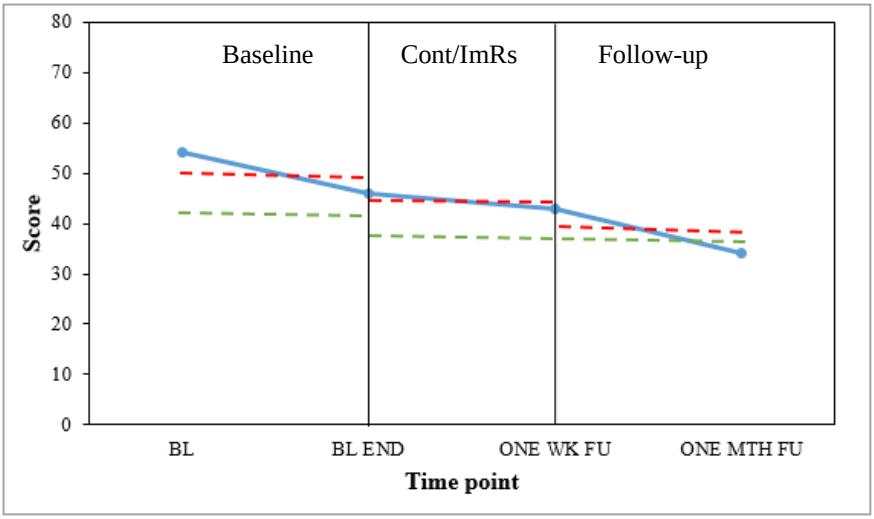
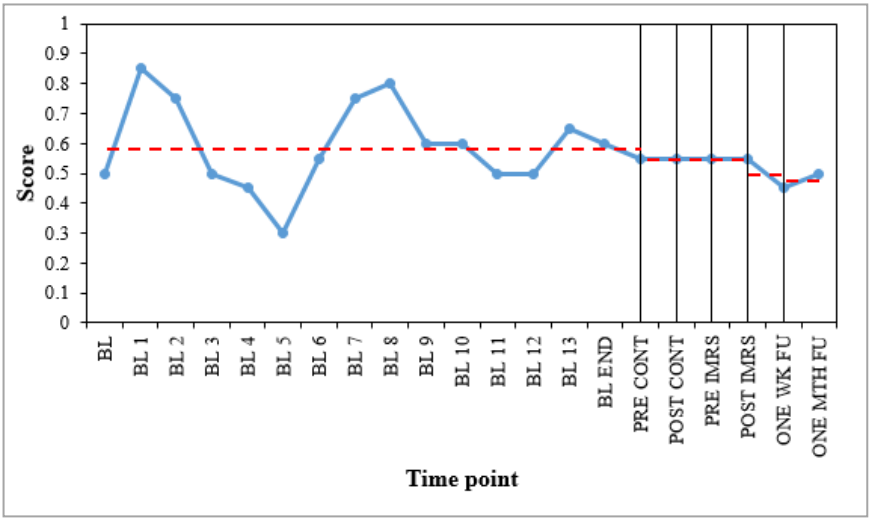


Figure 3.50. Scores on the VAS-A for Participant 7



Note. - - - - = Mean; - - - - = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Table 3.15

Visual inspection of SIAS data displayed in Figure 3.49.

Phase	Mean	Level	Trend	Reliable change	Clinical change
Baseline	50	-8	Decrease	N	N
Cont/ImRs	44.5	-3	No trend	N	N
Follow-up	38.5	-9	Decrease	Y	Y

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; Y (Yes), N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table 3.16

Visual inspection of VAS-A data displayed in Figure 3.50.

Phase	Mean	Level	Trend
Baseline	0.59	+0.05	No trend
Control	0.55	0	No trend
Break	0.55	0	No trend
ImRs	0.55	0	No trend
One Wk FU	0.50	-0.10	Decrease
One Mnth FU	0.48	+0.05	Increase

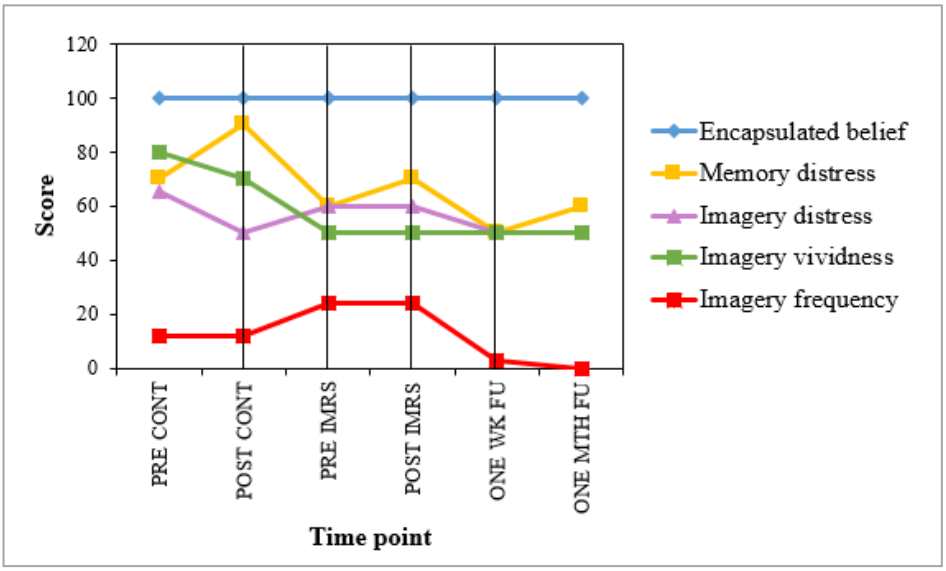
Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change.

There was a decrease in social anxiety and reliable and clinical change were found at one month follow-up. However, a decreasing trend was observed over baseline and no trend was observed over the control/imagery rescripting phase. This makes it difficult to attribute change to the intervention and suggests that other factors might have been involved (e.g. natural improvement). VAS-A data were stable over baseline

(*tau* =-.009, p>.05). Scores remained stable until one week follow-up when there was a slight decrease.

3.3.7.2 Encapsulated belief, memory and imagery data

Figure 3.51. Scores on the Ideographic Ratings (Wild et al., 2008) for Participant 7



Note. PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; Phases between control and imagery rescripting session and imagery rescripting session and follow-up indicate one week breaks.

There was a reduction in imagery frequency following imagery rescripting and scores were low at follow-up. There were slight reductions in memory distress and imagery distress and vividness over the study. However, imagery distress and vividness decreased over the control session suggesting that it might have had an effect. The participant described his encapsulated belief as a "fixed firm belief" and explained that this could not be modified, rating it at 100 each time. Detailed visual inspection of the ideographic ratings is provided in Appendix J.

3.3.7.3 Psychotic symptom and paranoia data

Figure 3.52. Scores on the SSI for Participant 7

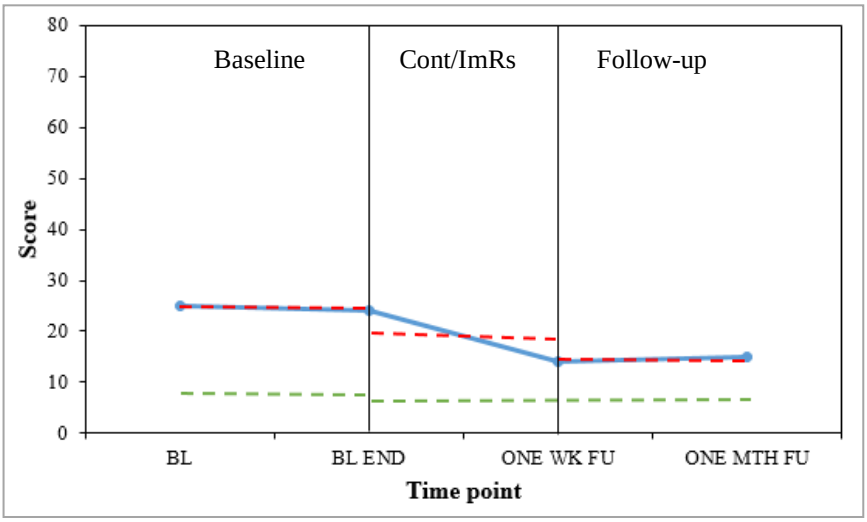
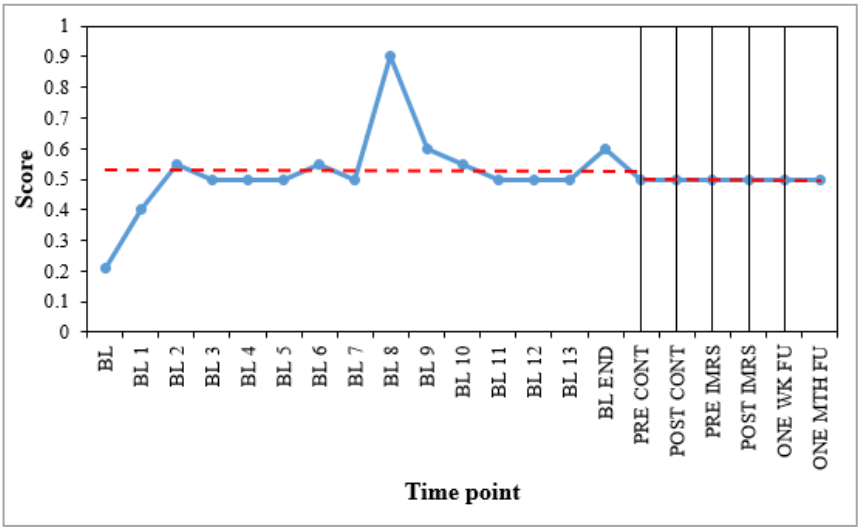


Figure 3.53 Scores on the VAS-P for Participant 7

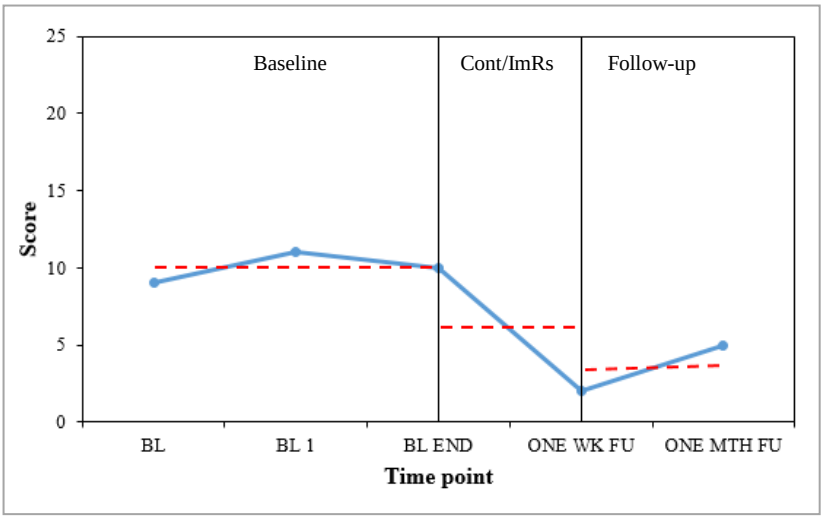


Note. – – – – = Mean; – – – – = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Psychotic symptoms were in the clinical range at baseline. They decreased over the control/imagery rescripting phase and remained stable at follow-up. Clinical change was found at one week and one month follow-up. However, reliable change was not observed. VAS-P data were stable over baseline (*tau* = .272, *p*>.05) and the study.

3.3.7.4 Depression data

Figure 3.54. Scores on the DASS-D for Participant 7

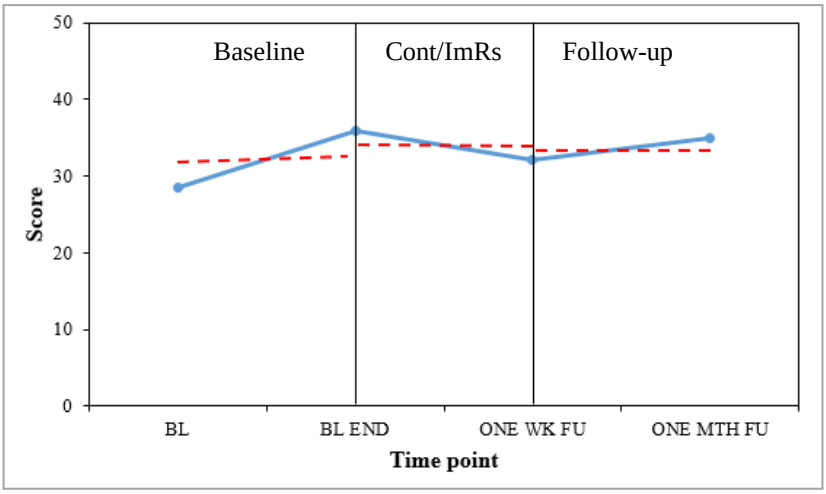


Note. – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Over baseline, depression was stable (*tau* = .333, p>.05) and in the clinical range. Clinical change was observed at both follow-up time points. However, an increasing trend over the follow-up phase suggests that any effect was time-limited.

3.3.7.5 Social functioning data

Figure 3.55. Scores on the TUS for Participant 7

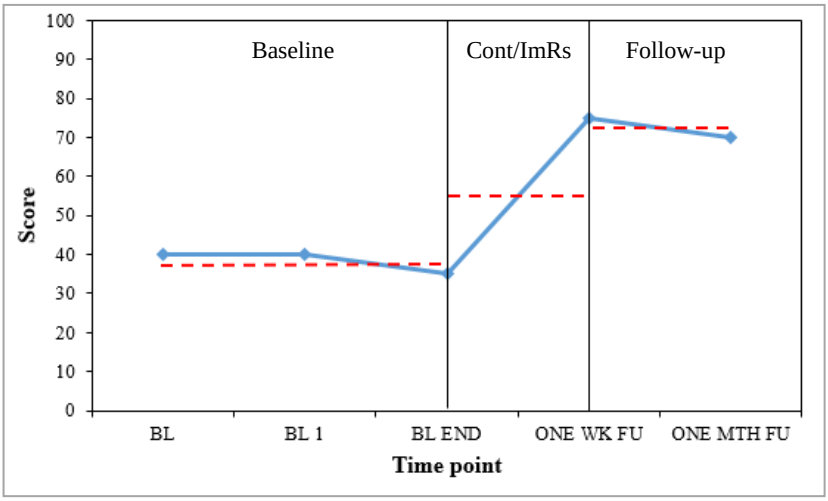


Note. – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

At the first baseline assessment, social functioning was in the 'social disability' range. There was an increase over the baseline phase and scores remained stable but in the clinical range for the rest of the study. The participant completed the one week follow-up assessment after Christmas and reported taking part in less activities. This should be considered.

3.3.7.6 Quality of life data

Figure 3.56. Scores on the EQ-5D-5L VAS for Participant 7



Note. – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Quality of life was stable over baseline (*tau* = -.816, p>.05). There was an increase in scores over the control/imagery rescripting phase and this remained stable at follow-up. This suggests that the intervention might have had a positive effect on quality of life.

3.3.7.7 Participant summary

Reliable and clinical change in social anxiety were found at one month follow-up. However, a decreasing trend over the baseline phase and no trend over the

control/imagery rescripting phase makes it difficult to attribute change to the intervention. Visual analogue scale data for anxiety were stable from the control to imagery rescripting phase. There was a small decrease in mean scores at follow-up. There was a reduction in imagery frequency following imagery rescripting and follow-up scores were low. Small reductions in memory distress and imagery distress and vividness were observed over the study. Imagery distress and vividness decreased over the control session suggesting that this might have had an effect. Encapsulated belief ratings were stable and the participant explained that this was a "fixed firm belief" and could not be modified.

Psychotic symptoms decreased over the control/imagery rescripting phase and clinical change was found at one week and one month follow-up. However, reliable change was not found. Paranoia data remained stable throughout the study. Depression scores decreased following the control/imagery rescripting phase and clinical change was observed at one week and one month follow-up. However, an increasing trend was observed in depression scores over follow-up. This suggests that the effect might have been time-limited. Social functioning remained stable and in the clinical range. There was an increase in quality of life scores over the control/imagery rescripting phase and this was maintained at follow-up.

Participant 7 reported that he could see the benefit of the intervention and it helped him to think about how he appeared in the queue rather than worrying about what he *might* have looked like. However, he explained that he found it difficult to take part as he could not visualise himself from an outside perspective. This may have been influenced by the difficulties associated with his diagnosis.

3.3.8 Participant 8

Participant 8 is a 20 year-old white British male who developed psychosis following repeated drug use. He experiences high levels of paranoia and holds concerns that his neighbours will break into his flat. He continues to experience drug dependency and during the study he was admitted to an acute mental health ward for detoxification.

3.3.8.1 Social anxiety data

Figure 3.57. Scores on the SIAS for Participant 8

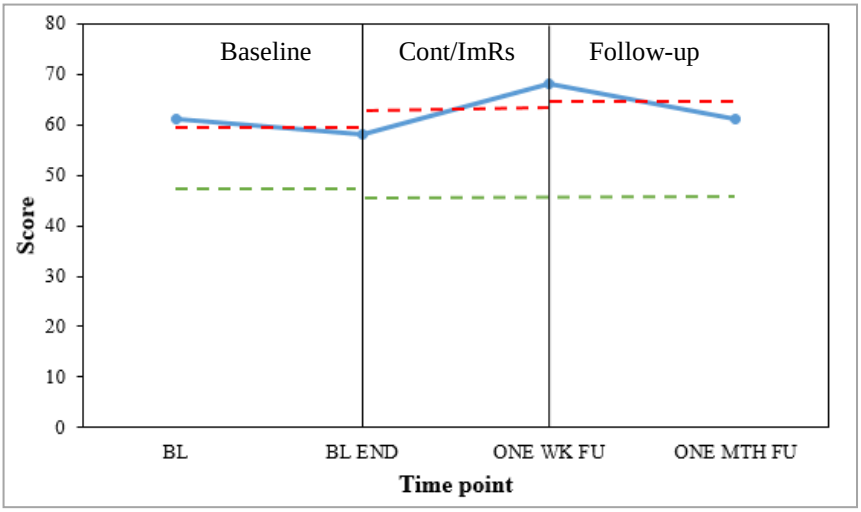
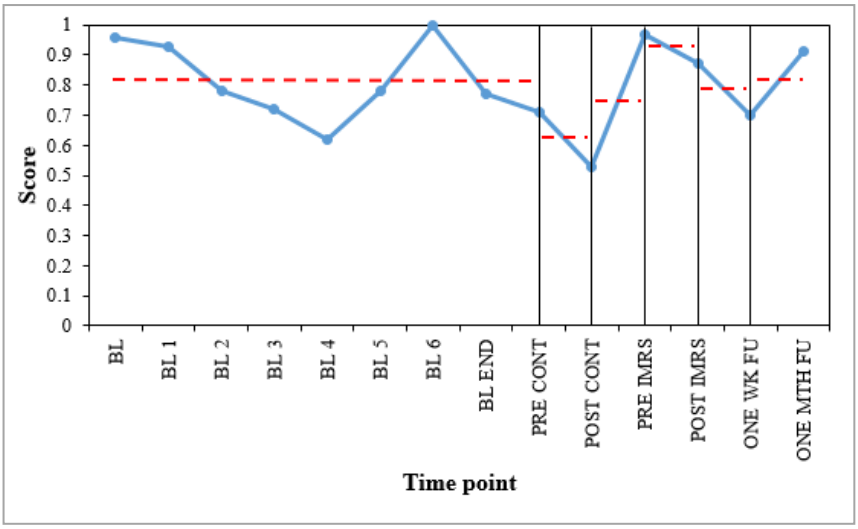


Figure 3.58. Scores on the VAS-A for Participant 8



Note. – – – – = Mean; – – – – = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Table 3.17

Visual inspection of SIAS data displayed in Figure 3.57.

Phase	Mean	Level	Trend	Reliable change	Clinical change
Baseline	59.5	-3	No trend	N	N
Cont/ImRs	63	+10	Increase	N	N
Follow-up	64.5	-7	Decrease	N	N

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table 3.18

Visual inspection of VAS-A data displayed in Figure 3.58.

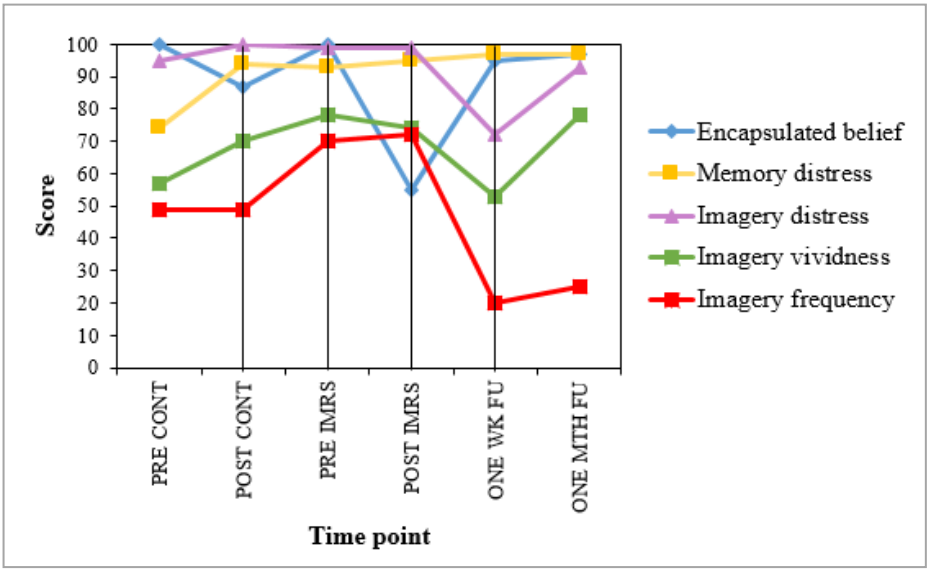
Phase	Mean	Level	Trend
Baseline	0.81	-0.25	No trend
Control	0.62	-0.18	Decrease
Break	0.75	+0.44	Increase
ImRs	0.92	-0.10	Decrease
One Wk FU	0.79	-0.17	Decrease
One Mnth FU	0.81	+0.21	Increase

Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change.

There was an increase in mean social anxiety scores over the study and reliable and clinical change were not found. VAS-A data were stable over baseline (*tau* =-.366, p>.05). There was a decrease in trend over the control and imagery rescripting sessions suggesting that they both had an effect. However, anxiety increased before the imagery rescripting phase and mean scores remained high throughout the study.

3.3.8.2 Encapsulated belief, memory and imagery data

Figure 3.59. Scores on the Ideographic Ratings (Wild et al., 2008) for Participant 8



Note. PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; Phases between control and imagery rescripting session and imagery rescripting session and follow-up indicate one week breaks.

Encapsulated belief ratings decreased over the imagery rescripting session and imagery frequency reduced following imagery rescripting. However, encapsulated belief decreased slightly over the control session suggesting that it had an effect on these ratings. There were also decreases in imagery distress and vividness following imagery rescripting. However, there was variation in the ratings and with the exception of imagery frequency, scores were high at follow-up. More detailed visual inspection of the ratings is included in Appendix J.

3.3.8.3 Psychotic symptom and paranoia data

Figure 3.60. Scores on the SSI for Participant 8

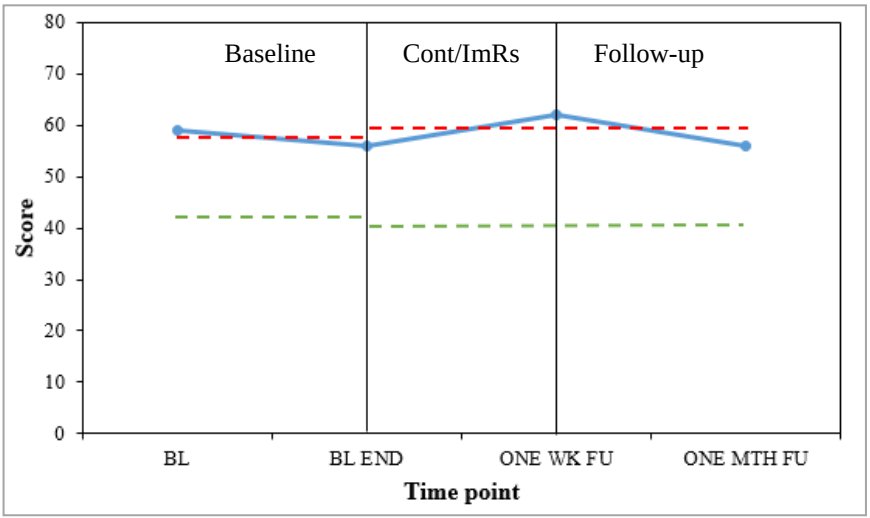
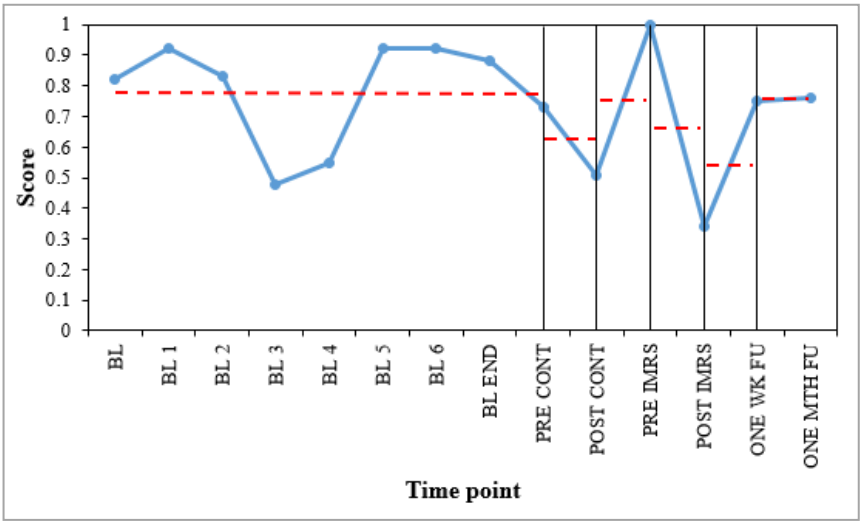


Figure 3.61. Scores on the VAS-P for Participant 8



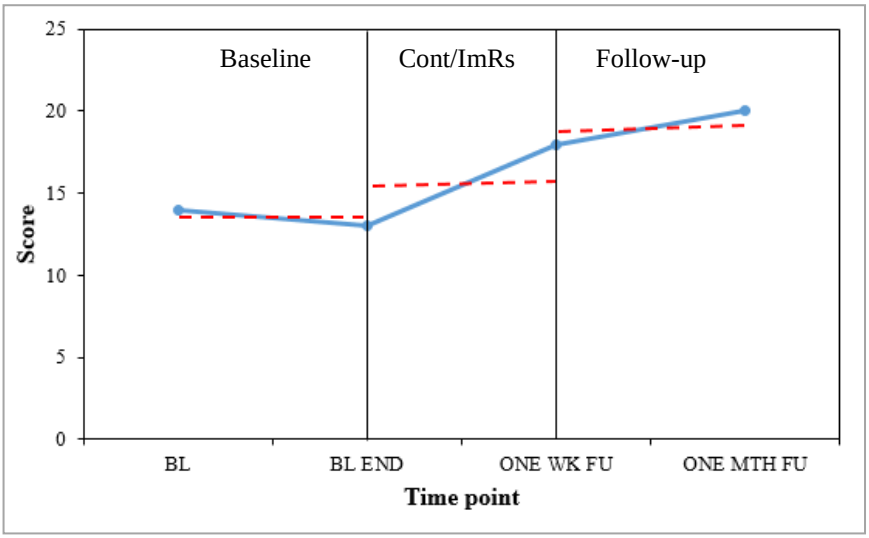
Note. – – – – = Mean; – – – – = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Psychotic symptoms were in the clinical range at baseline. They were stable over the study and reliable and clinical change were not found. VAS-P data were stable over baseline (*tau* = .029, *p*>.05). There were decreases in trend over the control and imagery rescripting phases, with the imagery rescripting session appearing to have a

greater effect. However, there was variation in scores and paranoia returned to baseline level at follow-up.

3.3.8.4 Depression data

Figure 3.62. Scores on the DASS-D for Participant 8

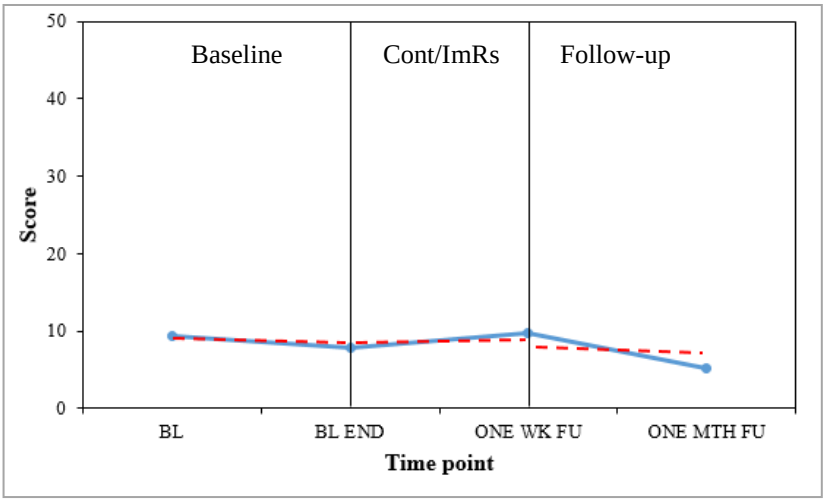


Note. – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Depression was in the clinical range at baseline. There was an increase in depression over the control/imagery rescripting and follow-up phases and clinical change was not found. The participant was admitted to hospital before the control/imagery rescripting phase and had returned to his flat for the follow-up appointments. It is possible that the participant's living circumstances led to a natural decline in his mood and this should be considered.

3.3.8.5 Social functioning data

Figure 3.63. Scores on the TUS for Participant 8

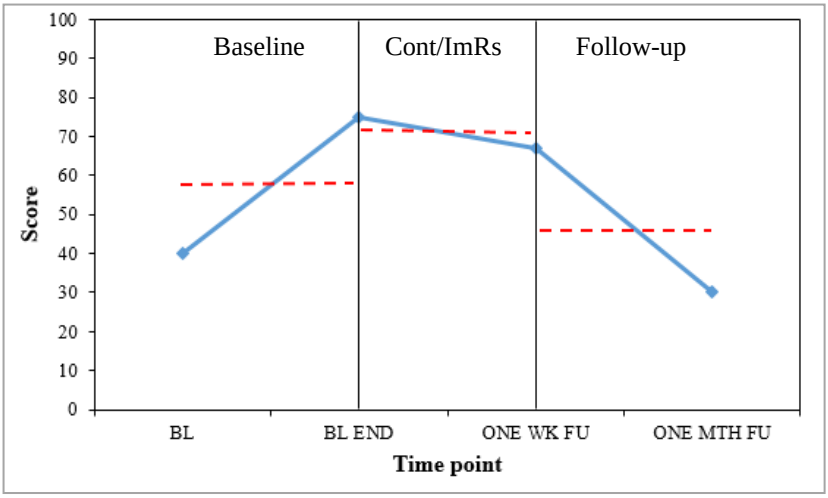


Note. – – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Social functioning was in the 'severe social disability' range at baseline. Scores remained stable and clinical change was not found. The participant reported performing slightly fewer activities when he returned to his flat (one month follow-up).

3.3.8.6 Quality of life data

Figure 3.64. Scores on the EQ-5D-5L VAS for Participant 8



Note. – – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

There was an increase in quality of life over baseline. The participant reported feeling more comfortable when the end of baseline assessment was completed as he was in hospital. There was a decrease in quality of life over the follow-up phase and at this point the participant had returned to his flat. This should be considered.

3.3.8.7 Participant summary

Mean social anxiety increased and reliable and clinical change were not found. Although there was a decrease in visual analogue scale anxiety scores over the control and imagery rescripting phases, mean scores remained high. For the ideographic ratings, encapsulated belief decreased over the imagery rescripting session and imagery frequency reduced following imagery rescripting. There were also decreases in imagery distress and vividness. However, encapsulated belief decreased over the control session suggesting that it had an effect. Also, most ratings remained high at follow-up.

Psychotic symptoms were stable and reliable and clinical change were not found. There was a decrease in paranoia over the control and imagery rescripting phases suggesting that both had an effect. However, this returned to baseline level at follow-up. There was an increase in depression over the control/imagery rescripting and follow-up phases and clinical change was not found. Social functioning remained in the 'severe social disability' range and a small decrease was observed at follow-up. Quality of life also decreased at follow-up. It is possible that the participant's level of depression, social functioning and quality of life were influenced by his living circumstances and this should be considered.

Despite his difficulties, Participant 8 reported that he found the intervention useful. He reported that it allowed him to realise that he had not wet himself in front of

his friends and that if he did they would be understanding. He stated that in future he will feel more able to be honest with people about the way he is feeling.

3.3.9 Participant 9

Participant 9 is a 20 year-old white British male with Attention Deficit Hyperactivity Disorder (ADHD). He is receiving ongoing assessment for psychotic symptoms. He lives with his parents and has a girlfriend. He experiences severe levels of social anxiety and rarely leaves his home, fearful that people will notice his anxiety.

3.3.9.1 Social anxiety data

Figure 3.65. Scores on the SIAS for Participant 9

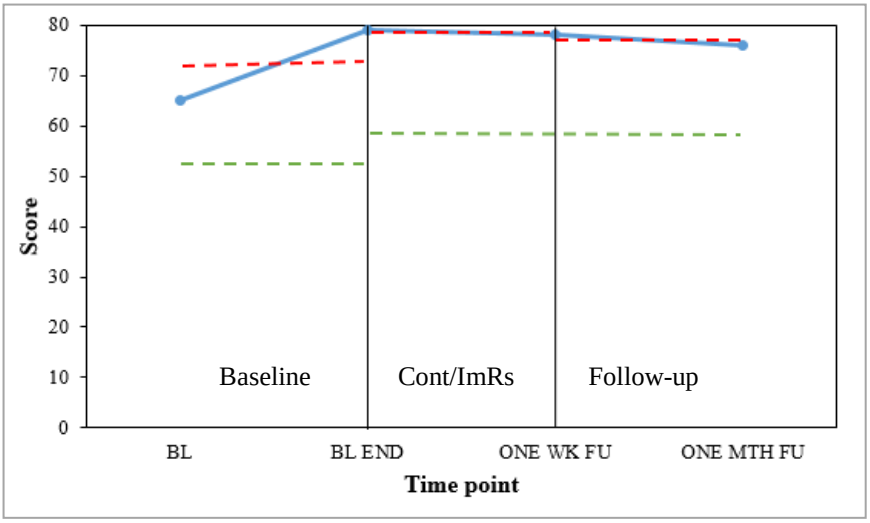
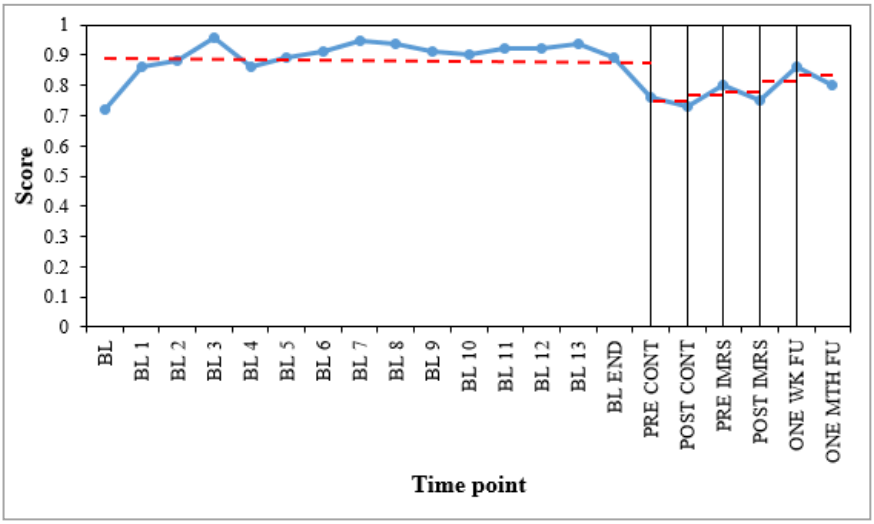


Figure 3.66. Scores on the VAS-A for Participant 9



Note. – – – – = Mean; – – – – = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Table 3.19

Visual inspection of SIAS data displayed in Figure 3.65.

Phase	Mean	Level	Trend	Reliable change	Clinical change
Baseline	72	+14	Increase	N	N
Cont/ImRs	78.5	-1	No trend	N	N
Follow-up	77	-2	No trend	N	N

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table 3.20

Visual inspection of VAS-A data displayed in Figure 3.66.

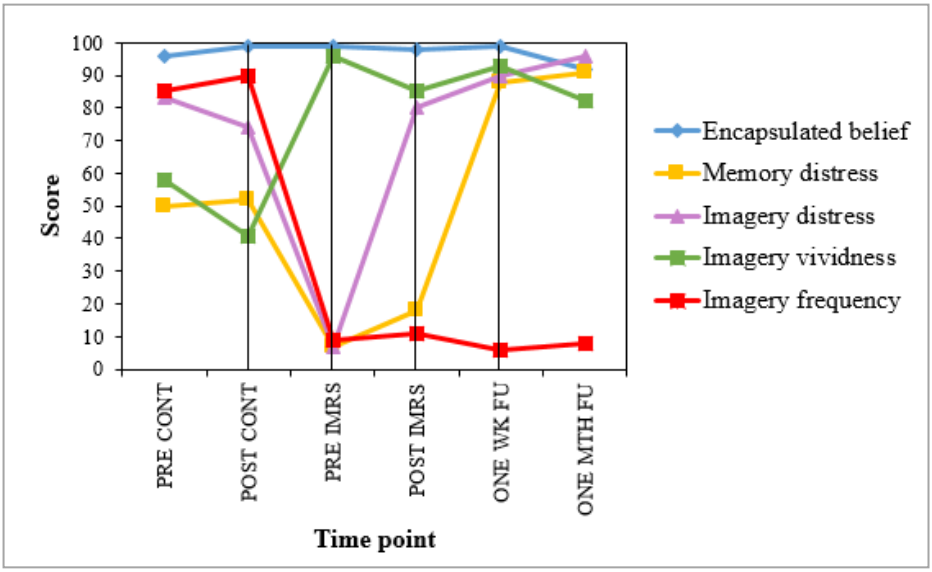
Phase	Mean	Level	Trend
Baseline	0.89	+0.04	No trend
Control	0.75	-0.03	No trend
Break	0.77	+0.07	Increase
ImRs	0.78	-0.05	Decrease
One Wk FU	0.81	+0.11	Increase
One Mnth FU	0.83	-0.06	Decrease

Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change**.**

Reliable and clinical change in social anxiety were not found. Mean scores increased over the control/imagery rescripting phase and remained high. VAS-A data were stable over baseline (*tau* =-.009, p>.05). Mean scores decreased over the control phase but increased over the other phases and remained high.

3.3.9.2 Encapsulated belief, memory and imagery data

Figure 3.67. Scores on the Ideographic Ratings (Wild et al., 2008) for Participant 9



Note. PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; Phases between control and imagery rescripting session and imagery rescripting session and follow-up indicate one week breaks.

Encapsulated belief remained stable until follow-up when there was a small decrease. There was a large decrease in imagery frequency prior to imagery rescripting and this remained stable and low throughout the rest of the study. There was variation in the other ratings and scores remained high at follow-up. Decreases in imagery distress and vividness over the control session suggests that this had some effect. More detailed visual inspection of the ideographic ratings is provided in Appendix J.

3.3.9.3 Psychotic symptom and paranoia data

Figure 3.68. Scores on the SSI for Participant 9

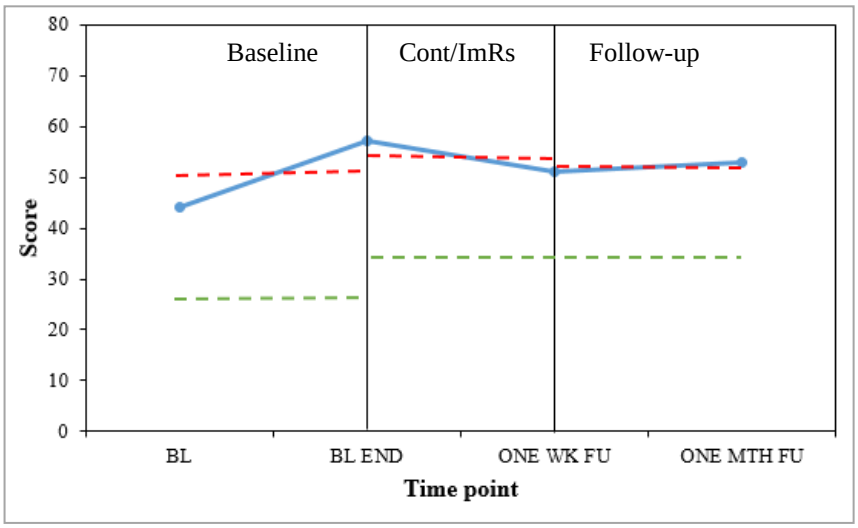
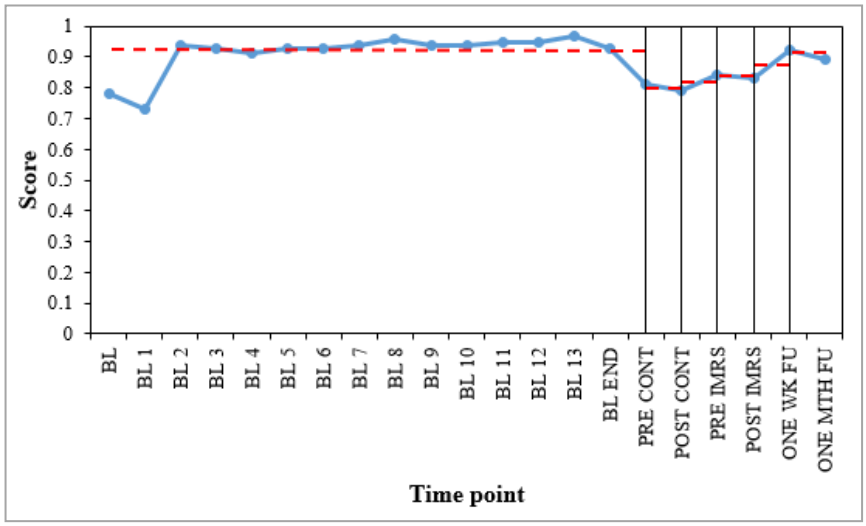


Figure 3.69. Scores on the VAS-P for Participant 9

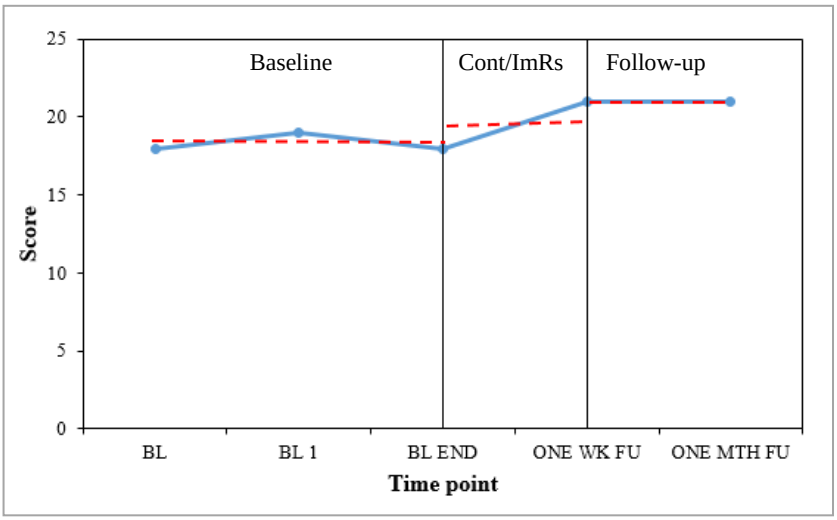


Note. – – – – = Mean; – – – – = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Psychotic symptoms were in the clinical range at baseline. They remained stable and high and reliable and clinical change were not found. VAS-P data were stable over baseline (*tau* = .272, *p*>.05). Mean scores decreased over the control phase but increased over the following phases, remaining high over the course of the study.

3.3.9.4 Depression data

Figure 3.70. Scores on the DASS-D for Participant 9

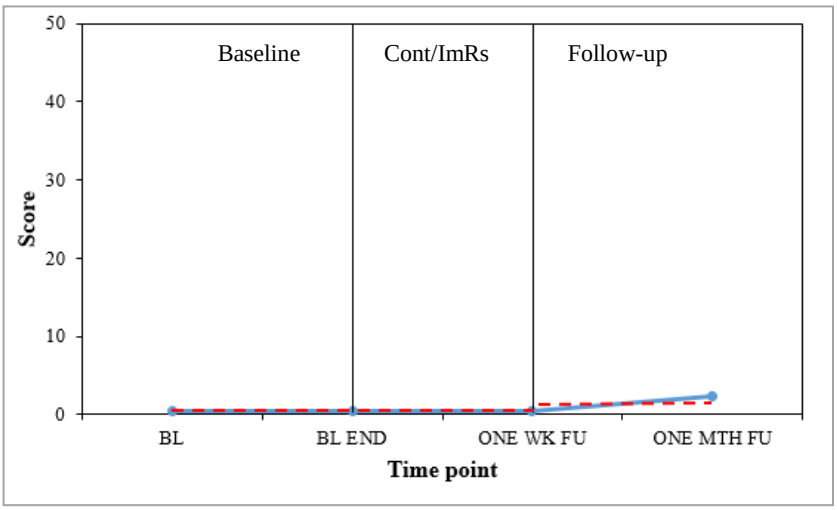


Note. – – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Over baseline, depression was stable (*tau* = .000, p>.05) and in the clinical range. There was a small increase over the control/imagery rescripting phase and scores remained stable and high at follow-up. Clinical change was not found.

3.3.9.5 Social functioning data

Figure 3.71. Scores on the TUS for Participant 9

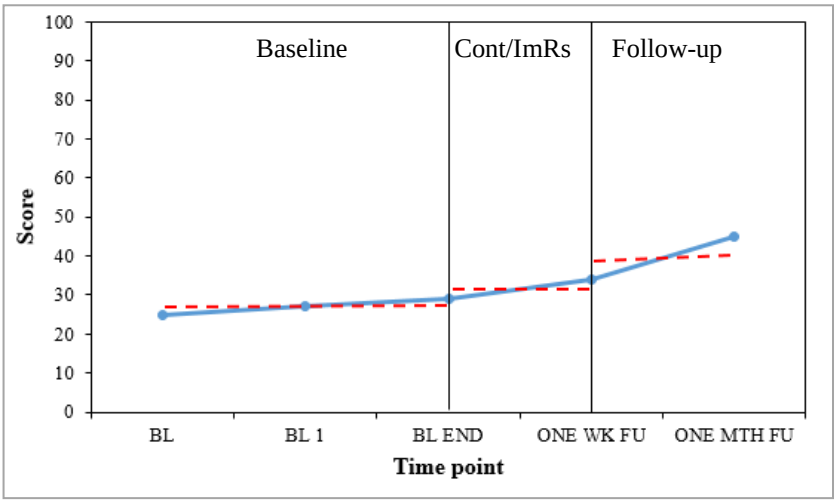


Note. – – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Social functioning was in the 'severe social disability' range at baseline. Scores remained stable and low throughout the study and clinical change was not found. There was a small increase in social functioning at follow-up and the participant reported going into the town centre.

3.3.9.6 Quality of life data

Figure 3.72. Scores on the EQ-5D-5L VAS for Participant 9



Note. - - - - = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

There was an increase in quality of life over each phase. However, scores were not stable over baseline (*tau* = 1.00, p<.01) making it difficult to attribute change to the intervention and not to natural improvement. This should be considered.

3.3.9.7 Participant summary

Mean social anxiety increased over the control/imagery rescripting phase and reliable and clinical change were not found. An increase in mean visual analogue scale data for anxiety was observed from the control phase through to follow-up and scores remained high. For the ideographic ratings, there was a small decrease in encapsulated

belief ratings at follow-up but this remained high. Imagery frequency decreased prior to imagery rescripting and remained stable and low. The other ratings varied throughout the study and scores were high at follow-up. Decreases in imagery distress and vividness over the control session suggests that this had some effect.

Psychotic symptoms remained stable and high and reliable and clinical change were not found. Paranoia increased from the control phase and also remained high. There was no clinical change in depression. There was a small increase in depression over the control/imagery rescripting phase and scores remained high at follow-up. Social functioning remained stable and low in the 'severe social disability' range. Quality of life increased over the study but an increasing trend at baseline makes it difficult to attribute change to the intervention and not natural improvement.

Participant 9 reported that the intervention helped him to think about how to handle difficult situations. However, he continued to experience severe social disability. He found it difficult to take part in the imagery rescripting. He did not feel comfortable enough to close his eyes and asked his girlfriend to stay in the room.

3.3.10 Participant 10

Participant 10 is a 19 year-old white British male with Emotionally Unstable Personality Disorder. He experienced an acute psychotic episode when he was 17 years old. He explained that social anxiety and paranoia are his main difficulties. He has a girlfriend and currently lives in a supported living environment for young people.

3.3.10.1 Social anxiety data

Figure 3.73. Scores on the SIAS for Participant 10

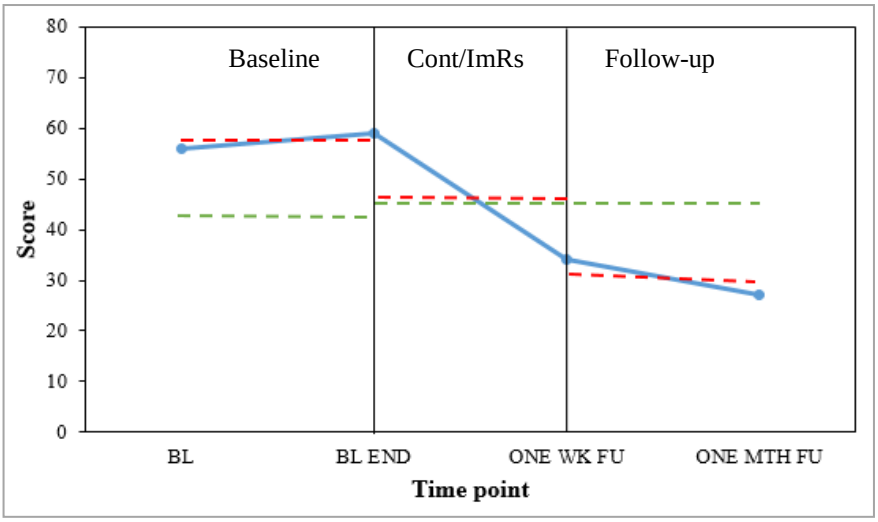
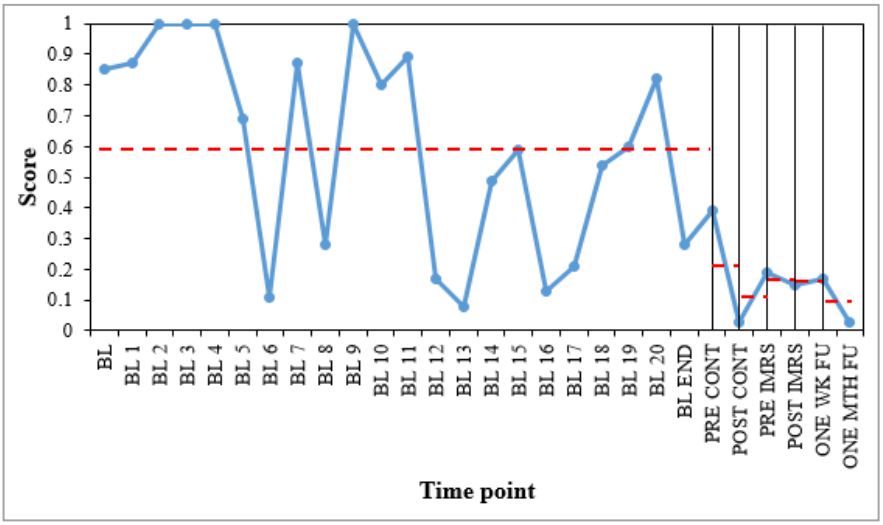


Figure 3.74. Scores on the VAS-A for Participant 10



Note. - - - - - = Mean; - - - - - = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Table 3.21

Visual inspection of SIAS data displayed in Figure 3.73.

Phase	Mean	Level	Trend	Reliable change	Clinical change
Baseline	57.5	+3	No trend	N	N
Cont/ImRs	46.5	-25	Decrease	Y	Y
Follow-up	30.5	-7	Decrease	Y	Y

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; Y (Yes), N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table 3.22

Visual inspection of VAS-A data displayed in Figure 3.74.

Phase	Mean	Level	Trend
Baseline	0.59	-0.46	Decrease
Control	0.21	-0.36	Decrease
Break	0.11	+0.16	Increase
ImRs	0.17	-0.04	No trend
One Wk FU	0.16	+0.02	No trend
One Mnth FU	0.10	+0.14	Decrease

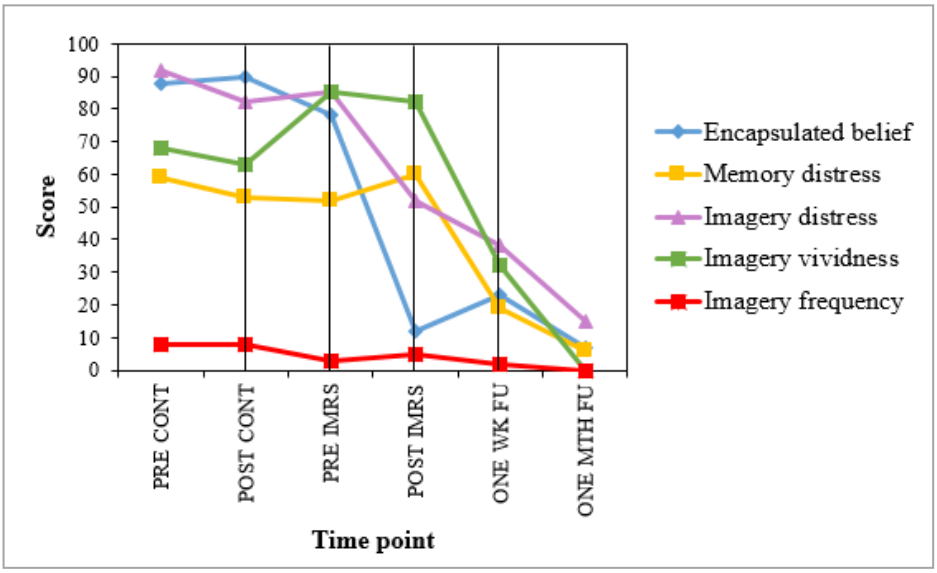
Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change.

There was a decrease in social anxiety scores over the control/imagery rescripting and follow-up phases and reliable and clinical change were found. VAS-A data were low at one month follow-up. There was a shift down in anxiety over the control phase and no trend was observed over the imagery rescripting phase. This suggests that the control phase had a greater effect. Data were not stable over baseline

(*tau* =-.317, p<.05) making it difficult to attribute change in scores to the intervention. However, scores appear to stabilise across the phases and this should be considered.

3.3.10.2 Encapsulated belief, memory and imagery data

Figure 3.75. Scores on the Ideographic Ratings (Wild et al., 2008) for Participant 10



Note. PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; Phases between control and imagery rescripting session and imagery rescripting session and follow-up indicate one week breaks.

There were reductions in all ideographic ratings following imagery rescripting and scores were low at follow-up. Imagery frequency reduced but was stable and low throughout the study. There were small reductions in memory and imagery distress and imagery vividness over the control session suggesting that it had some effect. See Appendix J for more detailed visual inspection.

3.3.10.3 Psychotic symptom and paranoia data

Figure 3.76. Scores on the SSI for Participant 10

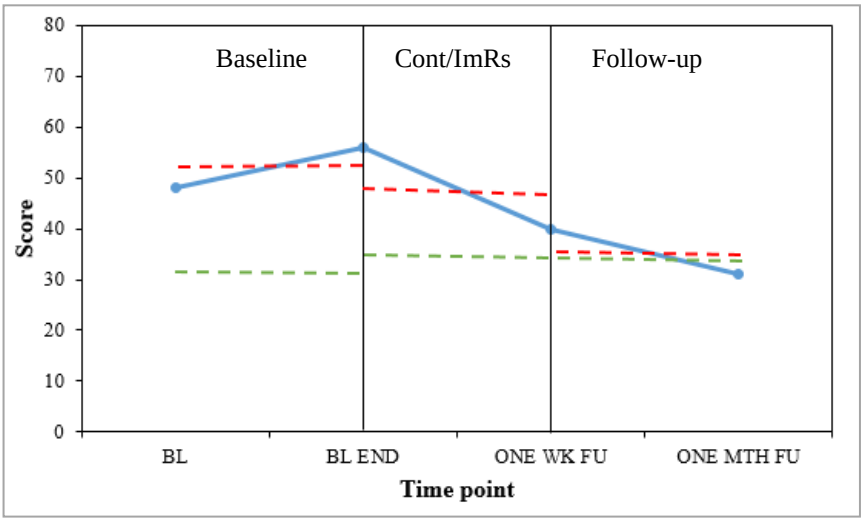
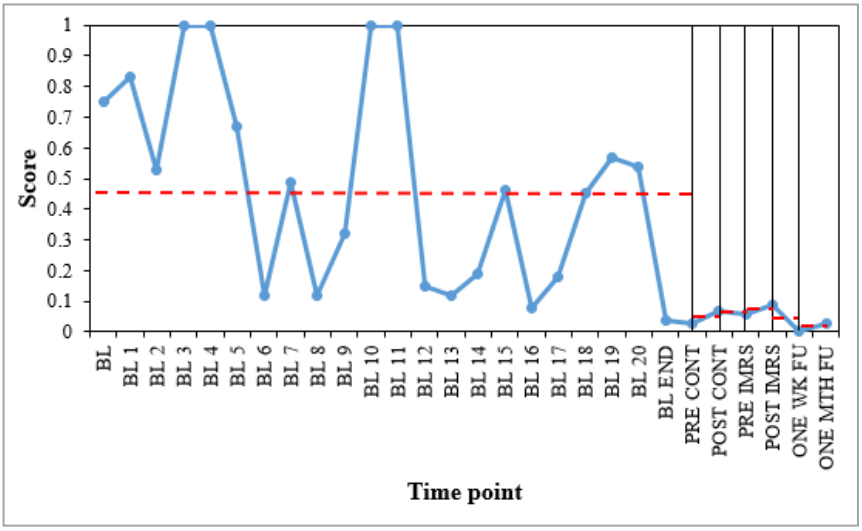


Figure 3.77. Scores on the VAS-P for Participant 10

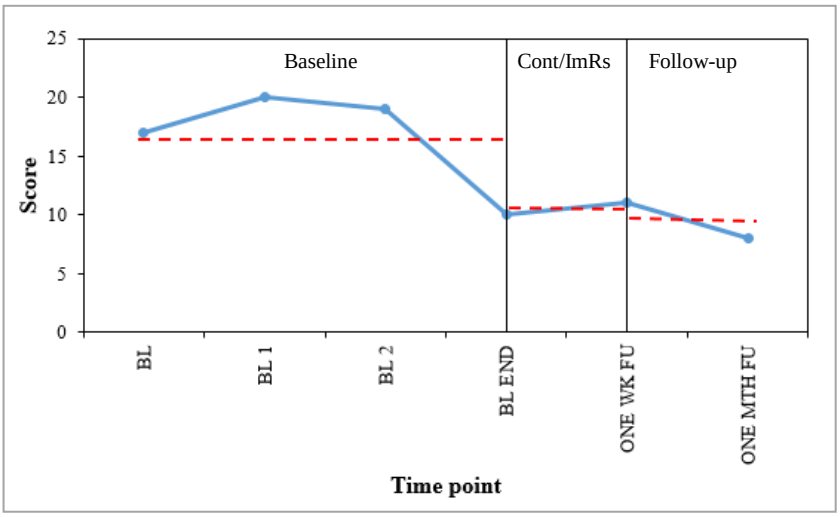


Note. = Mean; = Reliable change; BL = Baseline; BL END = End of baseline; PRE CONT = Pre-control; POST CONT = Post-control; PRE IMRS = Pre-imagery rescripting; POST IMRS = Post-imagery rescripting; ONE WK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions; Phases between POST CONT and PRE IMRS and POST IMRS and ONE WK FU indicate one week breaks.

Psychotic symptoms were in the clinical range at baseline. They decreased over the study and reliable change was found at one month follow-up. There was fluctuation in VAS-P data over baseline but ratings stabilised and remained low from the control phase. However, the data were not stable over baseline (*tau* = -.370, $p<.05$) and there were small increases in paranoia over the control and imagery rescripting phases.

3.3.10.4 Depression data

Figure 3.78. Scores on the DASS-D for Participant 10

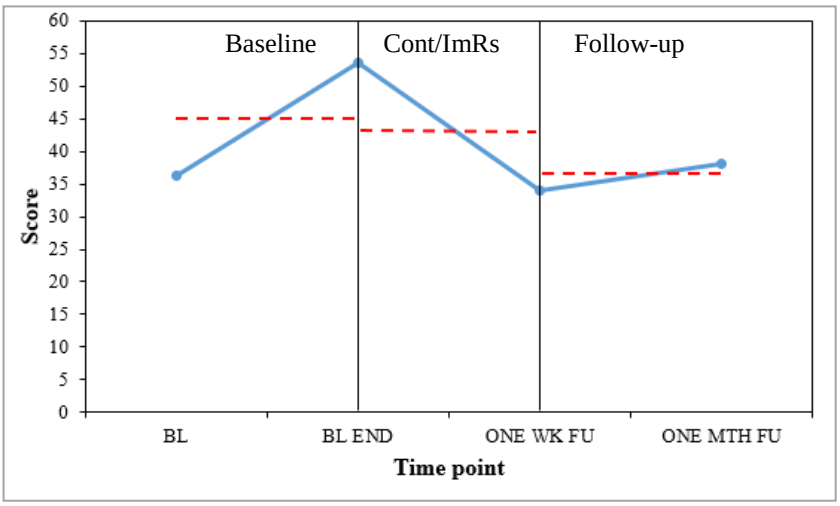


Note. – – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Over baseline, depression was stable (*tau* = -.333, p>.05) and in the clinical range. There was a decrease in scores over the study but clinical change was not found.

3.3.10.5 Social functioning data

Figure 3.79. Scores for TUS for Participant 10

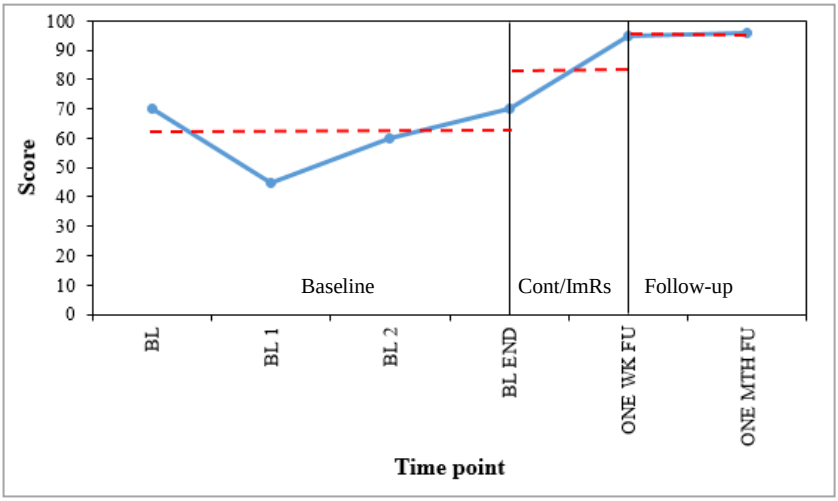


Note. – – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Social functioning increased over baseline and was in the 'non-clinical' range at the second assessment. There was a decrease in social functioning over the control/imagery rescripting phase and scores were in the clinical range at follow-up.

3.3.10.6 Quality of life data

Figure 3.80. Scores on the EQ-5D-5L VAS for Participant 10



Note. – – – – = Mean; BL = Baseline; BL END = End of baseline; ONE WEEK FU = One week follow-up; ONE MNTH FU = One month follow-up; 'Cont/ImRs' phase includes control and imagery rescripting sessions.

Quality of life was stable over baseline (*tau* = .183, p>.05). There was an increase in mean scores over the study and scores were high at follow-up. However, an increasing trend from the second baseline assessment suggests some natural improvement.

3.3.10.7 Participant summary

Reliable and clinical change in social anxiety were found following the control/imagery rescripting and follow-up phases. There was a trend in visual analogue scale data for anxiety over baseline making it difficult to attribute change to the intervention. However, scores appear to stabilise over the course of the study and

follow-up scores were low. This suggests that the intervention might have had an effect. There was a shift down in anxiety scores over the control phase and no trend over the imagery rescripting phase suggesting that the control session had a greater effect. All ideographic ratings decreased following imagery rescripting and scores were low at follow-up. There were slight reductions in memory and imagery distress and imagery vividness over the control session suggesting that this had an effect.

Psychotic symptoms decreased over the control/imagery rescripting phase and reliable change was found at one month follow-up. Although paranoia stabilised from the control session onwards, a decreasing trend over baseline and small increases in scores over the control/imagery rescripting phases makes it difficult to attribute this change to the intervention. Depression decreased over the study but clinical change was not found. Social functioning decreased over the control/imagery rescripting phase and remained in the clinical range. Quality of life increased over the control/imagery rescripting phase and remained stable at follow-up. However, there was an increasing trend from the second baseline assessment suggesting some natural improvement.

Participant 10 reported that he benefited from the intervention and that he had "not really thought about" the image and the memory since completing it. He reported feeling more confident and stated that he would be able to manage the situation if he bumped into the 'bully' again. He no longer had concerns about being assaulted.

3.4 Group analyses

In this section the data are combined and analysed in reference to each hypothesis. The total number of participants achieving reliable and/or clinical change are presented. Friedman's ANOVA is used to investigate significant change in data across the study and Wilcoxon's tests are used to investigate differences between the control and imagery rescripting sessions. Cohen's *d* repeated measures effect sizes are also calculated for the sample. Due to the small sample size these statistical analyses are exploratory and should be interpreted with some caution.

3.4.1 Primary hypotheses

3.4.1.1 Hypothesis one: There will be a reduction in social anxiety scores following imagery rescripting, measured one month after imagery rescripting

Table 3.23 shows reliable and clinical change in SIAS scores and outcome for all participants. Five participants (1, 4, 5, 7 & 10) 'recovered' (Wise, 2004). Participant 2 achieved reliable and clinical change at follow-up but also achieved reliable change at baseline. This suggests some natural improvement and this participant was therefore not classified as 'recovered'.

Three participants (1, 4 & 10) achieved reliable and clinical change following control/imagery rescripting and at follow-up. This suggests that the intervention had an effect. Two participants (5 & 7) achieved reliable and clinical change at follow-up only. This suggests that other factors may have been involved in any identified improvements. For Participant 7, a decreasing trend was observed over the baseline phase and no trend was observed over the control/imagery rescripting phase. This suggests that there might have been some natural improvement. However, reliable and clinical change were not achieved over baseline suggesting that the intervention might also have had an effect.

Table 3.23

Reliable and clinical change and outcome on the SIAS for all participants

	Reliable change			Clinical change			Outcome
Participant	**BL**	**C/I**	**FU**	**BL**	**C/I**	**FU**	(based on Wise, 2004)
1	N	Y	Y	N	Y	Y	Recovered
2	Y	N	Y	N	N	Y	*
3	N	N	N	N	N	N	Unchanged
4	N	Y	Y	N	Y	Y	Recovered
5	N	N	Y	N	N	Y	Recovered
6	N	N	N	N	N	N	Unchanged
7	N	N	Y	N	N	Y	Recovered
8	N	N	N	N	N	N	Unchanged
9	N	N	N	N	N	N	Unchanged
10	N	Y	Y	N	Y	Y	Recovered
Total	**1**	**3**	**6**	**0**	**3**	**6**	**Recovered = 5**

Note. BL = Baseline phase, C/I = Control/imagery rescripting phase, FU = Follow-up phase, Y = Yes, N = No, * = not classified as 'recovered' due to reliable change over the baseline phase.

Using data from the full sample, Friedman's ANOVA revealed significant change in SIAS scores over the phases, $\chi^2(2) = 6.20$, $p = .046$. Mean scores reduced from 57.40 (SD = 8.00) at baseline to 48.80 (SD = 15.29) at one week follow-up and 42.50 (SD = 17.48) at one month follow-up. Cohen's *d* effect size for the SIAS was 0.54 following the control/imagery rescripting phase and 0.93 at one month follow-up.

These findings suggest that, for the sample, the intervention reduced social anxiety and this was maintained at one month follow-up. The SIAS was administered

before the control session and after the imagery rescripting session. It is therefore not possible to ascertain which session had a specific effect. As the statistical tests are exploratory and mean scores remained in the clinical range, the findings should be interpreted with caution. They should also be considered in the context of individual visual inspection, which indicates that some participants did not improve.

3.4.1.2 Hypothesis two: There will be a reduction in visual analogue scale ratings related to anxiety following imagery rescripting

Eight participants (1, 3, 4, 5, 6, 7, 8 & 10) demonstrated a reduction in anxiety following imagery rescripting. Reductions in anxiety were also observed over the control session for four participants (3, 5, 8 & 10) suggesting that it had an effect. Data for two participants (5 & 10) were not stable over baseline suggesting some natural improvement. Scores for three participants (6, 7 & 8) remained high. This suggests that the intervention had limited effect for these participants.

Friedman's ANOVA revealed no significant change in anxiety over the phases, $\chi^2(2) = 7.44$, $p = .055$. Mean scores were .64 (SD = .13) at baseline, .54 (SD = .24) at post-control, .47 (SD = .23) at post-imagery rescripting and .43 (SD = .31) at one month follow-up. Cohen's *d* effect sizes were 0.49 following the control session, 0.50 following the imagery rescripting session and 0.69 at one month follow-up.

Following Wild et al. (2008), mean difference scores for the control and imagery rescripting sessions were compared. Mean difference for the control was .08 (SD = .12) and mean difference for the imagery rescripting was .12 (SD = .17). A Wilcoxon test revealed no significant difference between the sessions ($z = -6.52$, $p = .570$).

These findings suggest that the intervention reduced anxiety in most participants. In some cases anxiety reduced over the control session suggesting that it had an effect. However, the statistical analyses suggest that any changes over the study

and any differences between the sessions was not significant. Again, the exploratory nature of these tests and the results from the individual analyses should be considered.

3.4.1.3 Hypothesis three: There will be a reduction in encapsulated belief and memory distress ratings related to negative imagery following imagery rescripting

Nine participants (1, 2, 3, 4, 5, 6, 8, 9 & 10) demonstrated a reduction in encapsulated belief ratings following imagery rescripting. However, for participants 6 and 9, only small decreases in scores were observed. For Participant 8, scores increased and remained high at follow-up. Furthermore, four participants (1, 3, 5 & 8) demonstrated reductions in encapsulated belief ratings over the control session. This suggests that this session had an effect for these participants.

Friedman's ANOVA revealed significant change in encapsulated belief ratings over the study phases, $\chi^2(2) = 15.89$, $p = <0.001$. Mean scores were 94.10 (SD = 6.37) at pre-control, 86.10 (SD = 14.69) at post-control, 52.70 (SD = 34.97) at post-imagery rescripting and 52.00 (SD = 36.09) at one month follow-up. Cohen's *d* effect sizes for encapsulated belief ratings were 0.68 following the control session, 1.68 following the imagery rescripting session and 1.52 at one month follow-up.

A Wilcoxon test revealed a significant difference between the control and imagery rescripting sessions ($z = -2.10$, $p = .039$) in encapsulated belief ratings. Mean difference was 8.00 (SD = 14.56) for the control session and 32.40 (SD = 30.94) for the imagery rescripting session. This suggests the imagery rescripting had an effect on encapsulated belief but the control session did not.

Nine participants (1, 2, 3, 4, 5, 6, 7, 9 & 10) demonstrated a reduction in memory distress ratings following imagery rescripting. However, for Participant 9, a large increase in scores was observed at one week follow-up and this was maintained at

one month follow-up. Four participants (1, 3, 5 & 10) demonstrated reduction in memory distress ratings over the control session. This suggests that this session had an effect for these participants.

Friedman's ANOVA revealed a significant change in memory distress over the phases, $\chi^2(2) = 7.99$, $p = .042$. Mean scores were 72.70 (SD = 15.55) at pre-control, 73.70 (SD = 21.81) at post-control, 59.10 (SD = 31.89) at post-imagery rescripting and 46.60 (SD = 33.53) at one month follow-up. Cohen's *d* effect sizes for memory distress ratings were 0.05 following the control session, 0.41 following the imagery rescripting session and 1.09 at one month follow-up. Despite the difference in effect size, a Wilcoxon test revealed no significant difference between the control and imagery rescripting sessions ($z = -.712$, $p = .504$) in memory distress ratings.

The statistical analyses suggest that the intervention reduced encapsulated belief and memory distress ratings. They also suggest that the imagery rescripting session (but not the control session) had an effect on encapsulated belief ratings. However, some participants did not improve and some demonstrated reductions in encapsulated belief ratings over the control session. The exploratory nature of the statistical testing should be therefore be considered.

3.4.1.4 Hypothesis four: There will be a reduction in distress, vividness and frequency ratings related to negative imagery following imagery rescripting

Nine participants (1, 2, 3, 4, 5, 6, 7, 8 & 10) demonstrated a reduction in imagery distress following imagery rescripting. However, reductions for three participants (6, 7 & 8) were small and this should be considered. Also, for Participant 8, there was an increase in scores at one month follow-up. Eight participants (1, 2, 3, 5, 6, 7, 9 & 10) demonstrated reductions in imagery distress over the control session. This suggests that this session had an effect.

Friedman's ANOVA revealed significant change in imagery distress over the study phases, $\chi^2(2) = 14.81$, $p = .001$. Mean scores were 84.40 (SD = 14.55) at pre-control, 78.60 (SD = 18.08) at post-control, 67.60 (SD = 28.34) at post-imagery rescripting and 46.40 (SD = 34.80) at one month follow-up. Cohen's *d* effect sizes were 0.29 following the control session, 0.59 following the imagery rescripting session and 1.40 at one month follow-up. Despite the difference in effect size, a Wilcoxon test revealed no significant difference between the control and imagery rescripting sessions ($z = -.204$, $p = .865$) in imagery distress ratings.

Six participants (3, 4, 5, 6, 7 & 10) demonstrated reductions in imagery vividness following imagery rescripting. However, scores for Participant 3 remained high and did not show an overall improvement. For Participant 6, there was a large increase in scores over the imagery rescripting session but this reduced at follow-up. Scores for Participant 7 decreased before imagery rescripting and remained stable throughout the study. Reductions in imagery vividness were observed over the control session for four participants (1, 7, 9 & 10) suggesting that this session had an effect.

Friedman's ANOVA revealed no significant change in imagery vividness over the study phases, $\chi^2(2) = 4.46$, $p = .220$. Cohen's *d* effect sizes were 0.02 following the control session, 0.59 following the imagery rescripting session and 0.79 at one month follow-up. Despite the difference in effect size, a Wilcoxon test revealed no significant finding between difference scores for the control and imagery rescripting sessions ($z = -.459$, $p = .695$) in imagery vividness ratings.

All participants demonstrated reductions in imagery frequency following imagery rescripting. However, for seven participants (1, 2, 3, 4, 6, 7 & 10), scores remained low throughout the study. No participants demonstrated reductions in imagery frequency over the control session suggesting that it did not have an effect.

Friedman's ANOVA revealed significant change in imagery frequency over the phases, $\chi^2(2) = 19.07$, $p<.001$. Mean scores were 27.00 (SD = 30.09) at pre-control, 29.60 (SD = 34.61) at post-control, 27.00 (SD = 45.12) at post-imagery rescripting and 4.00 (SD = 7.82) at one month follow-up. Cohen's *d* effect sizes were 0.06 following the control session, 0.00 following the imagery rescripting session and 0.89 at one month follow-up. A Wilcoxon test revealed no significant difference between the control and imagery rescripting sessions (z = -.412, p = .813) in imagery frequency ratings.

Overall, these findings suggest that the intervention had an effect on imagery distress and frequency. Large effect sizes at one month follow-up suggests that the intervention may have had a greater effect with time. Non-significant differences between the control and imagery rescripting sessions suggest that both had an effect. However, a number of participants did not demonstrate reductions in imagery distress and frequency over the control session and this should be considered.

Although no significant differences were found for imagery vividness, medium effect sizes were found and some participants did improve. Similarly, some participants did not demonstrate reductions in imagery distress and frequency. Again, the exploratory nature of the statistical analyses must be taken into account.

3.4.2 Research questions

3.4.2.1 What is the effect of imagery rescripting on psychotic symptoms and paranoia in people with psychosis and social anxiety?

Psychotic symptoms remained stable and in the clinical range for six participants (1, 2, 3, 6, 8 & 9). Two participants achieved reliable change in scores. One participant (5) achieved reliable change over the control/imagery rescripting and follow-up phases and one participant (10) achieved reliable change over the follow-up phase. Two

participants (4 & 7) achieved clinical change at one week and one month follow-up and one participant (5) achieved clinical change at one month follow-up. However, a decreasing trend was observed for Participant 5 over baseline suggesting some natural improvement.

Friedman's ANOVA revealed significant change in psychotic symptoms over the phases, $\chi^2(2) = 9.39$, $p = .007$. Mean scores reduced from 39.50 (SD = 13.06) at baseline to 34.10 (SD = 14.77) at one week follow-up and 29.40 (SD = 15.39) at one month follow-up. Cohen's *d* effect sizes were 0.38 following the control/imagery rescripting phase and 0.70 at one month follow-up. However, most participants remained in the clinical range. Again, the exploratory nature of these statistical analyses should be considered.

Paranoia appeared to stabilise for three participants (1, 7 & 10) over the course of the study. Decreases in trend were observed for two participants (5 & 8) over the imagery rescripting session. However, decreases were also observed for these participants over the control session suggesting that this might have had an effect. Paranoia remained high for three participants (3, 8 & 9). Participant 2 experienced an increase in scores from the control session through to follow-up. However, there was variation in this participant's scores over the study and this should be considered.

Friedman's ANOVA revealed that there was no significant change in paranoia scores over the phases, $\chi^2(2) = 5.79$, $p = .122$. Mean scores were .53 (SD = .24) at baseline, .46 (SD = .30) at post-control, .40 (SD = .30) at one week follow-up and .44 (SD = .40) at one month follow-up. This indicates that for the sample, paranoia remained largely stable. Cohen's *d* effect sizes for the VAS-P were 0.25 following the control session, 0.26 following the imagery rescripting session and 0.23 at one month

follow-up. A Wilcoxon test revealed no significant difference between the control and imagery rescripting sessions (z = -.070, p = .984) in paranoia ratings.

The findings suggest that imagery rescripting only had an effect on psychotic symptoms for some participants. A medium effect size at one month follow-up suggests that the intervention might have had an effect with time. However, it is important to note that the statistical testing was exploratory and mean scores remained in the clinical range. The group analyses indicate that there was no change in paranoia following imagery rescripting. However, some participants experienced improvement in paranoia and some experienced deterioration. This should be considered.

3.4.2.2 What is the effect of imagery rescripting on depression in people with psychosis and social anxiety?

Depression remained in the clinical range for eight participants (1, 2, 3, 4, 6, 8, 9 & 10). Participant 5 achieved clinical change at one month follow-up and Participant 7 achieved clinical change at one week and one month follow-up. Reliable change data were not available and the findings should be interpreted with caution.

Friedman's ANOVA revealed no significant change in depression over the study phases, $\chi^2(2) = 3.13$, p = .233. Mean scores were 13.30 (SD = 3.99) at baseline, 10.90 (SD = 5.55) at one week follow-up and 11.70 (SD = 6.50) at one month follow-up. This indicates that for the sample, depression remained stable. Cohen's *d* effect sizes were 0.53 following the control/imagery rescripting phase and 0.34 at one month follow-up.

The findings suggest that the imagery rescripting had limited effect on depression. However, two participants did achieve clinical change and the exploratory nature of the statistical testing should be considered.

3.4.2.3 What is the effect of imagery rescripting on social functioning and quality of life in people with psychosis and social anxiety?

No participants achieved clinical change in social functioning. Friedman's ANOVA revealed no significant change in social functioning over the phases, $\chi^2(2) = .684$, $p = .733$. Mean scores were 21.14 (SD = 15.69) at baseline, 20.26 (SD = 16.51) at one week follow-up and 19.91 (SD = 15.66) at one month follow-up. This indicates that for the sample as a whole, social functioning remained stable and low (i.e. below the 30 hours per week clinical cut-off). Cohen's *d* effect sizes for the TUS were 0.05 following the control/imagery rescripting phase and 0.08 at one month follow-up.

Quality of life increased for seven participants (1, 3, 4, 5, 7, 9 & 10) following imagery rescripting. However, two participants (1 & 4) rated highly throughout the study and four participants (3, 5, 9 & 10) demonstrated improvements over the baseline period. This makes it difficult to attribute change to the intervention. For two participants (6 & 8) scores decreased at follow-up. This suggests that the imagery rescripting had limited effect on quality of life for these participants.

Friedman's ANOVA revealed a significant change in EQ-5D-5L VAS scores over the phases, $\chi^2(2) = 10.32$, $p = .004$. Mean scores were 54.55 (SD = 16.39) at baseline, 72.10 (SD = 17.51) at one week follow-up and 68.10 (SD = 24.42) at one month follow-up. Cohen's *d* effect sizes for the EQ-5D-5L VAS were 0.97 following the control/imagery rescripting phase and 0.61 at one month follow-up.

Overall these findings suggest that imagery rescripting had a positive effect on quality of life. A medium effect size at one month follow-up (compared to a large effect size following the control/imagery rescripting phase) might suggest that any effects were time-limited. However, the exploratory nature of the analyses should be considered.

3.5 Treatment fidelity

Analysis of the tape ratings completed by a Clinical Psychologist revealed that there was 98% concordance with the imagery rescripting script adapted from Wild & Clark (2011). Omissions included not asking two participants (1 & 3) whether they had any questions before starting the imagery rescripting and not asking three participants (8, 9 & 10) how they felt and how the memory felt to them following the imagery rescripting. The completed rating sheets are included in Appendix K.

3.6 Chapter conclusion

Five participants (1, 4, 5, 7 & 10) achieved reliable and clinical change in social anxiety at one month follow-up and were classified as 'recovered' (Wise, 2004). Reductions in visual analogue scale data for anxiety and ideographic ratings were also observed. Group analyses revealed significant changes in social anxiety, encapsulated belief, memory and imagery distress and imagery frequency ratings. Medium to large effect sizes were also found. However, these analyses were exploratory and some participants did not improve. This should be considered.

Overall the data suggest that the imagery rescripting had no adverse effects on psychotic symptoms, paranoia, depression, social functioning or quality of life. For psychotic symptoms, two participants (5 & 10) achieved reliable change and three participants (4, 5 & 7) achieved clinical change. Reductions in paranoia data were also observed in some participants. Two participants (5 & 7) achieved clinical change in depression. No participants achieved clinical change in social functioning, but quality of life increased for some participants. Group analyses revealed significant changes in psychotic symptoms and quality of life. Medium to large effect sizes were also found.

Non-significant differences were found between the control and imagery rescripting sessions for anxiety, memory and imagery distress, imagery vividness and

frequency and paranoia. This suggests that both sessions had an effect. However, some participants did not demonstrate change over the control session. Again, the exploratory nature of the statistical analyses should be considered.

CHAPTER FOUR

4. Discussion

4.1 Overview

This chapter summarises the results of the study in reference to each hypothesis with a focus on both visual inspection and the exploratory group analyses. The results are discussed in relation to existing psychological literature. Effect sizes are compared to those calculated using data from Wild et al. (2008) to investigate differences in efficacy between the studies. The clinical implications of the findings are discussed with a focus on the appropriate use of imagery rescripting with people with psychosis and social anxiety. The strengths and limitations of the current study are highlighted and avenues for future research are identified.

4.2 Summary of results

4.2.1 Primary hypotheses

4.2.1.1 Hypothesis one: There will be a reduction in social anxiety scores following imagery rescripting, measured one month after imagery rescripting

In support of hypothesis one, five participants (1, 4, 5, 7 & 10) achieved reliable and clinical change in social anxiety at one month follow-up and were classified as 'recovered' (Wise, 2004). Although reliable and clinical change were also found for Participant 2, reliable change was observed over the baseline phase. This suggests some natural improvement and makes it difficult to attribute change to the intervention.

Four participants (3, 6, 8 & 9) did not achieve reliable and clinical change at follow-up and were classified as 'unchanged' (Wise, 2004). Scores for these participants remained largely stable and high throughout the study. This does not support hypothesis one, indicating that the imagery rescripting did not always lead to a reduction in social anxiety, measured one month after the rescripting.

The group analyses revealed a significant change in social anxiety across the study and medium to large effect sizes were found following imagery rescripting. Although this offers further support for hypothesis one, mean scores remained in the clinical range. This suggests that for the sample as a whole the intervention had limited effect. However, the exploratory nature of these analyses should be considered. It should also be noted that some participants did achieve change in social anxiety following imagery rescripting.

Overall the findings offer partial support for hypothesis one, indicating that social anxiety reduced following imagery rescripting in some participants but not all.

4.2.1.2 Hypothesis two: There will be a reduction in visual analogue scale ratings related to anxiety following imagery rescripting

In support of hypothesis two, eight participants (1, 3, 4, 5, 6, 7, 8 & 10) demonstrated a reduction in anxiety following imagery rescripting. However, for some participants data were unstable over baseline (5 & 10) or only minimal changes were observed (6, 7 & 8). This makes it difficult to attribute change to the intervention rather than other factors (e.g. natural improvement or measurement variability). Furthermore, reductions in anxiety were observed for four participants (3, 5, 8 & 10) over the control session. This suggests that the control session also had an effect for these participants.

Two participants (2 & 9) did not demonstrate reduction in anxiety following imagery rescripting. Instead, scores increased from the control session through to follow-up. These findings do not support hypothesis two, indicating that the imagery rescripting did not always lead to a reduction in anxiety ratings.

The group analyses revealed no significant change in anxiety and medium effect sizes were found across the study. Again, these findings do not support hypothesis two. However, the majority of participants did show some improvement in anxiety and the

results of these exploratory analyses should be treated with caution.

Overall the findings offer partial support for hypothesis two, indicating that the imagery rescripting led to some reduction in anxiety in most participants. Whereby imagery rescripting did lead to reduction in anxiety, the magnitude of change varied between participants, with some benefiting more than others. However, the group analyses should be interpreted with caution.

4.2.1.3 Hypothesis three: There will be a reduction in encapsulated belief and memory distress ratings related to negative imagery following imagery rescripting

In support of hypothesis three, nine participants (1, 2, 3, 4, 5, 6, 8, 9 & 10) demonstrated a reduction in encapsulated belief ratings following imagery rescripting. However, for three participants (6, 8 & 9) the overall change was minimal. One participant (7) did not demonstrate a reduction in encapsulated belief, consistently rating it as '100'. This does not support hypothesis three, suggesting that a reduction in encapsulated belief ratings was not always observed following imagery rescripting. Furthermore, four participants (1, 3, 5 & 8) demonstrated a reduction in encapsulated belief ratings over the control session, suggesting that this had an effect.

In further support of hypothesis three, nine participants (1, 2, 3, 4, 5, 6, 7, 9 & 10) demonstrated reductions in memory distress ratings following imagery rescripting. However, for Participant 9 there was a small increase in ratings over the imagery rescripting phase and a large increase at follow-up. In contrast to hypothesis three, Participant 8 did not demonstrate a reduction in memory distress ratings following imagery rescripting. Furthermore, scores for this participant increased over the study. A reduction in memory distress ratings was observed for four participants (1, 3, 5 & 10) over the control session. This suggests that this had an effect for these individuals.

The group analyses revealed a significant difference in encapsulated belief ratings over the study phases. Large effect sizes were found following imagery rescripting, compared to a medium effect size following the control session. This offers further support for hypothesis three. A significant difference in memory distress ratings was also found across the study phases. A small effect size was found following the control session, a medium effect size was found following imagery rescripting and large effect size was found at follow-up. Although this offers support for hypothesis three it is important to interpret the findings from the exploratory analyses with caution. However, most participants did demonstrate reduction in memory distress following imagery rescripting and this should be considered.

Overall, the findings support hypothesis three, indicating that there was a reduction in encapsulated belief and memory distress ratings following imagery rescripting in most participants. The group analyses support this, highlighting significant reductions in encapsulated belief and memory distress following imagery rescripting. Again, the exploratory nature of the statistics should be considered.

4.2.1.4 Hypothesis four: There will be a reduction in distress, vividness and frequency ratings related to negative imagery following imagery rescripting

In support of hypothesis four, nine participants (1, 2, 3, 4, 5, 6, 7, 8 & 10) demonstrated reduction in imagery distress ratings following imagery rescripting, six participants (3, 4, 5, 6, 7 & 10) demonstrated reductions in imagery vividness and all participants demonstrated reductions in imagery frequency. However, three participants (6, 7 & 8) only achieved small reductions in imagery distress. Imagery vividness scores also remained high for Participant 3. For seven participants (1, 2, 3, 4, 6, 7, & 10), imagery frequency was low throughout the study. This should be considered.

One participant (9) did not demonstrate a reduction in imagery distress ratings

following imagery rescripting. Although there was variation in scores, four participants (1, 2, 8 & 9) did not show an overall reduction in imagery vividness and scores remained high for these participants at follow-up. This does not support hypothesis four and suggests that imagery rescripting did not lead to reductions in imagery distress and vividness ratings in all participants. Over the control session, a reduction in imagery distress ratings was observed for eight participants (1, 2, 3, 5, 6, 7, 9 & 10) and a reduction in imagery vividness was observed for four participants (1, 7, 9 & 10). This suggests that the control session had an effect for these individuals.

In further support of hypothesis four, the group analyses revealed significant changes in imagery distress and frequency across the study. For imagery distress, medium to large effect sizes were found after imagery rescripting, compared to a small effect size after the control session. For imagery frequency, a large effect size was found at follow-up compared to small effect sizes following the control and imagery rescripting sessions. This suggests a delayed effect on imagery frequency ratings. There was no significant change in imagery vividness over the study phases but medium effect sizes were found following imagery rescripting and at follow-up, compared to a small effect size following the control session. These findings offer partial support for hypothesis four. However, the exploratory nature of the analyses should be considered.

Overall the findings offer partial support for hypothesis four, suggesting that imagery rescripting led to a reduction in imagery distress, vividness and frequency in most participants but not all. This is supported by the group analyses which indicate significant change in imagery distress and frequency across the study phases. Although the group analyses revealed a non-significant reduction in imagery vividness, some of the participants did improve and medium effect sizes were found following imagery rescripting. This should be taken into account when interpreting the findings.

4.2.2 Research questions

4.2.2.1 What is the effect of imagery rescripting for social anxiety on psychotic symptoms and paranoia in people with psychosis?

Psychotic symptoms remained stable and in the clinical range for six participants (1, 2, 3, 6, 8 & 9) following imagery rescripting. This suggests that the imagery rescripting had no effect on psychotic symptoms for these participants. Reliable change was found for two participants (5 & 10) and clinical change was found for three participants (4, 5 & 7). However, a decreasing trend was observed over baseline for Participant 5. This suggests some natural improvement and should be considered.

The group analyses revealed a significant reduction in psychotic symptoms over the study and a medium effect size was found at follow-up. This suggests that for the sample the imagery rescripting had a positive effect on psychotic symptoms. However, mean scores remained in the clinical range suggesting that any effect was limited. The exploratory nature of the statistical analyses should also be taken into account.

Paranoia appeared to stabilise for three participants (1, 7 & 10) suggesting that the imagery rescripting had a positive effect. Improvements in paranoia were observed for two participants (5 & 8) over the imagery rescripting session. However, improvements were also observed over the control session for these participants, suggesting that it had an effect. Paranoia remained high for three participants (3, 8 & 9) and Participant 2 demonstrated an increase in scores from the control session through to follow-up. This suggests that the imagery rescripting might have had a negative effect on paranoia for Participant 2. For some participants (2, 5 & 8) there was variation in scores throughout the study and this should be considered.

The group analyses revealed no significant change in paranoia and small effect sizes over the course of the study. This suggests that the imagery rescripting did not

have an effect on paranoia. However, it should be considered that these statistics were exploratory and some participants did show improvements.

Overall, psychotic symptoms remained stable for most participants and the imagery rescripting only had a positive effect for some. For paranoia, both positive and negative effects were observed. Although the group analyses suggest a significant reduction in psychotic symptoms and no change in paranoia, they were exploratory and should therefore be interpreted with caution.

4.2.2.2 What is the effect of imagery rescripting for social anxiety on depression in people with psychosis?

Clinical change in depression was observed in two participants (5 & 7) at follow-up suggesting that the imagery rescripting had a positive effect for these individuals. Reliable change data for the DASS-D were unavailable and this should therefore be interpreted with caution.

Scores for all other participants remained in the clinical range suggesting that the imagery rescripting had no effect for these individuals. The group analyses revealed no significant change in depression over the study. Although a medium effect size was found following imagery rescripting, a small effect size was found at follow-up. Overall the findings suggest that the imagery rescripting had limited effect on depression. However, the exploratory nature of the statistics should be considered.

4.2.2.3 What is the effect of imagery rescripting for social anxiety on social functioning and quality of life in people with psychosis?

No participants achieved clinical change in social functioning. The group analyses revealed no significant change over the study phases and small effect sizes were found following imagery rescripting and at follow-up. This indicates that the imagery rescripting had no effect on social functioning.

Quality of life scores increased for seven participants (1, 3, 4, 5, 7, 9 & 10) following imagery rescripting. However, increases in trend at baseline were observed for four participants (3, 5, 9 & 10) suggesting some natural improvement. Also, scores for two participants (1 & 4) were high throughout the study. A decrease in quality of life scores was observed for two participants (6 & 8) at follow-up.

Group analyses revealed a significant change in quality of life scores over the study and a large effect size following imagery rescripting. This suggests that the imagery rescripting had a positive effect on quality of life. However, a medium effect size was found at follow-up suggesting that any effect was time-limited. The exploratory nature of these statistics should also be considered in interpretation.

4.3 Qualitative information

It is worth noting that all participants reported benefiting from the imagery rescripting in some way. Participant 6 explained that it helped him to consider his actions in the remembered event but he found it difficult to describe himself in the third person. Likewise, Participant 7 reported some benefit but found it difficult to visualise himself in the event. Both participants had Asperger's syndrome and their performance may have been influenced by the difficulties associated with their diagnosis.

Participant 8 felt that the imagery rescripting allowed him to consider other perspectives, but he stopped and asked for reassurance part way through as he thought he had said something inappropriate. Participant 9 felt that the imagery rescripting allowed him to think about how to handle difficult situations. However, he did not want to close his eyes and there was background noise during the imagery rescripting. This might have affected the efficacy of the intervention and should be considered.

4.4 Links to existing literature

The findings will be evaluated in reference to the literature presented in the first chapter. The individual and group analyses will be considered, as well as the encapsulated belief, memory and imagery data obtained for each participant.

4.4.1 Imagery rescripting

As with research investigating imagery rescripting in social phobia (e.g. Frets et al., 2014; Lee & Kwon, 2013; Nilsson et al., 2012; Wild et al., 2007; Wild et al., 2008) the group analyses found significant reductions in social anxiety following imagery rescripting. In line with Wild et al. (2007, 2008), significant reductions in encapsulated belief, memory and imagery distress and imagery frequency ratings were also found. However, the individual analyses highlighted that not all participants improved on these measures. Unlike Wild et al. (2007, 2008), the group analyses did not find significant reductions in imagery vividness. However, some participants did improve on these measures and this should also be considered.

Table 4.1 displays effect sizes for the current study and for Wild et al's (2008) study. Unfortunately Wild et al. (2008) do not provide post-control session data for imagery distress, vividness or frequency. Instead, the post-control session effect sizes for Wild et al's (2008) imagery ratings were calculated using pre-control and pre-imagery rescripting session data. This should be considered in interpretation.

Table 4.1

Effect sizes for the current study and Wild et al's (2008) study

	Current study			**Wild et al. (2008)**		
Measure	Post-Cont	Post-IMRS	Follow-up	Post-Cont	Post-IMRS	Follow-up
Social anxiety	*	0.54	0.93	0.04	1.09	1.04
Encapsulated belief	0.68	1.68	1.52	0.49	2.71	2.54
Memory distress	0.05	0.41	1.09	0.27	2.25	1.81
Imagery distress	0.29	0.59	1.40	0.08	*	1.17
Imagery vividness	0.02	0.59	0.79	0.34	*	1.17
Imagery frequency	0.06	0.00	0.89	0.23	*	0.24

Note. Post-Cont = post-control; Post-IMRS = post-imagery rescripting; * = data were not available to calculate effect sizes; imagery distress, vividness and frequency data for Wild et al. (2008) calculated using pre-control and pre-imagery rescripting session data; follow-up for Wild et al. (2008) was one week, follow-up for the current study was one month.

In the current study, medium to large effect sizes were found following the imagery rescripting session and at follow-up (with the exception of memory distress and imagery frequency, which yielded a medium and small effect size following the imagery rescripting session, respectively). This is compared to large effect sizes in Wild et al's (2008) study (with the exception of imagery frequency which yielded a small effect size at follow-up). Overall these findings suggest that imagery rescripting is slightly less efficacious in the current study. However, the exploratory nature of these calculations must be considered.

In both studies, small effect sizes were found following the control session (with the exception of encapsulated belief in the current study, which yielded a medium effect

size). This suggests that in both studies the imagery rescripting session had a greater effect than the control session. However, the effect sizes for the current study should be interpreted in the context of the findings presented above, which indicate that some participants showed greater improvements over the control session than the imagery rescripting session.

In support of Wild et al. (2008) the group analyses found a significant difference between the control and imagery rescripting sessions in the reduction of encapsulated belief ratings. Mean difference scores were higher for the imagery rescripting session suggesting a greater effect. However, four participants (1, 3, 5 & 8) achieved reductions in encapsulated belief over the control session. This differs from Wild et al's (2008) findings, suggesting that the control session might have had an effect for some participants. The exploratory nature of the group analysis should be considered.

The group analyses revealed no significant difference between the control and imagery rescripting sessions in VAS-A data or memory distress ratings. This is contrary to Wild et al's (2008) finding that there was a significant difference between the sessions for social anxiety and memory distress ratings. In the current study, four participants (3, 5, 8 & 10) demonstrated reductions in anxiety and four participants (1, 3, 5 & 10) demonstrated reductions in memory distress over the control session. These findings suggest that the control session might have had an effect for some participants. Again, the exploratory nature of the group analyses should be considered.

Even though changes were observed over the control session for some participants, greater improvement was often observed over the imagery rescripting session. For instance, Participant 5 achieved greater improvement in anxiety, two participants (5 & 8) achieved greater improvement in encapsulated belief ratings and

three participants (1, 3 & 5) achieved greater improvement in memory distress ratings. This offers support for Wild et al. (2008) and should be considered.

Wild et al. (2008) did not calculate difference scores for imagery distress, vividness or frequency. In the current study, no significant differences were found between the control and imagery rescripting sessions for these ratings. Eight participants (1, 2, 3, 5, 6, 7, 9 & 10) demonstrated reductions in imagery distress and four participants (1, 7, 9 & 10) demonstrated reductions in imagery vividness over the control session suggesting that this had an effect for these participants.

No participants demonstrated change in imagery frequency over the control session. Imagery frequency was rated for the preceding week and all participants duplicated their pre-control session rating at post-control. Although no significant difference was found between the control and imagery rescripting sessions, scores for seven participants (1, 2, 3, 4, 6, 7 & 10) were low throughout the study and change was minimal. This should be considered in interpretation of the group analysis. No significant difference was found between the control and imagery rescripting sessions for paranoia. Although paranoia decreased for two participants (5 & 8) over the imagery rescripting session, reductions were also observed over the control session.

Despite the calculated differences in effect size between the control and imagery rescripting sessions, the findings from the current study suggest that the control session did have an effect for some participants. This is contrary to data provided by Wild et al. (2008) that suggests it had no effect. In the current study, exposure to the image and memory in the control session might have led to improvements.

4.4.2 Theories related to imagery rescripting

The observed change in some participants and the significant group findings can be explained using theoretical models of imagery rescripting. In reference to Arntz and

Weertman's (1999) work, it is possible that the final stage of the procedure allowed participants to introduce new information to their younger representation of self. In support, emotional processing theory (Foa & Kozak, 1986) would suggest that the imagery rescripting encouraged exposure to the fear memory and modification of this using new and corrective information. In reference to Teasdale and Barnard's (1993) interacting cognitive subsystems theory, the imagery rescripting might have allowed information to move from the propositional ("knowing") to the implicational ("feeling") subsystem, allowing the participants' memories to be reappraised.

In addition, it is possible that the imagery rescripting changed the meaning of the chosen event through US revaluation, whereby the distressing memory represented the US. This might have allowed participants to generalise to other contexts (Arntz, 2011) and use a positive image in place of the original distressing image (Arntz, 2012). Finally, Brewin's (2006) retrieval competition hypothesis would suggest that the imagery rescripting allowed the participants to increase the strength of their positive representations of self through the introduction of new information, replacing their pre-existing negative representations.

4.4.3 CBT for social anxiety in psychosis

Although the group findings suggest that imagery rescripting may be an effective intervention for social anxiety in people with psychosis, five out of the 10 participants did not 'recover' (Wise, 2004). This suggests that whilst effective for some, it may not work for all. Nevertheless, the current study does offer some support for studies investigating cognitive behavioural interventions for social anxiety in people with psychosis (e.g. Gega et al., 2013; Good, 2002; Halperin et al., 2000; Kingsep et al., 2003; Tully & Edwards, 2009). Whilst they should be interpreted with caution, the effect sizes presented above are comparable to the medium to large effect sizes

calculated for some of the studies investigating the utility of CBT for social anxiety in people with psychosis (e.g. Gega et al., 2013; Kingsep et al., 2003). They can also be compared to the effect sizes for CBT for social phobia (e.g. Gil et al., 2001).

4.4.4 Cognitive-behavioural models

Although the main purpose of this research is to investigate the efficacy of imagery rescripting for social anxiety in people with psychosis, the data obtained also offer support for cognitive-behavioural models. For instance, all participants experienced dysfunctional beliefs about themselves, other people or the world, based on negative life experiences (Garety et al., 2001; Morrison, 2001). In reference to models of social anxiety, the participants also appeared to experience a shift in attention towards themselves (Clark & Wells, 1995) and mental representations of how they believed they were perceived by others (Rapee & Heimberg, 1997).

4.4.5 Models of psychosis and social anxiety

The data obtained in the current study can be applied to models of psychosis and social anxiety. In reference to Michail and Birchwood's (2009) pathways model, themes of persecution from others were common in the participants' beliefs. Nine participants (1, 2, 3, 5, 6, 7, 8, 9 & 10) also experienced paranoia. Interestingly, those with more severe levels of social anxiety experienced higher levels of paranoia (i.e. 6, 8 & 9). In addition, eight participants (1, 2, 4, 5, 6, 8, 9 & 10) 'jumped to conclusions' in their beliefs, making negative attributions about others' behaviour (Freeman et al., 2000). Although this information cannot be used to draw conclusions about specific pathways, it does support an association between psychosis and social anxiety.

The data also support Birchwood et al's (2007) stigma processing model of psychosis and social anxiety. Eight of the 10 participants (1, 2, 3, 4, 5, 6, 8 & 9) appeared to experience images concerned with others judging and rejecting them, also

known as an ‘other-to-self’ focus. Of these eight participants, seven (1, 3, 4, 5, 6, 8 & 9) appeared to focus attention on themselves and how they might appear to others (e.g. saying or doing something embarrassing or inappropriate), or a ‘self-to-self’ focus.

Participant 2 experienced something slightly different with her attention focused on other people rather than herself (i.e. “people laughing and saying horrible things”). Participant 7 did not appear concerned about how others’ perceived him, focusing instead on feeling nervous and the situation he was in being unmanageable. This participant had a diagnosis of Asperger’s syndrome and found it difficult to articulate why he was nervous about being in public. This is likely to have influenced the information provided and should be considered.

The data also provide support for Newman-Taylor and Stopa’s (2013) model of paranoia. Excluding Participant 7, all participants experienced fear of others, self-consciousness, perceptions of interpersonal threat or beliefs about being inadequate and inferior. A perception of others as fearful was especially true for Participant 10 who explained that he was concerned about being approached by a ’bully’ he once knew and that he would be physically assaulted.

4.4.6 Imagery

All participants were able to describe an image that was distressing to them. This supports previous research suggesting that dysfunctional images are common in psychosis and social anxiety (e.g. Hackmann et al., 1998; Morrison et al., 2002; Schulze et al., 2013). Based on data obtained during the semi-structured interview (Hackmann et al., 1998; Hackmann et al., 2000, as cited in Cooke, 2012), seven participants (1, 2, 3, 6, 7, 8 & 9) held a ‘field’ perspective, two participants (5 & 10) held an observer perspective and one participant (4) experienced both perspectives. This offers support for Lockett et al. (2012) who suggest that a ‘field’ perspective is common in psychosis.

Five participants (1, 3, 4, 5, 6 & 8) appeared to hold images concerned with social performance, whereas three participants (2, 5 & 10) had concerns that seemed to be related more to fear and paranoia. Participant 9 appeared to hold concerns that were based in both social performance and fear and paranoia (i.e. "looking nervous in public and having people stare at me"). Again, Participant 7 found it difficult to articulate his concerns. Overall these findings are contrary to Lockett et al's (2012) suggestion that people with psychosis and social anxiety are more likely to experience imagery related to fear and paranoia. However, it must be considered that the participants are likely to have additional images beyond those discussed as part of the current study.

4.5 Clinical implications

This study offers some support for the use of imagery rescripting for social anxiety in people with psychosis. Five participants 'recovered' and given the brief nature of the intervention, this is promising. No participants achieved reliable change in the opposite direction and 'deteriorated' (Wise, 2004). This suggests that imagery rescripting should not increase social anxiety in people with psychosis. Although some participants did not recover, important information was gained about the suitability and feasibility of imagery rescripting for people with psychosis and social anxiety.

First, it is clear that the nature of the participants' difficulties impacted on their ability to benefit from the intervention. Two of the participants (6 & 7) had diagnoses of Asperger's syndrome and they found it challenging to take part in the imagery work. This might be expected as impairment in imagination is a core feature of the condition (Attwood, 2007). These individuals could have been excluded. However, including them has highlighted the need to provide time and support if using imagery rescripting with individuals with psychosis and comorbid autistic spectrum conditions.

Of those who remained 'unchanged', two participants (8 & 9) experienced high levels of social anxiety and paranoia. As previously noted, they found it difficult to fully take part in the imagery rescripting. It is interesting to note that two participants (3 & 6) had a diagnosis of paranoid schizophrenia. In its current format, imagery rescripting may not be as effective for those with more enduring presentations. It appears that the intervention was far more effective for those who had experienced a brief psychotic episode or psychotic symptoms associated with a mood disorder.

Despite this suggestion, it is important to note that the imagery rescripting did not exacerbate psychotic symptoms in any participants. Furthermore, some participants' psychotic symptoms improved. Improvements in depression and quality of life were also observed in some participants. This suggests that imagery rescripting might offer additional benefits for people with psychosis and social anxiety. Although Participant 2 demonstrated an increase in paranoia following imagery rescripting, variation in scores was observed over the study. Increases in paranoia were not observed in any other participants.

Craig et al. (2013) note that investigations of complex interventions should be ethical. With this in mind, the current study suggests that imagery rescripting is a safe intervention for people with psychosis and social anxiety. None of the participants reported finding the intervention distressing and as noted above, the intervention did not exacerbate psychological symptoms. Although Participant 8 asked to stop the intervention (due to concerns about having said something inappropriate), he felt able to continue after a short discussion. Those participants with a diagnosis of Asperger's syndrome (6 & 7) experienced difficulties in memory visualisation but this did not appear to have an adverse effect on their wellbeing. The experience of these

participants highlights the flexibility of imagery rescripting and suggests that it can be used in a safe and ethical manner with those with complex and comorbid issues.

For a small number of participants (1, 3, 4 & 8), improvements were seen in ideographic ratings following imagery rescripting but some of these increased at follow-up. This suggests that when using imagery rescripting for social anxiety in people with psychosis, extended intervention or 'booster' sessions might be necessary. Given that a two session intervention had effects in this study, this could still be achieved in line with current service and financial restraints.

Despite some finding it challenging, most of the participants completed the imagery rescripting and reported that it was useful. The use of an intervention that is able to engage individuals is worthwhile, especially in a client group where motivation tends to be low. However, for those with more severe difficulties imagery rescripting might need to be incorporated into an extended CBT programme focused on the individual needs and wishes of the client. For those with less severe presentations, using imagery rescripting as a stand-alone treatment might be possible. This has the potential to be a short-term and cost-effective clinical tool.

4.6 Strengths of the study

The use of a multiple baseline case series allowed for systematic and detailed investigation of change as a result of the intervention. All participants received the intervention and acted as their own control, allowing effects to be attributed to the intervention rather than extraneous factors (Kazdin, 2010). Randomisation, standardised measures and follow-up assessments were used. With the exception of a small number of missing data and those participants who dropped out, all participants completed the measures and sessions.

The inclusion of a number of assessment sessions at the beginning of the study allowed the Chief Investigator to build trust and rapport with the participants before commencing the intervention. This was important given the nature of the client group and the presenting difficulties. The use of a manualised treatment approach (taken from Wild & Clark, 2011) enables the study to be replicated in other settings. A particular strength of this study was the investigation of treatment fidelity. The tape ratings indicated that the imagery rescripting script was followed closely.

4.7 Limitations of the study

4.7.1 Study design

Kazdin (2010) notes that findings from case series designs might not be able to be generalised beyond the participants studied. This study used a small sample that was underpowered for statistical analysis, meaning the findings should be interpreted with caution. Although overall retention was good, three participants dropped out in the early stages of the study. Whilst this provides useful information about the feasibility of investigating novel interventions in people with psychosis and social anxiety, the final sample may not be representative of the original population.

In addition, the number of participants in each baseline condition was uneven, with three participants in the one week block, three in the two week block and four in the three week block. It would have been useful to have recruited two more participants for the one and two week blocks, allowing more data to be obtained. Unfortunately the time limits of the study did not allow for this. The use of a multiple baseline design also raises ethical questions about withholding the intervention (Kazdin, 2010). It is possible that those who dropped out might have stayed in the study and benefited had the intervention been provided sooner.

Participant 7 was classified as 'recovered' despite only achieving reliable and clinical change at one month follow-up. There was also a decreasing trend over the baseline phase and no trend over the intervention phase. It is possible that other factors were involved in this participant's improvement and this makes it difficult to fully attribute change to the intervention. Although Kazdin (2010) claims that single case series designs allow changes to be attributed to the intervention rather than extraneous factors (Kazdin, 2010), there is always potential for other factors to be involved. This should be considered for all participants included in this study.

4.7.2 Measures

Due to budget restraints, the Chief Investigator was required to administer the outcome measures and the intervention. It is possible that this led to demand characteristics in the participants and affected the internal validity of the study. More specifically, the participants might have felt inclined to show that they were benefiting from the intervention and their responses may have been influenced by this. A lack of assessor blinding was a common issue found in CBT for anxiety in the context of psychosis in the literature review presented in the first chapter. Although the current study was unable to address this directly, participants were encouraged to complete the majority of the assessments on their own. Unfortunately this was not possible for the TUS as this requires clinician administration. It is also worth noting that many of the participants found it difficult to remember their activity levels when responding to the TUS and it is possible that the data obtained are not reliable.

Unlike Wild et al. (2008) the current study did not take a measure of social anxiety immediately after the control or imagery rescripting sessions. This makes it difficult to ascertain whether change occurred within these sessions or after a period of time (i.e. one week or one month follow-up). Likewise, the omission of the SIAS, SSI,

DASS-D, TUS and EQ-5D-5L after the control session (and before the imagery rescripting session) did not allow the individual effect of these sessions to be measured. This is problematic as it is not clear how effective the imagery rescripting session was, or whether the control session had an effect. Although the VAS-A was administered after the control and imagery rescripting sessions, use of the word 'anxiety' rather than 'social anxiety' may mean that different concepts were being measured. This study also used a different social anxiety measure to Wild et al. (2008). Use of the same measure would have allowed for a more accurate comparison between the studies.

The participants in this study were asked to complete a large quantity of assessments. This might have led to practice or fatigue effects. Although counterbalancing can be used to reduce such effects (Robson, 2011), this was not possible in the current study as the order of the control and imagery rescripting sessions could not be changed (Wild et al., 2008). Also, given that the participants experienced high levels of social anxiety and paranoia, the responses given to the measures might have been influenced by individual interpretation or demand characteristics.

4.7.3 Intervention

Excluding Participant 4, all participants achieved control session change in at least one measure or ideographic rating. No tape ratings were made of the control session making it difficult to see whether treatment adherence was upheld. Wild et al. (2008) note that providing the control session first may allow the imagery rescripting session to be more effective. Wild et al. (2007) also explain that the format of the imagery rescripting session does not allow for separate analysis of reliving, cognitive restructuring and imagery rescripting. This applies to the current study and makes it difficult to ascertain how effective the different components of treatment were.

It is also unclear how much of the observed change was influenced by increased contact and rapport with the Chief Investigator. Therapeutic improvements can often be seen as a result of non-specific factors such as effective alliance (Messer & Wampold, 2002) and it is possible that this occurred. With this in mind, it was more difficult for the Chief Investigator to build trust and rapport with those experiencing higher levels of social anxiety and paranoia or comorbid issues such as Asperger's syndrome or drug abuse. This might have influenced the results obtained and should be considered.

The participants were aware that it was a feasibility study and their willingness to help might have influenced their approach. All participants were keen to improve their situation or assist with the research and motivational or volunteer effects might have been present. It should also be considered that the Chief Investigator's confidence and skill in administering the intervention is likely to have increased as the study progressed. Unfortunately, study progression was also associated with increasing participant complexity making it difficult to investigate this.

4.7.4 Statistical analysis

Despite being underpowered for statistical analysis, this study used exploratory non-parametric tests and repeated measures effect size calculations. Although these have been interpreted with caution throughout, the lack of power limits confidence in the findings. Also, due to the issues in study design, it was not possible to calculate statistics investigating differences between the control and imagery rescripting sessions for the SIAS, SSI, DASS-D, TUS and EQ-5D-5L. It should also be considered that Wild et al. (2008) used parametric statistics to investigate changes over the study phases and differences between the control and imagery rescripting sessions. The use of non-parametric statistics are justified in the current study due to the small sample size.

However, a different approach to analysis makes it difficult to fully compare the findings with Wild et al's (2008) study.

4.8 Future research

Although the findings from the current study are mixed, they show some promise for the use of imagery rescripting in people with psychosis and social anxiety. Further research is therefore warranted. Guidelines for complex interventions (Craig et al., 2013) note that small pilot studies offer a first step in assessing interventions for efficacy and feasibility. Although they provide initial data regarding the efficacy of an intervention, the findings may be different when applied to larger samples or wider settings. Further research might be needed to refine the design, with consideration of methodological issues and limitations. This should be followed by larger scale studies that use randomisation (Craig et al., 2013). This is considered in greater detail below.

If replicating the current study, future research should plan the frequency of measures so that the effect of separate components of treatment (including the control session) can be observed. Alternatively, future studies could utilise a between-subjects design with participants being randomised to a control session group or an imagery rescripting session group. This would also eliminate the possibility of crossover effects between the two sessions (Wild et al., 2008). In line with Wild et al. (2007) it would also be useful to compare those receiving reliving, cognitive restructing or imagery rescripting. This would go some way to indicate which part of the imagery rescripting session is most effective. Studies should also recruit larger samples with statistical power, allowing inferential statistics to be used with more confidence.

Future studies should also ensure that assessments are completed by independent assessors blind to treatment allocation. The control session should be rated to investigate potential crossover of therapeutic skills between sessions or groups. The

same standarised assessments of social anxiety should be used between studies, allowing for more accurate comparison. As suggested by Wild et al. (2008), the use of more robust measures of imagery and memory would be beneficial. Although the treatment fidelity rating sheet used in this study was useful, future research could also look to develop its format in line with rating scales for CBT, such as the Cognitive Therapy Scale – Revised (CTSR; Blackburn et al., 2001).

Wild et al. (2007) note that imagery rescripting could be delivered in a longer format. This also applies to this study, especially for those with more enduring difficulties that did not appear to benefit from the brief nature of the intervention. Future studies could compare an increasing number of imagery rescripting sessions between individuals or groups with different presentations. This would allow conclusions to be drawn regarding optimum treatment length.

4.9 Conclusion

This study offers partial support for the use of imagery rescripting for social anxiety in people with psychosis. Five out of the 10 participants 'recovered', demonstrating reliable and clinical change in social anxiety post-intervention and/or at follow-up. Individual and group analyses found improvements, significant reductions and medium to large effect sizes for anxiety and encapsulated belief and memory and imagery ratings. However, improvements were not always observed and the exploratory group statistics should be interpreted with caution.

Overall there was no deterioration in psychotic symptoms, paranoia, depression, social functioning or quality of life, and in some cases improvements were found. Those with less complex presentations appeared to benefit from the imagery rescripting most. It might be a suitable short-term and cost-effective intervention for these individuals. Those experiencing more severe and enduring psychotic disorder or

comorbid issues may require more time, support or comprehensive treatment. Overall, the findings are promising and further research investigating imagery rescripting for social anxiety in the context of psychosis is warranted. This should aim to improve on the current study by keeping the identified limitations in mind.

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APPENDICES

Appendix A – Covering letter

A study investigating the effect of talking about images and memories of social events in people with psychosis and social anxiety

{Insert address}

Department of Psychological Sciences
Norwich Medical School
Norwich Research Park
University of East Anglia
Norwich
NR4 7TJ

{Insert date}

Dear {Insert name},

Please find enclosed an information sheet about the above named study. If you are interested in the study you will be asked to provide permission for me to contact you. If you are happy with this a member of your care team will provide me with your contact details and I will call you to arrange a suitable time for us to meet. Please feel free to discuss the study with a member of your care team or your family or friends.

If you want to contact me directly about taking part or if you have any questions about the study, please do not hesitate to contact me on 07518 503098 or via D.Heavens@uea.ac.uk.

Yours sincerely,

Dave Heavens
Trainee Clinical Psychologist

Appendix B – Participant Information Sheet

Information about the research

A study investigating the effect of talking about images and memories of social events in people with psychosis and social anxiety

Primary researcher: Dave Heavens, Trainee Clinical Psychologist, University of East Anglia (UEA)
Primary supervisor: Dr Jo Hodgekins, Clinical Psychologist and Clinical Lecturer, UEA
Secondary supervisor: Dr Mike Dow, Clinical Psychologist, UEA
Collaborator: Dr Rebecca Ison, Research Clinical Psychologist, Central Norfolk Early Intervention Team (CNEIT), Norfolk and Suffolk Foundation Trust

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You are being invited to take part in a research study. Before you decide whether you wish to take part, please take the time to read this information sheet. If you have any questions about the research or if something is unclear, please speak to a member of your care team or contact me on **07518 503098**. Please feel free to discuss the research with a family member or friend.

This information sheet is split into two parts. Part 1 tells you about the study and what will happen if you decide to take part. Part 2 gives you some more detailed information about the study.

Part 1

What is the purpose of the study?

I am carrying out this study as part of my assessment for the Doctorate in Clinical Psychology course at the UEA. I am interested to see whether talking about images and memories of social events makes the images and memories less distressing and leads to improvements in symptoms related to social anxiety and psychosis. This intervention has previously been found to be helpful for people with social anxiety who have not experienced an episode of psychosis.

Why have you been invited?

I am recruiting people who have experienced an episode of psychosis and who also experience social anxiety. You have been contacted because a member of your care team feels that you might be suitable for the study. I am hoping to

include 12 people in the study altogether. Unfortunately we cannot include everyone in this study. People who are currently receiving treatment for social anxiety or people whose psychotic symptoms are making them feel quite unwell at the moment will not be approached to take part.

If you are interested in taking part, you will have an initial meeting with the researcher to talk about your current worries and see whether the study is suitable for you. More detail about this is provided below.

Do you have to take part?

You do not have to take part if you do not want to. If after reading this sheet you decide that you do not want to take part in the study you do not need to do anything else.

If you do wish to take part in the study I will ask you to read and sign a consent form (this is included with this information sheet). You can keep this information sheet and you will be given a copy of the consent form for your records.

If you change your mind about being in the research, you are free to withdraw at any time and you do not have to give a reason for this. This study is not connected to the treatment you receive from the service or the NHS and this would continue as normal. Taking part in this study will not affect the care you receive from the NHS either now or in the future.

What will happen if you take part?

If you decide to take part, you will be asked to attend seven different sessions. You can choose whether these sessions take place at your home or at the service you usually attend.

The first session will involve making sure you want to take part in the study and if so, completing some assessments. This will take about one hour and 10 minutes. I need to use these assessments to see whether you meet the study criteria and if you can be included. If you do not meet the criteria then unfortunately I will not be able to include you in the study. This is because the intervention we are testing might not be appropriate for you. If this happens I will explain things to you and make sure that you have an opportunity to ask questions.

If you can be included in the study you will be invited to a second session. This will involve completing some questionnaires and ratings. This will take about 40 minutes. You will then be asked to wait either 1, 2 or 3 weeks until we meet again. I will randomly pick numbers from sealed envelopes (a bit like picking names from a hat) to see how long you will be asked to wait. You or I will not be able to choose how long you will wait until the next session. This is to make sure that everybody in the study is treated fairly. If you are asked to wait for 2 or 3 weeks then you will be asked to complete some ratings and questionnaires each week until we meet again.

The third session will involve completing some questionnaires and ratings. This will take around 45 minutes.

The fourth session will involve asking you about any negative images and memories you have of social events. I will also ask you to complete some ratings. This session will take around two hours and 10 minutes. You can have breaks during this session if you want to.

A week later, you will be asked to attend a fifth session where we will talk about any upsetting images and memories you might have about social events and try and make them less distressing. I will also ask you to complete some ratings. This session will last around one hour and 40 minutes. Again, you can have breaks if you want to.

Within one week of this session you will be asked to attend the sixth session. This will involve completing some questionnaires and ratings and will take around 45 minutes. One month after finishing the fifth session (the one where we will talk about images and memories and try to make them less distressing) you will be asked to attend the seventh and final session. This will involve completing some questionnaires and ratings. This will take around 45 minutes.

I have included a table below showing you the different stages in this study. I will ask your permission to tape record what we talk about in some of the sessions. This will help me to check that I am doing things properly. The tape recordings will be locked in a secure filing cabinet at the UEA. The recordings will be erased once the study is complete.

Stages involved in the study

Session	**What will happen**	**Approximate time taken**
1	Make sure you want to take part in the study and if so, complete assessments to see if the study is appropriate for you	One hour and 10 minutes
2	Complete questionnaires and ratings about how you are feeling and what you do with your time	40 minutes
Wait 1, 2 or 3 weeks (decided at random)		
3	Complete questionnaires and ratings (as in session 2)	45 minutes
4	Talk about images and memories of social events and complete ratings	Two hours and 10 minutes (you can have breaks if you want to)
One week break		
5	Talk about images and memories of social events and try and make them less distressing. Complete ratings.	One hour and 40 minutes (you can have breaks if you want to)
6	Complete questionnaires and ratings (as in session 2)	45 minutes

7	Complete questionnaires and ratings (as in session 2)	45 minutes
	Total hours involved in the study	Approximately 8 hours

I will also ask you if I can use your notes at the service to collect information about your age, ethnicity, social status and diagnoses. All of this information will remain confidential (please see below for further information on this).

If you decide to take part, I will let your GP know that you are doing so. I will also ask for your consent for me to keep a member of your care team updated on your participation in the study and the things that we have talked about. This is to make sure that they are kept up-to-date on how you are and what you are doing in the study.

Will you be paid for taking part?

After completion of all of the sessions you will be offered a £15 shopping voucher for taking part. Unfortunately payment for travel expenses is not available. However, if you prefer to carry out the sessions in your home then this can be arranged.

What will you have to do?

As mentioned, you will be asked to complete some questionnaires and ratings. The questionnaires will ask you about your symptoms of psychosis and how you find social situations. You will also be asked whether you ever feel sad or depressed and what kind of things you do each day. When completing the ratings you will be asked to describe how you are feeling at the time. If you want more information about the questionnaires or ratings then please feel free to ask.

I will also talk to you about any upsetting images and memories you might have of social events. To help with this, I will help you to think about a time that you have felt anxious or worried in a social situation and ask you some questions about it. I will then ask you to give me some more ratings. For example, I will ask you to rate how much the pictures or memories upset or worry you and how often you see them in your mind.

I will also talk to you about how any images and memories you have can be made less distressing. To do this, I will help you to think of more positive images or memories or to think about the images or memories in a different way.

Some of the questionnaires may be carried out by another researcher. If this happens I will make sure that you get to meet them beforehand and you have the opportunity to ask them any questions you may have.

What are the possible disadvantages and risks of taking part?

Talking about negative social events from your past may lead you to become upset. If you decide to take part and this happens, please let me or a member of your care team know and we will do our best to help. As explained, you can withdraw from the study at any point without giving a reason.

If you become upset outside of the study sessions then you should call a member of your care team. This will ensure that they are kept up-to-date on how you are and are able to provide you with the care that you need.

What are the possible benefits of taking part?

I hope this study will help you but I cannot promise that this will be the case. You may see some improvements in your symptoms of social anxiety and psychosis. You may also see improvements in your mood and the number of activities that you are doing each day. This is not guaranteed but I hope that the study will provide information on how to help people who experience psychosis and social anxiety.

What happens when the study stops?

On completion of the study, you will continue to receive care from the NHS and the service that you are in contact with. Taking part in this study does not change this.

A summary report will be given to the service and you will be able to request a copy of this. This report will be about the study in general and will not include information about you in particular. Once the research is complete, the information collected will be used to write a thesis which will be submitted to and marked by the UEA. You name will not be used so those reading it will not be aware that you took part.

What if there is a problem?

Any complaint about the study or the way you have been treated or any possible harm that you might suffer will be addressed. The detailed information about this is given in Part 2.

Will taking part in the study be kept confidential?

Yes. I will follow ethical and legal practice and all information about you will be handled in confidence. However, if you disclose information that suggests you or others are at risk we will need to share this with your case manager and your care team. Further details about this are included in Part 2.

If the information in Part 1 has interested you and you are considering participation, please read the additional information in Part 2 before making any decision.

Part 2

What will happen to the results of the research study?

The results will be used to write a thesis. The results for the whole study will be summarised in a report and given to the service that you have contact with. Your name or any personal information about your involvement in the study will not be included in this. You will be able to request a copy of this report.

Once marked, the thesis will be kept in a library at the UEA so that other trainee clinical psychologists can access it. It will also be held on the electronic library database. The thesis will also be written up and submitted for publication in an academic journal. No identifiable data (e.g. name, age) will be used in the thesis or any other documents.

What will happen if you don't want to carry on in the study?

You have the right to withdraw from the study at any point without giving a reason. If you do decide to withdraw I will ask you whether I can retain the information that I have already collected from you. This is your choice and until the thesis is written, you can choose for all of your information to be withdrawn if you wish. If you do not feel comfortable talking about withdrawing from the study, please ask a member of your care team to talk to me or send me a message on **07518 503098**.

What if there is a problem?

If you have any concerns about the study please feel free to contact me on **07518 503098** or via e-mail (D.Heavens@uea.ac.uk). Alternatively, please feel free to contact a member of your care team who will contact me on your behalf. Please note that I will only be available during working hours (Monday-Friday, 9am-5pm) and the contact details above are provided for any issues that you may have with your participation in the study.

If you need to speak to somebody about any other issues please contact a member of your care team or GP. You can also contact the Early Intervention team (Monday-Friday, 9am-5pm) on **01603 201400**. If you need to contact somebody in an emergency, please call the Crisis Resolution team on **01603 421239**.

If you wish to make a complaint about the study or the way you have been treated, please feel free to contact the UEA Clinical Psychology Course Director:

Professor Ken Laidlaw
Professor of Clinical Psychology/Programme Director ClinPsyD
Department of Psychological Sciences
Norwich Medical School
Norwich Research Park
Norwich
NR4 7TJ

Tel: 01603 593600
E-mail: K.Laidlaw@uea.ac.uk

You can also contact your local Patient Advice and Liason Service (PALS):

PALS Office
Hellesdon Hospital
Drayton High Road
Norwich
NR6 5BE

Tel: 01603 421191
E-mail: pals@nsft.nhs.uk

Will taking part in the study be kept confidential?

All of the information obtained from you during the study will remain confidential. Your name will not be used on questionnaires, record forms or any notes that are taken during the sessions. A numbering system will be used to ensure anonymity (a number will be used on any documents instead of your name). All documentation will be kept separate from your signed consent form.

If electronic information has to be transported between locations, this will be done using a locked memory stick. All information will be stored in a locked filing cabinet or on a password protected computer. This also applies to any voice recordings that are taken. Following study completion, the information collected from you will be kept for a maximum of 10 years. After this, the information will be permanently destroyed.

If you disclose information that makes me concerned for the safety of yourself or others, then I will be required to share this with your case manager and care team. If you disclose any information related to a crime, I will be required to inform the Police. However, any other information that you share will remain strictly confidential.

Who is organising and funding the research?

I will be organising the research with the assistance of my academic supervisors at the UEA. The study collaborator will also be involved in the organisation of the study when required.

The university is funding the research. The research is not funded by a grant.

Who has reviewed the study?

All research in the NHS is looked at by independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given favourable opinion by XXXXXX Research Ethics Committee.

Further information and contact details

If you would like general information about taking part in research, please access the following website:

www.invo.org.uk.

If you would like specific information about this research, please contact me on **07518 503098** or via e-mail (D.Heavens@uea.ac.uk). Alternatively, you can contact my academic supervisor using the details overleaf.

Dr Joanne Hodgekins
Clinical Psychologist and Clinical Lecturer
Department of Psychological Sciences
Norwich Medical School
Norwich Research Park
University of East Anglia
Norwich
NR4 7TJ

Tel: 01603 591890
E-mail: J.Hodgekins@uea.ac.uk

If you would like advice on whether you should participate in this study or not, you are advised to contact a member of your care team. Alternatively, please feel free to discuss the study with family members and/or friends.

Thank you for taking the time to read this information sheet.

Dave Heavens
Trainee Clinical Psychologist

Appendix C - Consent form

Consent form

A study investigating the effect of talking about pictures and memories of social events in people with psychosis and social anxiety

Name of researcher: Dave Heavens, Trainee Clinical Psychologist

Please initial the box next to each statement

1. I confirm that I have read and understand the information sheet dated 03/11/13 (version 1.0) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and that my care and treatment will not be affected. ☐
3. I consent to being audio recorded for the purposes of the study and I am aware that all information collected from me will be stored securely and destroyed on completion of the research. ☐
4. I understand that relevant sections of my medical notes and data collected during the study may be looked at by individuals from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for this to occur. ☐
5. I understand that my GP and my care team will be informed of my participation in the study and I agree for them to be contacted if any problems arise. ☐
6. I understand that the information obtained from me will be used to write a thesis and may be published in a peer-reviewed journal. I understand that my name will not be used on these documents. ☐
7. I agree to take part in the above study. ☐

Name of Participant	Date	Signature
Name of Researcher	Date	Signature

When completed: 1 for participant; 1 for researcher file; 1 (original) to be kept in clinical notes.

Appendix D - Measures

Social Interaction Anxiety Scale (SIAS; Mattick & Clarke, 1998)

Social Interaction Anxiety Scale (SIAS)

Page 1 of 1

Patient Name: _____ **Date:** _____

Instructions: For each item, please circle the number to indicate the degree to which you feel the statement is characteristic or true for you. The rating scale is as follows:

0 = **Not at all** characteristic or true of me.
1 = **Slightly** characteristic or true of me.
2 = **Moderately** characteristic or true of me.
3 = **Very** characteristic or true of me.
4 = **Extremely** characteristic or true of me.

CHARACTERISTIC	NOT AT ALL	SLIGHTLY	MODERATELY	VERY	EXTREMELY
1. I get nervous if I have to speak with someone in authority (teacher, boss, etc.).	0	1	2	3	4
2. I have difficulty making eye contact with others.	0	1	2	3	4
3. I become tense if I have to talk about myself or my feelings.	0	1	2	3	4
4. I find it difficult to mix comfortably with the people I work with.	0	1	2	3	4
5. I find it easy to make friends my own age.	0	1	2	3	4
6. I tense up if I meet an acquaintance in the street.	0	1	2	3	4
7. When mixing socially, I am uncomfortable.	0	1	2	3	4
8. I feel tense if I am alone with just one other person.	0	1	2	3	4
9. I am at ease meeting people at parties, etc.	0	1	2	3	4
10. I have difficulty talking with other people.	0	1	2	3	4
11. I find it easy to think of things to talk about.	0	1	2	3	4
12. I worry about expressing myself in case I appear awkward.	0	1	2	3	4
13. I find it difficult to disagree with another's point of view.	0	1	2	3	4
14. I have difficulty talking to attractive persons of the opposite sex.	0	1	2	3	4
15. I find myself worrying that I won't know what to say in social situations.	0	1	2	3	4
16. I am nervous mixing with people I don't know well.	0	1	2	3	4
17. I feel I'll say something embarrassing when talking.	0	1	2	3	4
18. When mixing in a group, I find myself worrying I will be ignored.	0	1	2	3	4
19. I am tense mixing in a group.	0	1	2	3	4
20. I am unsure whether to greet someone I know only slightly.	0	1	2	3	4

CO-OCCURRING DISORDERS PROGRAM: SCREENING AND ASSESSMENT

19

Positive and Negative Syndrome Scale (PANSS; Kay et al., 1987)

PANSS RATING FORM

		absent	minimal	mild	moderate	moderate severe	severe	extreme
P1	Delusions	1	2	3	4	5	6	7
P2	Conceptual disorganisation	1	2	3	4	5	6	7
P3	Hallucinatory behaviour	1	2	3	4	5	6	7
P4	Excitement	1	2	3	4	5	6	7
P5	Grandiosity	1	2	3	4	5	6	7
P6	Suspiciousness/persecution	1	2	3	4	5	6	7
P7	Hostility	1	2	3	4	5	6	7
N1	Blunted affect	1	2	3	4	5	6	7
N2	Emotional withdrawal	1	2	3	4	5	6	7
N3	Poor rapport	1	2	3	4	5	6	7
N4	Passive/apathetic social withdrawal	1	2	3	4	5	6	7
N5	Difficulty in abstract thinking	1	2	3	4	5	6	7
N6	Lack of spontaneity & flow of conversation	1	2	3	4	5	6	7
N7	Stereotyped thinking	1	2	3	4	5	6	7
G1	Somatic concern	1	2	3	4	5	6	7
G2	Anxiety	1	2	3	4	5	6	7
G3	Guilt feelings	1	2	3	4	5	6	7
G4	Tension	1	2	3	4	5	6	7
G5	Mannerisms & posturing	1	2	3	4	5	6	7
G6	Depression	1	2	3	4	5	6	7
G7	Motor retardation	1	2	3	4	5	6	7
G8	Uncooperativeness	1	2	3	4	5	6	7
G9	Unusual thought content	1	2	3	4	5	6	7
G10	Disorientation	1	2	3	4	5	6	7
G11	Poor attention	1	2	3	4	5	6	7
G12	Lack of judgement & insight	1	2	3	4	5	6	7
G13	Disturbance of volition	1	2	3	4	5	6	7
G14	Poor impulse control	1	2	3	4	5	6	7
G15	Preoccupation	1	2	3	4	5	6	7
G16	Active social avoidance	1	2	3	4	5	6	7

Semi-structured interview (Hackmann et al., 1998 and Hackmann et al., 2000, as cited in Cooke, 2012)

NAME:

AGE:

GENDER:

DATE:

YEARS IN EDUCATION:

MEETS CRITERIA FOR SOCIAL PHOBIA ON SIAS: YES / NO

EVER HAD TREATMENT FOR AN ANXIETY PROBLEM: YES / NO

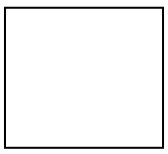
1. Do you ever get anxious in social situations? I wonder if you could tell me about a few times recently when that happened to you?

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

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

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

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

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

Yes / No

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

Yes / No

Were you aware of any smells?

Yes / No

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

Yes / No

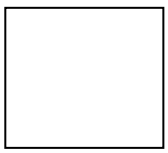
6. Sometimes people get an impression of how they appear, or how others might be reacting, even if they are not looking at them. Did that happen to you?

Yes / No

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

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

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



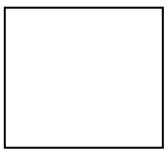
8. Can you now describe the image? What can you see? What can you hear? What can you smell? What can you feel?

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

Write down every detail. Summarise all the client has described, in detail adding "Is that right?"

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

How about the things you hear in the image – do they appear louder or quieter or at all distorted to how they would in real life? On this scale *(present Scale 3 again),* with 0 being "Not distorted at all" and 100 being "Completely distorted to how it would sound in real life", how distorted would you say the sounds in your image are? *Enter rating in box below.*



How about the smells in the image? Are they stronger or at all distorted from how you would experience them in real life? On this scale *(present Scale 3),* with 0 being

"Completely the same as I would smell them in real life" and 100 being "Completely different to how they would smell in real life", how distorted would you say the smells in your image are? *Enter rating in box below.*

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

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

11. When was the image located in time?

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

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

12. Do you frequently experience this specific image when you feel anxious in social situations? *If not, ask if the client experiences any other images regularly when socially anxious.*

Yes / No

If a different image is elicited, ask client to describe this image in as much detail as possible, including sights, sounds, smells, tastes, body sensations. Remember to check back with the client that you have recorded this information accurately. Record below.

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

How do you feel in the image (emotions)?

What is happening in the image?

Why is this happening?

What has led up to this event?

What is the worst thing about it?

What does it mean about you?

What does it mean about others?

What does it mean about the world?

Summarise the interpersonal meaning, asking "Is that right?" and make a written summary.

14. What is your earliest recollection of having the thoughts/sensations/emotions/experiences reflected in the image?

Where were you in this earliest recollection?

How old were you?

What was happening in your life at the time?

15. Is there a particular memory that seems to be closely linked to the image?

Yes / No

16. If so, do you think you could evoke it with your eyes closed, just as if it was happening now, and describe it to me?

    If necessary, prompt with the following:

    Can you see anything in the memory?

    Can you hear anything (including your own voice)?

    Any tastes or smells?

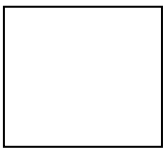
    What sensations do you have in your body?

Summarise below, checking with client that information is accurate:

17. *Present Scale 4: 0-100% rating scale*

Can you please indicate on this scale, with 0% being "not at all" and 100% being "completely", how similar the actual sensory aspects of the image are compared to those in the remembered event?

17b. *Present Scale 5: Get ratings of the extent to which the memory is focused on others/another person or self-focused on a 7 point scale. Enter score in box below:*



18. What do you feel in the remembered event?

What is happening in this remembered event?

What has led up to this event?

What is the worst thing about it?

What does it mean about you?

What does it mean about others?

What does it mean about the world?

Summarise all the meanings, asking, "Is that right?" and make a written account below:

19. *Present Scale 4 again.*

Please indicate on this scale, with 0% being "not at all similar" and 100% being "completely the same" how similar in terms of interpersonal meaning (what we've just been talking about) the remembered event and the image are?

20. Were you anxious in social situations before this event?

Yes / No

21. *If "yes"*
Did the event change this anxiety in any way *ie. make it better/ worse/ no different)?

22. Did you experience anxiety at the time of the event?

Yes / No

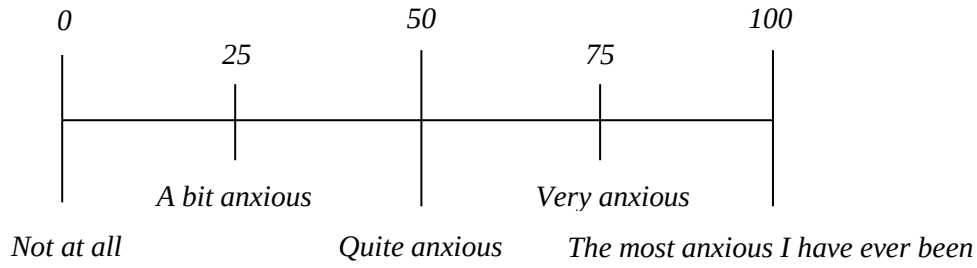
If "no"
Did you recall this event when your anxiety problems started?

Yes / No

Ratings for semi-structured interview (Hackmann et al., 1998 and Hackmann et al., 2000, as cited in Cooke, 2012)

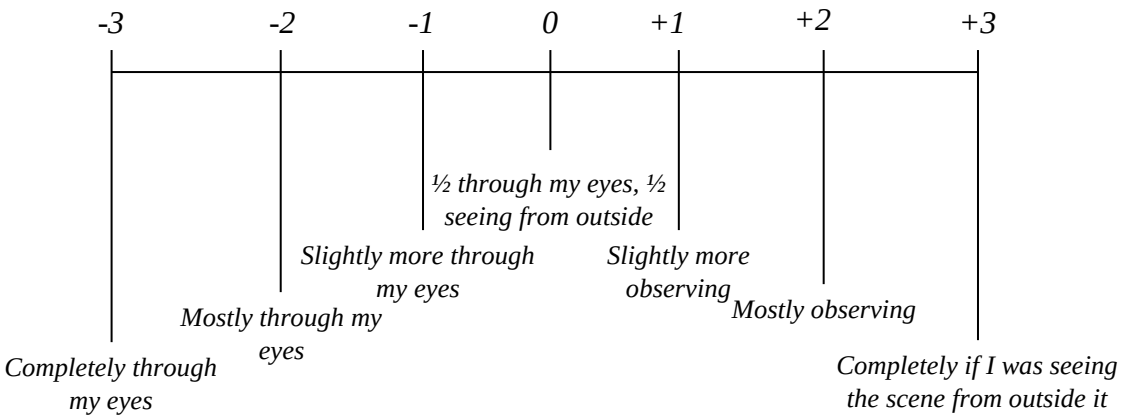
Scale 1 (for use with question 4)

Ask client to mark anywhere along the line to show how anxious they were



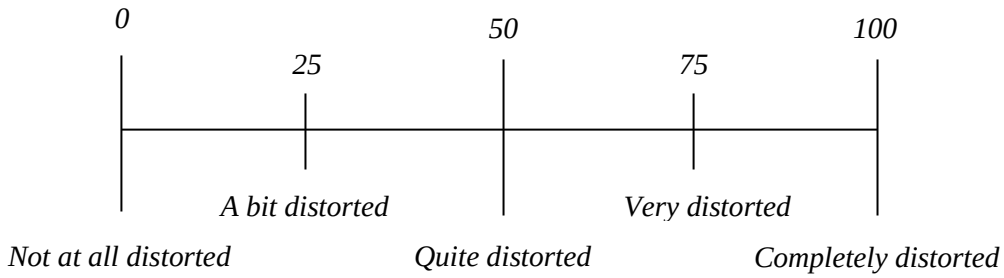
Scale 2 (for use with question 7)

Ask client to choose a number to indicate the image perspective

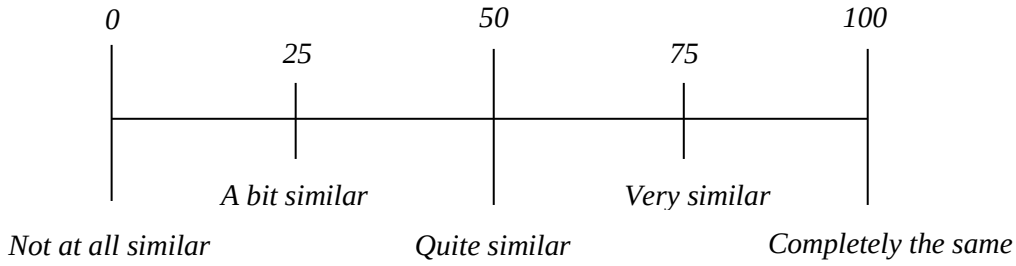


Scale 3 (for use with question 9)

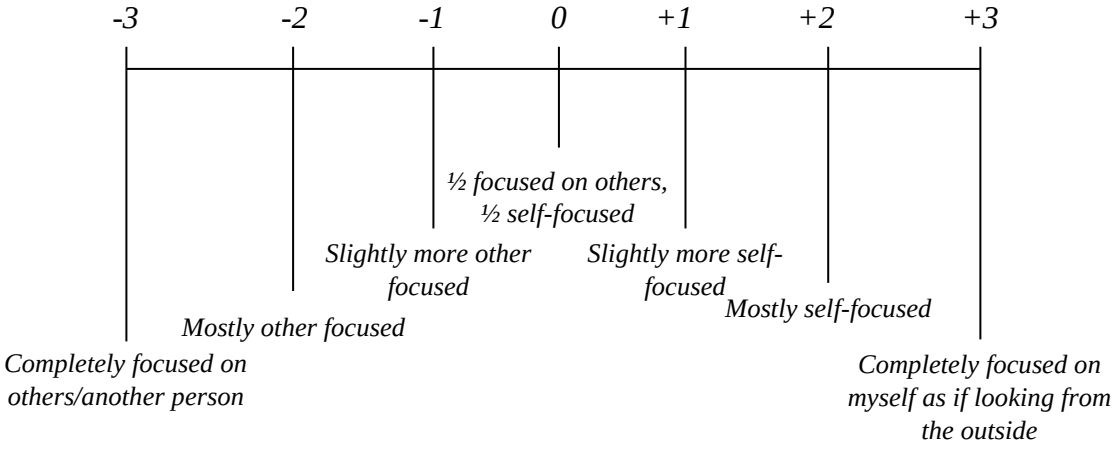
Ask client to mark anywhere along the line to show how distorted from real life the image was



Scale 4 (for use with questions 17 & 19)
Ask client to mark anywhere along the line to show how similar the image and the remembered event are

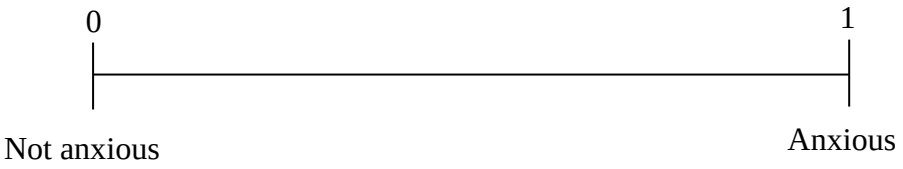


Scale 5 (for use with question 17b)
Ask client to choose a number to indicate the focus of the memory



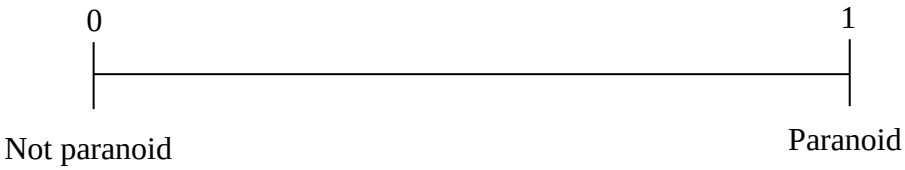
Visual analogue scale for anxiety (VAS-A)

Anxiety scale



Visual analogue scale for paranoia (VAS-P)

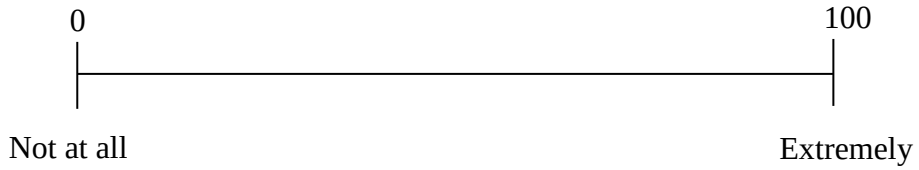
Paranoia scale



Ideographic ratings (Wild et al., 2008)

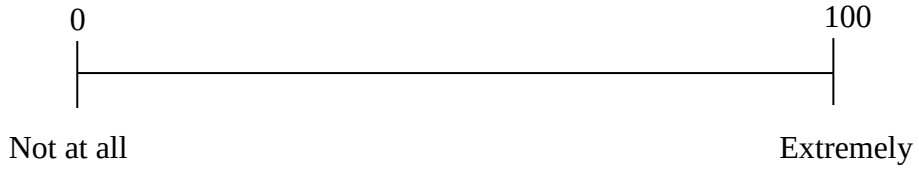
Scale 1 (Encapsulated belief)

How much do you believe the statement we have discussed to be true?



Scale 2 (Memory distress)

How distressing is the *memory* we have talked about?

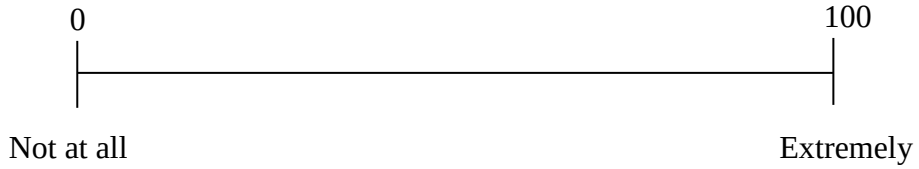


Scale 3 (Imagery distress)

How distressing is the *image* we have talked about?

Scale 4 (Imagery vividness)

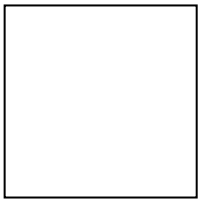
How vivid is the *image* we have talked about?



(Imagery frequency)

How frequently has the *image* occurred in the last week?

(Please enter a number in the box below)



Schizotypal Symptoms Inventory (SSI; Hodgekins et al., 2012)

SSI (Brief Version)

Please answer each item depending on how often (if at all) this experience has occurred over the **past 2 weeks**. Please answer all of the questions honestly, even if you are unsure of your answer.

1. I sometimes avoid going to places where there will be many people because I will get anxious.	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*
2. Do you believe in telepathy (mind-reading)?	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*
3. I am sure I am being talked about behind my back.	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*
4. I get very nervous when I have to make polite conversation.	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*
5. Have you had the sense that some person or force is around you, even though you cannot see anyone?	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*
6. Do you often feel that other people have got it in for you?	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*
7. I feel very uneasy talking to people I do not know well.	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*
8. Have you noticed a common event or object that seemed to contain a special sign for you?	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*
9. When you see people talking to each other, do you often wonder if they are talking about you?	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*
10. I often hear a voice speaking my thoughts aloud.	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*
11. Do you often feel nervous when you are in a group of unfamiliar people?	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*
12. I often feel that others have it in for me.	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*
13. Have you seen things invisible to other people?	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*

14. I feel very uncomfortable in social situations involving unfamiliar people.	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*
15. Do you sometimes feel that people are talking about you?	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*
16. Can other people feel your feelings when they are not there?	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*
17. I get anxious when meeting people for the first time.	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*
18. Do you believe in clairvoyancy (psychic forces, fortune telling)?	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*
19. Do you sometimes feel that other people are watching you?	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*
20. Have you felt that you are communicating with another person telepathically (by mind-reading)?	*Not at all*	*Occasionally*	*Sometimes*	*Often*	*All of the time*

Depression Anxiety and Stress Scale – Short Version (DASS-21; Lovibond & Lovibond, 1995; DASS-D items: 3, 5, 10, 13, 16, 17 & 21)

DASS21 *Name:* *Date:*

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

1	I found it hard to wind down	0	1	2	3
2	I was aware of dryness of my mouth	0	1	2	3
3	I couldn't seem to experience any positive feeling at all	0	1	2	3
4	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5	I found it difficult to work up the initiative to do things	0	1	2	3
6	I tended to over-react to situations	0	1	2	3
7	I experienced trembling (eg, in the hands)	0	1	2	3
8	I felt that I was using a lot of nervous energy	0	1	2	3
9	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10	I felt that I had nothing to look forward to	0	1	2	3
11	I found myself getting agitated	0	1	2	3
12	I found it difficult to relax	0	1	2	3
13	I felt down-hearted and blue	0	1	2	3
14	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
15	I felt I was close to panic	0	1	2	3
16	I was unable to become enthusiastic about anything	0	1	2	3
17	I felt I wasn't worth much as a person	0	1	2	3
18	I felt that I was rather touchy	0	1	2	3
19	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	0	1	2	3
20	I felt scared without any good reason	0	1	2	3
21	I felt that life was meaningless	0	1	2	3

Time Use Survey (Hodgekins et al., 2015; Short, 2006)

TIME USE INTERVIEW

EMPLOYMENT

1. Did you do any paid work in the last month, either as an employee or self-employed?

YES → ASK DETAILS
NO → GO TO QU 3

Details

2. How many hours a week do you usually work in your main job? Include any overtime. How many hours have you worked in the last month?

Usual hours/week:
Hours worked in last month:

3. Over the last month have you been away from your main job?

YES → ASK DETAILS
NO → GO TO QU 4

Details

4. Have you ever had a paid job?

YES → ASK DETAILS
NO → GO TO 'EDUCATION AND TRAINING' SECTION

Details (What was the job? When left job, etc)

EDUCATION AND TRAINING

1. Are you studying for any formal qualifications at the moment?

YES → ASK DETAILS
NO → GO TO QU 2

Details (e.g. what, where, full/part time, hours in the last month)

2. In the last month, have you been on any taught courses or undertaken learning of any of the following sorts:

Taught courses meant to lead to qualifications (even if you did not obtain them)	
Taught courses designed to help you develop skills that you might use in a job	
Courses or instruction or tuition in driving, in playing a musical instrument, in an art or craft, in a sport or in any practical skill	
Evening classes (e.g. art/craft, languages, cookery)	
Learning which involved working on your own from a package of materials provided	

IF YES TO ANY OF THE ABOVE → ASK DETAILS
IF NONE OF THE ABOVE → GO TO 'VOLUNTARY WORK' SECTION

Details (e.g. what, where, full/part time, hours in the last month)

3. On how many occasions in the last month did you spend time studying at home outside of teaching sessions? How many hours?

Details (e.g. what, where, full/part time, hours in the last month)

VOLUNTARY WORK

1. Have you done any voluntary work through a group or on behalf of an organisation at any time during the last month? Have you done any unpaid work for anybody else e.g. running errands for elderly relatives?

   YES → ASK DETAILS
   NO → GO TO 'LEISURE ACTIVITIES'

Details of voluntary work
How many times in the past month?
How long do you normally spend doing this?

LEISURE ACTIVITIES

1. I am now going to ask some questions about things that some people do in their spare time. For each activity that I mention could you please tell me whether of not you have done this in the last month, AND how often?

ACTIVITY	NUMBER OF TIMES	AMOUNT OF TIME
Been to cinema		
Been to an event as a spectator (e.g. sports event, theatre, live music performance)		
Been to a museum, art gallery or heritage site		
Been to a library		
Been out to eat or drink at a café, restaurant, pub or wine bar		
Been to a shopping centre, or mall, apart from regular shopping for food and household items		
Been to some other place of entertainment (e.g. dance, club, bingo, casino)		
Been on any other outdoor trips (including going to places of natural beauty, picnics, going for a drive or going to the beach)		
Been involved in any community based activities (e.g. Scouts, going to church)		

2. I am now going to ask about sports activities. Could you please tell me whether or not you took part in any of these sports in the last month AND how often?

ACTIVITY	NUMBER OF TIMES	AMOUNT OF TIME
Swimming		
Cycling		
Gym/weight training		
Exercise classes (e.g. aerobics, martial arts)		
Team sports (e.g. rugby, football, cricket, hockey, netball)		
Racquet sports (e.g. tennis, badminton, squash)		
Jogging, cross country, road running		
Walking or hiking for 2 miles or more (recreationally)		
Climbing/mountaineering		
Fishing		
Golf		
Horse riding		
Pub games (e.g. snooker, pool, darts)		

3. How much time do you spend socialising? How many occasions in the last month have you seen friends, either visiting them or receiving visitors? How much time did you tend to spend socialising on each occasion on average?

Details

CHILD CARE

1. Are you responsible for the care of any children?

YES → ASK 2
NO → GO TO 'HOUSEWORK AND CHORES'

2. How many children do you have? How old are they? Are you their primary carer?

3. How much time do you spend doing things with your children?

Physical care (e.g. feeding, dressing, washing)	
Supervision (inside and outside)	
Teaching children (e.g. helping with homework)	
Reading, playing and talking with children	
Accompanying child (e.g. to school, doctor, friend's house, etc)	

HOUSEWORK AND CHORES

1. How many people do you live with? Who is mainly responsible for the housework?

2. How much time do you spend doing housework and chores per week?

Food management and preparation	
Cleaning, dusting, vacuuming, washing dishes	
Food shopping	
Washing	
Gardening	
DIY and repairs	

Appendix E

Imagery Rescripting Script (adapted from Wild & Clark, 2011)

Introduction

Provide participant with rationale:

"We've seen that a traumatic event led you to develop certain beliefs about yourself and to feel as though people will respond to you in the present in a similar way to what happened in the past. It is like you have been processing the present on the basis of the restricted information that you had in the past. At the time you were a child/younger person and you did not have access to current/adult information. We have seen that as an adult, you do not get rejected, and the world does not expect you to be perfect.

We've seen that although the memory was painful, you were not actually rejected, although it very much felt like that at the time (or you were rejected on that occasion but are no longer rejected now). We need to update the memory to bring in this new information that we have discovered.

The way we do that is to revisit the memory again. For you to tell it in the first person present-tense as though you are the (Insert participant's younger-self age)*-year-old* (Insert participant's name) *again. And then to bring in the new information as an adult. To see* (Insert participant's current age)*-year-old* (Insert participant's name) *intervening. This may involve talking to* (Insert participant's younger-self age)*-year-old* (Insert participant's name) *and telling him/her what you know now, you may also feel like intervening in another way, perhaps talking to other people in the situation.*

The aim of the procedure is to update the memory so that it is no longer an event which colours your present, so that you can accurately process the present as it is really happening.

I may prompt you as we go along. Do you have any questions?"

Imagery rescripting: Stage 1

Provide participant with the following instructions:

"When you're ready, sit comfortably, close your eyes and take yourself back. You're (Insert participant's younger-self age) *years old and you're…Tell me what happens, take me through what happens as if it's happening right now."*

(Participant responds)

"That's great, (Insert participant's name), *you're doing a great job. So* (Insert content of image)*…Just stay with what's happening, what happens next?"*

Ensure that participant talks through the event in as much detail as possible. Prompt for further information as necessary.

Imagery rescripting: Stage 2

Provide participant with the following instructions:

"You are doing a great job, (Insert participant's name). *Now, keep your eyes closed. We're going to move into the next phase of this procedure. What I would like you to do now is to talk me through the event again, but this time I want you to tell it to me as though you are observing what is happening, as though you are in the room, watching the events unfold. So, this would mean talking me through the event in the third person. "I see* (Insert participant's name)*...*(Insert content of image)*. Tell me what you see".*

(Participant responds)

"That's right. (Support participant's view of situation). *And what happens next? What do you see happening next"*

Imagery rescripting: Stage 3

Provide participant with the following instructions:

"Good work, (Insert participant's name). *We are almost done. Now keep your eyes closed. We are going to go through this one more time. This time, I want you to talk me through it again as if you were* (Insert participant's younger-self age)*-year-old* (Insert participant's name) *and it is happening right now. But this time, your wise* (Insert participant's current age)*-year-old self is in the room with you. He/she has all the information you have learned in therapy and she can intervene if you want him/her to, he/she can talk to* (Insert names of other people in situation) *or do anything else that feels helpful and right in this situation. Are you ready? Okay, take me back to* (Insert location of image)*, you are* (Insert content of image*)."*

(Participant responds)

"That is right. What do you feel inclined to do?"

(Participant responds)

"So, see older (Insert participant's name) doing this."

(Participant responds)

"How does (Insert names of other people in the situation) *respond?"*

(Participant responds)

"And what happens next?"

(Participant responds)

"What do you feel inclined to do?"

(Participant responds)

"So, see yourself saying this to (Insert names of other people in the situation)*".*

(Participant responds)

"And how does/do (Insert names of other people in the situation) respond?"

(Participant responds)

"And what do you see?"

(Participant responds)

"Is there anything that (Insert participant's name) needs to do or say?"

(Participant responds)

"Can you tell him/her in your own way?"

(Participant responds)

"And how does she respond?"

(Participant responds)

"Is there anything else that he/she needs to do or say?"

(Participant responds)

"Can you say that to him/her?"

(Participant responds)

*"Is there anything else she needs to do or say?"******

(Participant responds)

*Continue with prompt until participant has nothing else to say

"Okay, when you are ready, bring your attention back to this office. Take your time and open your eyes. How do you feel? How does the memory feel to you now?"

Appendix F – Imagery rescripting rating scale (template)

Imagery rescripting rating scale

Participant:

Introduction to rescripting	Achieved	Comments
Provide introduction to imagery rescripting		
Explain imagery rescripting stages (three in total)		
Explain that props and techniques can be used (e.g. cartoon characters, rewind, pause)		
Offer participant the opportunity to ask questions		
Guide participant in talking about image as younger self		
Encourage participant to close eyes and revisit the image		
Ask participant to describe image/event as younger self		
Offer prompts to gain information about 'what happens next'		
Inform participant that they are doing a good job		
Encourage participant to talk about the image/event in detail		
Guide participant in talking about image as older self as observer		
Encourage participant to keep their eyes closed		
Ask participant to describe image/event as older self as observer		
Provide example of talking about the image/event in the third person		
Offer prompts to gain information about 'what happens next'		
Inform participant that they are doing a good job		
Encourage participant to talk about the image/event in detail		
Guide participant in talking about image as younger self with older self intervening		
Encourage participant to keep their eyes closed		
Ask participant to describe image/event as younger self with older self intervening		
Explain that information from the cognitive restructuring can be used to help		
Explain that anything else that is helpful can be used (e.g. props, techniques)		

Ask what else they feel inclined to do (repeated as often as necessary)		
Ask how the other person responds (repeated as often as necessary)		
Offer prompts to gain information about ‘what happens next’		
Encourage participant to get older self to say or do things that their younger self requires (repeated as often as necessary)		
End of rescripting		
Encourage participant to bring attention back to the room		
Ask participant how they feel and how the memory feels to them after doing the rescripting		

Appendix G – Ethical approval documentation

NHS
Health Research Authority
NRES Committee London - Brent
80 London Road
Skipton House
London
SE1 6LH

Telephone: 020 7972 2552

03 March 2014

Mr David Heavens
Department of Psychological Sciences
Norwich Medical School
University of East Anglia, Norwich
NR4 7TJ

Dear Mr Heavens

Study title:	**An investigation into imagery rescripting with people with psychosis and social anxiety: A case series design**
REC reference:	**14/LO/0330**
Protocol number:	**N/A**
IRAS project ID:	**147272**

The Research Ethics Committee reviewed the above application at the meeting held on 24 February 2014. Thank you for attending to discuss the application.

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details, unless you expressly withhold permission to do so. Publication will be no earlier than three months from the date of this favourable opinion letter. Should you wish to provide a substitute contact point, require further information, or wish to withhold permission to publish, please contact the REC Manager Ms Julie Kidd, Juliekidd@nhs.net.

Ethical opinion

a. The Chair asked you to confirm where the study would take place and the recruitment process. You replied Norwich, Great Yarmouth and Kings Lynn; and explained that a member of the care team or Dr Rebecca Ison would identify suitable participants to approach for interview; participants would then be given information to read, and give their verbal consent. The next stage would be that you would follow up and meet the participants to inform them of the screening process and if interested gain written consent.

b. You informed the Committee that you would give a presentation on the inclusion/exclusion criteria to Dr Rebecca Ison and the care team.
c. The Chair asked if the same methodology had been done in other current studies. You said that it had been done in both social anxiety but not psychosis, which is the point of the study.
d. The Chair asked if the 3 week wait was necessary. You explained the multiple base-lines whereby participants would be put into groups and interviewed at different times to compare any changes. Members commented that participants' mood would not change unless the situation becomes very stressful. You said that you were more concerned with tracking change rating on a day to day basis.
e. The Chair asked who assesses if one loses capacity. You said the case manager, Dr Hodgekins or Dr Rebecca Ison. The Chair asked if a participant was to lose capacity could they re-enter into the study. You explained that it would not be feasible as you would miss out on collecting some data.
f. The Chair asked if data collected would go into the participants NHS file. You assured the Committee that it would stay at UEA, but if any risk issues occurred they would go onto the clinical files and be shared with the appropriate personnel. You also said that consent would be kept separate.
g. The Chair asked what a full de brief would involve at the end of the study. You said this would be a final follow up so participants would be able to ask questions and get more information on any aspects of the study.
h. The Chair asked if parental consent would be obtained for participants under 18 years. Dr Hodgekins said that they would but it was unlikely to have any that young. It was agreed that the inclusion criteria would be amended to 18 years and over.
i. The Chair asked what support would be offered outside normal working hours. You said a mobile phone number would be given and participants would be able to talk to their case manager. Dr Hodgekins said that the case manager and the home treatment team oversee participants care. It was agreed that an out of hours' telephone number would be highlighted in the information sheet.
j. The Committee asked if at any point the participants would be sectioned. You said no and that participants would be living in the community.
k. The Committee asked Dr Hodgekins to explain what the 45 minute re-structuring was mentioned in the protocol. It was explained that this was more to do with clinical re-structuring and it is done on an individual basis through semi structured interviews, and a technique used in cognitive assessment.
l. You informed the Committee that you had forgotten to submit a standard visual analogue scales form and would forward it to the Committee.

Decision Favourable (with additional conditions

The members of the Committee present gave a favourable ethical opinion of the above research on the basis described in the application form, protocol and supporting documentation, subject to the conditions specified below.

Ethical review of research sites

NHS Sites

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

The Committee has not completed any site-specific assessment (SSA) for the non-NHS research site(s) taking part in this study. The favourable opinion does not therefore apply to any non-NHS site at present. I will write to you again as soon as an SSA application(s) has been reviewed. In the meantime no study procedures should be initiated at non-NHS sites.

Conditions of the favourable opinion

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

1. Forward the standard visual analogue form.
2. Confirm in writing that the age group for inclusion is now 18-35 years. Instead of 16-35 years stated in the IRAS form.
3. Include in the information sheet an out of hours' telephone number for participants.
4. Add consent for audio recording.

You should notify the REC in writing once all conditions have been met (except for site approvals from host organisations) and provide copies of any revised documentation with updated version numbers. The REC will acknowledge receipt and provide a final list of the approved documentation for the study, which can be made available to host organisations to facilitate their permission for the study. Failure to provide the final versions to the REC may cause delay in obtaining permissions.

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

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

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

Registration of Clinical Trials

All clinical trials (defined as the first four categories on the IRAS filter page) must be registered on a publically accessible database within 6 weeks of recruitment of the first participant (for medical device studies, within the timeline determined by the current registration and publication trees).
There is no requirement to separately notify the REC but you should do so at the earliest opportunity e.g when submitting an amendment. We will audit the registration details as part of the annual progress reporting process.

To ensure transparency in research, we strongly recommend that all research is registered but for non clinical trials this is not currently mandatory.

If a sponsor wishes to contest the need for registration they should contact Catherine Blewett (catherineblewett@nhs.net), the HRA does not, however, expect exceptions to be made. Guidance on where to register is provided within IRAS.

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

Approved documents

The documents reviewed and approved at the meeting were:

Document	*Version*	*Date*
Covering Letter		07 February 2014
Evidence of insurance or indemnity		06 February 2014
GP/Consultant Information Sheets		15 January 2014
Interview Schedules/Topic Guides		15 January 2014
Investigator CV		15 January 2014
Letter from Sponsor		06 February 2014
Letter of invitation to participant		15 January 2014
Other: Academic Supervisor Dr Joanne Hodgekins		15 January 2014
Other: Flowchart		15 January 2014
Other: Imagery rescripting protocol	1	15 January 2014
Other: Validated questionnaire - Social Interaction Anxiety Scale (SIAS)		
Other: Validated questionnaire - Positive & negative Symptoms Scale (PANSS)		
Other: Validated questionnaire - Schizotypal Symptoms Inventory - Brief version (SSI)		
Other: Validated questionnaire - Time use Survey (TUS) & score sheet		
Other: Validated questionnaire - EuroQOL-5 Dimensions 5-Levels (EQ-5D-5L)		
Other: Non-validated questionnaire -Ideographic ratings	1	15 January 2014
Other: Non-validated questionnaire - visual analogue scales	1	15 January 2014
Participant Consent Form	1.0	15 January 2014
Participant Information Sheet	1.0	15 January 2014

Protocol	1	15 January 2014
REC application		02 February 2014
Referees or other scientific critique report		15 January 2014

Membership of the Committee

The members of the Ethics Committee who were present at the meeting are listed on the attached sheet.

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.

After ethical review

Reporting requirements

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

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

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

Feedback

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

Further information is available at National Research Ethics Service website > After Review

14/LO/0330	**Please quote this number on all correspondence**

We are pleased to welcome researchers and R & D staff at our NRES committee members' training days – see details at http://www.hra.nhs.uk/hra-training/

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

Yours sincerely
PP

Dr John Keen
Chair

Email: Juliekidd@nhs.net

Enclosures: *List of names and professions of members who were present at the meeting and those who submitted written comments*
"After ethical review – guidance for researchers"

Copy to: *Mrs Sue Steel*
Dr Bonnie Teague, NHS

NHS
Health Research Authority
NRES Committee London - Brent
80 London Road
Skipton House
London
SE1 6LH

Telephone: 020 7972 2552

13 March 2014

Mr David Heavens
Department of Psychological Sciences
Norwich Medical School
University of East Anglia, Norwich
NR4 7TJ

Dear Mr Heavens

Study title:	**An investigation into imagery rescripting with people with psychosis and social anxiety: A case series design**
REC reference:	**14/LO/0330**
Protocol number:	**N/A**
IRAS project ID:	**147272**

Thank you for your letter of 12th March 2014. I can confirm the REC has received the documents listed below and that these comply with the approval conditions detailed in our letter dated 03 March 2014

Documents received

The documents received were as follows:

Document	*Version*	*Date*
Covering Letter		12 March 2014
Other: Visual Analogue Scales	1	07 March 2014
Participant Consent Form	1	07 March 2014
Participant Information Sheet: Information about the research		07 March 2014

Approved documents

The final list of approved documentation for the study is therefore as follows:

Document	*Version*	*Date*
Covering Letter		07 February 2014
Covering Letter		12 March 2014
Evidence of insurance or indemnity		06 February 2014

GP/Consultant Information Sheets		15 January 2014
Interview Schedules/Topic Guides		15 January 2014
Investigator CV		15 January 2014
Letter from Sponsor		06 February 2014
Letter of invitation to participant		15 January 2014
Other: Academic Supervisor Dr Joanne Hodgekins		15 January 2014
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Other: Validated questionnaire - Positive & negative Symptoms Scale (PANSS)		
Other: Validated questionnaire - Schizotypal Symptoms Inventory - Brief version (SSI)		
Other: Validated questionnaire - Time use Survey (TUS) & score sheet		
Other: Validated questionnaire - EuroQOL-5 Dimensions 5-Levels (EQ-5D-5L)		
Other: Non-validated questionnaire -Ideographic ratings	1	15 January 2014
Other: Non-validated questionnaire - visual analogue scales	1	15 January 2014
Other: Visual Analogue Scales	1	07 March 2014
Participant Consent Form	1	07 March 2014
Participant Information Sheet: Information about the research		07 March 2014
Protocol	1	15 January 2014
REC application		02 February 2014
Referees or other scientific critique report		15 January 2014

You should ensure that the sponsor has a copy of the final documentation for the study. It is the sponsor's responsibility to ensure that the documentation is made available to R&D offices at all participating sites.

14/LO/0330 **Please quote this number on all correspondence**

Yours sincerely

Ms Julie Kidd
Committee Co-ordinator

E-mail: Juliekidd@nhs.net

Copy to: *Mrs Sue Steel,*
Dr Bonnie Teague, NHS

Norfolk and Suffolk NHS
NHS Foundation Trust
Research and Development
The Knowledge Centre
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E mail: RDofficemailbox@nsft.nhs.uk

Mr David Heavens
Trainee Clinical Psychologist
Department of Psychological Sciences
Norwich Medical School
University of East Anglia
Norwich
NR4 7TJ

20th March 2014

Dear Mr Heavens,

Re: 2014MH06: An investigation into imagery rescripting with people with psychosis and social anxiety: A case series design

Thank you for submitting the above project for local research governance approval. I am pleased to inform you that your project has been given full approval and you may begin your research at the following site:

- Norfolk & Suffolk NHS Foundation Trust

I have enclosed two copies of the Standard Terms and Conditions of Approval. Please sign both copies returning one copy to the Research and Development office, at the above address, and keeping the other in your study file. Failure to return the standard terms and conditions may affect the conditions of approval. **Under the agreed Standard Terms and Conditions of Approval you must inform the R&D department of any proposed changes to this study and submit annual progress reports to the R&D department.**

Any researcher(s) whose substantive employer is not the Norfolk & Suffolk NHS Foundation Trust must have a Letter of Access or Honorary Research contract and evidence of Good Clinical Practice (GCP) training before coming on site to conduct their research in this project. Please note that you cannot take part in this study until you have this documentation. If a Letter of Access / Honorary Research Contract has not been issued – please contact us immediately.

If you have any queries regarding this or any other project, please contact, Tom Rhodes, Research Facilitator, at the above address.

The reference number for this study is: **2014MH06,** and this should be quoted on all correspondence.

Yours sincerely,

Dr Jon Wilson
Deputy Medical Director (Research)

Your research governance approval is valid providing you comply with the conditions set out below:

1. You commence your research within one year of the date of this letter. If you do not begin your work within this time, you will be required to resubmit your application.
2. You notify the Research and Development Office should you deviate or make changes to the approved documents.
3. You alert the Research and Development Office by contacting the address above, if significant developments occur as the study progresses, whether in relations to the safety of individuals or to scientific direction.
4. You complete and return the standard annual self-report study monitoring form when requested to do so at the end of each financial year. Failure to do this will result in the suspension of research governance approval.
5. You comply fully with the Department of Health Research Governance Framework and Trust Research Policies, and in particular that you ensure that you are aware of and fully discharge your responsibilities in respect to Data Protection, Health and Safety, financial probity, ethics and scientific quality. You should refer in particular to Sections 3.5 and 3.6 of the Research Governance Framework.
6. You ensure that all information regarding patients or staff remains secure and strictly confidential at all times. You ensure that you understand and comply with the requirements of the NHS Confidentiality Code of Practice, Data Protection Act and Human Rights Act. Unauthorised disclosure of information is an offence and such disclosures may lead to prosecution.
7. **UKCRN Portfolio Studies only**: You will make local Trust research team members aware that it is expected that the "first participant, first visit" date should be within 70 days of the full submission for Trust Research Governance Approval, and this date must be reported to the Research and Development office using the email address above. Delay to recruitment due to study-wide developments must be reported to the Trust as soon as possible.
8. **UKCRN Portfolio Studies only**: You will report and upload Trust recruitment to the UKCRN portfolio accurately and in a timely manner, and will provide recruitment figures to the Trust upon request.

List of Approved Documents:

Documents	Version	Date
Protocol	1	15.01.14
Consent Form	1.1	07.03.14
Participant Information Sheet	1.1	07.03.14
Questionnaire: Visual Analogue Scale		
Questionnaire: SIAS		
Questionnaire: SSI (Brief Version)		
Questionnaire:EQ5D5L		
Questionnaire: PANSS		
Questionnaire: Time Use Interview		
Questionnaire: Time Use Interview Score Sheet		

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Appendix H – GP letter

A study investigating the effect of talking about pictures and memories of social events in people with psychosis and social anxiety

{Insert address}

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Norwich Research Park
University of East Anglia
Norwich
NR4 7TJ

Tel: 07518 503098
E-mail: D.Heavens@uea.ac.uk

{Insert date}

Dear Dr {Insert name},

I am writing to inform you that {Insert name} has agreed to take part in a research study being conducted as part fulfilment for the Doctorate in Clinical Psychology at the University of East Anglia. The study is investigating whether a therapeutic intervention known as 'imagery rescripting' can be used to make pictures and memories of past social events less distressing in people with psychosis and social anxiety.

Each participant involved in the study will be allocated to one of three conditions. Following the completion of some assessments, those in the first condition will be asked to wait one week before receiving the intervention. Those in the second condition will be asked to wait for two weeks and those in the third condition will be asked to wait for three weeks. All participants involved in the study will receive the intervention. All of the participants will complete assessments at various stages during the study allowing the effect of the intervention to be observed.

The intervention will be delivered over two sessions and will involve talking about images and memories for past social events. The participants will be helped to view the images and memories discussed in a more positive way. The time required for participation is approximately ten hours, divided into seven sessions over a period of 11-13 weeks. The assessments included in the study relate to the symptoms of social

anxiety, psychosis, paranoia and depression. Measures of social functioning and quality of life will also be taken.

If you have any concerns about {Insert name} taking part in this study or you would like more details, please do not hesitate to contact me using the details above.

Yours sincerely,

Dave Heavens
Trainee Clinical Psychologist

Appendix I – Visual inspection for research question data

Participant 1

Table I1

Visual inspection of SSI data displayed in Figure 3.4.

	Mean	Level	Trend	Reliable change	Clinical change
Baseline	35	+4	No trend	N	N
Cont/ImRs	36	-3	No trend	N	N
Follow-up	33	-3	No trend	N	N

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I2

Visual inspection of VAS-P data displayed in Figure 3.5.

Phase	Mean	Level	Trend
Baseline	0.46	-0.08	No trend
Control	0.34	+0.05	No trend
Break	0.34	-0.04	No trend
ImRs	0.31	-0.02	No trend
One Wk FU	0.30	-0.01	No trend
One Mnth FU	0.31	+0.04	No trend

Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change.

Table I3

Visual inspection of DASS-D data displayed in Figure 3.6.

Phase	Mean	Level	Trend	Clinical change
Baseline	9	0	No trend	N
Cont/ImRs	8	-2	Decrease	N
Follow-up	9	+3	Increase	N

Note. Cont/ImRs phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I4

Visual inspection of TUS data displayed in Figure 3.7.

Phase	Mean	Level	Trend	Clinical change
Baseline	40.49	+4.45	Increase	N
Cont/ImRs	43.42	+1.41	No trend	N
Follow-up	37.77	-12.71	Decrease	N

Note. Cont/ImRs phase includes both the control and imagery rescripting sessions; + or – indicates the direction of change; N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I5

Visual inspection of EQ-5D-5L-VAS data displayed in Figure 3.8.

Phase	Mean	Level	Trend
Baseline	72	-5	No trend
Cont/ImRs	77	+16	Increase
Follow-up	85	0	No trend

Note. Cont/ImRs phase includes control and imagery rescripting sessions; + or – indicates the direction of change.

Participant 2

Table I6

Visual inspection of SSI data displayed in Figure 3.12.

	Mean	Level	Trend	Reliable change	Clinical change
Baseline	38	-16	Decrease	N	N
Cont/ImRs	30	0	No trend	N	N
Follow-up	29.5	-1	No trend	N	N

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I7

Visual inspection of VAS-P data displayed in Figure 3.13.

Phase	Mean	Level	Trend
Baseline	0.39	-0.32	No trend
Control	0.32	-0.02	No trend
Break	0.23	-0.17	Decrease
ImRs	0.17	+0.05	No trend
One Wk FU	0.30	+0.22	Increase
One Mnth FU	0.53	+0.23	Increase

Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change.

Table I8

Visual inspection of DASS-D data displayed in Figure 3.14.

Phase	Mean	Level	Trend	Clinical change
Baseline	11	+3	No trend	N
Cont/ImRs	11	-4	Decrease	N
Follow-up	10.5	+3	Increase	N

Note. Cont/ImRs phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I9

Visual inspection of TUS data displayed in Figure 3.15.

Phase	Mean	Level	Trend	Clinical change
Baseline	15.89	-0.81	No trend	N
Cont/ImRs	14.14	-2.68	Decrease	N
Follow-up	11.05	-3.51	Decrease	N

Note. Cont/ImRs phase includes both the control and imagery rescripting sessions; + or – indicates the direction of change; N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I10

Visual inspection of EQ-5D-5L-VAS data displayed in Figure 3.16.

Phase	Mean	Level	Trend
Baseline	81.25	0	No trend
Cont/ImRs	80	+20	Increase
Follow-up	87.5	-5	No trend

Note. Cont/ImRs phase includes control and imagery rescripting sessions; + or – indicates the direction of change.

Participant 3

Table I11

Visual inspection of SSI data displayed in Figure 3.20.

	Mean	Level	Trend	Reliable change	Clinical change
Baseline	29	-4	No trend	N	N
Cont/ImRs	28	+2	No trend	N	N
Follow-up	27.5	-3	No trend	N	N

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I12

Visual inspection of VAS-P data displayed in Figure 3.21.

Phase	Mean	Level	Trend
Baseline	0.58	-0.02	No trend
Control	0.78	+0.10	Increase
Break	0.76	-0.14	Decrease
ImRs	0.70	+0.01	No trend
One Wk FU	0.73	+0.05	No trend
One Mnth FU	0.75	0	No trend

Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change.

Table I13

Visual inspection of DASS-D data displayed in Figure 3.22.

Phase	Mean	Level	Trend	Clinical change
Baseline	8.5	-1	No trend	N
Cont/ImRs	8	0	No trend	N
Follow-up	10.5	+5	Increase	N

Note. Cont/ImRs phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I14

Visual inspection of TUS data displayed in Figure 3.23.

Phase	Mean	Level	Trend	Clinical change
Baseline	31.04	-1.96	No trend	N
Cont/ImRs	35.40	+10.67	Increase	N
Follow-up	40.73	0	No trend	N

Note. Cont/ImRs phase includes both the control and imagery rescripting sessions; + or – indicates the direction of change; N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I15

Visual inspection of EQ-5D-5L-VAS data displayed in Figure 3.24.

Phase	Mean	Level	Trend
Baseline	59.5	+9	Increase
Cont/ImRs	67	+6	Increase
Follow-up	70	0	No trend

Note. Cont/ImRs phase includes control and imagery rescripting sessions; + or – indicates the direction of change.

Participant 4

Table I16

Visual inspection of SSI data displayed in Figure 3.28.

	Mean	Level	Trend	Reliable change	Clinical change
Baseline	21.5	+5	Increase	N	N
Cont/ImRs	19	-10	Decrease	N	Y
Follow-up	12.5	-3	No trend	N	Y

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; Y (Yes), N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I17

Visual inspection of VAS-P data displayed in Figure 3.29.

Phase	Mean	Level	Trend
Baseline	0.00	0	No trend
Control	0.00	0	No trend
Break	0.00	0	No trend
ImRs	0.00	0	No trend
One Wk FU	0.00	0	No trend
One Mnth FU	0.00	0	No trend

Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change.

Table I18

Visual inspection of DASS-D data displayed in Figure 3.30.

Phase	Mean	Level	Trend	Clinical change
Baseline	11.67	+2	No trend	N
Cont/ImRs	10.5	-5	Decrease	N
Follow-up	7	-2	Decrease	N

Note. Cont/ImRs phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I19

Visual inspection of the TUS data displayed in Figure 3.31.

Phase	Mean	Level	Trend	Clinical change
Baseline	19.58	-0.38	No trend	N
Cont/ImRs	20.31	+1.84	No trend	N
Follow-up	23.41	+4.35	Increase	N

Note. Cont/ImRs phase includes both the control and imagery rescripting sessions; + or – indicates the direction of change; N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I20

Visual inspection of the EQ-5D-5L VAS data displayed in Figure 3.32.

Phase	Mean	Level	Trend
Baseline	70	+15	No trend
Intervention	77.5	+5	Increase
Follow-up	82.5	+5	Increase

Note. Cont/ImRs phase includes control and imagery rescripting sessions; + or – indicates the direction of change.

Participant 5

Table I21

Visual inspection of SSI data displayed in Figure 3.36.

	Mean	Level	Trend	Reliable change	Clinical change
Baseline	54	-6	Decrease	N	N
Cont/ImRs	43.5	-15	Decrease	Y	N
Follow-up	24	-24	Decrease	Y	Y

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; Y (Yes), N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I22

Visual inspection of VAS-P data displayed in Figure 3.37.

Phase	Mean	Level	Trend
Baseline	0.55	+0.04	Decrease
Control	0.63	-0.49	Decrease
Break	0.49	+0.21	Increase
ImRs	0.42	-0.35	Decrease
One Wk FU	0.30	+0.12	Increase
One Mnth FU	0.25	-0.23	Decrease

Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change.

Table I23

Visual inspection of DASS-D data displayed in Figure 3.38.

Phase	Mean	Level	Trend	Clinical change
Baseline	18.5	-3	No trend	N
Cont/ImRs	14.5	-7	Decrease	N
Follow-up	7	-8	Decrease	Y

Note. Cont/ImRs phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; Y (Yes), N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I24

Visual inspection of TUS data displayed in Figure 3.39.

Phase	Mean	Level	Trend	Clinical change
Baseline	0.34	+0.67	No trend	N
Cont/ImRs	0.45	+0.44	No trend	N
Follow-up	1.64	+2.81	Increase	N

Note. Cont/ImRs phase includes both the control and imagery rescripting sessions; + or – indicates the direction of change; N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I25

Visual inspection of EQ-5D-5L-VAS data displayed in Figure 3.40.

Phase	Mean	Level	Trend
Baseline	30	+20	No trend
Cont/ImRs	55	+20	Increase
Follow-up	75	+20	Increase

Note. Cont/ImRs phase includes control and imagery rescripting sessions; + or – indicates the direction of change.

Participant 6

Table I26

Visual inspection of SSI data displayed in Figure 3.44.

	Mean	Level	Trend	Reliable change	Clinical change
Baseline	33	-2	No trend	N	N
Cont/ImRs	31.5	-1	No trend	N	N
Follow-up	30.5	-1	No trend	N	N

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I27

Visual inspection of VAS-P data displayed in Figure 3.45.

Phase	Mean	Level	Trend
Baseline	0.64	+0.13	No trend
Control	0.85	-0.04	No trend
Break	0.82	-0.03	No trend
ImRs	0.83	+0.05	No trend
One Wk FU	0.80	-0.10	No trend
One Mnth FU	0.57	-0.37	Decrease

Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change.

Table I28

Visual inspection of DASS-D data displayed in Figure 3.46.

Phase	Mean	Level	Trend	Clinical change
Baseline	19	+2	No trend	N
Cont/ImRs	16.5	-5	Decrease	N
Follow-up	16.5	+5	Increase	N

Note. Cont/ImRs phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I29

Visual inspection of TUS data displayed in Figure 3.47.

Phase	Mean	Level	Trend	Clinical change
Baseline	17.81	-8.76	Decrease	N
Cont/ImRs	10.30	-6.27	Decrease	N
Follow-up	7.82	+1.31	No trend	N

Note. Cont/ImRs phase includes both the control and imagery rescripting sessions; + or – indicates the direction of change; N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I30

Visual inspection of EQ-5D-5L-VAS data displayed in Figure 3.48.

Phase	Mean	Level	Trend
Baseline	52.5	+30	Increase
Cont/ImRs	62.5	-5	No trend
Follow-up	45	-30	Decrease

Note. Cont/ImRs phase includes control and imagery rescripting sessions; + or – indicates the direction of change.

Participant 7

Table I31

Visual inspection of SSI data displayed in Figure 3.52.

	Mean	Level	Trend	Reliable change	Clinical change
Baseline	24.5	-3	No trend	N	N
Cont/ImRs	19	-10	Decrease	N	Y
Follow-up	14.5	+1	No trend	N	Y

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; Y (Yes), N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I32

Visual inspection of VAS-P data displayed in Figure 3.53.

Phase	Mean	Level	Trend
Baseline	0.52	+0.29	No trend
Control	0.50	0	No trend
Break	0.50	0	No trend
ImRs	0.50	0	No trend
One Wk FU	0.50	0	No trend
One Mnth FU	0.50	0	No trend

Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change.

Table I33

Visual inspection of DASS-D data displayed in Figure 3.54.

Phase	Mean	Level	Trend	Clinical change
Baseline	10	+1	No trend	N
Cont/ImRs	6	-8	Decrease	Y
Follow-up	3.5	+3	Increase	Y

Note. Cont/ImRs phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; Y (Yes), N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I34

Visual inspection of TUS data displayed in Figure 3.55.

Phase	Mean	Level	Trend	Clinical change
Baseline	32.18	+7.52	Increase	N
Cont/ImRs	34.05	-3.78	Decrease	N
Follow-up	33.59	+2.86	Increase	N

Note. Cont/ImRs phase includes both the control and imagery rescripting sessions; + or – indicates the direction of change; N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I35

Visual inspection of EQ-5D-5L-VAS data displayed in Figure 3.56.

Phase	Mean	Level	Trend
Baseline	38.33	-5	No trend
Cont/ImRs	55	+40	Increase
Follow-up	72.5	-5	No trend

Note. Cont/ImRs phase includes control and imagery rescripting sessions; + or – indicates the direction of change.

Participant 8

Table I36

Visual inspection of SSI data displayed in Figure 3.60.

	Mean	Level	Trend	Reliable change	Clinical change
Baseline	57.5	-3	No trend	N	N
Cont/ImRs	59	+6	Increase	N	N
Follow-up	59	-6	Decrease	N	N

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I37

Visual inspection of VAS-P data displayed in Figure 3.61.

Phase	Mean	Level	Trend
Baseline	0.78	-0.09	No trend
Control	0.62	-0.22	Decrease
Break	0.76	+0.49	Increase
ImRs	0.67	-0.66	Decrease
One Wk FU	0.55	+0.41	Increase
One Mnth FU	0.76	+0.01	No trend

Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change.

Table I38

Visual inspection of DASS-D data displayed in Figure 3.62.

Phase	Mean	Level	Trend	Clinical change
Baseline	13.5	-1	No trend	N
Cont/ImRs	15.5	+5	Increase	N
Follow-up	19	+2	Increase	N

Note. Cont/ImRs phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I39

Visual inspection of TUS data displayed in Figure 3.63.

Phase	Mean	Level	Trend	Clinical change
Baseline	8.66	-1.54	No trend	N
Cont/ImRs	8.78	+1.77	No trend	N
Follow-up	7.41	-4.51	Decrease	N

Note. Cont/ImRs phase includes both the control and imagery rescripting sessions; + or – indicates the direction of change; N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I40

Visual inspection of EQ-5D-5L-VAS data displayed in Figure 3.64.

Phase	Mean	Level	Trend
Baseline	57.5	+75	Increase
Cont/ImRs	71	-8	Decrease
Follow-up	48.5	-37	Decrease

Note. Cont/ImRs phase includes control and imagery rescripting sessions; + or – indicates the direction of change.

Participant 9

Table I41

Visual inspection of SSI data displayed in Figure 3.68.

	Mean	Level	Trend	Reliable change	Clinical change
Baseline	50.5	+13	Increase	N	N
Cont/ImRs	54	-6	Decrease	N	N
Follow-up	52	+2	No trend	N	N

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I42

Visual inspection of VAS-P data displayed in Figure 3.69.

Phase	Mean	Level	Trend
Baseline	0.91	+0.03	No trend
Control	0.80	-0.02	No trend
Break	0.82	+0.05	Increase
ImRs	0.84	-0.01	No trend
One Wk FU	0.88	+0.09	Increase
One Mnth FU	0.91	-0.03	Decrease

Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change.

Table I43

Visual inspection of DASS-D data displayed in Figure 3.70.

Phase	Mean	Level	Trend	Clinical change
Baseline	18.33	0	No trend	N
Cont/ImRs	19.5	+3	Increase	N
Follow-up	21	0	No trend	N

Note. Cont/ImRs phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I44

Visual inspection of TUS data displayed in Figure 3.71.

Phase	Mean	Level	Trend	Clinical change
Baseline	0.50	0	No trend	N
Cont/ImRs	0.50	0	No trend	N
Follow-up	1.44	+1.87	Increase	N

Note. Cont/ImRs phase includes both the control and imagery rescripting sessions; + or – indicates the direction of change; N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I45

Visual inspection of EQ-5D-5L-VAS data displayed in Figure 3.72.

Phase	Mean	Level	Trend
Baseline	27	+4	Increase
Cont/ImRs	31.5	+5	Increase
Follow-up	39.5	+9	Increase

Note. Cont/ImRs phase includes control and imagery rescripting sessions; + or – indicates the direction of change.

Participant 10

Table I46

Visual inspection of SSI data displayed in Figure 3.76.

	Mean	Level	Trend	Reliable change	Clinical change
Baseline	52	-8	Increase	N	N
Cont/ImRs	48	-16	Decrease	N	N
Follow-up	35.5	-9	Decrease	Y	N

Note. 'Cont/ImRs' phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; Y (Yes), N (No); the reliable change threshold was calculated from the mean baseline score for Cont/ImRs and follow-up; clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I47

Visual inspection of VAS-P data displayed in Figure 3.77.

Phase	Mean	Level	Trend
Baseline	0.46	-0.72	Decrease
Control	0.05	+0.04	No trend
Break	0.07	-0.01	No trend
ImRs	0.08	+0.03	No trend
One Wk FU	0.05	-0.09	Decrease
One Mnth FU	0.02	+0.03	No trend

Note. ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; + or – indicates the direction of the change.

Table I48

Visual inspection of DASS-D data displayed in Figure 3.78.

Phase	Mean	Level	Trend	Clinical change
Baseline	16.5	-7	No trend	N
Cont/ImRs	10.5	+1	No trend	N
Follow-up	5.9	-3	Decrease	N

Note. Cont/ImRs phase includes both control and imagery rescripting sessions; + or – indicates the direction of change; N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I49

Visual inspection of TUS data displayed in Figure 3.79.

Phase	Mean	Level	Trend	Clinical change
Baseline	44.94	+17.42	Increase	Y
Cont/ImRs	43.84	-19.62	Decrease	N
Follow-up	36.03	+3.99	Increase	N

Note. Cont/ImRs phase includes both the control and imagery rescripting sessions; + or – indicates the direction of change; Y (Yes), N (No); clinical change was calculated using the second measure in each phase (i.e. end of baseline, one week follow-up, one month follow-up).

Table I50

Visual inspection of EQ-5D-5L-VAS data displayed in Figure 3.80.

Phase	Mean	Level	Trend
Baseline	61.25	0	No trend
Cont/ImRs	82.5	+25	Increase
Follow-up	95.5	+1	No trend

Note. Cont/ImRs phase includes control and imagery rescripting sessions; + or – indicates the direction of change.

Appendix J - Visual inspection for ideographic ratings

Participant 1

Table J1

Visual inspection of the ideographic ratings data displayed in Figure 3.3.

Inspection	Time point	EB	MD	ID	IV	IF
Mean	Control	75.5	52.5	53.5	66	4
	Break	49	39	37	69.5	2.5
	ImRs	27	24	18.5	71	1
	One Wk FU	15	20	15.5	73.5	0.5
	One Mnth FU	26	17.5	12	70	0
Level	Control	-37	-11	-9	-4	0
	Break	-16	-16	-24	+11	-3
	ImRs	-28	-14	-13	-8	0
	One Wk FU	+4	+6	+5	+13	-1
	One Mnth FU	+18	-11	-12	-20	0
Trend	Control	Dec	Dec	Dec	NT	NT
	Break	Dec	Dec	Dec	Inc	Dec
	ImRs	Dec	Dec	Dec	Dec	NT
	One Wk FU	Inc	Inc	Inc	Inc	Dec
	One Mnth FU	Inc	Dec	Dec	Dec	NT

Note. EB = Encapsulated belief; MD = Memory distress; ID = Imagery distress; IV = Imagery vividness; IF = Imagery frequency; Control = Control session; Break = Break between control and imagery rescripting session; ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; - sign indicates shift down in scores, + sign indicates shift up in scores; Dec = Decrease in trend, Inc = Increase in trend; NT = No trend.

Participant 2

Table J2

Visual inspection of the ideographic ratings data displayed in Figure 3.11.

Inspection	Time point	EB	MD	ID	IV	IF
Mean	Control	84	95	88	60	4
	Break	83	86	87	66	3
	ImRs	73	83	90	78	1
	One Wk FU	63	79	81	76	3
	One Mnth FU	52	65	69	66	3
Level	Control	0	+3	-4	+2	0
	Break	-3	-20	+2	+9	-3
	ImRs	-16	+13	+3	+15	0
	One Wk FU	-4	-21	-20	-19	+3
	One Mnth FU	-18	-7	-4	-1	+2
Trend	Control	NT	Inc	Dec	Inc	NT
	Break	NT	Dec	Inc	Inc	Dec
	ImRs	Dec	Inc	Inc	Inc	NT
	One Wk FU	Dec	Dec	Dec	Dec	Inc
	One Mnth FU	Dec	Dec	Dec	NT	Dec

Note. EB = Encapsulated belief; MD = Memory distress; ID = Imagery distress; IV = Imagery vividness; IF = Imagery frequency; Control = Control session; Break = Break between control and imagery rescripting session; ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; - sign indicates shift down in scores, + sign indicates shift up in scores; Dec = Decrease in trend, Inc = Increase in trend; NT = No trend.

Participant 3

Table J3

Visual inspection of the ideographic ratings data displayed in Figure 3.19.

Inspection	Time point	EB	MD	ID	IV	IF
Mean	Control	79	69.5	71.5	43	2
	Break	68	63.5	71.5	57	2
	ImRs	57	57	55	58.5	2
	One Wk FU	45	43	39.5	46	2
	One Mnth FU	40.5	39	38	45.5	1.5
Level	Control	-30	-19	-3	+10	0
	Break	+8	+7	+3	+18	0
	ImRs	-30	-20	-36	-15	0
	One Wk FU	+6	-8	+5	-10	0
	One Mnth FU	-15	0	-8	+9	-1
Trend	Control	Dec	Dec	NT	Inc	NT
	Break	Inc	Inc	NT	Inc	NT
	ImRs	Dec	Dec	Dec	Dec	NT
	One Wk FU	Inc	Dec	Inc	Dec	NT
	One Mnth FU	Dec	NT	Dec	Inc	Dec

Note. EB = Encapsulated belief; MD = Memory distress; ID = Imagery distress; IV = Imagery vividness; IF = Imagery frequency; Control = Control session; Break = Break between control and imagery rescripting session; ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; - sign indicates shift down in scores, + sign indicates shift up in scores; Dec = Decrease in trend, Inc = Increase in trend; NT = No trend.

Participant 4

Table J4

Visual inspection of the ideographic ratings data displayed in Figure 3.27.

Inspection	Time point	EB	MD	ID	IV	IF
Mean	Control	100	100	100	50	15.5
	Break	100	100	100	64	11.5
	ImRs	54.5	100	100	61	7.5
	One Wk FU	43	77	76.5	32	6
	One Mnth FU	51	29	28.5	13.5	2
Level	Control	0	0	0	-2	+1
	Break	0	0	0	+30	-9
	ImRs	-91	0	0	-36	+1
	One Wk FU	+68	-46	-47	-22	-4
	One Mnth FU	-52	-50	-49	-15	-4
Trend	Control	NT	NT	NT	NT	NT
	Break	NT	NT	NT	Inc	Dec
	ImRs	Dec	NT	NT	Dec	NT
	One Wk FU	Inc	Dec	Dec	Dec	Dec
	One Mnth FU	Dec	Dec	Dec	Dec	Dec

Note. EB = Encapsulated belief; MD = Memory distress; ID = Imagery distress; IV = Imagery vividness; IF = Imagery frequency; Control = Control session; Break = Break between control and imagery rescripting session; ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; - sign indicates shift down in scores, + sign indicates shift up in scores; Dec = Decrease in trend, Inc = Increase in trend; NT = No trend.

Participant 5

Table J5

Visual inspection of the ideographic ratings data displayed in Figure 3.35.

Inspection	Time point	EB	MD	ID	IV	IF
Mean	Control	95.5	61	95	92	80
	Break	93	63.5	95	100	115
	ImRs	70	47	82.5	91.5	140
	One Wk FU	41	23.5	60.5	62.5	85
	One Mnth FU	24	24.5	41	25.5	15
Level	Control	-9	-12	-10	+16	+20
	Break	+4	-17	+10	0	+50
	ImRs	-30	-50	-35	-17	0
	One Wk FU	-8	+3	-9	-41	-110
	One Mnth FU	-26	-1	-30	-33	-30
Trend	Control	Dec	Dec	Dec	Inc	Inc
	Break	Inc	Inc	Inc	NT	Inc
	ImRs	Dec	Dec	Dec	Dec	NT
	One Wk FU	Dec	NT	Dec	Dec	Dec
	One Mnth FU	Dec	NT	Dec	Dec	Dec

Note. EB = Encapsulated belief; MD = Memory distress; ID = Imagery distress; IV = Imagery vividness; IF = Imagery frequency; Control = Control session; Break = Break between control and imagery rescripting session; ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; - sign indicates shift down in scores, + sign indicates shift up in scores; Dec = Decrease in trend, Inc = Increase in trend; NT = No trend.

Participant 6

Table J6

Visual inspection of the ideographic ratings data displayed in Figure 3.43.

Inspection	Time point	EB	MD	ID	IV	IF
Mean	Control	87	83.5	86.5	45.5	21
	Break	87	76.5	86	29.5	12.5
	ImRs	86.5	68	83.5	46	5
	One Wk FU	84	69.5	77	45.5	5
	One Mnth FU	78.5	59	74	17.5	4
Level	Control	+4	+13	-3	+1	0
	Break	-4	-27	+2	-33	-17
	ImRs	+3	+10	-7	+66	+2
	One Wk FU	-8	-7	-6	-67	-2
	One Mnth FU	+3	-14	0	+11	0
Trend	Control	NT	Inc	NT	NT	NT
	Break	NT	Dec	NT	Dec	Dec
	ImRs	NT	Inc	Dec	Inc	NT
	One Wk FU	Dec	Dec	Dec	Dec	NT
	One Mnth FU	Dec	Dec	NT	Inc	NT

Note. EB = Encapsulated belief; MD = Memory distress; ID = Imagery distress; IV = Imagery vividness; IF = Imagery frequency; Control = Control session; Break = Break between control and imagery rescripting session; ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; - sign indicates shift down in scores, + sign indicates shift up in scores; Dec = Decrease in trend, Inc = Increase in trend; NT = No trend.

Participant 7

Table J7

Visual inspection of the ideographic ratings data displayed in Figure 3.51.

Inspection	Time point	EB	MD	ID	IV	IF
Mean	Control	100	80	57.5	75	12
	Break	100	75	55	60	18
	ImRs	100	65	60	50	24
	One Wk FU	100	60	55	50	13.5
	One Mnth FU	100	55	50	50	1.5
Level	Control	0	+20	-15	-10	0
	Break	0	-30	+10	-20	+12
	ImRs	0	+10	0	0	0
	One Wk FU	0	-20	-10	0	-21
	One Mnth FU	0	-10	0	0	-3
Trend	Control	NT	Inc	Dec	Dec	NT
	Break	NT	Dec	Inc	Dec	Inc
	ImRs	NT	Inc	NT	NT	NT
	One Wk FU	NT	Dec	Dec	NT	Dec
	One Mnth FU	NT	Inc	NT	NT	Dec

Note. EB = Encapsulated belief; MD = Memory distress; ID = Imagery distress; IV = Imagery vividness; IF = Imagery frequency; Control = Control session; Break = Break between control and imagery rescripting session; ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; - sign indicates shift down in scores, + sign indicates shift up in scores; Dec = Decrease in trend, Inc = Increase in trend; NT = No trend.

Participant 8

Table J8

Visual inspection of the ideographic ratings data displayed in Figure 3.59.

Inspection	Time point	EB	MD	ID	IV	IF
Mean	Control	93.5	84	97.5	63.5	49
	Break	93.5	93.5	99.5	74	59.5
	ImRs	77.5	94	99	76	71
	One Wk FU	75	96	85.5	63.5	46
	One Mnth FU	96	97	82.5	65.5	22.5
Level	Control	-13	+20	+5	+13	0
	Break	+13	-1	-1	+8	+21
	ImRs	-45	+2	0	-4	+2
	One Wk FU	+40	+2	-27	-21	-52
	One Mnth FU	+2	0	+21	+25	+5
Trend	Control	Dec	Inc	Inc	Inc	NT
	Break	Inc	NT	NT	Inc	Inc
	ImRs	Dec	NT	NT	Dec	NT
	One Wk FU	Inc	NT	Dec	Dec	Dec
	One Mnth FU	NT	NT	Inc	Inc	Inc

Note. EB = Encapsulated belief; MD = Memory distress; ID = Imagery distress; IV = Imagery vividness; IF = Imagery frequency; Control = Control session; Break = Break between control and imagery rescripting session; ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; - sign indicates shift down in scores, + sign indicates shift up in scores; Dec = Decrease in trend, Inc = Increase in trend; NT = No trend.

Participant 9

Table J9

Visual inspection of the ideographic ratings data displayed in Figure 3.67.

Inspection	Time point	EB	MD	ID	IV	IF
Mean	Control	97.5	51	78.5	49.5	87.5
	Break	99	29.5	40.5	68.5	49.5
	ImRs	98.5	12.5	43.5	90.5	10
	One Wk FU	98.5	53	85	89	8.5
	One Mnth FU	95.5	89.5	93	87.5	7
Level	Control	+3	+2	-9	-17	+5
	Break	0	-45	-67	+55	-81
	ImRs	-1	+11	+73	-11	+2
	One Wk FU	+1	+70	+10	+8	-5
	One Mnth FU	-7	+3	+6	-11	+2
Trend	Control	Inc	Inc	Dec	Dec	Inc
	Break	NT	Dec	Dec	Inc	Dec
	ImRs	NT	Inc	Inc	Dec	NT
	One Wk FU	NT	Inc	Inc	Inc	Dec
	One Mnth FU	Dec	Inc	Inc	Dec	NT

Note. EB = Encapsulated belief; MD = Memory distress; ID = Imagery distress; IV = Imagery vividness; IF = Imagery frequency; Control = Control session; Break = Break between control and imagery rescripting session; ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; - sign indicates shift down in scores, + sign indicates shift up in scores; Dec = Decrease in trend, Inc = Increase in trend; NT = No trend.

Participant 10

Table J10

Visual inspection of the ideographic ratings data displayed in Figure 3.75.

Inspection	Time point	EB	MD	ID	IV	IF
Mean	Control	89	56	87	65.5	8
	Break	84	52.5	83.5	74	5.5
	ImRs	45	56	68.5	83.5	4
	One Wk FU	17.5	39.5	45	57	3.5
	One Mnth FU	15	12.5	26.5	16	1
Level	Control	+2	-6	-10	-5	0
	Break	-12	-1	+3	+22	-5
	ImRs	-66	+8	-33	-3	+2
	One Wk FU	+11	-41	-14	-50	-3
	One Mnth FU	-16	-13	-23	-32	-2
Trend	Control	NT	Dec	Dec	Dec	NT
	Break	Dec	NT	Inc	Inc	Dec
	ImRs	Dec	Inc	Dec	NT	Inc
	One Wk FU	Inc	Dec	Dec	Dec	Dec
	One Mnth FU	Dec	Dec	Dec	Dec	Dec

Note. EB = Encapsulated belief; MD = Memory distress; ID = Imagery distress; IV = Imagery vividness; IF = Imagery frequency; Control = Control session; Break = Break between control and imagery rescripting session; ImRs = Imagery rescripting session; One Wk FU = One week follow-up; One Mnth FU = One month follow-up; - sign indicates shift down in scores, + sign indicates shift up in scores; Dec = Decrease in trend, Inc = Increase in trend; NT = No trend.

Appendix K - Imagery rescripting rating sheets (completed)

Imagery rescripting rating scale

Participant: 1

Introduction to rescripting	Achieved	Comments
Provide introduction to imagery rescripting	Yes	
Explain imagery rescripting stages (three in total)	Yes	Had already cognitively restructured the memory? Unclear when the cognitive restructuring happened but incorporated well into the session
Explain that props and techniques can be used (e.g. cartoon characters, rewind, pause)	Yes	Done really nicely and in keeping with clients understanding and experience
Offer participant the opportunity to ask questions	No	
Guide participant in talking about image as younger self		
Encourage participant to close eyes and revisit the image	Yes	
Ask participant to describe image/event as younger self	Yes	
Offer prompts to gain information about 'what happens next'	Yes	This enabled the client to open up emotionally
Inform participant that they are doing a good job	Yes	Not very frequently but some encouragement given
Encourage participant to talk about the image/event in detail	Yes	Got 5 senses and smells of cigarettes, bodily sensations
Guide participant in talking about image as older self as observer		
Encourage participant to keep their eyes closed	Yes	
Ask participant to describe image/event as older self as observer	Yes	
Provide example of talking about the image/event in the third person	Yes	
Offer prompts to gain information about 'what happens next'	Yes	This happens frequently through stage 2
Inform participant that they are doing a good job	Yes	
Encourage participant to talk about the image/event in detail	Yes	Lots of thoughts, feelings and ideas but did not restructure at this point??
Guide participant in talking about image as younger self with older self intervening		

Encourage participant to keep their eyes closed	Yes	
Ask participant to describe image/event as younger self with older self intervening	Yes	
Explain that information from the cognitive restructuring can be used to help	Yes	This was done well incorporating positive beliefs about self-image and also helpful information about how she shouldn't be behaving the way she was and how he can stand up to people and this is ok. Really well executed!!
Explain that anything else that is helpful can be used (e.g. props, techniques)	Yes	
Ask what else they feel inclined to do (repeated as often as necessary)	Yes	This enabled him to feel more hopeful and think about being and feeling more sure and confident
Ask how the other person responds (repeated as often as necessary)	Yes	Asked frequently and appropriately
Offer prompts to gain information about 'what happens next'	Yes	This again allowed client to expand more
Encourage participant to get older self to say or do things that their younger self requires (repeated as often as necessary)	Yes	Offered guidance on anything else you would like him to say and do really sensitively
End of rescripting		
Encourage participant to bring attention back to the room	Yes	
Ask participant how they feel and how the memory feels to them after doing the rescripting	Yes	Gained more control over the memory and felt better, "that situation was the exception rather than the rule!!"

Imagery rescripting rating scale

Participant: 2

Introduction to rescripting	Achieved	Comments
Provide introduction to imagery rescripting	Yes	Very clearly explained
Explain imagery rescripting stages (three in total)	Yes	
Explain that props and techniques can be used (e.g. cartoon characters, rewind, pause)	Yes	
Offer participant the opportunity to ask questions	Yes	
Guide participant in talking about image as younger self		
Encourage participant to close eyes and revisit the image	Yes	
Ask participant to describe image/event as younger self	Yes	Prompted client to remain in 1st person but she struggled to do this and struggled to stay in the memory. However, therapist persisted and client was able to access thoughts, feelings well in the session
Offer prompts to gain information about 'what happens next'	Yes	Used feelings in body and senses to support client to access memory deeply
Inform participant that they are doing a good job	Yes	
Encourage participant to talk about the image/event in detail	Yes	Used senses to help participant to access feelings in the memory
Guide participant in talking about image as older self as observer		
Encourage participant to keep their eyes closed	Yes	
Ask participant to describe image/event as older self as observer	Yes	Lots of detail encouraged to be given and this was very positive and in line with social anxiety expectations
Provide example of talking about the image/event in the third person	Yes	
Offer prompts to gain information about 'what happens next'	Yes	
Inform participant that they are doing a good job	Yes	"You are doing a really good job of describing this"
Encourage participant to talk about the image/event in detail	Yes	Lots of "anything else" to elicit further detail

Guide participant in talking about image as younger self with older self intervening		
Encourage participant to keep their eyes closed	Yes	Did well at this but again struggled to remain in the first person and again therapist very sensitively persisted
Ask participant to describe image/event as younger self with older self intervening	Yes	Although it was not clear that older self was present throughout the memory. It took a while for the older self to be incorporated
Explain that information from the cognitive restructuring can be used to help	Yes	
Explain that anything else that is helpful can be used (e.g. props, techniques)	Yes	Able to coach younger self saying "keep calm and carry on". Lovely therapeutic moment
Ask what else they feel inclined to do (repeated as often as necessary)	Yes	
Ask how the other person responds (repeated as often as necessary)	Yes	
Offer prompts to gain information about 'what happens next'	Yes	
Encourage participant to get older self to say or do things that their younger self requires (repeated as often as necessary)	Yes	Lots of supportive self statements and actions to manage with the situation better and advice from older self-elicited well
End of rescripting		
Encourage participant to bring attention back to the room	Yes	
Ask participant how they feel and how the memory feels to them after doing the rescripting	Yes	

Imagery rescripting rating scale

Participant: 3

Introduction to rescripting	Achieved	Comments
Provide introduction to imagery rescripting	Yes	Very clearly explained
Explain imagery rescripting stages (three in total)	Yes	Very quiet responses from participant. Unsure how much the participant was just agreeing
Explain that props and techniques can be used (e.g. cartoon characters, rewind, pause)	Yes	
Offer participant the opportunity to ask questions	No	No chance to ask questions given. Client very quiet
Guide participant in talking about image as younger self		
Encourage participant to close eyes and revisit the image	Yes	
Ask participant to describe image/event as younger self	Yes	
Offer prompts to gain information about 'what happens next'	Yes	
Inform participant that they are doing a good job	Yes	
Encourage participant to talk about the image/event in detail	Yes	Used senses to help participant and encouraged client to go into more detail
Guide participant in talking about image as older self as observer		
Encourage participant to keep their eyes closed	Yes	
Ask participant to describe image/event as older self as observer	Yes	Client easily adapts to observer perspective. Therapist appropriately encouraging
Provide example of talking about the image/event in the third person	Yes	Uses the clients own example
Offer prompts to gain information about 'what happens next'	Yes	
Inform participant that they are doing a good job	Yes	Lots of lovely encouragement from therapist
Encourage participant to talk about the image/event in detail	Yes	Lots of detail brought out, more so than in first person perspective. This enables the client to link with the strong emotions of sadness and loneliness that had not previously been discussed. Participant did not make

		any changes as the adult self/observer
Guide participant in talking about image as younger self with older self intervening		
Encourage participant to keep their eyes closed	Yes	
Ask participant to describe image/event as younger self with older self intervening	Yes	
Explain that information from the cognitive restructuring can be used to help	Yes	Did not use much info from restructuring although having hugs and reminders seemed supportive
Explain that anything else that is helpful can be used (e.g. props, techniques)	Yes	
Ask what else they feel inclined to do (repeated as often as necessary)	Yes	This was done lots although she did not take opportunities to make changes. With encouragement form the therapist the participant started to develop more helpful thoughts, e.g. they're not talking about you
Ask how the other person responds (repeated as often as necessary)	Yes	
Offer prompts to gain information about 'what happens next'	Yes	
Encourage participant to get older self to say or do things that their younger self requires (repeated as often as necessary)	Yes	This stage enabled participant to feel more confident in the memory
End of rescripting		
Encourage participant to bring attention back to the room	Yes	
Ask participant how they feel and how the memory feels to them after doing the rescripting	Yes	

Imagery rescripting rating scale

Participant: 4

Introduction to rescripting	Achieved	Comments
Provide introduction to imagery rescripting	Yes	Very clear
Explain imagery rescripting stages (three in total)	Yes	
Explain that props and techniques can be used (e.g. cartoon characters, rewind, pause)	Yes	
Offer participant the opportunity to ask questions	Yes	
Guide participant in talking about image as younger self		
Encourage participant to close eyes and revisit the image	Yes	
Ask participant to describe image/event as younger self	Yes	Not speaking in present tense but past tense. Therapist goes with this and also does not use present tense. However, this did not seem to cause any difficulties with emotional engagement with the exercise
Offer prompts to gain information about 'what happens next'	Yes	
Inform participant that they are doing a good job	Yes	
Encourage participant to talk about the image/event in detail	Yes	Therapist engages participant in thoughts, feelings, and 5 senses successfully
Guide participant in talking about image as older self as observer		
Encourage participant to keep their eyes closed	Yes	
Ask participant to describe image/event as older self as observer	Yes	Quickly participant gets into observer image but does not choose to anything differently
Provide example of talking about the image/event in the third person	Yes	
Offer prompts to gain information about 'what happens next'	Yes	
Inform participant that they are doing a good job	Yes	
Encourage participant to talk about the image/event in detail	Yes	
Guide participant in talking about image as younger self with older self intervening		
Encourage participant to keep their eyes closed	Yes	

Ask participant to describe image/event as younger self with older self intervening	Yes	Participant initially struggled to do this but therapist encouraged her to stick with it in a very gentle and empathetic way
Explain that information from the cognitive restructuring can be used to help	Yes	
Explain that anything else that is helpful can be used (e.g. props, techniques)	Yes	
Ask what else they feel inclined to do (repeated as often as necessary)	Yes	This was done very well and in a very sensitive way. The client described feeling very alone and distressed by the memory. The therapist appropriately encouraged participant to make changes
Ask how the other person responds (repeated as often as necessary)	Yes	
Offer prompts to gain information about 'what happens next'	Yes	
Encourage participant to get older self to say or do things that their younger self requires (repeated as often as necessary)	Yes	
End of rescripting		
Encourage participant to bring attention back to the room	Yes	
Ask participant how they feel and how the memory feels to them after doing the rescripting	Yes	

Imagery rescripting rating scale

Participant: 5

Introduction to rescripting	Achieved	Comments
Provide introduction to imagery rescripting	Yes	Described very clearly
Explain imagery rescripting stages (three in total)	Yes	Well described using the script, although sounded more relaxed than with previous participants
Explain that props and techniques can be used (e.g. cartoon characters, rewind, pause)	Yes	
Offer participant the opportunity to ask questions	Yes	No questions asked by participant
Guide participant in talking about image as younger self		
Encourage participant to close eyes and revisit the image	Yes	
Ask participant to describe image/event as younger self	Yes	Described the scene well. Not talking in the present tense but this did not affect her ability to engage in the therapeutic task
Offer prompts to gain information about 'what happens next'	Yes	Used the ability to pause the scene well
Inform participant that they are doing a good job	Yes	The therapeutic interaction enabled the client to get into the scene and express more physical and emotional reactions, e.g. "my body is going to implode into itself
Encourage participant to talk about the image/event in detail	Yes	
Guide participant in talking about image as older self as observer		
Encourage participant to keep their eyes closed	Yes	
Ask participant to describe image/event as older self as observer	Yes	
Provide example of talking about the image/event in the third person	Yes	
Offer prompts to gain information about 'what happens next'	Yes	
Inform participant that they are doing a good job	Yes	
Encourage participant to talk about the image/event in detail	Yes	The therapist's responses enabled participant to

		express her greatest fears around believing that older people are judging her in the memory and described the impact of the panic attack in more detail
Guide participant in talking about image as younger self with older self intervening		
Encourage participant to keep their eyes closed	Yes	
Ask participant to describe image/event as younger self with older self intervening	Yes	
Explain that information from the cognitive restructuring can be used to help	Yes	Used a lot of the restructuring and this sounded very empowering for the participant
Explain that anything else that is helpful can be used (e.g. props, techniques)	Yes	Imagines chairs etc. in the scene
Ask what else they feel inclined to do (repeated as often as necessary)	Yes	
Ask how the other person responds (repeated as often as necessary)	Yes	
Offer prompts to gain information about 'what happens next'	Yes	
Encourage participant to get older self to say or do things that their younger self requires (repeated as often as necessary)	Yes	Uses older self well, including reassurance around the panic attack. Able to introduce the positive aspects of self, including kindness and generosity
End of rescripting		
Encourage participant to bring attention back to the room	Yes	
Ask participant how they feel and how the memory feels to them after doing the rescripting	Yes	It was not as bad as the participant was expecting it to be

Imagery rescripting rating scale

Participant: 6

Introduction to rescripting	Achieved	Comments
Provide introduction to imagery rescripting	Yes	
Explain imagery rescripting stages (three in total)	Yes	
Explain that props and techniques can be used (e.g. cartoon characters, rewind, pause)	Yes	
Offer participant the opportunity to ask questions	Yes	Participant expresses a number of concerns about having to imagine what is going to happen. Difficulties imaging self. Therapist explains not to worry about this and takes control in a very gentle way. Participant struggled to take in all the information
Guide participant in talking about image as younger self		
Encourage participant to close eyes and revisit the image	Yes	
Ask participant to describe image/event as younger self	Yes	
Offer prompts to gain information about 'what happens next'	Yes	The participant struggled to speak in the present tense and spoke in a disjointed way with gaps in the memory
Inform participant that they are doing a good job	Yes	
Encourage participant to talk about the image/event in detail	Yes	The participant struggled to explain how he was feeling in the present tense and kept going back and forth but with encouragement from the therapist he was able to engage in the exercise
Guide participant in talking about image as older self as observer		
Encourage participant to keep their eyes closed	Yes	
Ask participant to describe image/event as older self as observer	Yes	Participant does this well and the therapist is skilled at encouraging this

Provide example of talking about the image/event in the third person	Yes	
Offer prompts to gain information about ‘what happens next’	Yes	
Inform participant that they are doing a good job	Yes	
Encourage participant to talk about the image/event in detail	Yes	
Guide participant in talking about image as younger self with older self intervening		
Encourage participant to keep their eyes closed	Yes	
Ask participant to describe image/event as younger self with older self intervening	Yes	Able to do this with scaffolding and support from therapist
Explain that information from the cognitive restructuring can be used to help	Yes	Uses this. Although participant struggles with the imaginative process and keeps coming away from the imagery or digressing
Explain that anything else that is helpful can be used (e.g. props, techniques)	Yes	
Ask what else they feel inclined to do (repeated as often as necessary)	Yes	
Ask how the other person responds (repeated as often as necessary)	Yes	
Offer prompts to gain information about ‘what happens next’	Yes	
Encourage participant to get older self to say or do things that their younger self requires (repeated as often as necessary)	Yes	
End of rescripting		
Encourage participant to bring attention back to the room	Yes	
Ask participant how they feel and how the memory feels to them after doing the rescripting	Yes	

Imagery rescripting rating scale

Participant: 7

Introduction to rescripting	Achieved	Comments
Provide introduction to imagery rescripting	Yes	
Explain imagery rescripting stages (three in total)	Yes	
Explain that props and techniques can be used (e.g. cartoon characters, rewind, pause)	Yes	
Offer participant the opportunity to ask questions	Yes	Participant had a number of questions and talked these through with the therapist
Guide participant in talking about image as younger self		
Encourage participant to close eyes and revisit the image	Yes	
Ask participant to describe image/event as younger self	Yes	
Offer prompts to gain information about 'what happens next'	Yes	
Inform participant that they are doing a good job	Yes	
Encourage participant to talk about the image/event in detail	Yes	
Guide participant in talking about image as older self as observer		
Encourage participant to keep their eyes closed	Yes	
Ask participant to describe image/event as older self as observer	Yes	
Provide example of talking about the image/event in the third person	Yes	
Offer prompts to gain information about 'what happens next'	Yes	
Inform participant that they are doing a good job	Yes	
Encourage participant to talk about the image/event in detail	Yes	
Guide participant in talking about image as younger self with older self intervening		
Encourage participant to keep their eyes closed	Yes	
Ask participant to describe image/event as younger self with older self intervening	Yes	
Explain that information from the cognitive restructuring can be used to help	Yes	
Explain that anything else that is helpful can be used (e.g. props, techniques)	Yes	

Ask what else they feel inclined to do (repeated as often as necessary)	Yes	
Ask how the other person responds (repeated as often as necessary)	Yes	
Offer prompts to gain information about ‘what happens next’	Yes	
Encourage participant to get older self to say or do things that their younger self requires (repeated as often as necessary)	Yes	
End of rescripting		
Encourage participant to bring attention back to the room	Yes	
Ask participant how they feel and how the memory feels to them after doing the rescripting	Yes	

Imagery rescripting rating scale

Participant: 8

Introduction to rescripting	Achieved	Comments
Provide introduction to imagery rescripting	Yes	Used script
Explain imagery rescripting stages (three in total)	Yes	
Explain that props and techniques can be used (e.g. cartoon characters, rewind, pause)	Yes	
Offer participant the opportunity to ask questions	Yes	No questions asked but client clarified what had been said
Guide participant in talking about image as younger self		
Encourage participant to close eyes and revisit the image	Yes	
Ask participant to describe image/event as younger self	Yes	Well described, client chose to work with a memory that involved drug taking, although appeared to recall it well in detail
Offer prompts to gain information about 'what happens next'	Yes	
Inform participant that they are doing a good job	Yes	
Encourage participant to talk about the image/event in detail	Yes	Talked and sounded anxious and paranoid talking about needing the toilet and catastrophic thoughts about being unable to control his bladder. The participant asked for the Dictaphone to be switched off, possibly due to paranoia around drug taking etc. although this is not clear on the tape
Guide participant in talking about image as older self as observer		
Encourage participant to keep their eyes closed	Yes	
Ask participant to describe image/event as older self as observer	Yes	
Provide example of talking about the image/event in the third person	Yes	
Offer prompts to gain information about 'what happens next'	Yes	
Inform participant that they are doing a good job	Yes	

Encourage participant to talk about the image/event in detail	Yes	Mentioned a lot of his thoughts and feelings about using MDMA and worries about it that he did not know at the time
Guide participant in talking about image as younger self with older self intervening		
Encourage participant to keep their eyes closed	Yes	
Ask participant to describe image/event as younger self with older self intervening	Yes	
Explain that information from the cognitive restructuring can be used to help	Yes	Uses information lots from his adult knowledge, which reassures his younger self
Explain that anything else that is helpful can be used (e.g. props, techniques)	Yes	
Ask what else they feel inclined to do (repeated as often as necessary)	Yes	
Ask how the other person responds (repeated as often as necessary)	Yes	
Offer prompts to gain information about 'what happens next'	Yes	
Encourage participant to get older self to say or do things that their younger self requires (repeated as often as necessary)	Yes	Lots of helpful reassurance from older self and also supporting younger self to think more positively about himself
End of rescripting		
Encourage participant to bring attention back to the room	Yes	
Ask participant how they feel and how the memory feels to them after doing the rescripting	No	Not on tape recording

Imagery rescripting rating scale

Participant: 9

Introduction to rescripting	Achieved	Comments
Provide introduction to imagery rescripting	Yes	
Explain imagery rescripting stages (three in total)	Yes	
Explain that props and techniques can be used (e.g. cartoon characters, rewind, pause)	Yes	
Offer participant the opportunity to ask questions	Yes	Participant asked questions freely throughout the discussion, appear to be fairly literal/concrete in his language Asked participant to imagine therapist is an alien but it was unclear what prompted this. There was also someone else in the room, presumably to support the participant but unclear what her role was and what impact this may have had on the intervention
Guide participant in talking about image as younger self		
Encourage participant to close eyes and revisit the image	Yes	
Ask participant to describe image/event as younger self	Yes	
Offer prompts to gain information about 'what happens next'	Yes	The supportive person in the room added into the memory at two points, again unclear what impact this might have had on the intervention, as she was also there when the event memory had occurred and added in her perspective
Inform participant that they are doing a good job	Yes	
Encourage participant to talk about the image/event in detail	Yes	Lots of detail about thoughts and feelings and body sensations elicited
Guide participant in talking about image as older self as observer		
Encourage participant to keep their eyes closed	Yes	Someone sounded like they were clearing up in the

		background, unclear what impact again that this might have had on the intervention
Ask participant to describe image/event as older self as observer	Yes	
Provide example of talking about the image/event in the third person	Yes	Again participant had someone else in the room with him and they were talking as he was describing the memory
Offer prompts to gain information about 'what happens next'	Yes	
Inform participant that they are doing a good job	Yes	
Encourage participant to talk about the image/event in detail	Yes	
Guide participant in talking about image as younger self with older self intervening		
Encourage participant to keep their eyes closed	Yes	
Ask participant to describe image/event as younger self with older self intervening	Yes	
Explain that information from the cognitive restructuring can be used to help	Yes	
Explain that anything else that is helpful can be used (e.g. props, techniques)	Yes	
Ask what else they feel inclined to do (repeated as often as necessary)	Yes	
Ask how the other person responds (repeated as often as necessary)	Yes	
Offer prompts to gain information about 'what happens next'	Yes	
Encourage participant to get older self to say or do things that their younger self requires (repeated as often as necessary)	Yes	
End of rescripting		
Encourage participant to bring attention back to the room	Yes	
Ask participant how they feel and how the memory feels to them after doing the rescripting	No	Not on the tape

Imagery rescripting rating scale

Participant: 10

Introduction to rescripting	Achieved	Comments
Provide introduction to imagery rescripting	Yes	
Explain imagery rescripting stages (three in total)	Yes	
Explain that props and techniques can be used (e.g. cartoon characters, rewind, pause)	Yes	
Offer participant the opportunity to ask questions	Yes	Asked questions appropriately during the discussion
Guide participant in talking about image as younger self		
Encourage participant to close eyes and revisit the image	Yes	
Ask participant to describe image/event as younger self	Yes	
Offer prompts to gain information about 'what happens next'	Yes	Lots of thoughts and feelings elicited
Inform participant that they are doing a good job	Yes	
Encourage participant to talk about the image/event in detail	Yes	
Guide participant in talking about image as older self as observer		
Encourage participant to keep their eyes closed	Yes	
Ask participant to describe image/event as older self as observer	Yes	
Provide example of talking about the image/event in the third person	Yes	
Offer prompts to gain information about 'what happens next'	Yes	
Inform participant that they are doing a good job	Yes	
Encourage participant to talk about the image/event in detail	Yes	Again lots of details about thoughts and feelings elicited when thinking about the bullying
Guide participant in talking about image as younger self with older self intervening		
Encourage participant to keep their eyes closed	Yes	
Ask participant to describe image/event as younger self with older self intervening	Yes	
Explain that information from the cognitive restructuring can be used to help	Yes	
Explain that anything else that is helpful can be used (e.g. props, techniques)	Yes	

Ask what else they feel inclined to do (repeated as often as necessary)	Yes	
Ask how the other person responds (repeated as often as necessary)	Yes	
Offer prompts to gain information about ‘what happens next’	Yes	
Encourage participant to get older self to say or do things that their younger self requires (repeated as often as necessary)	Yes	
End of rescripting		
Encourage participant to bring attention back to the room	Yes	No preparation for coming out of memory, e.g. become aware of the sounds around us etc.
Ask participant how they feel and how the memory feels to them after doing the rescripting	No	Not on the tape