

Persecutory Delusions and Personal Goals

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July 2015

Research submitted in partial fulfilment of the requirements for the degree of
Doctor in Clinical Psychology (DClinPsy), Royal Holloway, University of
London.

Acknowledgements

The work presented here was prepared with the support of Lyn Ellett, who, as the academic supervisor, provided key feedback and advice on the direction of the project. Those kind enough to give additional guidance and comments included Tom Boyd, Andy MacLeod, Daniel Freeman, Philippa Garety, Helen Waller and Juliana Onwumere.

The individuals who gave up their time to participate in the study and to share their aspirations, as well as their difficulties, in order that others may benefit in the future, each contributed uniquely to the work. The support of NHS clinical staff in the Barnet, Enfield and Haringey NHS Foundation Trust was invaluable for the completion of the project. Particular thanks are due to Ruth Kloocke and Lucy Leonard, for facilitating the research involvement of their teams.

Lindsay Smith kindly provided the independent ratings upon which reliability calculations could be based. Thanks are also due to Giles Barrett and Richard Lanyon, for proof-reading and motivational material.

Abstract

The present thesis presents the first known systematic investigation of the personal goals and motivations of people with persecutory delusions. Motivational characteristics of goals are both theoretically implicated in symptom persistence and clinically relevant to the refinement of psychological therapies. Goals motivated by avoidance, rather than approach, and by external motivations rather than internal 'self-concordant' ones, have been implicated in the persistence of depression, and an analogous role in delusion persistence is feasible.

Thirty participants with persecutory delusions and schizophrenia-spectrum diagnoses completed measures of depression, anxiety and paranoia, as well as of goals and motivations. It was hypothesised that higher depression scores would be associated with fewer approach motivations, more avoidance motivations and lower self-concordance of goals, as has been found previously in groups without psychosis.

A phenomenological profile of participants' personal goals is presented. Two of the three study hypotheses were supported. Higher levels of depression were associated with more avoidance motivations and lower goal self-concordance in the group. An exploratory link of avoidance motivations with paranoia was also identified. The hypothesised association of depression with approach motivations was not found.

The findings are consistent with a proposal that avoidant and externally-motivated goal pursuit might contribute to the persistence of persecutory delusions, as well as depression. Therapeutic outcomes may be facilitated by supporting clients to identify self-concordant goals to approach valued achievements, rather than avoiding feared consequences. It is hoped that further research can continue to develop a motivational perspective on the experiences of those holding distressing persecutory beliefs, with the aim of improving psychological therapies for the future.

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Chapter 1. Introduction

The present thesis concerns the personal goals and motivations of people with persecutory delusions. Goals and motivations are both theoretically implicated in the persistence of symptoms and clinically relevant to the refinement of therapies.

Previous studies have identified personal goal attributes associated with depression, but no such research has been carried out thus far with people experiencing psychosis. Depression is known to be prevalent in groups of people with persecutory delusions. Goal motivations have been implicated in the persistence of depression over time, and have been found to predict functional and affective outcomes.

Analogous effects are feasible for people with distressing persecutory beliefs. The assessment of personal goals and motivations is key to effective delivery of cognitive-behavioural therapies (CBT). It is therefore proposed that increasing our understanding of the personal goals and motivations of people with distressing persecutory beliefs will facilitate ongoing therapeutic development.

The present chapter introduces the literature on persecutory delusions and the ongoing research agenda for refinement of talking therapies, and makes the case for the relevance of personal goals as an area deserving further research in this population. The chapter will conclude with a summary of the aims and hypotheses of the present investigation.

1.1 *Definition and clinical significance of persecutory delusions*

A persecutory delusion is an unfounded or unrealistic belief that harm is occurring, or is going to occur, to the self, and that the perpetrator intends to cause harm (Freeman & Garety, 1999). The exact definition of a delusion has attracted much

attention and debate (Garety, 1985; Garety & Hemsley, 1994; Rodrigues & Banzato, 2010). A belief held by an individual is increasingly likely to be classified as a delusion the more it is implausible, seemingly unfounded, strongly held, preoccupying, distressing and unshared by others (Freeman, 2007; Oltmanns, 1988).

Persecutory delusions are of considerable clinical significance as one of the most common and distressing symptoms of psychosis (Appelbaum, Robbins, & Roth, 1999; Sartorius et al., 1986; Wessely et al., 1993). The World Health Organisation conducted an international prospective study of 1379 individuals contacting psychiatric services for the first time with symptoms of schizophrenia (Sartorius et al., 1986). Persecutory delusions were the second most common psychotic symptom found, occurring in almost 50% of respondents (delusions of reference were the most common symptom). Persecutory delusions are associated with strong negative affect, and are the delusion type most likely to be acted upon (Appelbaum et al., 1999; Wessely et al., 1993). The presence of persecutory delusions has been found to predict hospital admission on first contact with psychiatric services (Castle, Phelan, Wessely, & Murray, 1994). The understandably high levels of distress, preoccupation and functional disturbance caused by persecutory delusions, as well as their high prevalence among groups with psychosis, indicate this symptom as an important target for research and therapeutic intervention.

A single symptom approach has illuminated the richness of delusional belief systems and the mechanisms of their effects on behaviour, which had not previously been captured by studies that focused on the diagnosis of schizophrenia. Delusions are complex, multi-faceted processes (Garety & Hemsley, 1994) which can vary widely in dimensions such as content, conviction, preoccupation, distress and functional impairment (Haddock, McCarron, Tarrier, & Faragher, 1999). Different facets of

delusions show differential associations with other processes. For example, Garety et al. (2005) found that in a sample of 100 people with delusions, delusional conviction was associated with reasoning biases and not with depression. Other studies (e.g. Freeman & Garety, 1999; Startup et al., 2007) have shown delusional distress to be associated with affective disturbance.

1.2 *Psychological therapy for persecutory delusions*

Cognitive Behavioural Therapy (CBT) is an effective psychological treatment for psychosis (Wykes, Steel, Everitt, & Tarrier, 2008; Zimmermann, Favrod, Trieu, & Pomini, 2005), as reflected in the guidelines published by the National Institute for Health and Clinical Excellence (NICE, 2009). The symptom improvements achieved during therapy are accompanied by correlated attenuations in brain responses to threatening stimuli (Kumari et al., 2011). CBT is usually used in combination with antipsychotic medication, but recently has shown promising results even without pharmacotherapy (Morrison et al., 2012). However, some studies have shown that 30-50% of individuals with persistent positive symptoms did not measurably benefit from 'first generation' CBT interventions for psychosis (Kuipers et al., 1998). Recent meta-analyses have reported that although total positive psychotic symptom scores show beneficial effects, results are inconsistent for specific effects on delusions (NICE, 2009; van der Gaag, Valmaggia, & Smit, 2014). Van der Gaag and colleagues (2014) meta-analysed the results of 18 randomised controlled trials of formulation-based CBT for people experiencing psychosis, to examine therapeutic effects on hallucinations and delusions separately. The authors derived an overall statistically significant effect size of 0.36 for CBT effects on delusions, and 0.44 for hallucinations. When CBT was compared with active treatment, however, the effect on delusions lost statistical significance, whereas the significant effect on hallucinations remained. When only blinded studies were examined, the size of the

effect on delusions was reduced (0.24), whereas the effect on hallucinations increased (0.46). These findings suggest that the effectiveness of CBT for psychosis in ameliorating delusions is modest, and less consistent than its effect on hallucinations. A literature review of the effectiveness of CBT for persecutory delusions specifically (Garety, Bentall, & Freeman, 2008) concluded that effects were of small to moderate size, and that the mechanisms of change have not yet been confirmed. Clearly improvements in our therapeutic interventions for persecutory delusions are desirable, as well as an improved understanding of how these treatments effect change.

Development of better treatments requires an improved understanding of the mechanisms which maintain paranoid beliefs. To this end, the current research agenda targeting the refinement of psychological therapies for persecutory delusions has focused on key cognitive and emotional processes with proposed causal relevance. From an 'interventionist-causal' perspective (Kendler & Campbell, 2009), a pragmatic research route to improving therapeutic interventions requires specific theoretical advances regarding candidate causal mechanisms, which should be followed by adequately controlled intervention studies, in which each theoretically driven factor is manipulated. Corresponding improvements in delusions can then be taken to indicate a causal effect (Freeman, 2011).

Freeman & Garety (2014) summarised recent advances in the understanding and treatment of persecutory delusions, in which a number of specific psychological processes have been linked with delusion persistence. These processes included worry, negative thoughts about the self, interpersonal sensitivity, anomalous internal experiences, insomnia and reasoning biases. The first two of these - worry and

negative beliefs about the self - have particularly strong links with anxiety and depression, and will be discussed further in relation to delusion persistence below.

1.3 *A multifactorial model of persecutory delusions and their persistence*

Freeman and colleagues (2002) built on Garety and colleagues' (2001) biopsychosocial model of the positive symptoms of psychosis, to propose a multifactorial stress-vulnerability account of persecutory delusions. The authors conducted a review of available evidence, which suggested a number of different factors acting in various combinations to precipitate and maintain distressing beliefs in different individuals. The model therefore brings together a number of factors, which combine to increase the likelihood that a belief is formed or maintained, though no one factor may be individually necessary or sufficient (Freeman & Garety, 2014; Freeman, Garety, Kuipers, Fowler, & Bebbington, 2002). Both the individual's vulnerability and the precipitating stressor(s) may be biological, psychological and/or social.

The model proposed that a stressor (such as a traumatic event or drug use) interacts with a pre-existing vulnerability to precipitate anomalous experiences (such as misattribution of internally-generated thoughts as heard voices), which lead to a search for meaning. The process of making sense of puzzling experiences is then impacted by core beliefs that the individual holds about themselves and the world, as well as by attributional biases, and cognitive biases associated with psychosis. The more an individual believes themselves to be a deserving or opportune target, and the world to be a dangerous place, the more likely they will be to arrive at a persecutory explanation. Such beliefs are then maintained by the relief that comes

from having found an explanation for confusing experiences, and by biases of attention and memory that may be associated with anxiety and depression (Freeman et al., 2013).

Freeman and colleagues' model emphasises key roles for anxiety and depression, and associated cognitive factors, in the maintenance of delusions. Subsequent research has therefore examined the roles of these factors, and targeted findings to enable evidence-based therapeutic developments. Among the cognitive factors highlighted in Freeman & Garety's (2014) review, worry and negative thoughts about the self have particularly strong associations with anxiety and depression, respectively (Freeman & Garety, 1999; Vorontsova, Garety, & Freeman, 2013). Anxiety and depression are both highly comorbid with psychosis (Birchwood, Iqbal, Chadwick, & Trower, 2000; Cosoff & Hafner, 1998), and both have been implicated in the maintenance of positive psychotic symptoms such as persecutory delusions in theoretical accounts (Freeman et al., 2002; Garety, Kuipers, Fowler, Freeman, & Bebbington, 2001).

1.4 *Anxiety, worry and delusion persistence*

Early findings demonstrating high prevalence of worry and anxiety in people with persecutory delusions (Freeman & Garety, 1999) and high levels of worry predicting delusion persistence over time (Startup, Freeman, & Garety, 2007) led to trials of a targeted worry intervention for people with persecutory delusions (Foster, Startup, Potts, & Freeman, 2010; Freeman, Dunn, Startup, & Kingdon, 2012). Researchers found that specifically treating worry, without directly addressing delusional beliefs, ameliorated not only worry but also the severity of delusions (Foster et al., 2010; Freeman, Dunn, et al., 2015) These findings support the proposal that anxiety-related

processes such as worry are involved in the maintenance of delusions, and can be targeted clinically to enable therapeutic change.

1.5 Depression, negative beliefs about the self and delusion persistence

Depression has been implicated as a key maintenance factor for persecutory delusions (Freeman et al., 2002). Specific associations between depression and persecutory delusions have been found in several studies (Ben-Zeev, Ellington, Swendsen, & Granholm, 2011; R. J. Drake et al., 2004; Fowler et al., 2012; Smith et al., 2006), but the mechanisms of this relationship are not fully known. Longitudinal studies have found that levels of depression and associated cognitive factors, such as negative beliefs about the self, predict the persistence of paranoia over time. In a prospective study of participants with persecutory delusions and schizophrenia spectrum diagnoses, Vorontsova et al. (2013) found that baseline levels of depression predicted 10% of the variance in paranoia six months later, over and above what could be predicted by baseline paranoia. Depression showed a significant association with negative beliefs about the self, and such beliefs were also predictive of paranoia persistence. Fowler et al. (2012) used multilevel modelling to analyse longitudinal relationships between negative schematic beliefs, low mood and paranoia over 12 months in 301 patients with psychosis. Cross-lagged effects (levels of one factor at one time predicting levels of another factor at a later point in time) were significant, and the most plausible models were those with pathways from depressive affect and negative beliefs to paranoia, not the other way around. Taken together, these findings support a role for depression and associated cognitive processes, such as negative beliefs about the self, in perpetuating distressing persecutory beliefs. The mechanisms underlying the relationship remain unclear,

however, and interventionist research will be necessary before causal effects can be confirmed.

Demonstration of depression-related processes in delusion persistence could pave the way for further novel intervention routes, for example using behavioural activation for low mood (Mazzucchelli, Kane, & Rees, 2009; Waller et al., 2013), mindfulness-based cognitive therapy (Chadwick, Taylor, & Abba, 2005; Segal, Williams, & Teasdale, 2012; van Aalderen et al., 2012) or self-esteem interventions (Fennell, 1998; Hall & Tarrier, 2003). These interventions have demonstrated effectiveness in the treatment of depression (e.g. Cuijpers, van Straten, & Warmerdam, 2007; van Aalderen et al., 2012). A rationale for their appropriate application for people experiencing distressing persecutory beliefs could reveal a valuable further therapeutic potential: to reduce the distress and disability associated with persistent psychotic symptoms. The substantial comorbidity and correlations found between depression levels and persecutory delusion severity in people experiencing psychosis support the application of depression-focused techniques to therapeutic work with this group.

1.6 *Improving psychological therapy for persecutory delusions through depression-related processes*

Freeman and colleagues' (2002) model was developed to be empirically testable and well-suited for use in the refinement of psychological therapies. Individual proposed maintenance factors included in the model can be studied empirically in relation to delusion persistence. Identification of evidence-based contributors can then be followed with targeted manipulation studies, leading towards randomised controlled

treatment trials for improved therapeutic techniques. Processes appropriate for therapeutic intervention are thus of particular interest to this research route.

Taken together, the findings outlined above regarding the high prevalence of depression in people with psychosis, combined with evidence supporting the role of affective disturbances in the maintenance of psychotic symptoms, support the proposal that targeting depression, and cognitive factors associated with it, may be a fruitful approach to improving psychological therapies for people with persecutory delusions.

CBT protocols for depression have been adapted to target analogous processes in people experiencing psychosis (Waller et al., 2014). Such treatments can include low-intensity cognitive-behavioural psychological therapies (e.g. Waller et al., 2013), recently in development, which aim to ameliorate depression in order to indirectly facilitate recovery from psychosis. A typical protocol for such an intervention might comprise eight weekly one-hour sessions, spent working towards a specific goal (e.g. to travel on the bus independently), using techniques of behavioural activation to tackle depression-related withdrawal. Such treatments offer the possibility of time-limited, evidence-based and cost-effective interventions for people with psychosis, which can therefore be delivered to a greater number of those in need more rapidly than is possible with longer-term and higher-intensity therapies. Translating established findings from the field of depression to working with delusions can improve our understanding of the relationship between affective and psychotic disorders, as well as facilitating the extension of evidence-based treatments for people with distressing persecutory beliefs.

Explicitly targeting interventions towards ameliorating depression might also be a more effective way to work collaboratively with someone who holds delusional beliefs with high conviction than seeking to challenge or manipulate such beliefs directly. An encouraging example, with two cases, of therapeutic work reducing the effect of persecutory delusions without focusing on the belief content was reported by Ellett (2013). A six-session mindfulness based approach (adapted from mindfulness based cognitive therapy for depression) was used by the author to support the individuals in responding differently to internal experiences, and reductions were observed in levels of depression, anxiety and delusional dimensions (conviction, preoccupation, distress and functional impairment due to beliefs), which were maintained at one-month follow-up. These initial findings from two single cases must be interpreted with caution, but are consistent with a therapeutic effect on delusions of indirect depression-related therapeutic intervention. The mechanisms of the effect remain unclear, however, and merit further investigation.

Specific depression-related processes are of interest as maintenance factors, and therefore potential targets for therapeutic development. A growing area of clinically-relevant research regarding the psychology of depression and how it persists concerns goals, goal-directed behaviour and the motivations that drive such behaviour. Depression has been described as inherently a 'disorder of motivation' (Nesse, 2001), and is characterised by disruptions in hope, interest and behavioural drive (A. T. Beck, Steer, & Brown, 1996; World Health Organisation, 1992). Such motivational disruptions are a plausible mechanism by which depressive processes might also contribute to the persistence of distressing persecutory beliefs: it makes sense that individuals who are less motivated to strive for desired future states are less likely to come into contact with the richness of information in the environment to encourage belief re-evaluation. Emerging findings regarding, on the one hand,

depression-related features of personal goals (e.g. Sherratt & MacLeod, 2013) and, on the other hand, characteristics of personal goals that are found to predict gains in wellbeing and goal attainment over time (e.g. Sheldon & Elliot, 1999), have contributed to theoretical development and refinement of psychological therapies, which aim to harness individuals' motivations to empower them to make life changes that move them towards their valued goals.

1.7 Definition and clinical significance of personal goals

Various proposed definitions of personal goals have brought together cognitive, emotional and behavioural aspects of the construct. Austin and Vancouver (1996) proposed a broad definition of goals as 'internal representations of desired states, where states are broadly construed as outcomes, events, or processes'. A key component of action intention that specifically characterises goals is captured by Cochran and Tesser's (1996) description: 'a cognitive image of an ideal stored in memory for comparison to an actual state; a representation of the future that influences the present; a desire (pleasure and satisfaction are expected from goal success); a source of motivation, an incentive to action' (p.100). Hierarchical structures of personal goals have been described (e.g. MacLeod, 2012), with generalised 'system concepts' or 'motive dispositions' (e.g. to be kind) at the highest, most abstract level, and concrete 'programs' or 'action intentions' (e.g. to call my mother today) at the lowest level. Most research has addressed an intermediate level of goals, sometimes referred to as 'personal strivings' (e.g. to qualify as a professional psychologist), which Emmons (1986) described as referring to 'what a person is characteristically trying to do,' which might bring together a number of lower-order actions towards a unifying purpose.

The study of goals in relation to achievement and productivity has a long history (e.g. Locke, 1968; Locke & Latham, 2002); however, findings relating aspects of goals to wellbeing and mental health are relatively recent. Some accounts have proposed that goals and goal-directed behaviour are in themselves crucial to mental health and wellbeing, and that the very process of striving for valued goals fulfils a basic human need for directedness and purpose (e.g. Schmuck & Sheldon, 2001). Other theorists have emphasised the multidimensional variability of personal goals, whose content, orientation and underlying motivations may differentially affect the wellbeing of those pursuing goals (MacLeod, 2012). Individuals may hold many goals in different life domains, and these may in turn be driven by diverse motivations. Motivations can include: approach motivations, directed to achieve a desired state that is not currently true; avoidance motivations, directed to prevent the occurrence of an undesired state; internally-driven motivations, relating to personal value or pleasure; and/or externally-driven motivations, relating to pleasing others or meeting situational demands. Empirical research has found that certain characteristics of people's personal goals show associations with positive and negative affect (Emmons, 1986) and with depression (Coats, Janoff-Bulman, & Alpert, 1996; Dickson & MacLeod, 2004b, 2006; Sherratt & MacLeod, 2013). Longitudinal research has further demonstrated differential gains in wellbeing and achievement depending on the motivational characteristics of goals being pursued (Sheldon & Elliot, 1999). These empirical findings are consistent with the possibility of a causal role for goal motivations in the course of depression over time.

A brief targeted intervention (Goal setting And Planning; GAP) has recently been developed to improve mental health by supporting individuals to identify and plan for valued goals. This therapeutic approach has already shown promising effects, leading to increases in positive affect and reductions in depression (Coote &

MacLeod, 2012). A controlled trial of a four-session group-format GAP intervention delivered to a mixed group of 22 psychiatric patients including nine diagnosed with schizophrenia (Farquharson & MacLeod, 2014) found that, compared to a control group, those receiving GAP experienced gains on measures of satisfaction with life and goal outcome expectancy, and reductions in self-reported negative affect. One-month follow-up indicated improvements on measures of satisfaction with life, goal outcome expectancy, positive affect and hopelessness, although negative affect no longer showed significant improvement. These findings broadly support the proposal that goal-directed thinking and behaviour can, in and of themselves, be beneficial to wellbeing (Schmuck & Sheldon, 2001). Further optimisation of goal-orientated therapies will benefit from an increased understanding of the aspects of goals that functionally relate to clinical outcomes and wellbeing.

Following findings that 'not all goals are created equal' in terms of their functional and affective sequelae (Ryan, Sheldon, Kasser, & Deci, 1996), developments in knowledge regarding those aspects of goals that relate to wellbeing and depression will be relevant to the refinement of psychological therapies. The following sections will focus on the theoretical and empirical literature relating to the motivational orientation (approach vs. avoidance) and self-concordance (internal motivation vs. external motivation) of personal goals, as these two dimensions have arguably received the most empirical attention in association with depression (e.g. Ong & Phinney, 2002; Sherratt & MacLeod, 2013). Theoretical accounts that connect these aspects of goals with wellbeing and depression will be used to conceptualise feasible causal mechanisms.

Early cognitive behavioural theory and therapy set out a role for goals in orienting subsequent behaviour (A. T. Beck, 1979; Clark & Beck, 1999), but motivational and

functional characteristics of different goals were not elaborated, nor any associations between goal characteristics and psychological difficulties. Recent research into the significance for clinical psychology of personal goals has therefore drawn on other strands of theory and research in psychology: notably self-regulation accounts such as Perceptual Control Theory (PCT; Powers, 1973) and the motivation-focused Self-Determination Theory (SDT; Ryan & Deci, 2000). These theories, with accompanying bodies of empirical research, have conceptualised individuals' intentionality and motivation more comprehensively than traditional behavioural and cognitive models. Perceptual Control Theory and Self-Determination Theory place more emphasis on goal motivational orientation (approach vs. avoidance) and self-concordance (internally vs. externally driven motivation), respectively.

1.7.1 Perceptual Control Theory

Perceptual Control Theory (PCT; Powers, 1973) positions goals as a key central construct in the human process of self-regulation. It is a bottom-up dynamic model, which frames human behaviour as 'the control of perception,' wherein certain internal reference values (goals, e.g. 'to have a clean home') are compared with perceived inputs from the environment (e.g. a perception of dirtiness in relation to one's home) to trigger actions (e.g. cleaning) that cancel discrepancies between these values. PCT posits that control units, with their corresponding goals (reference values) are arranged hierarchically. The highest levels contain system concepts, such as representations of an ideal self and world, which influence lower levels. Units in descending middle levels represent values and goals of increasing specificity. At the lowest level lie control units that regulate tension in muscles, which translate into actions on the environment. As such actions impact the environment to reduce discrepancies between reference values and dynamically shifting perceptions, the control process brings the organism closer to its goals. Control of perceived inputs is

thus achieved using negative feedback loops in relation to hierarchies of goals, which may come into conflict with each other and undergo reorganisation as the individual interacts cyclically with the changing environment. Goals are therefore central to self-regulation, along with the capacity to control perceived inputs. Stress is proposed to occur when individuals are restricted in altering perceived inputs in the direction of their goals (Carver & Scheier, 2008). The mechanistic logic of PCT has been extended to the conceptualisation of emotional experience and disorders of such (Carver & Scheier, 1990). Empirical studies have supported the PCT assertion that different goals that individuals hold predict their behaviours, including coping responses to stress, and are associated with longitudinal changes in levels of wellbeing (e.g. Elliot, Thrash, & Murayama, 2011).

PCT has been criticised on the grounds that it is too mechanistic a model to explain adequately the dynamics of human motivation. For example, Bandura and Locke (2003) argued that PCT does not account for the body of evidence supporting a role for self-efficacy beliefs in influencing individuals' striving behaviour, associated affect and achievement (Bandura & Locke, 2003). Even advocates of the theory have pointed out limitations in empirically validating any gains in explanatory power of the model over others (Vancouver & Putka, 2000). Nevertheless, growing support for this explanatory framework has led to the development of a transdiagnostic therapeutic approach, named the Method Of Levels, which is based on PCT and works on clients' goals as its main focus, with promising results (Carey, 2008; Tai, 2009). In the context of the current study, PCT is relevant as a theoretical framework for understanding the functional importance of the distinction between two motivational subtypes of goals: approach goals and avoidance goals.

1.7.2 Approach goals and avoidance goals

Approach goals relate to desired states that an individual wishes to move towards, and avoidance goals refer to undesired states that an individual seeks to avoid or minimise. Approach goals have been proposed, according to feedback-based theories such as PCT, to facilitate more effective self-regulation than avoidance goals, because a feedback-based control system can respond readily to the approach and achievement of a positive goal state by reference to an internal representation of it, whereas monitoring the avoidance of an undesired state is never-ending, fails to generate any pattern of error reduction in its pursuit, and cannot ever reach a point of completion. This proposal is supported by findings that pursuit of more avoidant goals is associated with increased resource depletion over time, which may mediate an effect of avoidant goal striving on decreases in wellbeing (Oertig et al., 2013).

A functional distinction between approach and avoidance motivations has been emphasised in multiple strands of psychological research (Elliot, 1999). This very distinction was made in Gray's (1981; 1991) highly influential model of animal (including human) motivation, which posited two separate neurobiological systems for behavioural control: a Behavioural Activation System (BAS) and a Behavioural Inhibition System (BIS), with distinct physiological substrates. The BAS was proposed to respond to reward and appetitive stimuli, regulating feelings of happiness, desire and elation, and associated approach behaviours. The BIS was proposed to respond to punishment and aversive stimuli, regulating feelings of sadness, fear and anxiety, with associated avoidance behaviours and inhibition of activity. In the field of personality psychology, too, a very similar distinction was made between approach and avoidance motivations for understanding dispositional differences between individuals (Elliot & Covington, 2001; Elliot & Thrash, 2002).

Approach and avoidance motivational systems were proposed to contribute to psychopathology, either as mediators of the effects of positive or negative environments, or through variation between individuals in the reactivities of the systems (e.g. an individual with an over-sensitive avoidance system might respond to potentially threatening stimuli with a much higher anxiety and avoidance response than an individual with a less sensitive avoidance system). Both approach and avoidance motivational systems have been implicated in depression, with different theorists placing somewhat different emphasis on one or the other. Fowles (1988) proposed that a primary BAS deficit might underlie depression, which could subsequently lead to overactivation of the BIS. Interactive involvement of both BAS and BIS systems has been included in an integrative motivational model of depression (Trew, 2011). Consistent with theoretical accounts, depressed individuals have shown overactive BIS and underactive BAS responsiveness compared to non-clinical controls (e.g. Kasch, Rottenberg, Arnow, & Gotlib, 2002). These differences in BIS and BAS responsiveness correspond with individuals having more avoidance personal goals and fewer approach goals, an association which may be mediated by self-esteem (Heimpel, Elliot, & Wood, 2006).

Greater numbers of avoidance goals and fewer approach goals have been connected with depression and lower levels of subjective wellbeing. Most studies have used non-clinical samples, which necessitates caution in the extrapolation of these findings to clinical populations. Coats, Janoff-Bulman & Alpert (1996) coded as 'approach' or 'avoidance' the self-generated personal goals of 81 students, and found that scores on a depression measure correlated significantly positively with numbers of avoidance goals and significantly negatively with numbers of approach goals. To strengthen their case for the functional effects of approach vs. avoidance

motivations, Coats and colleagues (1996) followed their first study with a second, in which they randomised 167 students to pursue the same goal framed either as approach ('be creative') or avoidance ('avoid being uncreative'). The results indicated that an avoidance frame resulted in significantly more negative and less positive self-evaluations after completion of a performance task, compared to an approach frame. The effect was particularly strong for poor performers, indicating that the adoption of avoidance goals can result in negatively-valenced experiences that are strongest following unsuccessful task striving. Naturalistic longitudinal studies showing a predictive effect of avoidance goals on negative changes in subjective wellbeing over time add further support to the association between avoidance (as opposed to approach) goals and negative affective outcomes (Elliot & Church, 2002; Elliot & Sheldon, 1997; Elliot, Sheldon, & Church, 1997; Elliot et al., 2011).

A negative association between depression scores and numbers of approach goals reported is particularly consistent among findings of non-clinical research, wherein several studies have used the same procedure for goal assessment (Dickson & MacLeod, 2004a, 2004b, 2006). Participants were asked to generate as many personal goals as possible in response to two prompts: 'In the future it will be important for me to...' and 'In the future it will be important for me to avoid...'. The goals were counted as sub-totals of 'approach' and 'avoidance' goals. A correlational non-clinical study of 16 to 18-year olds reported that higher depression scores were associated with fewer approach goals, while higher anxiety scores were associated with more avoidance goals (Dickson & MacLeod, 2004b). Dickson & MacLeod (2004a) administered this goal assessment task to four groups of adolescents selected, respectively, for high depression scores (Beck Depression Inventory [BDI] ≥ 14 , $n=25$), high anxiety scores (Beck Anxiety Inventory [BAI] ≥ 14 , $n=27$), high depression *and* anxiety ($n=30$) or low depression and anxiety ('controls,' $n=30$). The

authors found that high depression and high depression+anxiety groups generated significantly fewer approach goals (but no more avoidance goals) than the control group, and that the high anxiety group generated more avoidance (but no fewer approach) goals than the control group. Dickson & MacLeod (2006) reported similar results from a smaller study of adolescents, in which they compared a dysphoric subgroup (BDI > 21; n = 28) to a non-dysphoric subgroup (BDI < 8; n = 28) and found that the dysphoric group reported fewer approach and more avoidance goals than the non-dysphoric group. In summary, three studies with the same goal assessment procedure found higher non-clinical depression to be associated with fewer self-reported approach goals, and one of the three also found dysphoria to be associated with more avoidance goals.

1.7.3 Approach and avoidance goals in relation to clinical depression

Studies comparing groups with clinical depression against non-clinical groups have produced mixed findings regarding associations between depression and numbers of approach and avoidance goals. Vergara and Roberts (2011) compared a group of 43 participants who had recovered from depression to a group of 40 never-depressed controls, and found more avoidance goals given by the recovered group than the controls. No difference was found, however, in numbers of approach goals. The authors interpreted these findings as suggesting that holding avoidance goals may serve as a marker of depression vulnerability. Dickson, Moberly & Kinderman (2011) found no differences in numbers of approach or avoidance goals generated by a depressed group (n=23) compared to never-depressed controls (n=26). Dickson and colleagues' study had fewer participants, and therefore less power to detect significant differences. Their depressed group did produce more avoidance goals overall (M = 5.7, SD = 2.1) than controls (M = 4.8, SD = 1.6), and it is possible that

the difference would have reached statistical significance if a larger participant sample had been used. Numbers of approach goals produced by the depressed participants ($M = 6.8$, $SD = 2.5$) and controls ($M = 6.5$, $SD = 1.9$) were very similar, however, and did not differ in the hypothesised direction.

1.7.4 Making sense of inconsistent findings: underlying motivation

Both of the studies described above used Dickson & MacLeod's (2004a; b) goal assessment protocol, wherein participants are asked to generate as many goals as they can think of in each of two conditions: approach ('it will be important for me to...') and avoidance ('it will be important for me to avoid...'). The total number of goals produced under each condition is counted for subsequent analysis. In the context of a hierarchical system of goals and motivations (Elliot, 2006; MacLeod, 2012), this protocol only addresses one level: the approach-avoidance framing of the stated goal. This level of approach-avoidance motivation clearly has significant functional consequences, as demonstrated by Coats and colleagues' (1996) experimental findings. However, Elliot has emphasised the importance of considering motivation beyond the explicit level of approach-avoidance goal framing, in terms of the reasons for pursuit of goals. The same goal (e.g. 'to get a job') may be motivated by approach motivation (e.g. 'to use my skills to help others') or avoidance motivation (e.g. 'to stop my partner nagging me'), and these different motivations may colour pursuit of the goal quite differently: 'goal pursuit feels different and has different effects when it is impelled by different underlying motivations' (Elliot, 2006, p. 114). Assessment of underlying motivations for goals also allows a richer, dimensional picture of their motivational characteristics to be captured than a binary approach/avoidance goal distinction can allow: each goal may be driven by a number of approach motivations and/or a number of avoidance motivations.

Sherratt & MacLeod (2013) recently applied Elliot's (2006) line of thinking to address the inconsistency of previous findings regarding depression and approach and avoidance goals, by examining underlying motivations for goals. After generating goals in approach and avoidance conditions and picking two top goals in each condition, participants were asked what their reasons were for pursuing these goals, or why these goals were important to them. These motivations were themselves coded as representing approach or avoidance. The authors followed Elliot (2006) in emphasising this level of underlying motivation, over and above the importance of superficial goal framing. Sherratt and MacLeod found, like Dickson et al. (2011), that no significant differences were evident in the numbers of approach or avoidance goals generated by depressed (n=26) and non-depressed (n=33) groups. When asked about their reasons (motivations) for pursuing each stated goal, however, the depressed group showed significantly less approach motivation and more avoidance motivation for their approach goals than the non-depressed group. This finding suggests that asking individuals to explicitly generate goals in approach and avoidance categories without exploring underlying motivations may have obscured patterns in participants' goal motivations in previous studies, because goals may have been superficially framed as approach or avoidance to fit the task instructions, while underlying motivations may have been different. The motivations underlying approach goals in particular showed associations with depression in Sherratt and MacLeod's (2013) results, while motivations for avoidance goals showed no significant associations. Further research into personal goal characteristics of clinical groups is expected to benefit from eliciting and taking account of underlying motivations that individuals may report for their goals, as reported in the Sherratt & MacLeod (2013) study, beyond the superficial framing of goals as approach or avoidance. It will also be of interest to examine approach and avoidance goal

motivations alongside other depression-related indices, for example goal self-concordance. The following sections introduce the concept of goal self-concordance (Sheldon & Elliot, 1999), alongside its theoretical source: self-determination theory (Ryan & Deci, 2000).

1.7.5 Self-Determination Theory and goal self-concordance

Self-Determination Theory (SDT; Ryan & Deci, 2000) explains all human behaviour as lying on a continuum between heteronomy (externally regulated) and autonomy (internally regulated). The model includes a fundamental premise that the need to feel autonomous is one of three basic human psychological needs, alongside the need for perceived competence and the need to feel related. Autonomous or internally driven motivation (e.g. 'I want to learn a new language because it is inherently interesting and a valuable skill for me to develop') is therefore proposed to lead to greater application of effort, more persistence, higher quality performance and more positive subjective experience than externally driven motivation (e.g. 'I must learn this language because I was told that I should and I will feel guilty if I don't'). Thus a key motivational characteristic of goals for their functional effects, according to SDT, is their self-concordance: the extent to which they are internally rather than externally driven.

Early forms of self-determination theory emphasised a functional distinction between 'intrinsic' goals, which serve to meet an organism's fundamental needs (e.g. to learn to cook, to improve relationships with family), and 'extrinsic' goals, which aim to achieve external rewards (e.g. to earn more money, to become famous), but may not lead to fundamental needs being met (e.g. Deci, 1975; Ryan & Deci, 2000). Empirical research found the pursuit of extrinsic, as opposed to intrinsic, goals to be associated with lower wellbeing and less optimal functioning (e.g. Kasser & Ryan, 1993, 1996;

R. M. Ryan, 1999). A binary distinction between intrinsic and extrinsic goals proved too simplistic, however (Sheldon, Williams, & Joiner, 2008). Cross-cultural researchers argued for the functional importance of the motivations underlying goal pursuit, beyond the face content. For example, individuals in developing countries with very restrictive financial circumstances might strive for material gains in order to meet basic organismic needs, rather than for external acclaim, and this striving would not be expected to act detrimentally upon their adaptive functioning (Brdar, Rijavec, & Miljković, 2009). Self-determination theory has since developed to emphasise the autonomy of the underlying motivations for goals - this is termed the goals' self-concordance, and corresponds to the internal vs. external locus of causality for goal pursuit (Sheldon et al., 2008).

The self-concordance of goals is defined as the extent to which they are driven by internal motivations of enjoyment or personal value, as opposed to external demands imposed upon the individual. Sheldon and Elliot (1999) distinguished between four types of motivation for goals, listed here in order of increasing self-concordance:

1. Externally motivated (e.g. 'My doctor wants me to take my medication.')
2. Introjected (e.g. 'I will feel guilty for letting someone down if I do not attend my appointment.')
3. Identified (e.g. 'It is important to me to look after my personal care, as I value health and independence.')
4. Intrinsically motivated (e.g. 'I want to paint pictures because I enjoy doing it.')

Goal self-concordance can be measured by asking participants to rate on a Likert scale the extent to which they agree with each of four statements, corresponding respectively to each of the motivational goal types summarised above:

1. You pursue this goal because somebody else wants you to or because the situation demands it.
2. You pursue this goal because you would feel ashamed, guilty or anxious if you didn't.
3. You pursue this goal because you really believe that it's an important goal to have.
4. You pursue this goal because of the fun and enjoyment that it provides you.

Following Sheldon and Elliot (1999), a total self-concordance score can then be calculated by subtracting each participant's scores for the first two questions from their summed score for the third and fourth questions. A dimensional measure of goal self-concordance, corresponding to motivational autonomy, is thereby derived.

Self-concordance of personal goals has shown a positive association with positive self-regard (Judge, Bono, Erez, & Locke, 2005) and goal attainment (Koestner, Lekes, Powers, & Chicoine, 2002). Sheldon & Elliot (1999) integrated findings from three longitudinal datasets, totalling 394 college student participants, to demonstrate that individuals pursuing more self-concordant goals put more sustained effort into goal pursuit, were more successful in attaining their goals and experienced greater wellbeing gains from goal pursuit than those pursuing less self-concordant goals. Sheldon et al. (2004) reported the results of a further set of three studies of college students, the results of which showed that goal self-concordance (autonomy) was associated with subjective wellbeing cross-sectionally, and predicted positive increases in wellbeing prospectively over a one-year follow-up period. The predictive effect of goal self-concordance remained when changes in income were controlled. These longitudinal findings add weight to the assertion that goal self-concordance is a significant contributor to positive affective experiences over time, although causality

cannot be conclusively established in the absence of studies using experimental designs.

Two studies have examined associations of goal self-concordance with depression. Ong and Phinney (2002) examined personal goals, self-concordance and depression in groups of European American (N = 155) and Vietnamese American (N = 121) college students. They found that the Vietnamese American group had significantly lower goal self-concordance and significantly higher depression scores than the European American group, and that self-concordance accounted for the differences in depression levels between the two groups. Sherratt (2011) compared goal self-concordance of depressed and non-clinical participant groups, and found, as hypothesised, that the goals of depressed participants were significantly less self-concordant than those of the non-clinical group. Both of these studies' findings therefore support a proposed association between low goal self-concordance and depression. It will be important to replicate these findings in further groups of individuals, including those with other diagnoses, to assess generalisability of the results.

One further study administered the four items of Sheldon and Elliot's (1999) self-concordance measure to 136 undergraduate students, but instead of calculating a composite self-concordance index, examined the associations of the individual items with scores on measures of depression and anxiety (Winch, Moberly, & Dickson, 2014). Winch and colleagues found that for approach (rather than avoidance) goals, higher depression scores were associated with significantly fewer intrinsic motivations, more identified motivations, more introjected motivations and more external motivations. For avoidance goals, higher depression scores were only significantly associated with more external motivations. These findings are broadly in

line with self-determination theory predictions: four of the five significant correlations were in the direction that would support an association between higher depression scores and lower self-concordance. It is also notable that motivations for approach-framed goals showed more significant associations with depression scores than those for avoidance-framed goals, as was the case in Sherratt and MacLeod's (2013) findings.

There is a promising possibility of therapeutically increasing goal self-concordance to determine if benefits, such as reduced depression scores and/or gains in goal attainment, might result. Sheldon and colleagues developed an intervention to train participants in self-congruent goal-setting, which has been trialled in a study of 90 college students (Sheldon, Kasser, Smith, & Share, 2002). This initial study found benefits of the intervention in terms of goal self-concordance and subjective wellbeing, but only for those participants who were already relatively high in goal self-concordance at the start. Clearly there remains much work to be done in applying self-determination theory and goal self-concordance research to helping individuals who may experience the consequences of low-self-concordant goal striving. One possible clinical application of the knowledge base regarding goal self-concordance would be to the selection and prioritisation of therapy goals, which are chosen at the start of cognitive-behavioural treatments, and used to orientate subsequent techniques (e.g. J. S. Beck, 2011).

1.8 *The role of goals in cognitive behavioural therapies*

A common feature of cognitive behavioural treatments, including both high-intensity and low-intensity therapies, is their goal-focused orientation (J. S. Beck, 2011; Garety, Kuipers, Fowler, Chamberlain, & Dunn, 1994; Papworth, Marrinan, & Martin, 2013). The consideration of conscious goals and their motivational functions was

absent from early behavioural theories of psychological functioning (Locke & Latham, 2002; e.g. Watson, 1924), which located motivations outside the individual, in the form of rewards and punishments. Beck's cognitive model of depression (e.g. A. T. Beck, 1979; Clark & Beck, 1999), which laid the foundations for much of contemporary cognitive behavioural therapy, conceptualised goals as part of a 'secondary,' 'constructive' level of information processing system, as opposed to the 'primary,' 'survival-oriented' level on which depressogenic schemas of self and world were proposed to operate. Cognitive therapy in this frame aims to move the individual from a state of information processing dominated by overactivity in dysregulated primary structures to increasing activity in the secondary, constructive structures, which include personal goals. Identification of appropriate goals is prioritised from the start of therapy, and progress towards these goals can subsequently be implemented and monitored in a relatively manualised fashion. Goal setting is now widely acknowledged to be an important part not only of psychological therapies, but also of more broadly conceptualised casework with people experiencing mental health problems (e.g. Ades & Clarke, 2003; Lecomte, Wallace, Perreault, & Caron, 2005).

In the clinical experience of the author, some cases of individuals not responding to cognitive behavioural therapy have been attributed to goals being selected that were not motivating for the client. Progress towards goals often requires behavioural changes which are initially aversive, such as entering feared situations to habituate anxiety (graded exposure) or overcoming fatigue to initiate new activities in order to increase environmental reward (behavioural activation). The capacity of individuals and their therapists to access personally meaningful and motivating goals is crucial to the orientation and progress of any such intervention, as goals without sufficient motivational value are unlikely to make it worth tolerating the initial aversiveness of

the necessary behavioural changes. Clients themselves will be central to the identification of goals that will motivate them, but therapists also play a part in this collaborative process, and as such it is worth considering how this may be done most helpfully (e.g. Nezu & Nezu, 1993)

Goals held by clients in therapy have been found to differ considerably from the goals that their therapists see as appropriate for them (e.g. Thompson & Zimmerman, 1969), reflecting understandable differences in perspective, which may remain despite efforts towards collaboration. The priorities and needs associated with service contexts may also influence clinicians' perspectives on appropriate goals. For example, mental health services might seek to prioritise certain goals, such as medication adherence or re-commencing employment, that serve the stated aims of the service or its expectations of the best interests of the service user, but may not at that time be inherently motivating for the individual in question. Emphasis has been placed on the therapeutic importance of agreement between the goals of service users and clinicians (Clarke, Oades, Crowe, & Deane, 2006; Fischer, Shumway, & Owen, 2002), following empirical findings that goal agreement between client and therapist is significantly associated with positive outcomes, including reduced symptoms, decreased distress and increased satisfaction (e.g. Long, 2001; Michalak, Klappheck, & Kosfelder, 2004). In a meta-analysis of 15 therapy studies published between 2000 and 2009, Tryon and Winograd (2011) examined goal agreement between client and therapist, as well as outcomes, including client retention in treatment, symptom reduction, and adaptive functioning, and reported an overall effect size of 0.34 (SD = .19) for the positive association between goal agreement and positive therapeutic outcome.

A strong consensus on the importance of goal agreement between service user and provider leaves another question open: what kinds of goals may be expected to lead to positive outcomes? Individuals may have many different goals in assorted different life domains at any point in time (Emmons, 2003). The conversation that takes place between a service user and therapist at the time when goals are identified therefore has considerable scope for variability in how and which goals may be prioritised. The clinician's participation in the collaborative goal-setting process involves contributing to the selection and prioritisation of goals, and it is therefore of interest how this might be directed in the service of the client's best interests (Nezu & Nezu, 1993). People experiencing psychosis are typically thought to require some support and direction from clinicians in identifying appropriate goals for recovery (Lecomte et al., 2005; Rudnick, 2002). A particular concern has been raised, as articulated by Rudnick (2002), that individuals with 'serious mental illnesses such as schizophrenia' (p. 310) may wish to set goals that 'not only reflect values that are in conflict with values held by mental health practitioners or society at large but that may also be induced by mental impairment' (p. 311). In an ethical analysis of the appropriateness of pursuing client-selected goals in psychiatric rehabilitation, Rudnick came to the conclusion that client-selected goals should be pursued unless, either, this may be dangerous, or the goals are 'induced by severe mental impairment' (p. 310). It is not clear, however, how it may be identified whether or not any given goal is 'induced by severe mental impairment'. A collaborative goal-setting process in therapy may be disrupted for clients with psychosis by perceptions that their goals may be driven by psychotic symptoms such as delusions and thought disorder.

1.9 Goals of people with delusions

To date, no published research exists which examines the personal goals of people selected for the presence of persecutory delusions specifically. A search was

therefore conducted for studies regarding the goals of people with delusions in general, including persecutory delusions, as well as other content types. A search of the MEDLINE and PsycINFO databases for published studies dated up to the first week of February 2015 using the keywords (delusion* OR persecut* OR paranoi*) AND (goal OR goals) returned 636 results. The titles and abstracts of these were examined for empirical studies that selected people with delusions and examined the content of their personal goals. Two such studies were found (Jakes, Rhodes, & Issa, 2004; Rhodes & Jakes, 2000). Both of these studies had relatively small sample sizes (20 and 14, respectively) and concerned qualitative associations between the content of participants' delusions and the key problems and goals they identified in their lives, rather than any motivational or functional properties of goals. The backdrop to these two studies is the historical debate as to whether or not delusions have psychological 'meaning' (e.g. Berrios, 1991) and the question of where the content of delusional beliefs might originate from (e.g. Forgas & DeWolfe, 1974).

Rhodes and Jakes (2000) conducted an interpretative phenomenological analysis (IPA) of life problems and goals given by 14 participants, who were selected for the presence of delusions. The majority of these had been diagnosed with schizophrenia, some with manic-depression and some with delusional disorder. Responses regarding life problems and goals were elicited using the questions 'What do you consider to be the main problems/difficulties in your life? Now? And over long periods of your life?' and 'If you achieve or find etc. (the things discussed above) what advantages will that bring to you?' No explicit distinction was made between enquiry regarding life problems and that regarding goals in this study, and the two constructs were conceptualised as relatively continuous, with goals seen as reflecting desires to solve problems. Rhodes and Jakes used IPA to code and organise the material gathered according to themes, which the authors grouped into six main categories.

These were: Social (e.g. relationships, interaction with others), Competence (e.g. work, hobbies), Experiential base (e.g. physical or mental suffering, positive experiences of calm or wellbeing), Material base (e.g. money or accommodation), Direction (e.g. desire to keep moving in one direction, religious or philosophical aspirations) and Evaluation (e.g. self-evaluation, evaluation in relation to others). Subsequent thematic analysis of participants' delusional beliefs led the authors to draw thematic connections between the content of delusions and life problems/goals of their participants. They argued therefore that delusional talk is expressive, and attempts to describe a person's lived experience in some way. Rhodes and Jakes explicitly ruled out any inferences from their study findings regarding the functional characteristics of delusions or personal goals.

Jakes et al. (2004) interviewed 20 participants with delusions about their delusional beliefs and about their life problems and goals, using a similar procedure to Rhodes and Jakes (2000). IPA was also used to code and classify the content of participants' problems and goals, with five resulting key themes: Intimacy (e.g. relationships, love and sex), Achievement (e.g. wanting success or to lead others), Social alienation (e.g. feeling unlike others or looked down upon), Control aversion (e.g. unease due to perceived control by others, wanting to escape) and Basic fear (e.g. of illness, accidents, death). Jakes and colleagues classified the life problems and goals of each person into just one of these categories as a main theme, while two other raters independently classified the same participants' delusional beliefs according to the same set of five categories. Statistically significant agreement was found between the themes of participants' delusions and of their life problems/goals, with Kappa coefficients of .44 ($p < .01$) for one rater and .61 ($p < .01$) for another. The authors considered a number of explanations for this association, including that delusions might emerge as an expression of underlying life problems, or that particular

environmental circumstances and events might cause an individual to develop corresponding problems, goals and delusional themes. The possibility that participants' delusions might have driven their expressions of goals was discredited by the finding that in no cases did life problems or goals *explicitly* relate to the delusion, and in several cases the life problems and goals preceded the development of delusions by years. As with the Rhodes and Jakes study (2000), no examination was made of the functional or motivational characteristics of participants' goals. It would be of interest to know more about the motivational characteristics of the personal goals of people with delusions, and any quantitative associations between these and symptoms, as has been examined for people with depression (e.g. Sherratt & MacLeod, 2013). A greater understanding of these motivational features can also help to guide the development of increasingly effective therapies, which take into account the kinds of goals that will best motivate individuals to engage in therapeutic change.

1.10 Summary

The ongoing development of psychological therapies for people with persecutory delusions is served by the application of techniques to target specific processes associated with depression and anxiety, which are known maintenance factors. Accessibility of personally motivating goals is a candidate factor underlying the effect of depression on delusion persistence. Goal motivations are both theoretically implicated and clinically relevant to the refinement of psychological therapies. The empirical findings available support theoretical assertions that the types of personal goals accessible to individuals and the motivations held for such goals are associated with clinically relevant outcomes, in particular depression, wellbeing and functional effectiveness. Causality cannot be unequivocally established from the available evidence, and it will be particularly important to proceed with caution in

extending research from non-clinical to clinical populations, where this has not yet taken place. It seems probable that causality in the relationship between affective disturbance and personal goals is bidirectional: depression might make motivating goals less accessible, and the non-accessibility of motivating goals might in turn perpetuate depression, creating a vicious cycle. The goal-focused orientation of evidence-based psychological treatments for affective disturbances such as CBT offers a vehicle for therapeutically interrupting such vicious cycles at the goal-clarification and goal-pursuit stages. No studies published to date have systematically examined quantitative associations between symptoms and the goals and motivations of people with persecutory delusions. In order to facilitate extending the application of goal-focused therapies to people experiencing persecutory delusions, it is first necessary to develop our understanding of personally motivating goals identified by this group, and how they relate to symptoms and cognitive processes. An improved understanding of the goals and motivations of people with persecutory delusions, and how these relate to symptoms, can facilitate an increased understanding of the relationship between affective and psychotic disturbances, as well as further therapeutic developments. A study was therefore designed to examine personal goals and motivations in this group, and to investigate associations with symptoms.

1.11 Aims and hypotheses of the study

The current study's novel and innovative contribution to the literature is the merger of two previously separate foci of investigation: (1) the study of persecutory delusions and depression-related processes contributing to their persistence, and (2) the study of personal goals, their motivational characteristics and how these relate to depression. Therefore, the study reported in this thesis examined, firstly, the phenomenological profile of personal goals identified by a group of participants

experiencing current persecutory delusions, and, secondly, examined associations of goal motivations with symptoms and cognitive processes, with the aim of facilitating refinement of psychological therapies. The study recruited a sample of individuals with current persecutory delusions, and the following hypotheses were tested:

1. The number of approach motivations for goals will be negatively associated with levels of depression.
2. The number of avoidance motivations for goals will be positively associated with levels of depression.
3. The self-concordance of goals will be negatively associated with levels of depression.

Associations of goal motivations and self-concordance with paranoia, anxiety, schematic beliefs and worry were also examined.

Chapter 2. Methods

2.1 Design

A cross-sectional cohort design was used, to test associations between variables within a single sample of participants with persecutory delusions. The key variables of interest were personal goals, goal motivations (approach motivations and avoidance motivations), goal self-concordance and levels of depression. The main analyses examined associations of depression levels with approach motivations, avoidance motivations and goal self-concordance, to test the study hypotheses. Associations of goal motivations and self-concordance with anxiety, paranoia, worry and schematic belief scores were also examined.

2.2 Participants

2.2.1 Power analysis

No study is known to have reported a correlational analysis of goal approach/avoidance motivations and depression in a clinical group, so the power calculation is based on effect sizes of published group comparisons. Sherratt & MacLeod (2013) compared mean numbers of approach and avoidance motivations given for approach and avoidance goals by depressed and non-clinical groups. They reported significant differences in types of motivation for approach goals: the depressed group gave significantly more avoidance motivations, $d = 1.02$, and fewer approach motivations, $d = 0.67$, than the non-clinical group. These correspond to medium-to-large effect sizes. In order to achieve 80% power to detect a correlation of .50, the lower end of a large effect size (Cohen, 1992) with a .05 two-tailed significance level, a sample of 29 patients with delusions would be required.

2.2.2 Inclusion and exclusion criteria

The study inclusion criteria were twofold: current persecutory delusion(s) and a primary diagnosis of schizophrenia-spectrum disorder. Persecutory delusions were defined as by Freeman and Garety (2000): that the individual believes that harm is occurring, or is going to occur, to him or her, and that the individual believes that the persecutor has the intention to cause harm. Diagnoses included schizophrenia, schizoaffective disorder, delusional disorder and unspecified functional psychosis, the latter being a common diagnosis given to people in the early stages of treatment for psychotic experiences. The presence of current persecutory delusion(s) and appropriate symptom profile for a schizophrenia-spectrum diagnosis were confirmed using the semi-structured clinical interview Schedules for Clinical Assessment in Neuropsychiatry (SCAN) version 2.1 (World Health Organisation, 1998).

Individuals were excluded from participation if they had any organic brain disorder or primary substance abuse disorder, or if they were unable to give informed consent or possessed an insufficient grasp of the English Language to complete the measures.

Participants were not selected for depression status, and a spread of depression scores was expected. Other co-occurring diagnoses were not used to exclude people from participation, as long as the primary diagnosis was a schizophrenia-spectrum disorder.

2.2.3 Sample

All participants were recruited from outpatient secondary care mental health services in London. Early Intervention Services and Recovery Teams were approached to identify appropriate individuals. Clinical teams referred 78 individuals in total, who they believed to be suitable for the study. The researcher was able to contact 47

individuals, who were sent information sheets to consider study participation. Of these 47 people, eight were excluded as not having current persecutory delusions, six declined to participate due to time considerations or reluctance to talk, and 33 consented to take part in the study. One of these 33 individuals was excluded from the study partway through completing the measures, as he was unable to concentrate sufficiently to rate the questionnaire items. A further two individuals who consented to take part withdrew from the study, as they did not wish to continue. Therefore, the total sample size for the study was 30 participants. Of these, 15 were under the care of Early Intervention Services and 15 were under the care of Recovery Teams.

2.3 Measures

2.3.1 Visual Analogue Scales (VAS)

Visual Analogue Scales (VAS) were administered before and after the assessment procedure. Participants were asked to rate each of three mood items ('How anxious do you feel right now?' 'How sad do you feel right now?' and 'How happy do you feel right now?') by drawing a mark through a 10cm horizontal scale, which was then converted by measurement to a score 0 - 100. This method has been used in studies of people with psychosis as a measure of mood changes occurring over the course of an intervention (e.g. Freeman, Waller, et al., 2015). Any changes in mood ratings over the course of the present assessment procedure were used as an index of the acceptability of the process.

2.3.2 Clinical symptom interviews

Schedules for Clinical Assessment in Neuropsychiatry (SCAN) version 2.1 (World Health Organisation, 1998). The SCAN 2.1 is a system of semi-structured clinician

rated interview schedules for psychiatric diagnosis, developed by the World Health Organisation. The system is based around the Present State Examination, version 10.2 (PSE-10.2). Part 1 contains items relating to anxiety and affective disorders, and Part 2 covers psychotic and cognitive processes. Items are scored according to the intensity, frequency and duration of individual symptoms or experiences, which are cross-examined using definitions given in the glossary that accompanies the manual. Rating scales vary between items in different parts of the examination. Most items in Part 1 are rated according to a combination of frequency and severity, and most items in Part 2 are rated according to frequency. Particular items refer to distress and functional impairment caused by symptoms. The system permits classification of both current and lifetime psychiatric disorders according to DSM-IV or ICD-10 criteria. A computer package, iShell, available to trained examiners, allows input of item ratings, which then undergo processing with the appropriate algorithms and produce a set of diagnoses.

Inter-rater reliability coefficients for SCAN diagnoses were not calculated in the present study: all classifications were made by the same experimenter (NV), to check study eligibility, in the context of clinical diagnoses having already been made by each participant's Consultant Psychiatrist. The present experimenter (NV) completed the week-long formal training in the use of the SCAN over the period 9th – 13th November 2009 at the WHO-accredited training centre at Nottingham University. Previous studies have demonstrated that trained interviewers can administer the SCAN reliably (e.g. Rijnders et al., 2000). Inter-rater agreement between assessors in Rijnders and colleagues' study ranged between 87% (for diagnostic group classification) and 94% (for diagnostic caseness classification). Test-retest reliability over three months was reported as $\kappa = .64$ for diagnostic caseness and $\kappa = .52$ for current depression, which correspond to 'substantial' and 'moderate' agreement,

respectively, according to conventions set out by Landis and Koch (1977).

Vorontsova et al. (2013) reported high inter-rater agreement (93% agreement on diagnoses, $\kappa = .86$), one of the raters being the present experimenter (NV), using the SCAN in a study of individuals experiencing persecutory delusions.

In the current study, all sections of the SCAN 2.1 were included which are used in the assessment of schizophrenia spectrum disorders and of major depression. The key sections for the present purpose were as follows:

Section 6 (Depressed mood and ideation)

Section 7 (Thinking, concentration, energy, interests)

Section 8 (Bodily functions)

Section 10 (Expansive mood and ideation, to rule out a bipolar symptom profile)

Section 17 (Hallucinations)

Section 18 (Thought disorder and replacement of will)

Section 19 (Delusions)

Section 22 (Motor and behavioural items)

Section 23 (Affect)

Several items from Section 3 (Worrying, tension) were also included, as well as some checklist items regarding past history and course of illness over time. The numbers of items administered varied between participants according to presentation, because the procedure for most sections is to discontinue if answers to initial screening questions are negative. For example, in Section 7, if the examinee denies experiencing any difficulty over the last month with thinking, concentration, energy or interests, further detailed questions about these kinds of difficulties are not asked, and the examination continues to Section 8. The diagnostic interviews were voice

recorded for all participants who consented. The SCAN was used to verify that participants met diagnostic criteria for a schizophrenia-spectrum disorder, and to establish which of the participants with delusions also met diagnostic criteria for concurrent depression.

Psychotic SYmptoms RATing Scales (PSYRATS; Haddock, McCarron, Tarrier, & Faragher, 1999). The PSYRATS is a 17-item instrument rating the multidimensional severity of delusions (6 items) and hallucinations (11 items). Each item is given a rating from 0 to 4. Only the six-item Delusions Scale was used here, which has a total score range of 0 - 24. These items relate to delusional conviction, preoccupation (frequency and duration), distress (frequency and intensity) and functional impairment. The instrument has demonstrated very good inter-rater reliability (intra-class correlation coefficients ranging from .79 to 1.0) and test-retest reliability (intra-class correlation coefficient .70). Drake and colleagues assessed the PSYRATS Delusions Scale's internal consistency in a first-episode psychosis sample by calculating correlation coefficients between each item and the subscale score minus that item, with resulting coefficients ranging between .17 and .41 (R. Drake, Haddock, Tarrier, Bentall, & Lewis, 2007).

Two percentage rating items were added to the PSYRATS Delusions Scale to measure in more detail the two main delusion dimensions of interest, as has been done in previous studies (e.g. Vorontsova et al., 2013). The items concerned delusional conviction and delusional distress: each was rated as a percentage from 0 to 100. These ratings are reported separately from the Delusions Scale totals.

2.3.3 Clinical symptom questionnaires

Green et al. Paranoid Thoughts Scale (GPTS; Green et al., 2008). The GPTS is a 32-item self-report measure of paranoid thoughts over the last month, split into two parts. Part A assesses ideas of reference (e.g. 'People have been dropping hints for me') and Part B assesses ideas of persecution (e.g. 'I was sure someone wanted to hurt me'). Each part contains subscales for conviction, preoccupation and distress related to paranoid thoughts. Items are rated on a 1-5 scale, with higher numbers indicating a greater level of paranoid thinking. Total scores range from 32 to 160. The GPTS was developed explicitly for consistency with Freeman & Garety's (2000) definition of a persecutory delusion, and with the content of diagnostic questions used in the SCAN interview. Good internal consistency was found when used with patients with persecutory delusions ($\alpha = .90$) and non-clinical controls ($\alpha = .95$). High test-retest reliability was also found (intra-class correlation coefficient = 0.87 over a two week interval). Convergent validity was supported by correlations with other questionnaire measures of paranoia and delusional ideation. Total GPTS scores were significantly positively correlated with scores on the Paranoia Scale (Fenigstein & Venable, 1992), $r = .81, p < .01$, for patients with delusions and $r = .71, p < .01$, for non-clinical controls. GPTS scores were also significantly positively correlated with scores on the Peters et al. Delusions Inventory (Peters, Joseph, & Garety, 1999), $r = .39, p < .01$, for patients with delusions and $r = .39, p < .01$, for non-clinical controls. In those with persecutory delusions, subscale scores also showed appropriate associations with corresponding item scores on the PSYRATS interviewer-rated Delusions Scale (Haddock, McCarron, Tarrier, & Faragher, 1999), and clinical change over six months from baseline assessment was captured by changes in scores that correlated significantly with PSYRATS change scores (Green et al., 2008). In the present study, Cronbach's α for the GPTS was calculated as = .94.

Beck Depression Inventory (BDI-II) (A. T. Beck et al., 1996). The BDI is a 21-item self-report measure of the cognitive, affective and somatic symptoms of depression. Each item is rated between 0 and 3, according to how severely the respondent has been affected by each symptom over the past two weeks. Total scores can therefore range from 0 to 63. Cut-off scores for clinical interpretation have been provided as follows: 0 - 13, minimal depression; 14 - 19, mild depression; 20 - 28, moderate depression; 29 - 63, severe depression. The BDI has shown good internal consistency ($\alpha = .84$), moderate-high test-retest reliability (intra-class correlation coefficients from .48 to .86) and good concurrent validity with clinician-rated measures of depression. The BDI has been used to measure depression in previous studies of people experiencing persecutory delusions (e.g. Vorontsova et al., 2013). When administered to groups of people with psychosis, the correlation of the BDI with the psychosis-specific Calgary Depression Scale for Schizophrenia (CDSS; Addington, Addington, & Maticka-Tyndale, 1993) has been reported as approaching unity: $r = .91$ (Birchwood et al., 2000). In the present study, Cronbach's α for the BDI was calculated as = .82.

Beck Anxiety Inventory (BAI) (A. T. Beck, Epstein, Brown, & Steer, 1988). The BAI is a 21-item self-report measure of the cognitive and physiological symptoms of anxiety. Participants rate the items (e.g. 'Heart pounding or racing'; 'Fear of losing control') according to how severely they have been bothered by each experience over the previous week (0 = not at all bothered, 1 = mildly, 2 = moderately, 3 = severely). Total scores can therefore range from 0 to 63. Cut-off scores for clinical interpretation have been provided as follows: 0 - 7, minimal anxiety; 8 - 15, mild anxiety; 16 - 25, moderate anxiety; 26 - 63, severe anxiety. The BAI has demonstrated high internal consistency ($\alpha = .92$) and test-retest reliability over a week ($r = .75$). The BAI has

been used to measure anxiety in previous studies of individuals with persecutory delusions (e.g. Startup et al., 2007; Vorontsova et al., 2013), and BAI scores have shown significant associations with paranoia: Green et al. (2008) found $r = .41$ between the BAI and GPTS scores, and $r = .42$ between the BAI and Paranoia Scale (Fenigstein & Vanable, 1992) scores. In the present study, Cronbach's α for the BAI was calculated as $= .92$.

2.3.4 Cognitive measures

Brief Core Schema Scales (BCSS; Fowler et al., 2006). The BCSS contain 4 subscales of 6 items, each scored on a 0-4 scale (range 0-24 for each subscale), which assess endorsement of beliefs in four categories: Positive Self, Negative Self, Positive Other and Negative Other. Higher scores indicate greater belief endorsement. These scales were developed with non-clinical and psychosis groups, where the subscales demonstrated high internal consistency (α between $.78 - .88$), good convergent and discriminant validity in relation to associated measures, and encouraging test-retest reliability over 3 weeks (r between $.70 - .84$). Negative Self scores are thought to measure schematic beliefs relating to fault and/or vulnerability, which are thought to contribute to the formation and maintenance of persecutory beliefs (Freeman et al., 2002), and have been found to predict paranoia longitudinally (Fowler et al., 2012; Vorontsova et al., 2013). In the present study, Cronbach's α for the BCSS subscales were calculated as the following: Positive Self $\alpha = .85$, Negative Self $\alpha = .82$, Positive Other $\alpha = .93$, Negative Other $\alpha = .88$.

Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990). The PSWQ is the most established measure of trait worry style available, and has been used extensively in clinical and non-clinical populations. Items refer to the pervasiveness of worry across different situations (e.g. 'I am always worrying about

something'), the excessiveness of worry (e.g. 'my worries overwhelm me') and its uncontrollability (e.g. 'I know I should not worry about things, but I cannot help it'), reflecting the clinical profile of generalised anxiety disorder (American Psychiatric Association, 2000). Each of the 16 items is rated on a 1-5 scale. Items 1, 3, 8, 10 and 11 are reverse scored (e.g. item 8: 'I find it easy to dismiss worrisome thoughts'). Total scores can range from 16 to 80, with higher scores indicating a greater tendency to worry. The PSWQ has demonstrated high internal consistency in clinical and non-clinical samples, with α values reported ranging between .86 - .95 (Brown, Antony, & Barlow, 1992; Meyer et al., 1990; van Rijsoort, Emmelkamp, & Vervaeke, 1999). Good convergent and discriminant validity were also demonstrated in a study comprising 436 anxiety disorder patients (Brown et al., 1992) Worry has been implicated in the perpetuation of distressing persecutory beliefs (Freeman et al., 2002), and has been shown to predict delusion persistence over time (Startup et al., 2007). In the present study, Cronbach's α for the PSWQ was calculated as = .85.

Wechsler Test of Adult Reading (WTAR; Ginsberg, 2003). This test was developed and had normative data established alongside the Wechsler Adult Intelligence Scale - Third Edition (Wechsler, 1997). The WTAR was intended for the purpose of estimating adults' pre-morbid IQ, as it may have been before putative cognitive decline or brain damage. Participants are required to read aloud a list of 50 words with irregular pronunciations. The number of correct responses is used to derive an estimate of pre-morbid intellectual functioning. This was used to characterise the present participant sample's performance in relation to previous reports of studies of people with persecutory delusions (e.g. Freeman, Pugh, Vorontsova, Antley, & Slater, 2010; Vorontsova et al., 2013).

FAS test (Benton & Hamsher, 1976). In this task, participants are given 60 seconds on each of three trials to generate as many words as possible starting with the letter F, then A, then S, excluding proper nouns and repetitions of the same word stem with a different suffix. Verbal fluency is measured by the sum of valid words produced in the three trials. Verbal fluency is considered a broad measure of executive control / working memory capacity (Dalglish et al., 2007; Rosen & Engle, 1997). The FAS test was included in the present study in anticipation of a positive finding supporting the first hypothesis - of an association between higher depression scores and fewer approach motivations generated - which might be further strengthened if it could be shown to remain significant with verbal fluency statistically controlled in the analysis.

2.3.5 Goals and motivations

Goals were assessed by semi-structured interview, following Emmons' (1986) personal striving construct, as typically used in previous studies (e.g. Vincent, Boddana, & MacLeod, 2004). Following a brief explanation of the personal goal construct, participants were asked to brainstorm personal goals that they would usually or characteristically try to achieve over the next year. All responses were written down. Participants were prompted for further goals using common valued life domains (Rapp, 1998), following paradigms used in behavioural activation therapy (e.g. Hopko & Lejuez, 2008; Martell, Dimidjian, & Herman-Dunn, 2013), a well-evidenced treatment for depression (Cuijpers et al., 2007). Emmons (2003) drew common themes from three separate lines of research (Ebersole, 1998; Emmons, 1999; Wong, 1998) to propose four universal life striving domains: Work/achievement, Relationships/intimacy, Religion/spirituality and Generativity/service. The present study used a somewhat more detailed list of life domains, which has been published for use during goal setting for behavioural

activation (Hopko & Lejuez, 2008). This list can be seen to include the themes proposed by Emmons (2003). The domains were as follows:

1. Family relationships
2. Social relationships
3. Romantic relationships
4. Education, training, learning
5. Employment, career
6. Hobbies, recreation, leisure
7. Volunteer work, charity, political activities
8. Physical health
9. Spirituality
10. Mental health

Further goals generated were written down. All goals were categorised according to the ten above content categories where possible, and those that did not fit any category were labelled 'other'. Goals were categorised collaboratively with participants at the time of generation, and recorded under the appropriate sub-heading in the goal assessment form, included in Appendix C. No time limit was enforced for the generation of goals, in order to facilitate participants to think inclusively about strivings for the next year. Participants were asked whether they would like to add any more goals, until they reported no more. Following this, participants were asked to pick their three most important goals from all those generated. The three selected goals were written out on flash cards to facilitate further discussion. Goal motivation and self-concordance were then assessed for each of these three in turn, as follows.

To assess goal motivation, participants were first asked to report all of the reasons for their pursuit of the selected goal. No time limit was enforced for the generation of reasons for goal pursuit, in order to facilitate participants to think inclusively about their motivations. These were written down, and later classified as approach or avoidance motivations, following the procedure used by Sherratt & MacLeod (2013). Any motivations not classifiable as approach or avoidance were labelled 'other'. A second independent rater, a Clinical Psychology Doctoral trainee with a research doctoral qualification in psychology, re-rated a randomly-selected 20% of the goals' motivations, 59 motivations in total. The two raters agreed on 52 of the 59 motivation ratings (88%), and inter-rater reliability was assessed using Cohen's $\kappa = .73$, indicating substantial agreement (Landis & Koch, 1977). All seven of the motivations upon which the two raters disagreed were rated as 'other' by one rater and as either approach or avoidance by the other. No motivations were rated as approach by one rater and avoidance by the other.

Goal self-concordance was assessed following the method reported by Sheldon and colleagues (e.g. Sheldon & Kasser, 1995). For each goal, participants were asked to rate, on a scale of 0 (not at all for this reason) to 10 (completely for this reason), their agreement with the following statements.

1. You pursue this goal because somebody else wants you to or because the situation demands it.
2. You pursue this goal because you would feel ashamed, guilty or anxious if you didn't.
3. You pursue this goal because you really believe that it's an important goal to have.
4. You pursue this goal because of the fun and enjoyment that it provides you.

Goal self-concordance was calculated by subtracting the scores for the first two items (concerning external and introjected motivation) from the summed score of the third and fourth items (concerning identified and intrinsic motivation). Total self-concordance for three goals can therefore range from -60 to +60, where -60 corresponds to minimal self-concordance (maximum external and introjected motivation, zero intrinsic or identified motivation) and +60 corresponds to maximal self-concordance (maximum intrinsic and identified motivation, zero external or introjected motivation). Sheldon et al. (2004) found Cronbach's alpha coefficients ranging between .70 and .80 for composite self-concordance across four participant samples from different cultures.

2.4 Ethical approval and research sites

An application was made through the Integrated Research Applications System for review of the project by an NHS Research Ethics Committee and by the R&D department of each of the four London NHS Trusts where recruitment would take place: the Camden and Islington NHS Foundation Trust, the East London NHS Foundation Trust, the Barnet, Enfield and Haringey Mental Health NHS Trust and the Berkshire Healthcare NHS Foundation Trust. The Camden and Islington NHS Research Ethics Committee reviewed the study, and gave a favourable opinion of the project (ref. 14/LO/0549) on the 20th May, 2014. Approval was subsequently given by the Royal Holloway, University of London, Psychology Department Research Ethics Committee (ref. 2014/074) on the 4th July, 2014. The Berkshire Healthcare NHS Foundation Trust Research and Development Department gave approval for the study to go ahead on the 21st May, 2014 (ref. 2014/22). The North Thames Clinical Research Network granted R&D approval on behalf of the other three NHS Trusts on the 21st May 2014. Copies of the favourable opinion letters are included in Appendix A.

A local collaborator was established at each site. Consultant psychiatrists, psychologists and team leaders of relevant community care teams were contacted to request their approval for recruitment of patients in their care, and presentations were made at team meetings to explain the project and to encourage referrals by care coordinators.

2.5 Procedure

All participants read the information sheet and had the opportunity to ask any questions before consenting to take part. All gave written informed consent to participate in the study. Each participant completed the study measures once, during one or more meetings, according to the participant's preference. Three participants chose to complete the measures in two meetings, and 27 participants completed all measures in one meeting.

The clinical symptom measures were administered first, in order to establish a shared understanding of participants' current circumstances and difficulties before assessing goals. Participants completed the GPTS, BDI and BAI. Diagnoses and presence of persecutory delusions were confirmed using the semi-structured clinical interview Schedules for Clinical Assessment in Neuropsychiatry (SCAN) version 2.1 (World Health Organisation, 1998). The Psychotic SYmptoms RATing Scales (PSYRATS; Haddock et al., 1999) Delusions Scale was also used to assess the current multidimensional severity of delusions. Participants then completed the BCSS and PSWQ questionnaires and WTAR and VAS tests. Goals and motivations were assessed last. Visual analogue scales of mood (anxiety, sadness and happiness) were completed before and after the procedure, so that a check could be made of any mood changes occurring over the course of the assessment.

Most of the assessments (N = 22) took place at the participants' clinical care team bases. Five participants were seen at home, because they had particularly strong fears about going outside and travelling by public transport. Home visits went ahead with the following safety procedures, consistent with the recruiting NHS Trusts' policies regarding home visits: visits were only made if the participants' clinical teams agreed that they would be happy for the experimenter to make a visit, and had no concerns about safety; teams were informed about the timing of planned visits; and the experimenter made telephone contact with the clinical teams before and after each visit, to ensure that safety was maintained. One participant, who was an inpatient at the time of testing, completed the study measures on the ward. One participant completed the measures at the hostel in which he was resident, and one further participant completed them in a quiet room in a cafe, where she requested to meet instead of either her home or the clinic.

2.6 Analysis

The total numbers of goals produced by participants in each content category were recorded, as well as the numbers of goals produced that did not fit into any of the ten categories. These counts were repeated, using only the three goals that each participant prioritised as most important for the next year. These figures were used to provide a descriptive profile of goal content.

The numbers of approach motivations, avoidance motivations and 'other' motivations generated for each of the 'top three' goals were summed. Correlations were computed between BDI depression scores and the three goal-related indices: approach motivation, avoidance motivation and self-concordance. Associations of the

goal-related indices with paranoia, anxiety, schematic beliefs and worry were also examined.

A follow-up question emerged following consultation with the clinical teams who cared for participants: how do goal motivations and self-concordance vary across goal content categories? This question was explored graphically.

Changes in VAS mood ratings from the start to the end of the procedure were examined as an index of the acceptability of the assessment process.

2.7 Summary

The present investigation was designed to address two principal aims. The study set out, firstly, to descriptively examine the personal goals of a group of people with persecutory delusions, and, secondly, to analyse the associations between their goal motivations and symptoms, particularly levels of depression. Associations of motivational factors with worry and schematic beliefs were also of interest. The key motivational factors of interest were numbers of approach motivations, numbers of avoidance motivations and self-concordance of goals. The next chapter reports the results of the study.

Chapter 3. Results

This chapter reports the results of the present investigation into the personal goals and motivations of people with persecutory delusions, and their associations with depression, other symptoms and associated cognitive factors. Data screening and participant characteristics are summarised first. A descriptive profile is then presented of the personal goals identified by participants, followed by the results of statistical analyses. Quantitative analyses tested the study hypotheses: that higher depression scores among the group would be associated with fewer approach motivations for goals, more avoidance motivations for goals and lower goal self-concordance scores. Exploratory analyses examined associations of goal motivations and self-concordance with paranoia, anxiety, schematic beliefs and worry.

3.1 *Missing data*

There were high completion rates of the measures, with minimal missing data. One participant was unable to give a percentage rating of delusional distress for the PSYRATS. One participant omitted one item of the GPTS. One participant declined to answer item 21 of the BDI. One participant omitted one item of the BCSS. Data were complete for the BAI and PSWQ. In total, 0.09% of questionnaire data were missing. Each of the three omitted questionnaire items was replaced with the participant's mean score from the other items on the scale, or the subscale for the BCSS (Schafer & Graham, 2002).

3.2 *Normality of distributions and outliers in the data*

The distributions of scores for clinical symptom measures (PSYRATS, GPTS, BDI, BAI) and for the PSWQ and BCSS did not deviate significantly from normality. No

outliers were evident in these distributions, with the criterion used of outliers lying outside of three standard deviations either side of the mean score (Howell, 1998). Parametric tests were therefore used for statistical analyses carried out among these variables. Some deviations from normality were evident, however, in the data concerning goal motivations. Shapiro-Wilk tests indicated that the distributions of avoidance motivation and 'other' motivation numbers differed significantly from normality, both $p < .01$. The distribution of avoidance motivation numbers showed significant positive skew (skewness = 1.19, SE(skewness) = .43, $z = 2.77$). The distribution of 'other' motivation numbers also showed significant positive skew (skewness = 2.00, SE(skewness) = .43, $z = 4.65$). The distribution of approach motivation numbers showed a trend towards deviation from normality (skewness = .80, SE(skewness) = .43, $z = 1.860$, Shapiro-Wilk $W(30) = .931$, $p = .05$). Self-concordance scores were relatively normally distributed. Spearman's rank order correlations were used in statistical analyses examining the associations of goal motivations with other variables, in view of deviations from normality evident in the score distributions (Field, 2009).

One univariate outlier was identified in the distribution of avoidance motivation scores, using the definition of an outlier as scoring more than three standard deviations either side of the mean: this individual scored 8 on avoidance motivation, while three standard deviations greater than the mean would = 7.77. It was therefore decided to repeat the main study analyses with and without this outlier, to identify any differences. One univariate outlier was also identified in the distribution of 'other' motivation scores, who scored 6 while three standard deviations above the mean would = 5.09. This outlier was not relevant to the main study analyses, which did not involve the 'other' motivation variable.

3.3 *Participant demographic and clinical characteristics*

3.3.1 Demographics

The study participants comprised 15 males and 15 females with schizophrenia-spectrum diagnoses and current persecutory delusions. Participants ranged in age from 19 to 66 years old, with a mean age of 35 years (SD = 12 years). A mixture of ethnicities was reported: 11 participants described their ethnicity as 'white', four as 'black Caribbean', four as 'black African', two as 'black other', one as 'Pakistani', seven as 'other', and one person declined to classify their ethnicity. Marital status was 'single' for 26 participants, 'married' for one, 'divorced/separated' for two and 'widowed' for one participant. One of the 30 participants reported co-habiting with a partner. Highest levels of educational attainment in the group varied considerably: one participant had a postgraduate diploma, six had a degree, five had a diploma or foundation degree, six had A/AS levels, seven had GCSEs, and five had none of the above, having not completed secondary school. Two participants were working full time, none worked part time, four had been unemployed for less than a year, 13 had been unemployed for more than a year, two were full time students, two were part time students, six were volunteers, and one was retired. English was a second language for eight of the participants, but all had a sufficient grasp of the language to complete the assessments.

3.3.2 Clinical characteristics

One participant was a psychiatric inpatient at the time of testing, although they had been recruited to the study via their usual outpatient clinical team. The others were outpatients. Recruitment targeted four NHS trusts in London, but all participants were successfully recruited from Barnet, Enfield & Haringey Mental Health NHS Trust. 15 participants were recruited through an Early Intervention in Psychosis team, and 15

were recruited through Community Recovery teams. All but one of the participants were prescribed antipsychotic medication at the time of testing, although one of those prescribed this was thought to be non-compliant. Six of the participants were taking antidepressant medication alongside antipsychotics. Among the 30 participants with delusions, 15 had a case-note diagnosis of schizophrenia, one was diagnosed with delusional disorder, 12 were diagnosed with unspecified nonorganic psychosis, and two had uncertainty about which schizophrenia-spectrum diagnosis was most appropriate. The Schedules for Clinical Assessment in Neuropsychiatry (SCAN version 2.1; World Health Organisation, 1998) semi-structured clinical interview confirmed that all participants met the ICD-10 diagnostic criteria for a schizophrenia-spectrum disorder. The assessment also indicated that 19 of the 30 participants (63%) met ICD-10 criteria for a diagnosis of a current major depressive episode occurring alongside psychosis. An independent-samples t-test indicated that BDI depression scores were significantly higher in the subgroup who met diagnostic criteria for current depression ($M = 26.24$, 95% CI [22.13, 30.35]) than in the subgroup who did not ($M = 12.27$, 95% CI [6.06, 18.48]), $t(28) = -4.19$, $p < .01$.

3.4 *Clinical and cognitive measures*

3.4.1 Delusion severity

Table 1 presents the content of the main persecutory belief reported by each of the participants. PSYRATS total delusion severity scores for the main persecutory belief ranged from 5 to 23, with a mean score of 15.33 (SD = 3.93).

Participant number	Persecutory belief
P01	The government are persecuting me and trying to silence me. Due to the awareness I have of government plans for the future, I live in fear of persecution from government agencies.
P02	Some people who have abused me in the past want to hurt me again (and want to kill me).
P03	Terrorists will kill me.
P04	The police are irritating me to get me a criminal record.
P05	People are playing with my mind to upset me.
P06	The neighbours are getting at me on purpose to bring me down.
P07	The people with any power are trying to take what's important to me out of me.
P08	People are winding me up to upset me.
P09	People are hurting me on purpose to bring me down.
P10	The neighbours are winding me up on purpose to upset me.
P11	People are upsetting me by talking about me behind my back.
P12	People are monitoring my thoughts and persecuting me.
P13	People are trying to upset me on purpose.
P14	People have been persecuting me with witchcraft, and it is still going on.
P15	The voices are trying to kill me.
P16	People will attack me in the street.
P17	People are persecuting me and trying to kill me.
P18	Someone will break into my house and hurt me.
P19	My family are bringing me down on purpose.
P20	My ex-partner is bringing me down on purpose.
P21	E would bring me down and damage my reputation further if she could.
P22	Someone will break into the house and hurt me.
P23	People are controlling my thoughts to confuse me and upset me.
P24	People have sent spirits to harm me, degrade me and defame me.
P25	People are interfering with my activities because of jealousy.
P26	I am being controlled and put to pain.
P27	People are persecuting me, directly and indirectly.
P28	People will control me to bring me down.
P29	People are trying to make me suffer, and they want to kill me.
P31	The police are persecuting me with voices.

Table 1. The main persecutory belief reported by each participant.

Figure 1 summarises the multidimensional severity of delusions reported by participants, as measured by PSYRATS items, with specific reference to the main persecutory belief of each individual. Conviction percentage ratings for delusions ranged from 20% to 100%, with a mean of 77% and a standard deviation of 25%. Distress percentage ratings ranged from 0% to 100%, with a mean of 63% and a standard deviation of 26%. PSYRATS total scores were significantly correlated with GPTS scores, $r(28) = .68, p < .01$, indicating a significant association of large effect size (Cohen, 1992) between the severity of participants' main persecutory delusions and the intensity of their self-reported paranoia overall.

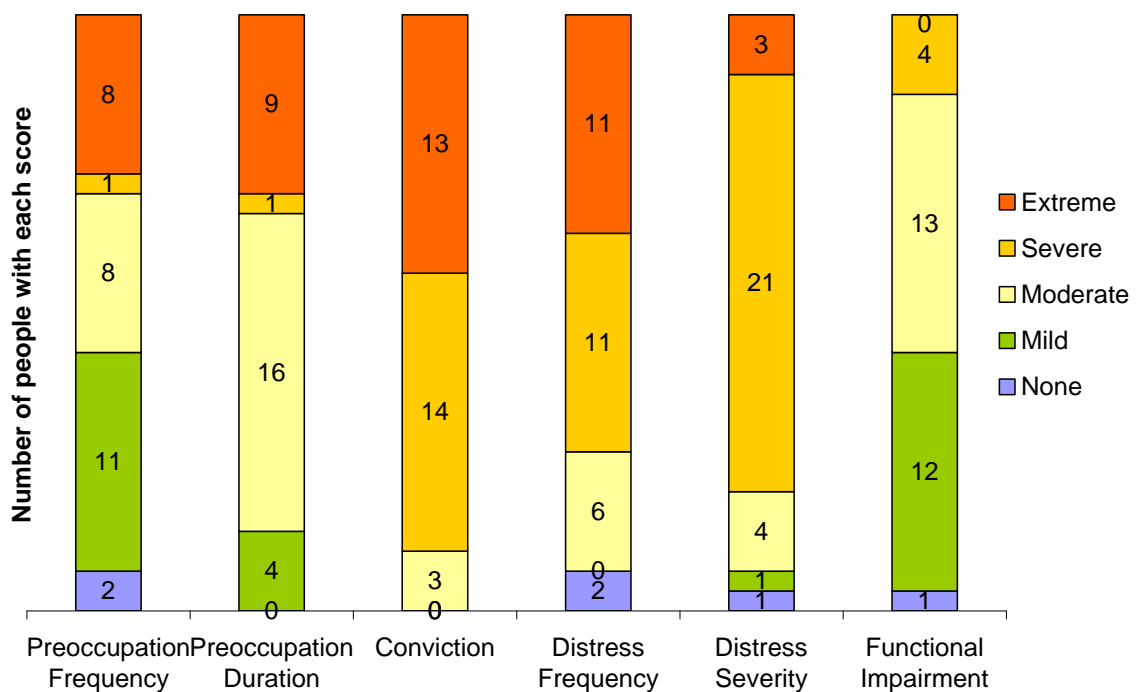


Figure 1. The multidimensional severity of persecutory delusions in the sample.

3.4.2 Clinical and cognitive questionnaire measures

Descriptive statistics for the participants' clinical and cognitive questionnaire scores are summarised in Table 2 below. These scores are similar to those found in previous studies of this population (e.g. Vorontsova et al., 2013). Table 3

summarises the numbers of participants who fell within each clinical cut-off category according to BDI and BAI scores.

	GPTS Paranoia	BDI Depression	BAI Anxiety	PSWQ Worry
Highest	171	43	57	76
Mean (SD)	102.06 (39.00)	21.02 (11.02)	22.23 (12.97)	53.77 (11.73)
Lowest	32	3	0	34

Brief Core Schema Scale subscale scores				
	Negative Self	Positive Self	Negative Other	Positive Other
Highest	21	23	24	24
Mean (SD)	6.03 (5.30)	12.03 (6.53)	11.83 (6.92)	9.53 (7.50)
Lowest	0	0	0	0

Table 2. Descriptive statistics of participants' clinical and cognitive questionnaire scores.

	Minimal	Mild	Moderate	Severe
BDI	8 (27%)	5 (17%)	10 (33%)	7 (23%)
BAI	5 (17%)	4 (13%)	10 (33%)	11 (37%)

Table 3. Numbers and percentages of participants who scored in each clinical cut-off category according to the BDI and BAI.

3.4.3 Premorbid IQ and verbal fluency

The WTAR and FAS tests were used as broad indices of participants' premorbid IQ scores and current verbal fluency (an index of executive functioning), respectively, to help characterise the sample relative to other studies of the same population. The group's mean number of correct words generated for the FAS test was 32.70 (SD = 13.18). The group's mean standardised WTAR score was 88.13 (SD = 19.66). This is in line with previous reports from studies of similar groups (Freeman et al., 2010;

Startup et al., 2007). Scores are likely to have been lowered to some extent by the fact that eight of the 30 participants spoke English as a second language, so were less familiar with the irregular words contained in the WTAR than might have been expected of native speakers.

3.5 Personal goals

All participants were able to identify multiple personal goals for the next year when asked, and all identified additional goals when prompted using the ten life domain categories provided. The 30 participants identified 437 goals in total. The number of goals identified spontaneously before prompting ranged from one to 16, with a mean of 5.43 ($SD = 2.73$), and the number of goals identified in total ranged from five to 34, with a mean of 14.57 ($SD = 6.55$). The total number of goals produced by participants was not significantly correlated with FAS verbal fluency scores, $r(28) = .33, p = .08$.

3.5.1 Descriptive overview of goals

The content categories of participants' personal goals were examined to explore the phenomenological profile of strivings among a group of individuals with persecutory delusions. Figure 2 summarises the numbers and percentages of personal goals identified in each category. The category of 'Education, learning and training' prompted the greatest number of goals, 56 (14%) in total. The category with least goals was 'Romantic relationships,' with only 22 goals (5%) in this category identified among the group of study participants. Each category thus contained goals comprising between 5% and 14% of total goals, which could be described as a relatively even spread.

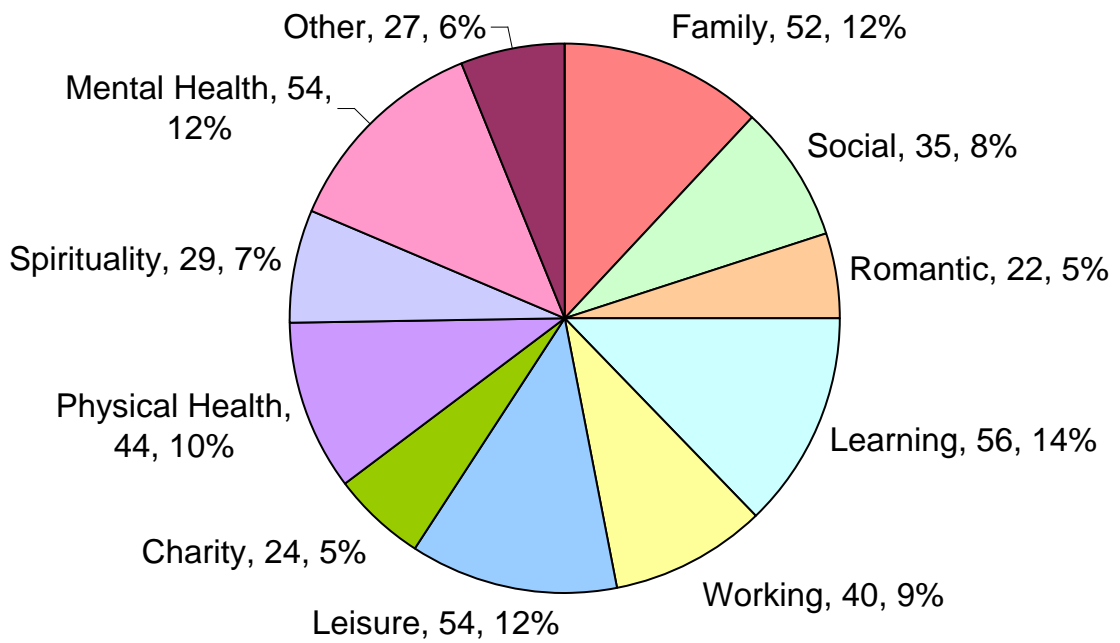


Figure 2. Numbers of goals identified in each category by the group as a whole.

Each participant selected a 'top three' goals that might be most important over the forthcoming year. Figure 3 summarises the numbers and percentages of goals in each category that were selected by participants within their top three goals. The category 'Family relationships' contained the greatest number of 'top three' goals (15 goals, 18%), and the category 'Romantic relationships' contained the fewest 'top three' goals (two goals, 2%).

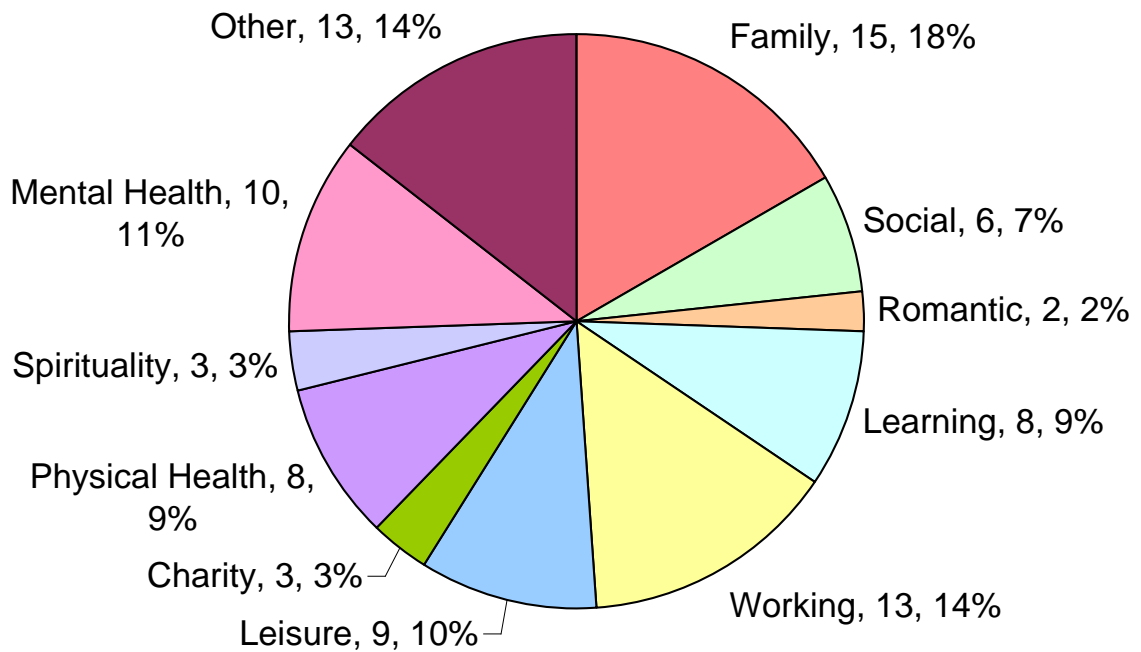


Figure 3. Numbers of 'top three' goals identified in each category by the group.

Table 4 presents the goal selected as top priority by each participant, along with the content category of the goal. Thirteen of the participant group's 'top three' goals (14% of the total number of 'top three' goals) fell into the 'other' category, rather than any of the prompt categories. These tended to relate to practical (e.g. "to find a new home") or financial concerns (e.g. "to pay off my bills"), although several were too abstract to classify (e.g. "living in the moment," "to find solutions to problems if there are any").

Participant number	Number One Goal	Category
P01	To complete my [college] course	Learning
P02	Living in the moment	Other
P03	To complete second year of [university] degree	Learning
P04	To get paid a salary	Working
P05	To find a great job in which I will be happy, with good money	Working
P06	To have a brain scan to prove that I'm wearing fibre on my head and I can speak more of myself.	Physical Health
P07	To find a more amiable relationship with my patterns of thought	Mental Health
P08	To try to be a bit happier	Mental Health
P09	To go to university to study health and social care.	Learning
P10	To do more exercise	Physical Health
P11	To have my daughter with me	Family
P12	To overcome my severe OCD condition - try to be normal again.	Mental Health
P13	To take medication properly	Mental Health
P14	To travel	Leisure
P15	To get off the drink and stop smoking	Physical Health
P16	To increase wellbeing and freedom	Mental Health
P17	I want my daughter to get a husband	Family
P18	To get a job that I enjoy and can use graphics skills	Working
P19	To find a new home	Other
P20	To get my child back	Family
P21	To lose some weight	Physical Health
P22	To do some training to help get back to work	Learning
P23	To start doing some charity work	Charity
P24	To go to Mecca in March	Spirituality
P25	To get back into full time employment	Working
P26	To improve my health - physical and mental	Physical Health
P27	To continue to impress the gods and goddesses of my ancestors - the 'ultimate awesome team'	Spirituality
P28	To keep on going to church	Spirituality
P29	To get a job	Working
P31	To nurse mother back to health	Family

Table 4. The top prioritised goal for the next year identified by each participant.

3.5.2 Goal motivations: approach, avoidance and self-concordance

Descriptive statistics of the numbers of approach, avoidance and 'other' motivations that participants gave for their top three goals and the self-concordance scores for these same goals are presented in Table 5 below. A Wilcoxon signed-rank test indicated a significant difference between the numbers of approach motivations ($M = 6.30$, $SD = 3.17$) and avoidance motivations ($M = 2.37$, $SD = 1.83$) generated for participants' top three goals, $p < .01$, with more approach than avoidance motivations given.

	Approach	Avoidance	Other	Self-concordance
Scores for number one goal				
Highest	8	3	2	20
Mean (SD)	2.07 (1.91)	0.93 (0.87)	0.37 (0.67)	8.20 (8.05)
Lowest	0	0	0	-9
Total scores for top three goals				
Highest	14	8	6	60
Mean (SD)	6.30 (3.17)	2.37 (1.83)	1.07 (1.34)	25.23 (20.62)
Lowest	1	0	0	-9

Table 5. Descriptive statistics for numbers of goal motivations by subtype and self-concordance scores relating to participants' top three goals.

3.6 Hypothesis testing: correlations of depression scores with goal motivations and self-concordance

Spearman's one-tailed non-parametric rank-order correlations were used, in view of some deviations from normality in data distributions, to test the main study hypotheses by examining associations of BDI depression scores with goal motivations and self-concordance. Self-concordance being a compound variable

calculated from four independently rated items, correlations of BDI depression scores with each of the four individual items were also examined. The resulting correlation coefficients are summarised in Table 6 below.

Correlation with BDI	Approach	Avoidance	Other	Self-concordance
r_s	-.22	.36*	.20	-.37*
p	.13	.02	.15	.02
Individual self-concordance items				
Correlation with BDI	External	Introjected	Identified	Intrinsic
r_s	.27	.40*	.15	.04
p	.08	.02	.21	.43

*Table 6. Correlations of depression scores with goal motivations and self-concordance, with associated significance values. * denotes significance at $\alpha < .05$ level.*

The results showed a significant positive correlation between depression scores and avoidance motivations, and a significant negative correlation between depression scores and goal self-concordance. Both of these correlations were of medium effect size (Cohen, 1992). Two of the three study hypotheses were thus supported: an association of higher depression with more avoidance motivation, and an association of higher depression with lower goal self-concordance. When correlations of BDI depression scores with individual items of the self-concordance measure were examined, the only significant association found was of higher depression scores with higher scores on the introjected motivation item ('You pursue this goal because you would feel ashamed, guilty or anxious if you didn't.') A non-significant trend was evident between higher depression scores and higher scores on the external motivation item ('You pursue this goal because somebody else wants you to or because the situation demands it.')

The third study hypothesis, regarding a negative association between depression and approach motivations, was not supported by the present findings, despite a trend in the predicted direction.

Figures 4 and 5 illustrate the significant correlations found, using scatter graphs of BDI depression scores plotted against numbers of avoidance motivations and against goal self-concordance scores, respectively. The one outlier identified in the distribution of avoidance motivations is labelled P15.

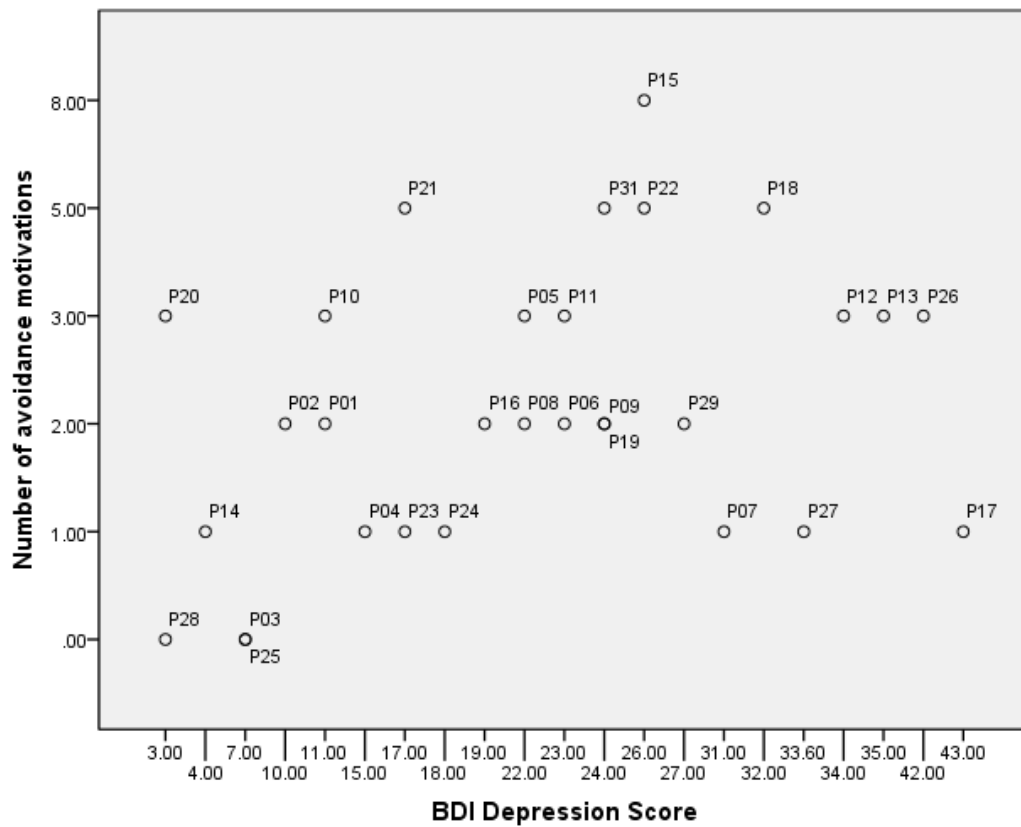


Figure 4. Scatter plot of participants' BDI scores and avoidance motivations.

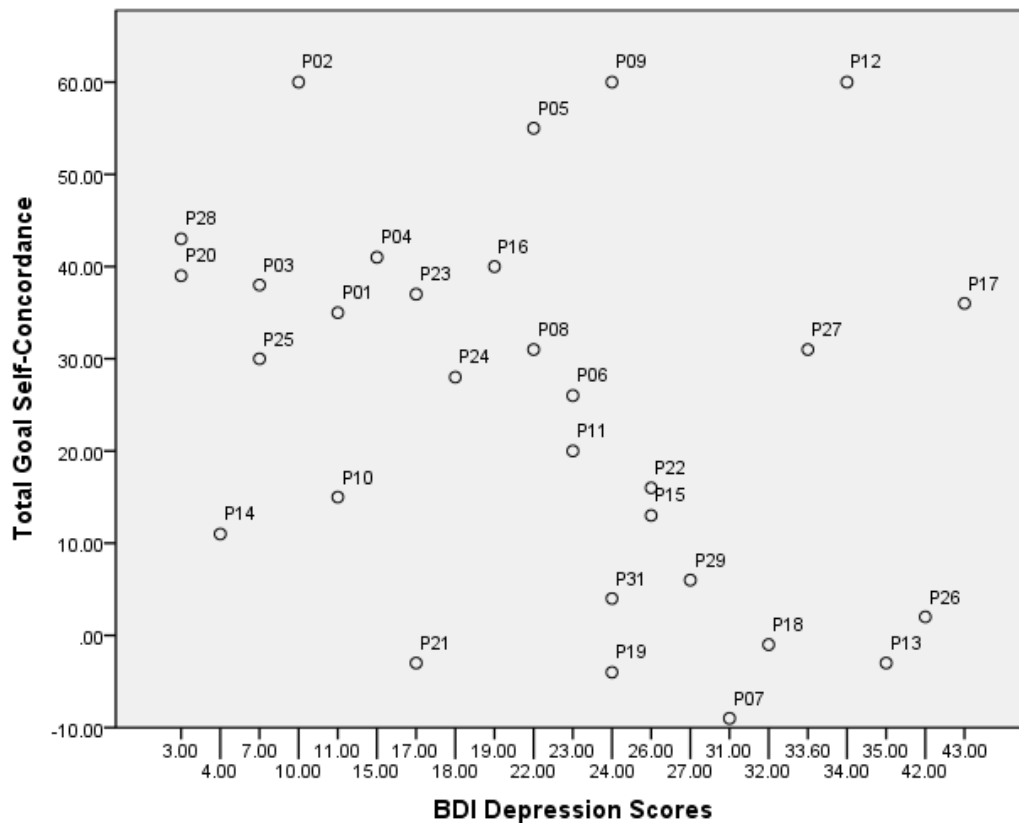


Figure 5. Scatter plot of participants' BDI scores and total goal self-concordance.

The analyses to test the main study hypotheses were repeated with one outlier excluded, who had an unusually high avoidance motivation score. The pattern of significant results was the same, with significant correlations evident of depression with avoidance motivation scores, $s_r = .35$, $p = .03$, and of depression with self-concordance scores, $s_r = -.36$, $p = .03$. The analyses with or without the outlier thus supported the same two of the three study hypotheses.

3.7 Additional exploratory analyses

Associations of goal motivation scores and self-concordance with anxiety, paranoia, worry, schematic belief scores and verbal fluency were also examined. Spearman's two-tailed non-parametric rank-order correlations were used, due to the absence of directional hypotheses, and in view of deviations from normality in data distributions.

In view of the exploratory nature of these analyses, the Bonferroni correction was not employed. Correlation coefficients and associated significance values are summarised in Table 7.

	Approach	Avoidance	Self-concordance
BAI s_r	-.35	.14	-.10
p	.06	.47	.60
GPTS s_r	-.29	.38*	.05
p	.13	.04	.79
PSWR s_r	-.19	.18	-.21
p	.32	.34	.26
BCSS SN s_r	-.10	.17	-.24
p	.59	.38	.21
BCSS SP s_r	.11	.01	.33
p	.57	.98	.08
BCSS ON s_r	-.16	.27	.02
p	.40	.16	.92
BCSS OP s_r	.07	.29	.07
p	.72	.12	.73
FAS s_r	.38*	-.01	-.07
p	.04	.96	.70

Table 7. Correlation coefficients and associated significance values for associations of goal motivation and self-concordance scores with clinical and cognitive measures.

** denotes significance at the $\alpha < .05$ level.*

Avoidance motivations showed a significant positive correlation with GPTS paranoia scores, $s_r(28) = .38$, $p = .04$, indicating an association between higher paranoia and more avoidance motivations. The correlation between avoidance motivations and GPTS paranoia scores did not remain significant when BDI depression scores were statistically covaried, $r(27) = .28$, $p = .14$.

Approach motivations showed a significant positive correlation with FAS verbal fluency scores, $s_r(28) = .38, p = .04$, indicating an association between higher verbal fluency and more approach motivations. Approach motivations and goal self-concordance showed no statistically significant correlations with paranoia, anxiety, worry or BCSS schematic belief scores, although the correlation between BAI anxiety scores and approach motivations showed a negative trend approaching significance, $s_r = -.35, p = .06$. There was therefore a tendency towards higher BAI anxiety scores being associated with fewer approach motivations for goals.

3.8 Goal motivations and self-concordance by category

Discussion of the key study findings, as presented in this chapter thus far, with the team of psychologists who worked with, and helped to recruit, the study participants, led to identification of a further question of interest to these key stakeholders: how do approach and avoidance motivation numbers and self-concordance scores vary across the categories of goals by content? This question was explored by calculating descriptive statistics for the numbers of approach and avoidance motivations and self-concordance scores for each category of goals by content. Figures 6 and 7 summarise these statistics for approach/avoidance motivations and self-concordance, respectively.

The three goal categories of 'Physical health,' 'Mental health' and 'other' (goals categorised as 'other' were mostly practical or financial in content, or were too abstract to classify) contained goals with the highest numbers of avoidance motivations and the lowest self-concordance scores, on average, among the goal content categories. These three goal categories also had some of the lowest average numbers of approach motivations identified, alongside the category of 'Spirituality.'

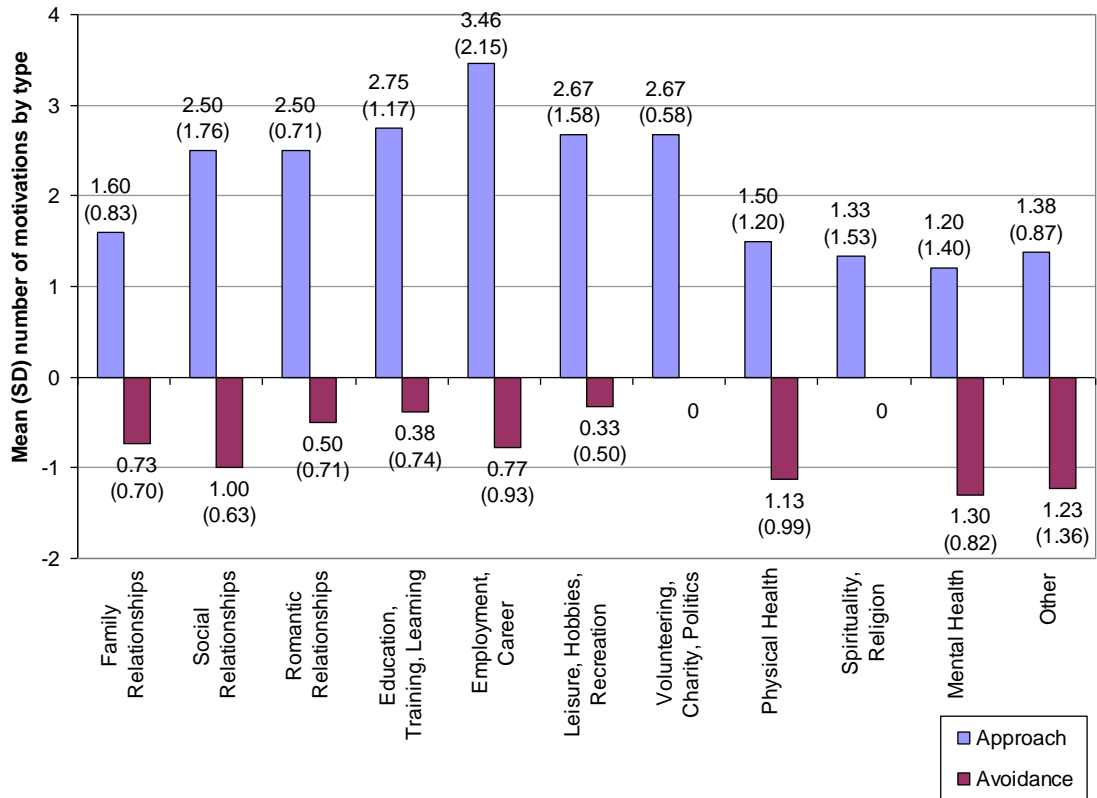


Figure 6. Mean (SD) approach and avoidance motivations identified per goal, classified by goal content category.

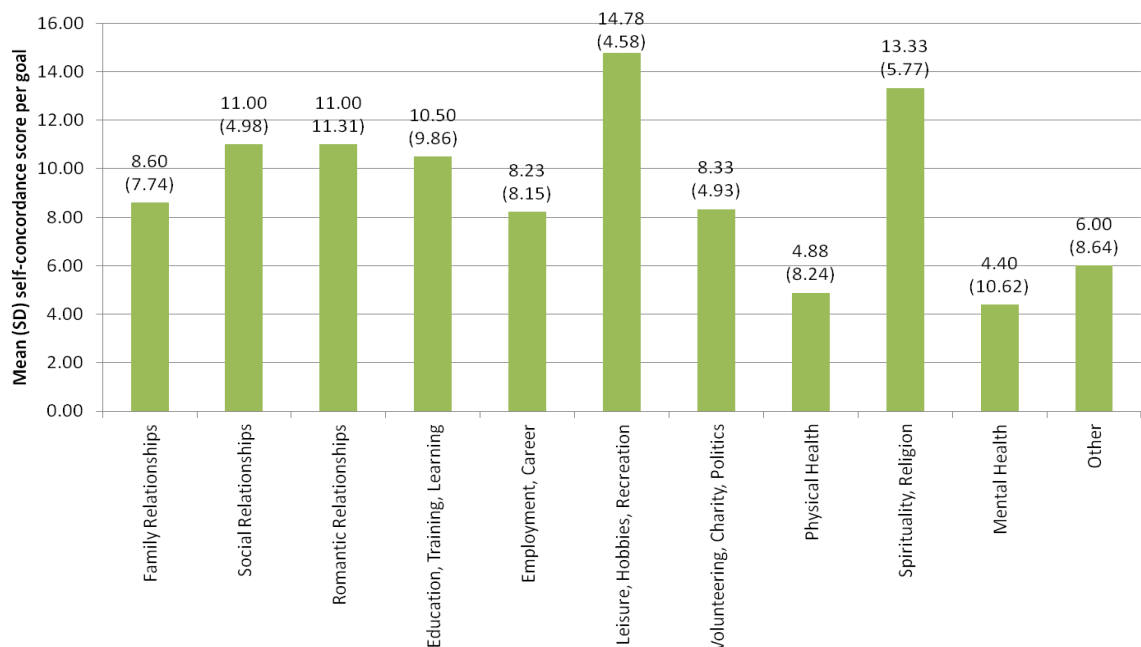


Figure 7. Mean (SD) goal self-concordance scores per goal, classified by goal content category.

The lowest average numbers of avoidance motivations were identified for goals in the categories of 'Spirituality,' 'Volunteering,' 'Romantic relationships,' 'Learning' and 'Leisure.' The categories 'Volunteering,' 'Romantic relationships,' 'Learning' and 'Leisure' also had some of the highest average numbers of approach motivations identified, alongside the category of 'Employment.' The categories of 'Leisure,' 'Spirituality,' 'Social relationships,' 'Romantic relationships' and 'Learning' contained goals with the highest average self-concordance ratings given.

The categories of 'Spirituality,' 'Volunteering' and 'Romantic relationships' only contained two or three goals each, whereas all other categories contained at least six goals. Particular caution was therefore appropriate in interpreting the patterns of goal motivations and self-concordance scores for these minority goal categories.

3.9 *Acceptability of the study procedures: visual analogue scale mood ratings and feedback*

Participants' visual analogue scale (VAS) mood ratings at the beginning and end of the study procedure were examined as indices of any changes in mood that might have occurred over the course of the assessment process. Participants were also asked directly about their experience of study participation. Figure 8 presents the means and 95% confidence intervals of the group's ratings of anxiety, sadness and happiness at the two time points.

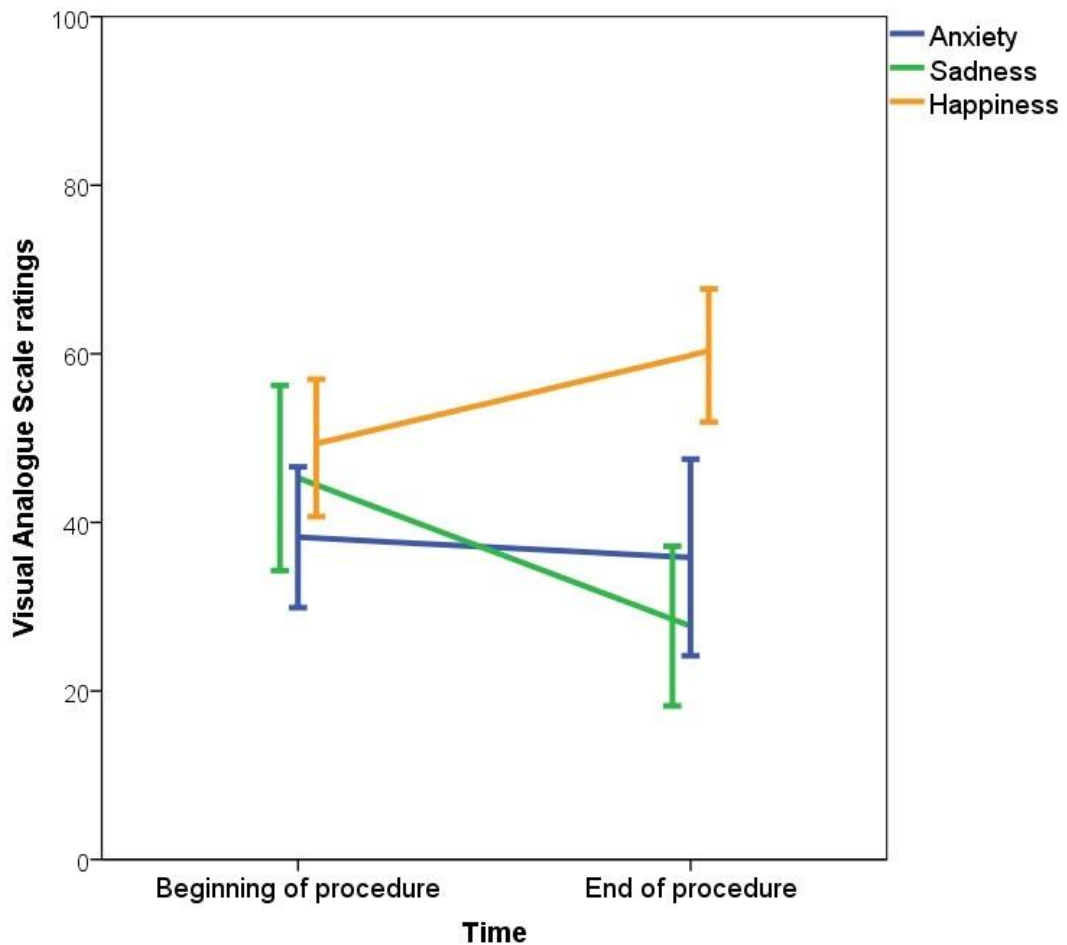


Figure 8. Participants' mean mood ratings at the beginning and end of the assessment procedure. Error bars represent 95% confidence intervals.

A multivariate repeated measures analysis of variance (MANOVA), with time as a within-subjects factor and anxiety, sadness and happiness as dependant variables, was used to identify any statistically significant changes over time in participants' scores on the three VAS scales. The MANOVA was used because this test controls the familywise Type I error rate in testing for multivariate change in a set of variables first, and if this is significant, then univariate follow-up ANOVA results can be examined for significant changes in individual variables (Field, 2009). The MANOVA results indicated, using Pillai's trace, a significant multivariate effect of time on the dependant mood variables, $V = 0.14$, $F(3,56) = 3.15$, $p = .03$. Follow-up univariate

ANOVAS revealed a significant effect of time on sadness, $F(1,58) = 6.13, p = .02$. Inspection of the descriptive statistics indicated that sadness ratings were lower at the end of the assessment ($M = 27.70, SD = 25.39$) than at the beginning of the assessment ($M = 45.27, SD = 29.42$). The effect of time on happiness ratings approached significance, $F(1,58) = 3.90, p = .05$ (slightly higher than the criterion value of .05). Inspection of the descriptive statistics indicated that happiness ratings appeared to be higher at the end of the assessment ($M = 59.80, SD = 21.18$) than at the beginning of the assessment ($M = 48.83, SD = 21.82$). There was no significant effect of time on anxiety ratings, $F(1,58) = 0.12, p = .73$. In summary, participants reported feeling significantly less sad at the end of the procedure than at the beginning, and there was a nearly significant trend for participants to report feeling happier at the end of the procedure than at the beginning. There was no indication of any significant change in anxiety ratings from the beginning to the end of the assessment.

The positive pattern in visual analogue scale mood rating changes was consistent with participants' qualitative feedback about participation in the study, which also indicated that the procedure was acceptable to those who took part. The only negative feedback given, by one participant, was that the overall assessment process took quite a long time. A selection of quotations is presented below of participants' feedback regarding the experience of study participation.

"It's been very beneficial - it's good to talk about things, and for somebody to take an account."

"It was interesting to see what kind of questions you ask, and what you would ask further to what I give you, to see how you understand my mental health, if you know what I mean. It was an assessment for myself as well, of how I feel."

"It was alright, I was expecting some more harder questions."

"It's alright - it's kinda like recuperating the brain!"

"It's been fun. I have problems, actually, with filling in these forms, because there's a lot of questions, questions, questions... but at least I'm not answering 'oh I'm sad, and this and this.' It took a long time. [laughs]"

"I hadn't thought about my goals and motivations in quite that format before - I had thought about my goals and motivations, but I hadn't broken them down by section like that, and I hadn't isolated which three were the most important, so that was quite interesting."

3.10 Summary

The goal assessment procedure was acceptable and feasible for all participants, and all were able to identify personal goals and to report their motivations. Two of the three study hypotheses were supported. The results indicated a significant association between higher depression scores and more avoidance motivations for personal goals, and a significant association between higher depression scores and lower self-concordance of personal goals. Both of these associations were of medium effect size, and were evident irrespective of whether or not an outlier was excluded from the analyses. No support was found for a hypothesised association between higher depression scores and fewer approach motivations for personal goals. Exploratory follow-up analyses indicated a significant association between higher paranoia scores and more avoidance motivations for personal goals. These exploratory findings did not relate to any *a priori* hypotheses, however, and cannot therefore be taken to indicate a population effect, beyond the characteristics of the present study sample.

Chapter 4. Discussion

Goal-directed thinking and motivational processes have been proposed to play an active role in the maintenance of depression over time, and evidence is accumulating in support of this proposal. An increasing understanding of the kinds of goals and motivations whose pursuit may drive most gains in wellbeing and achievement has driven therapeutic developments. The effectiveness of talking therapies can be facilitated by harnessing individuals' internal motivations and supporting them to engage in forms of goal pursuit that increase experiences of reward. The present study sought to take the first steps in extending an understanding of the clinical significance of personal goals and motivations to people with psychosis, specifically with delusions of persecution.

This chapter presents an overview of the descriptive profile of personal goals identified by the study participants, and quantitative associations of aspects of goal motivation with depression are discussed in the context of the existing literature. Motivational aspects of personal goals were considered as potential mediators or mechanisms underlying the effect of depression on delusion persistence over time, as found in previous studies of this population. Associations of depression scores with goal motivations and self-concordance were examined, in line with previous studies of groups without psychosis. The acceptability of the assessment procedure used in the study was considered, as indexed by mood ratings before and after testing, as well as qualitative feedback from participants. Limitations, clinical implications and directions for further research are also addressed.

4.1 Personal goals identified by the group

All participants were able to identify personal goals for the next year and motivations for these, as well as rating self-concordance. No substantial difficulties in goal assessment were thus evident with this group, which supports the feasibility and acceptability of the procedure. Given that this is the first study to have used this form of goal assessment with a group of people who have persecutory delusions, the feasibility and acceptability of the assessment process for this population was of interest in and of itself. Further indices of the acceptability of the procedure will be discussed later in this chapter, after the main findings have been considered.

4.1.1 Descriptive profile of goals

Goals identified by participants were distributed fairly evenly across the eleven categories (including 'other') into which they were classified, with each category comprising between 5% and 14% of total goals identified. Most of the goals identified by participants (410/437 goals, 94%) fell into one of the ten content categories used for prompting, which supports the fit of the category set to the strivings of the individuals who took part. The group of individuals with persecutory delusions who took part in the present study were thus able to classify most of their goals for the next year into a set of categories derived from studies of the general population and individuals experiencing depression (Emmons, 2003; Hopko & Lejuez, 2008; Martell et al., 2013). This suggests that similar life domain goal content category prompts are applicable to these groups. Goals falling in the 'other' category tended to relate to practical or financial concerns, which were not included in the life domains prompt list used in this study and in behavioural activation therapy (Hopko & Lejuez, 2008; Martell et al., 2013). Practical and financial strivings were also absent from Emmons' (2003) set of universal life domains, and may reflect more situation-bound desires to

solve circumstantial problems, rather than perpetual internally-driven valued life directions. One of the two qualitative studies of the goals of people with delusions mentioned in section 1.9 (Rhodes & Jakes, 2000) included the category of 'Material base' as one of six into which participants' goals could be classified, and this corresponded to practical and financial concerns. It is possible that individuals experiencing delusions, including those taking part in Rhodes and Jakes (2000) and in the present study, are more likely to report practical and/or financial goals than samples from the general population, in line with the known higher prevalence of poverty and social deprivation experienced by groups of people with psychosis compared to those without (e.g. Kirkbride, Jones, Ullrich, & Coid, 2014; Murali & Oyeboode, 2004). Direct comparisons between groups were not possible within the context of the single-group design of the present study.

Among the categories of goal content, the highest number of goals was generated in the category of 'Education, learning and training,' and the lowest number of goals was generated in the category of 'Romantic relationships.' When participants selected their top three most important goals for the next year, the category of 'Family relationships' contained the highest number of goals selected, and the category of 'Romantic relationships' contained the lowest. It thus appeared that participants in this study consistently placed romantic relationships relatively low down in their priorities for personal strivings in the forthcoming year, whereas family matters and the development of new skills and/or knowledge were prioritised relatively highly.

The assessment procedure was designed to support participants to think inclusively about goals in multiple areas of their lives, and the study did not aim to draw any conclusions about the relative prevalence of goals in particular life areas. It is

nevertheless of interest to consider that a broad range of goals were identified in many life domains, and that the domains to which goals most frequently belonged were of the sort relevant to most people, such as family relationships and the development of knowledge and/or skills. Mental health-related goals did not dominate the profile of personal strivings identified by the group, although goals in this category were also relatively prevalent, comprising 12% of goals in total and 11% of 'top three' goals.

Exploratory follow-up examination of approach motivations, avoidance motivations and self-concordance scores for goals in different content categories indicated that goals in the physical health and mental health categories scored the most avoidance motivations (alongside 'other' goals, which were mostly practical or financial in content, or too abstract to categorise) and the lowest self-concordance scores, on average, among the goal categories. These categories also yielded some of the lowest average numbers of approach motivations, alongside the category relating to spirituality. Goals in these categories were therefore associated with the most 'negative' motivational profiles (few approach motivations, many avoidance motivations, low self-concordance), corresponding to hypothesised associations with higher levels of depression. It is understandable that experiencing distressing difficulties with mental and/or physical ill health may drive individuals to prioritise addressing these issues, with underlying motivations of avoiding suffering. There is a tentative implication, however, that pursuit of these types of health-related or symptom-reduction goals, when motivated by avoidance and by external and/or introjected motivations, may tend not to bring individuals as much gain in wellbeing or achievement as pursuit of goals that are motivated more by approach and less by avoidance, and are driven by more intrinsic and identified motivations, rather than by external and/or introjected ones.

The goal content categories with the most 'positive' motivational characteristics (few avoidance motivations, many approach motivations, high self-concordance), included 'Leisure/hobbies/recreation', 'Education/training/learning', 'Romantic relationships', 'Spirituality/religion' and 'Voluntary/charity/political activities'. The latter three categories only comprised two or three goals each (all other categories comprised at least six goals), which indicates particular caution in interpreting their patterns of motivation and self-concordance. The exploratory nature of this examination of the goals across content categories precludes any conclusions being drawn about the motivational tendencies of goals that fall in one category or another. A tentative summary might pick out, however, among the specified categories containing six or more goals, that the goal categories relating to physical and mental health showed the most 'negative' motivational profiles, while the categories relating to learning and to leisure activities showed the most 'positive' motivational profiles. Further research using larger samples to test *a priori* hypotheses will be necessary before any generalisations can be made beyond the present participant sample regarding the motivational characteristics of goals by content category.

4.2 Hypothesis testing

Two of the three study hypotheses were supported by the findings. Support was found for an association between higher depression scores and more avoidance motivations for personal goals, and for an association between higher depression scores and lower goal self-concordance. A hypothesised association between higher depression scores and fewer approach motivations for personal goals was not supported by the study findings.

4.2.1 Avoidance motivations for personal goals

The study results supported the hypothesis that those with higher depression scores would report more avoidance goal motivations. The positive finding of an association between depression and avoidance motivations for personal goals mirrors reports from studies of people with major depressive disorder and non-clinical controls (Coats et al., 1996; Dickson & MacLeod, 2006; Sherratt & MacLeod, 2013; Vergara & Roberts, 2011), suggesting that the same effect may be evident for people with persecutory delusions and schizophrenia-spectrum diagnoses as has been shown in groups without psychosis.

An association of higher depression scores with more avoidant motivations for goals is consistent with theoretical assertions, including those founded in control theories of self-regulation, that pursuit of goals driven by avoidance brings about negative affective and functional consequences (e.g. Carver & Scheier, 1990; Elliot, 2006), an effect which may be mediated by depletion of self-regulatory resources (Oertig et al., 2013). The present findings would not, however, contradict an opposite hypothesis: that avoidant motivation might occur in response to depression. The cross-sectional nature of this study precludes any conclusive evidence being produced for either direction of causality. The association may in fact be bidirectional: avoidant goal striving may increase feelings of depression, which might feed back to further increase avoidance in goal striving, which may further increase depression. It is also possible that other factors, such as the occurrence of traumatic experiences, might cause both depression and a motivational focus on avoidance of possible further negative experiences. Traumatic experiences are known to be very common in the histories of people experiencing psychosis, and are associated both with positive psychotic symptoms and with depression in this group (e.g. Duhig et al., 2015; Varese et al., 2012).

Coats and colleagues' (1996) experimental findings, that manipulation of individuals' goals towards approach rather than avoidance resulted in more positive and less negative self-evaluations following completion of a task, supports a proposed causal role for goal orientation in shaping subsequent experience. Coats and colleagues manipulated the verbal framing of goals for participants, rather than targeting underlying motivations directly. For example, participants were instructed either to "be creative" or to "avoid being uncreative." The investigators did not assess underlying motivation, and conclusions cannot be drawn about causal effects of underlying motivations from the findings of this study. Coats and colleagues' experimental results do suggest, encouragingly, that therapeutic manipulation of approach vs. avoidance-orientated goal pursuit may be possible, and may have positive effects. Further exploration of such possibilities will be important for improving our understanding and application of goal motivation as a possible therapeutic target.

It is possible that pursuit of goals driven by avoidant motivations may contribute to maintaining distressing persecutory beliefs in the same way that it has been proposed to maintain depression. The significant association found in the present study between higher paranoia scores and more avoidant motivations is consistent with such a proposal, although only correlational and exploratory in this case. The association between paranoia and avoidant motivations did not remain statistically significant when depression scores were partialled out, which suggests that the covariance between the two may have been accounted for, in part, by an association of both with depression. An individual pursuing a goal driven by avoidant motivations may focus on the negative content of the consequence that they are trying to avoid, and thus both perpetuate negative affect in response to the feared negative outcome and also fail to attend to the balance of information available in their environment.

This focus on feared negative outcomes may contribute to the selective information processing that perpetuates delusions (Freeman et al., 2002), directing attention towards possible negative interpretations of events and away from possible positive interpretations, and reducing the probability that distressing beliefs may be re-evaluated. Resource depletion brought about through avoidant goal striving (Oertig et al., 2013) could further decrease an individual's capacity to take on contradictory information and restructure beliefs. A profile of avoidant goal motivations - acting to avoid feared negative consequences - would be consistent with existing evidence that people holding persecutory delusions show an attentional bias towards potential threat (Bentall & Kaney, 1989). An avoidant motivational style in goal-directed thinking and behaviour might further explain the prevalence of safety behaviours in this group (Freeman et al., 2007), which are by definition motivationally-avoidant acts intended to avert feared harm. The use of safety behaviours can prevent delusional belief disconfirmation, as the non-occurrence of feared harm is explained by the individual's preventative actions (Freeman et al., 2007, 2002). The effects of an avoidant motivational style on information processing in perpetuating delusions may be further strengthened when combined with cognitive factors such as jumping to conclusions and belief inflexibility, as conceptualised in Freeman and colleagues' multifactorial model (Freeman et al., 2002). These cognitive biases are proposed to decrease the probability of individuals considering alternative explanations for experience, and may thus strengthen the effects of information processing biases by restricting the scope of one's explanatory framework to the one compelling and distressing explanation that threat-focused biases support. Further research into the associations of avoidant motivations and goal pursuit with ongoing symptom changes in people with distressing persecutory beliefs is warranted, particularly in relation to how avoidance motivations might longitudinally predict safety behaviours and the persistence of delusions over time.

4.2.2 Negative findings regarding approach motivations

The hypothesis that higher depression scores would be associated with fewer approach motivations was not supported by the present study findings. It may be that no such effect exists in the population of people with persecutory delusions. A number of other factors should be considered when interpreting this negative result. The present study comprised a relatively low number of participants, in line with its novelty, and was therefore only powered to detect relatively large effect sizes. The correlation coefficient between depression scores and approach motivations was of small effect size, in the expected direction ($r_s = -.22$, $p = .12$), suggesting that a significant association may have been found if a greater number of participants from the same population had been tested. Sherratt and MacLeod (2013) reported an effect size of $d = 0.67$ for the difference between numbers of approach motivations for approach goals produced by their depressed and non-clinical groups. This corresponds to a medium effect size (Cohen, 1992), whereas the effect size reported for the difference between numbers of avoidance motivations given by the groups for approach goals was large, $d = 1.02$. It is possible that an association of smaller effect size exists between depression levels and approach motivations in the population of people with persecutory delusions, which the present study was not powered to detect.

Differences in measures used to assess depression may have contributed to differences between study findings. Sherratt and MacLeod (2013) used the PHQ-9 (Kroenke, Spitzer, & Williams, 2001) to measure depression, whereas the present study used the BDI (BDI-II A. T. Beck et al., 1996). Both instruments assess depressive symptoms over the past two weeks. The BDI is longer, with 21 items, including those closely corresponding to the nine items of the PHQ-9. Additional

items of the BDI concern experiences, not covered by the PHQ-9, of guilt, punishment feelings, self-criticism, crying, indecisiveness, worthlessness, irritability, tiredness and loss of interest in sex. Both scales have demonstrated good, and mutually comparable, psychometric properties in studies of groups with major depressive disorder (e.g. Titov et al., 2011). The BDI was chosen for this study because it is known to have been used in previous studies of people experiencing persecutory delusions (e.g. Vorontsova et al., 2013). No systematic differences are known between the PHQ-9 and BDI in measuring depression in the present population, but it remains possible that the difference in measures may have contributed to the discrepancy between our findings and those of Sherratt and MacLeod (2013).

People experiencing psychosis may report fewer motivations overall than groups without psychosis. The present study design did not include any comparison groups, and therefore could not address this question directly. The mean number of approach motivations given by the present group for three goals was 6.30 (SD = 3.17), and the mean number of avoidance motivations was 2.37 (SD = 1.83). The mean number of approach motivations *per goal* was therefore 2.10, and the mean number of avoidance motivations per goal was 0.79. Sherratt and MacLeod (2013) reported that their depressed group gave a mean number of 6.12 (SD = 4.47) approach motivations for two approach goals, and their non-clinical group gave a mean number of 8.24 (SD = 3.67) of the same. The figures for avoidance motivations for approach goals were mean = 4.00 (SD = 4.05) for the depressed group and mean = 1.06 (SD = 1.50) for the non-clinical group. The mean number of approach motivations given per approach goal by the depressed group was therefore 3.06, and 4.12 for the controls. The mean number of avoidance motivations given per approach goal was 2.00 for the depressed group and 0.53 for the controls. The present study participants' mean

number of avoidance motivations per goal therefore fell intermediately between the corresponding figures for Sherratt and Macleod's (2013) depressed and non-depressed groups. The present study participants' mean number of approach motivations, however, was considerably lower than the figures for both of Sherratt and MacLeod's (2013) groups. It is not clear from the present data what factors may have contributed to the present study participants producing fewer approach motivations overall than the participants of Sherratt and MacLeod's (2013) study. Relevant factors could include difficulties with concentration, negative symptoms and/or sedative effects of neuroleptic medication. It is likely that the restricted number of approach motivations produced a distribution with reduced variance compared to that of Sherratt and MacLeod's (2013) data, which may have lowered the detectable correlation with depression scores. The present study findings regarding a possible association of depression with approach motivations for personal goals in people with persecutory delusions remain inconclusive.

4.2.3 Goals and motivation assessment procedures across studies

Differences in the goal assessment procedures used in different studies are a key methodological issue to consider when interpreting the differing patterns of findings that have been reported by different studies in this area. Most of the earlier studies examining avoidance/approach goals (Dickson & MacLeod, 2004a, 2004b, 2006; Dickson et al., 2011; Vergara & Roberts, 2011) used the same protocol, wherein participants are asked to generate goals under two separate prompt conditions: 'it will be important for me to...' and 'it will be important for me to avoid...'. Goals produced under each condition are then counted as 'approach' or 'avoidance,' respectively, unless deemed to be completely inappropriate for the category. Coats and colleagues (1996) did not include two separate conditions in their study, but

encouraged participants to begin their goal statements with one of four phrases: 'It is important for me to...', 'It is important for me not to...', 'It is important for me to avoid...' or 'It is important for me to obtain...'. Sherratt and MacLeod (2103) argued that inconsistencies in these study findings may have been due to the fact that their goal assessment protocols did not access the underlying motivations behind participants' goals. They pointed out that goals framed as approach (e.g. "to get a job") may in fact belie avoidance motivations (e.g. "to stop my parents criticising me," "to stop having to rely on benefits"), and vice versa. The protocols used in previous studies (Coats et al., 1996; Dickson & MacLeod, 2004a, 2004b, 2006; Dickson et al., 2011; Vergara & Roberts, 2011) may thus have classified as 'approach' goals that had underlying avoidance motivations, and vice versa. Explicit demand of approach and avoidance statements in these protocols may have further influenced participants to frame goals motivated by avoidance as approach goals, or those motivated by approach as avoidance goals, and failed to reveal the underlying motivations. This may help to explain the negative findings of studies with clinical samples (Dickson et al., 2011; Vergara & Roberts, 2011) regarding an association between higher depression and fewer approach goals, as had been found in the non-clinical literature (Coats et al., 1996; Dickson & MacLeod, 2004a, 2004b, 2006): Sherratt and Macleod argued that assessment of underlying motivation may be necessary to examine approach-avoidance associations with depression scores in individuals with clinical depression.

Sherratt and Macleod (2013) adapted Dickson and MacLeod's (2004) protocol, by using the same prompts for goal generation ('it will be important for me to...' and 'it will be important for me to avoid...'), then asking participants to identify two most important approach goals and two most important avoidance goals for the next year, and subsequently eliciting all the reasons (motivations) that participants could identify

for each of these four goals. Motivations were then coded as approach or avoidance. Sherratt and MacLeod found significant associations between depression and approach and avoidance underlying motivations for approach goals, but not for avoidance goals. It therefore appeared that the types of motivations underlying approach goals showed significant associations with depression, whereas goal statements generated for an explicit avoidance frame did not reveal a meaningful pattern of underlying motivations.

The present study followed the procedure reported by Sherratt and MacLeod (2013), with some adaptations. The present procedure elicited goals using only an approach frame, following Sherratt and Macleod's finding that only this frame produced goals with a meaningful pattern of motivations associated with depression scores. The approach frame was chosen here to focus on material that might be most meaningful, and in avoidance of prolonging the assessment process unnecessarily. Another difference between the present study protocol and that used by Sherratt and MacLeod (2013) was that participants were prompted for goals in different life domains before being asked to select top priority goals. This step was included in the present protocol in order to support participants to think inclusively about different areas of their lives, and to derive a descriptive profile of their strivings. The key result, in terms of approach and avoidance motivations underlying goals, was that the present study found the same association between avoidance motivations underlying approach-framed goals as was found by Sherratt and MacLeod (2013), with a slightly different assessment procedure and for the first time in a group with persecutory delusions. This finding lends support to the robustness of the proposed association of avoidance motivations with depression, which has now been demonstrated in a group of people with persecutory delusions experiencing varying levels of depressive

symptomatology, and is consistent with a role for avoidant goal striving in the perpetuation of depression over time (Carver & Scheier, 1990; Elliot, 2006).

4.2.4 Depression and goal self-concordance

The study findings supported the hypothesis that higher depression scores would be associated with lower goal self-concordance in the group. Self-concordance is conceptualised as the extent to which a goal is driven by autonomous or internally-driven motivations, as opposed to controlled or externally-driven motivations (e.g. Sheldon & Kasser, 1995). The four questions used for participants to rate the self-concordance of each of their three top-priority goals are reproduced below, for the reader's convenience. Self-concordance scores are calculated by subtracting the scores given for the first and second statements below (each rated 0-10) from the summed score of the third and fourth statements. This represents subtracting external and introjected motivation scores from identified and intrinsic motivation scores, to form a composite index of self-concordance.

1. You pursue this goal because somebody else wants you to or because the situation demands it.
2. You pursue this goal because you would feel ashamed, guilty or anxious if you didn't.
3. You pursue this goal because you really believe that it's an important goal to have.
4. You pursue this goal because of the fun and enjoyment that it provides you.

The findings of the present study are consistent with the findings of Ong and Phinney (2002) and Sherratt (2011), who studied groups of people without psychosis, but with varying levels of depression. The present results suggest that an association of high levels of depression with low self-concordance of personal goals, as previously found

in groups of people without psychosis, is also to be found in people with persecutory delusions and schizophrenia-spectrum psychoses. Such correlational findings cannot be taken as evidence of causality, in either direction. It is possible that low goal self-concordance contributes to the increase or perpetuation of depression, via experiences of low wellbeing and limited achievement resulting from low self-concordant goal striving, as proposed in a theoretical account (Sheldon & Elliot, 1999). The converse is also possible: that the experience of depression might distance individuals from values-based or enjoyment-based goal striving, and draw them towards striving for goals driven by perceived external demands. Causal effects in both directions may operate simultaneously. Other factors may also influence both self-concordance of goals and depression. For example, cold parental care in early life has been proposed to contribute both to individuals' later goal motivations (Kasser, Ryan, Zax, & Sameroff, 1995) and to the development of depression (Parker, 1979; Shah & Waller, 2000). Sheldon and colleagues' (2004; 1999) longitudinal findings, regarding the predictive effect of goal self-concordance on increases in wellbeing and achievement through goal pursuit over time, lend support to a causal role for higher goal self-concordance in contributing to better subsequent affective and functional outcomes.

When individual motivational items of the self-concordance measure were examined, introjected motivation ('You pursue this goal because you would feel ashamed, guilty or anxious if you didn't') showed a significant positive correlation with depression scores. External motivation ('You pursue this goal because somebody else wants you to or because the situation demands it') showed a non-significant positive trend towards association with depression scores. It is of note that high scores on these negative items of the self-concordance measure thus appeared to carry the association with depression, rather than low scores on the positive items regarding

identified and intrinsic motivation. This raises the possibility that the presence of introjected motivation for goals is particularly pathological, over and above the absence of intrinsic or identified motivation. A cognitive focus on the possible negative internal consequences of failure to pursue one's goals ('You pursue this goal because you would feel ashamed, guilty or anxious if you didn't') might trigger increases in negative affect, and thereby contribute to the exacerbation or maintenance of depression over time. It is also possible that the content of the introjected item (regarding feelings of shame, guilt or anxiety) is confounded with depressive symptoms, which may account for the high correlation between them.

There was no indication in the present study findings of an association between goal self-concordance scores and paranoia or anxiety. It nevertheless remains possible that low self-concordance of personal goals may mediate, to some extent, the effect of depression on delusion persistence over time, although this would need to be established in future research. Several mechanisms for such an effect are feasible. A focus on perceived pressure from others (external motivation) may perpetuate external personal attributional bias for events, contributing to a tendency to interpret ambiguous difficult events as resulting from others' intentional actions. A focus on possible negative internal consequences of failure to pursue goals (introjected motivation) may increase or maintain negative affect. Negative information processing biases associated with negative affect may then continue to increase the probability of threatening explanations being selected to interpret events. A cognitive focus on pleasurable aspects of goal striving (intrinsic motivation) may, on the other hand, trigger positive affect, and might thereby lessen the effect of negative information processing biases. A focus on the personal value or commitment to striving for particular goals (identified motivation) might bring to mind positively evaluated concepts (values), long-term outcomes (e.g. doing what's important, acting

with integrity) and associated positive aspects of self-evaluation, which might lessen the influence of beliefs about personal vulnerability or powerlessness on delusion persistence.

It is further possible that pursuit of goals that are motivated externally, as opposed to being driven by personal values and enjoyment, may impact the recovery of people with delusions via the functional effect of reducing goal achievement. Sheldon and colleagues' (2004; 1999) findings, that higher goal self-concordance scores prospectively predicted more success in goal attainment as well as gains in wellbeing, suggest the possibility that individuals striving for less self-concordant goals may experience poorer outcomes driven, in part, by reduced goal attainment. Further research, particularly using prospective longitudinal designs, will be necessary in order for any possible predictive effects of goal self-concordance on delusion persistence and goal achievement to be explored.

4.3 Additional exploratory analyses

A significant association between higher paranoia scores and more avoidance motivations for personal goals emerged from the exploratory correlational analyses. This finding has been discussed earlier in the chapter. A significant association between higher verbal fluency scores and more approach motivations for personal goals was also found. This suggests that a significant proportion of the variance in numbers of approach motivations generated by the participants in the present study could be accounted for by their levels of verbal fluency at the time of testing, rather than by clinical factors such as depression. There was no indication of any association of verbal fluency with avoidance motivations or self-concordance scores, which were the two motivational factors showing associations with depression, and no significant correlation was found between verbal fluency and numbers of goals

generated. These findings are interpreted with caution, in view of the exploratory nature of the analyses conducted, and may not generalise beyond the present study sample. The pattern of results tentatively suggests that, in this group, generation of more approach motivations for goals may be particularly associated with higher verbal fluency, whereas more avoidance motivations and lower goal self-concordance are associated with higher levels of depression. The present pattern of findings did not suggest a consistent effect of verbal fluency on numbers of goals and motivations generated.

The exploratory analyses indicated a non-significant trend towards an association between higher anxiety scores and fewer approach motivations for personal goals, and a non-significant trend towards an association between BCSS positive self beliefs and goal self-concordance scores. These trends are broadly consistent with the overall pattern in the literature, that lower numbers of approach motivations tend to be associated with markers of psychopathology (such as high anxiety scores) and that high self-concordance scores tend to be associated with markers of wellbeing (such as positive cognitions about the self), but cannot be taken to indicate any specific associations, particularly given their non-significance and the multiple exploratory correlations calculated. There were no indications of avoidance/approach motivations or self-concordance being associated with any other schematic belief subscales, or with worry scores.

4.4 *Feasibility and acceptability of the assessment procedure*

The feasibility and acceptability of the goal assessment process was of particular interest, because no previous reports are known in the literature of studies using this

protocol with a group of people with persecutory delusions. High completion rates and minimal missing data attest to the feasibility of the assessment procedure. Of the 78 people whose names were put forward for the study, the researcher succeeded in contacting 47, and eight of these were excluded as not having current persecutory delusions. Therefore 39 suitable individuals were asked to take part in the study, and 33 of these consented. This recruitment rate is in line with previous studies of this population (e.g. Green et al., 2008; Vorontsova et al., 2013), and with previous research regarding goals of people experiencing depression (Sherratt, 2011; Sherratt & MacLeod, 2013). None of those declining to take part cited characteristics of the study as a reason; rather, all said they were either too busy or too unwell to meet with the researcher. It is nevertheless relevant to consider that selection bias may have skewed the sample, for example towards those who were more keen to talk or less symptomatic at the time of being contacted. All participants who commenced the goal assessment process completed it. The three individuals who consented to take part in the project, but stopped before completing all the measures, did so during the first part of the procedure, which comprised clinical symptom assessments. All participants were able to identify multiple personal goals for the next year, and to select their top three goals without any evident difficulty. All participants identified additional goals when prompted using ten life domains, in addition to goals identified before prompting, and this is consistent with a suggestion that this type of prompting procedure is helpful for individuals to identify goals. All participants were furthermore able to report reasons for pursuing their chosen goals, and to rate goal self-concordance. Complete data with no missing items in these domains supports the feasibility of the goal motivation assessment procedure.

Examination of visual analogue scale ratings of mood at the start and end of the study procedure gave an indication of the acceptability of the assessment process.

Sadness ratings decreased significantly from the beginning to the end of the assessment procedure, and there was a nearly significant trend for increases in happiness ratings. No indications were found of any significant change in anxiety ratings. This pattern of findings does not suggest any adverse effects of the assessment procedure on participants' mood. The opposite, if anything, was indicated: that participants felt less sad, and marginally happier, on average, at the end of the assessments than when they began. It is possible that goal assessment itself may be therapeutic, and may induce positive changes in mood, although this cannot be concluded from the present correlational results alone. Caution is indicated in the interpretation of these findings. No *a priori* hypotheses were tested, and the pattern of findings may characterise the present participant group without applying on the whole to the population from which the group was drawn. No control group was examined for changes in mood over a similar period of time spent otherwise, and thus it cannot be determined that any changes in mood were associated with particular aspects of the assessment process. A number of confounding factors may have influenced participants' mood, including simply spending time in a quiet room and being listened to. Demand characteristics may have skewed participants' responses. All measures, including the mood ratings, were administered by the same researcher, and participants may have been reluctant to report feeling worse at the end of the procedure than at the start, in avoidance of causing concern for the examiner. Nevertheless, the positive pattern of mood rating changes is noteworthy and encouraging. The positive pattern in visual analogue scale mood rating changes was consistent with participants' qualitative feedback about participation in the study, which also indicated that the procedure was acceptable to those who took part.

4.5 Limitations

The present study was the first known to have systematically examined the personal goals and motivations of a group of people with persecutory delusions. Caution is important in the interpretation of exploratory findings regarding goal content, as no *a priori* hypotheses were tested, and therefore the findings may not characterise the population beyond the present study sample. It is likely that the semi-structured format of the goal assessment procedure will have shaped the profile of goals generated by participants, due to the attentional effects of prompting and demand characteristics, even though it was made explicit that it was not necessary to generate a goal or goals for every category. The method used to assess goals and motivations was not absolutely the same as that used in any other study: goal content category prompting was used in combination with motivational and self-concordance assessment of goals, in order that both a descriptive profile of goal content and a quantitative profile of goal motivations could be derived. The combination of these methods is not expected to have skewed the key findings in any systematic way, and robust effects should be detectable regardless of minor variations in measurement protocol. Caution is nevertheless indicated in comparing findings between studies with slightly different protocols.

4.5.1 Sample

The relatively small sample size used in this study indicates caution in the interpretation of findings, which may not necessarily generalise to the population beyond the present sample. The small sample size is particularly relevant to consider in relation to the negative finding regarding a correlation between depression scores and approach motivations for personal goals, discussed earlier in this chapter. The present study was powered only to detect relatively large effect sizes, and a larger

sample size may have allowed detection of statistically significant correlations with lower effect sizes. Nevertheless, the sample was of sufficient size to yield positive findings supporting two out of three quantitative hypotheses. Small, novel initial studies such as this one are necessary before larger, more resource-intensive studies are justified.

The present study sample were all recruited from secondary care mental health services in one NHS Trust, situated in a relatively deprived area of North London, and aspects of their experiences may not generalise to the overall population of people with persecutory delusions. Recruitment rates for the study were in line with others recruiting from this population (e.g. Green et al., 2008; Vorontsova et al., 2013), but selection bias may nevertheless have skewed the sample: for example, those more keen to talk and/or less symptomatic may have been overrepresented. All participants had schizophrenia-spectrum diagnoses, and it is possible that those with persecutory delusions in the context of other diagnoses, for example bipolar disorder, may have responded differently to the assessments, in the context of their different profiles of experience over time. Participants in this study were not screened for levels of other symptoms, such as hallucinations, as these were not relevant to the main study hypotheses, and it is possible that such unmeasured factors may have accounted for some of the variance in our variables of interest.

The same experimenter made all SCAN ratings in the present study, and therefore no inter-rater reliability calculations were possible. The ratings were made to check agreement with diagnoses already made by participants' Consultant Psychiatrists, to ensure that participants met the study recruitment criteria. It is possible that the experimenter's ratings may have been skewed by knowing what the established diagnoses were, and that this may have inflated judgements of eligible diagnoses.

No comparison groups were included in the present study, which limits any inferences about features distinguishing people with persecutory delusions from other clinical groups. The present study did not aim to find aspects of goal motivation that would characterise groups with persecutory delusions specifically, as compared to others. Rather, the present study set out to extend the findings previously reported using groups without psychosis. The similar patterns of effects found in the results encourage analogous conceptualisations of underlying processes, as well as analogous approaches to therapeutic interventions.

4.5.2 Design

The cross-sectional design of the present study limits the interpretations that can be made regarding possible causal relationships between variables. Correlation is not sufficient to indicate causation, and evidence of causality can only be concluded when research using experimental designs has been carried out. A correlation between two variables at one point in time, such as those found in the present study, can indicate either one variable causing the other, or vice versa, or another unmeasured variable(s) affecting both those measured. Prospective longitudinal research would enable examination of the power of goal motivations to predict clinically relevant changes in symptom levels over time. Such findings would add further weight to the case for the involvement of personal goals and motivations in the maintenance of distressing persecutory beliefs, as well as of depression. Research using experimental designs will be needed before causality can be conclusively demonstrated.

The present study did not compare a subgroup of individuals who met diagnostic criteria for a current major depressive episode to a subgroup who did not, because it

was not powered to detect the expected effects using such a comparison, and because the full spectrum of variability in depression scores was of interest, beyond a binary classification. Differences between subgroups of people with persecutory delusions with and without current clinical depression are of interest, however, including in situations where binary decisions may be made on the basis of diagnostic classification (e.g. to apply a depression-focused treatment, or not to?), and correspondingly comparisons between these subgroups have been made in previous research (e.g. Vorontsova et al., 2013). It would have been of interest to compare depressed and non-depressed subgroups in terms of motivations and self-concordance of personal goals, if sufficient statistical power had been available to do so.

4.5.3 Validity of measures

The WTAR has been used in previous studies of people experiencing persecutory delusions, and the present study participants' average score of 88.13 is in line with those found by other studies of this population (e.g. Freeman et al., 2010; Vorontsova et al., 2013). The validity of the WTAR as a measure of pre-morbid IQ in this group is brought into question by the relatively low scores obtained overall, in the absence of any known learning disabilities or organic brain pathology, but in the context of five of the 30 participants lacking even secondary school education, and eight participants speaking English as a second language. Individuals with English as a second language and those lacking educational attainment were not excluded from the current study, and these groups evidently form a proportion of the population of people experiencing persecutory delusions. Poor performance on the WTAR may result from individuals never having been taught the pronunciation of the words included in the test, even though intellectually they may well have been capable of learning them. Caution is advisable in the interpretation of vocabulary-based tests

such as the WTAR as measures of IQ in groups with diverse educational and language backgrounds. It is also relevant to consider the validity of the other study measures, in light of eight participants speaking English as a second language. A lack of understanding or inability to express a response would pose a threat to the validity of interview and questionnaire measures. In each case, testing only went ahead if participants and their clinical teams agreed that they would not have any problems taking part in an interview or filling in questionnaires. The experimenter was always present to explain any written material, and to provide any relevant guidance on completing forms, and no problems arose with these for any of the participants, except for the one who was excluded from participation due to inability to concentrate on the materials. Psychological work in diverse communities necessitates continuous attention to the validity of measures, in the context of linguistic and educational differences.

4.6 *Clinical implications*

The present study findings carry a number of tentative clinical implications: some of these are rather general and may apply to many forms of talking therapy and other therapeutic interaction in mental health care, and others suggest some specific possible directions for therapeutic development.

The indices of acceptability and feasibility of the goal assessment procedure used here give no suggestion of any adverse effects of goal assessment. The fact that all participants were able to identify extra goals when prompted using a set of ten life domains suggests that goal assessments in a clinical context may benefit from using a category set to support individuals in thinking about different areas of their lives in which goals may be held. No indications were evident of difficulty for this group in identifying goal motivations or rating self-concordance. The associations found here

and in the broader literature between motivations underlying goals (approach vs. avoidance) and goal self-concordance with depression and functional sequelae suggest that it might be appropriate to emphasise the assessment of goal motivations and self-concordance in clinical work, once goals themselves have been elicited. The reduction in self-rated low mood observed over the course of the assessment suggests that assessment of goals and motivations may in itself be a therapeutic process, although this remains inconclusive pending controlled studies.

It could be particularly appropriate in the early stages of goal-focused psychological therapies, such as CBT, during the stage of goal selection and clarification, to explore the motivations behind individuals' goals. Sharing with individuals the message from research findings, that striving for goals motivated by avoidance may not bring about as good results as other goals, may help to support them in selecting goals to consciously strive for that are less likely to perpetuate depression and more likely to bring about positive gains in achievement over time. The addition of this motivational aspect to CBT has already been advocated for in the context of treatment for depression (e.g. Holtforth & Castonguay, 2005). The present study findings support a parallel role for the same processes in individuals experiencing persecutory delusions in the context of a psychotic disorder. It might be hoped that striving for goals motivated by approach rather than avoidance motivations can encourage a cognitive focus on possible positive consequences and deeply-held values, which might trigger associated positive affect and behavioural activation. In addition, the engagement with information in the environment that positive goal striving may facilitate could help individuals to attend to the balance of information (rather than focusing on possible threats) in a way that could help distressing beliefs to be re-evaluated over time.

Findings regarding an association between higher depression scores and more avoidance motivations for personal goals support a possible causal role for avoidant goal-directed thinking and behaviour in the maintenance of depression over time. This would need to be established more conclusively in future research, ideally with experimental/interventionist designs. There is also a suggestion in the present findings of a connection between avoidant goal motivations and the severity of paranoia. The paranoia link emerged from exploratory analyses, and is thus particularly tentative, but nevertheless interesting. With further evidence of the involvement of avoidant goal pursuit in the perpetuation of depression and/or distressing beliefs over time, it will be appropriate to trial interventions that may decrease individuals' avoidance in goal-striving and redirect them to other valued goals, those less motivated by avoidance and more by achievement.

Findings regarding a negative association between goal self-concordance and depression invite the hypothesis that therapeutically increasing the self-concordance of individuals' goals, or intervening to increase pursuit of the more self-concordant goals among those that an individual holds, might have the power to increase their subsequent wellbeing and goal attainment. Sheldon and colleagues' self-concordance intervention has so far only been trialled in a non-clinical setting, and only showed benefits for those already high in goal self-concordance (Sheldon et al., 2002). If a clinical therapeutic application for such an intervention is to be considered, it will be important to assess its feasibility and acceptability in a clinical setting, as well as its possible effects.

4.7 *Indications for future research*

More research is warranted into the role that avoidant goal motivations and self-concordance may play in the course of depression and delusional beliefs over time.

The present study made the first steps into systematically examining the personal goals and motivations of a group of people with persecutory delusions, and their associations with levels of depression. Given the encouraging results of the present investigation, further studies with increasingly robust designs and larger numbers of participants are warranted to replicate and extend the findings, as well as developing their clinical applications. Findings from multiple studies with greater numbers of participants would support the generalisability of findings to the population beyond the present study sample.

4.7.1 Longitudinal research

Accessibility of personally meaningful and motivating goals has been conceptualised here as a potential mediator or mechanism underlying the effect of depression on the persistence of persecutory delusions, but a formal mediational analysis was beyond the scope of the present study. A longitudinal observational study would be a logical next step. An investigation examining the variance in delusion persistence that might be accounted for by depression, and the extent to which this may in turn be accounted for by motivational characteristics of personal goals, would further illuminate the role that goal motivations and self-concordance might play. Any associations of avoidant motivations with safety behaviours would also be of interest, as it is theoretically plausible to suppose that avoidant motivations might contribute to delusion persistence via an increase in safety behaviours, which in turn prevent belief disconfirmation. It would further be of interest to examine individuals' goal motivations and self-concordance as predictors of any changes in depression occurring prospectively over time. Longitudinal findings regarding prospective predictive effects would lend support to hypotheses regarding the involvement of motivational characteristics of goals in symptom maintenance. It would also be of interest to examine any variation in goal achievement that might be predicted by

motivational factors, and whether this may mediate a predictive effect on functional outcomes.

4.7.2 Multiple groups

Further research into the goals and motivations of people with persecutory delusions could benefit from inclusion of comparison groups, for example of participants with non-psychotic depression and non-clinical controls, as have been included in other studies (e.g. Vorontsova, Garety and Freeman, 2013). Comparison of groups with persecutory delusions with and without co-occurring depression alongside groups with non-psychotic depression and non-clinical controls could reveal indications of features particularly associated with persecutory delusions and those particularly associated with depression. It will also be of interest to extend our understanding of the clinical significance of personal goals and motivations to other symptom domains, for example to examine any associations with hallucinations or with negative symptoms of psychosis.

4.7.3 Experimental research

With further support for a role of goal motivations and/or self-concordance in depression and/or delusion persistence over time, experimental interventionist research might then be warranted. It may be possible to experimentally manipulate individuals' goal motivation profiles by reinforcing approach motivations and reframing avoidance motivations over a period of time, as suggested by Holtforth and Castonguay for a therapeutic context (Holtforth & Castonguay, 2005). It would then be possible to evaluate any subsequent effects of the manipulation on individuals' symptoms, compared to a control group. Manipulations that are expected to have a positive effect (increasing approach and reducing avoidance motivation, increasing

self-concordance) would be primary candidates for lines of experimental research, which could have direct clinical application to therapeutic development.

4.8 Conclusion

The present study has made the first steps towards developing an understanding of the personal goals and motivations of people with persecutory delusions, and how these might relate to symptoms. A descriptive profile of goals was presented, and quantitative analyses revealed associations of levels of depression with avoidant goal motivations and low self-concordance, as predicted. An exploratory link of avoidant motivation with paranoia was also found. The possibility that avoidant motivation in goal-directed thinking and behaviour might perpetuate the difficulties experienced by this group, as it is thought to do with depression, suggests avenues for therapeutic application. It is hoped that further research can continue to develop a motivational perspective on the experiences of those holding distressing persecutory beliefs, with the aim of improving psychological therapies for the future.

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Appendices

Appendix A. Ethical approval letters

NHS Research Ethics Committee provisional opinion



Health Research Authority

NRES Committee London - Camden & Islington

North East REC Office
Room 002
Jarrow Business Centre
Rolling Mill Road
Jarrow
Tyne & Wear
NE32 3DT

Telephone: 0191 4283545

07 May 2014

Dr Natasha Vorontsova
Trainee Clinical Psychologist
Camden & Islington NHS Foundation Trust
Doctorate in Clinical Psychology
Royal Holloway, University of London
Egham Hill, Surrey
TW20 0EX

Dear Dr Vorontsova

Study Title: Goal-directed thinking and depression in people with persecutory delusions
REC reference: 14/LO/0549
Protocol number: n/a
IRAS project ID: 144259

The Research Ethics Committee reviewed the above application at the meeting held on 28 April 2014. Thank you for attending to discuss the application.

Documents reviewed

The documents reviewed at the meeting were:

<i>Document</i>	<i>Version</i>	<i>Date</i>
Covering Letter		14 March 2014
Evidence of insurance or indemnity	Indemnity RHUL Expires: 31.07.14	02 September 2013
Interview Schedules/Topic Guides	Schedules for Clinical Assessment in Neuropsychiatry	
Investigator CV	NV Summary CV	14 March 2014
Other: LE Summary CV		
Other: Memorandum Final Approval		28 January 2014

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Other: Goals and Motivations	1	14 March 2014
Other: PSYRATS-D	1	14 March 2014
Participant Consent Form	1	14 March 2014
Participant Information Sheet	1	14 March 2014
Protocol	1	14 March 2014
Questionnaire: Q1. GPTS		
Questionnaire: Q2. BDI-II		
Questionnaire: Q3. BAI		
Questionnaire: Q4. BCSS		
Questionnaire: Q5. PSWQ		
Questionnaire: Wechsler Test of Adult Reading		
Questionnaire: FAS Test		
Questionnaire: Visual Analogue Scales of Mood	1	14 March 2014
REC application	3.5	14 March 2014
Referees or other scientific critique report	Memorandum Provisional Approval	06 December 2013

Ethical issues raised by the Committee in private discussion together with the researcher's responses

The Chair, Mrs Rosie Glazebrook, welcomed you to the meeting and thanked you for attending.

1. Members felt that the application was unclear regarding the approach to potential participants, as it appeared that the researcher would access patient notes to assess inclusion and exclusion criteria; clarification on the matter was requested.

You confirmed that you would not access patient notes until you had received informed consent from them to do so, and added that you would only need to know what medication they were on and their diagnosis.

You went on to say that, the clinical team would be contacted to ask if you could conduct the research in their clinics, and that you were already in contact with some teams due to your prior research experience. You would attend team meetings or visit the clinics to see if any patients may be interested in participating that fitted the inclusion and exclusion criteria. The clinicians would give patients your phone number, or they would give you patients' phone numbers or postal addresses if they had consented for this to be given, so that contact could be made. You would send participants the information sheet, would meet up with them to discuss any concerns or questions they had, and would seek consent.

It was noted that this was not what was presented in the application.

2. The Committee queried how long potential participants would have to consider participating in the research.

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You responded that the Participant Information Sheet would only be sent if they were interested initially in the study, and you would ask potential participants to call you back if they would like to take part.

3. The Committee requested clarification as to who would assess capacity.

You replied that this would be the care coordinator who saw patients regularly. You would talk to either the care coordinator or the psychologist; in addition to this, you would be in contact with patients themselves to assess whether they could consent.

4. The REC queried where the interviews would occur, as there was concern for the researcher's safety if lone working was involved. Additionally, clarification was requested as to what mechanisms would be in place if there were a problem.

You clarified that in your previous research, you had conducted home visits, but for this study, you did not have the resources to do so and therefore would need to conduct interviews on site in an interview room. This was of benefit to you as there would be other people there such as the participants' care coordinators, or if they were unavailable doctors and nurses, so that you could be helped if required.

5. It was felt that two hours was a long time for these participants to be completing questionnaires and undergoing an interview in one sitting. Members asked if you felt the same.

You confirmed that two hours was the maximum time, and acknowledged that this could be too long. In your previous experience, you had allowed participants as many breaks as they required or as many separate meetings, and this method would be used in this study, as it would not affect the results. Most participants did want to complete the session in one go, however you would advise them that they could take breaks at any time.

You left the room.

The Committee discussed the responses.

Decision – Provisional Opinion

The Committee was unable to give a favourable opinion based on the information received so far. The Committee requested the following information before confirming its final opinion:

Further information or clarification required

1. The following amendments to the Participant Information Sheet:
 - a. Inclusion of information to state that participant GPs would be informed of their participation.

- b. Additions of the Trust's PALS contact details or another appropriate complaints procedure if PALS is not available.
2. The following amendments to the Consent Form:
- a. Addition of an option for participants to consent to their GP being informed of their participation.
 - b. Addition of an option for participants to consent to undertaking an interview.

The Committee delegated authority to confirm its final opinion on the application to the Chair.

If you would find it helpful to discuss any of the matters raised above or seek further clarification from a member of the Committee, you are welcome to contact the REC Manager at nrescommittee.london-camdenandislington@nhs.net

When submitting your response to the Committee, please send revised documentation where appropriate underlining or otherwise highlighting the changes you have made and giving revised version numbers and dates.

If the committee has asked for clarification or changes to any answers given in the application form, please do not submit a revised copy of the application form; these can be addressed in a covering letter to the REC.

The Committee will confirm the final ethical opinion within a maximum of 60 days from the date of initial receipt of the application, excluding the time taken by you to respond fully to the above points. A response should be submitted by no later than 06 June 2014.

Membership of the Committee

The members of the 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.

14/LO/0549

Please quote this number on all correspondence
--

Yours sincerely


pp
Mrs Rosie Glazebrook
Chair

A Research Ethics Committee established by the Health Research Authority

Email: nrescommittee.london-camdenandislington@nhs.net

Enclosures: List of names and professions of members who were present at the meeting and those who submitted written comments.

Copy to: Professor Andrew MacLeod, University of London
Dr Eric Johnson-Sabine, Barnet, Enfield and Haringey Mental Health NHS Trust

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NHS Research Ethics Committee favourable opinion



Health Research Authority

NRES Committee London - Camden & Islington

Room 002
Jarrow Business Centre
Rolling Mill Road
Jarrow
Tyne & Wear
NE32 3DT

Telephone: 0191 4283476

20 May 2014

Dr Natasha Vorontsova
Doctorate in Clinical Psychology
Royal Holloway, University of London
Egham Hill,
Surrey
TW20 0EX

Dear Dr Vorontsova

Study title:	Goal-directed thinking and depression in people with persecutory delusions
REC reference:	14/LO/0549
Protocol number:	n/a
IRAS project ID:	144259

Thank you for your letter of 16 May 2014, responding to the Committee's request for further information on the above research and submitting revised documentation.

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

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details. Publication will be no earlier than three months from the date of this opinion letter. Should you wish to provide a substitute contact point, require further information, or wish to make a request to postpone publication, please contact the REC Manager at nrescommittee.london-camdenandislington@nhs.net.

Confirmation of ethical opinion

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

Conditions of the favourable opinion

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

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

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).

Approved documents

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

<i>Document</i>	<i>Version</i>	<i>Date</i>
Covering letter on headed paper		14 March 2014
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only)	Indemnity RHUL Expires: 31.07.14	02 September 2013
Interview schedules or topic guides for participants	Schedules for Clinical Assessment in Neuropsychiatry	
Non-validated questionnaire [Wechsler Test of Adult Reading]		
Non-validated questionnaire [Q1. GPTS]		
Other [Goals and Motivations]	1	14 March 2014
Other [Memorandum Final Approval]		28 January 2014
Other [LE Summary CV]		
Other [PSYRATS-D]	1	14 March 2014
Participant consent form [Persecution and Personal Goals]	2	13 May 2014
Participant consent form	1	14 March 2014
Participant information sheet (PIS)	1	14 March 2014
Participant information sheet (PIS) [Persecution and Personal Goals]	2	13 May 2014
REC Application Form	3.5	14 March 2014
Referee's report or other scientific critique report	Memorandum Provisional Approval	06 December 2013
Research protocol or project proposal	1	14 March 2014
Response to Request for Further Information	N. Vorontsova	16 May 2014
Summary CV for Chief Investigator (CI)	NV Summary CV	14 March 2014
Validated questionnaire [Q2. BDI-II]		
Validated questionnaire [Q5. PSWQ]		
Validated questionnaire [Q3. BAI]		
Validated questionnaire [FAS Test]		
Validated questionnaire [Q4. BCSS]		
Validated questionnaire [Visual Analogue Scales of Mood]	1	14 March 2014

A Research Ethics Committee established by the Health Research Authority

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 HRA 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 HRA website:

<http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/>

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/>

14/LO/0549

Please quote this number on all correspondence

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

Yours sincerely



pp
Mrs Rosie Glazebrook
Chair

Email: nrescommittee.london-camdenandislington@nhs.net

Enclosures: "After ethical review – guidance for researchers"

Copy to: Professor Andrew MacLeod, University of London
Dr Eric Johnson-Sabine, Barnet, Enfield and Haringey Mental Health NHS Trust

A Research Ethics Committee established by the Health Research Authority

Royal Holloway Psychology Department ethical approval

From: Psychology-Webmaster@rhul.ac.uk
To: nxjt028@rhul.ac.uk; [Ellett, Lyn](#)
Cc: PSY-EthicsAdmin@rhul.ac.uk; [Leman, Patrick](#); [Lock, Annette](#); umit001@rhul.ac.uk
Subject: Ref: 2014/074 Ethics Form Approved
Date: 04 July 2014 16:04:29

Application Details: View the form click [here](#) Revise the form click [here](#)

Applicant Name: **Natasha Vorontsova**

Application title: **Persecution and Personal Goals**

Research and Development Department approval letters



Clinical Research Network
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www.noclor.nhs.uk

NHS PERMISSION FOR RESEARCH (R&D Approval)

21st May 2014

Dear Colleague/s

IRAS ID: 144259 (Please quote in all correspondence)
REC Ref: 14/LO/0549

Study Title: Goal- directed thinking and depression in people with persecutory delusions

NHS permission for the above research has been granted for the following NHS Trusts and/or Independent Contractors:

Trust/Independent Contractor	Name of PI / LC	Date of Permission
Camden & Islington NHS Foundation Trust	Dr Natasha Vorontsova	21 st May 2014
Barnet, Enfield and Haringey Mental Health NHS Trust	Dr Kathryn O'Donnell	21 st May 2014
East London NHS Foundation Trust	Dr Zelpha Kittler	21 st May 2014

Permission is based on the REC favourable opinion given on 20th May 2014.

Permission is granted on the understanding that the study is conducted in accordance with the Research Governance Framework, ICH GCP, and the policies and procedures of the Trust/s
http://www.crn.nihr.ac.uk/about_us/local_clinical_research_networks/north_thames

Permission is only granted for the activities for which a favourable opinion has been given by the REC [and which have been authorised by the MHRA].

Please ensure that all amendments are notified to the Permission Centre governance office in line with current NIHR guidance¹. Please also ensure that the office is notified of any changes in status to the project, for example if the site should close before the stated end date and of any urgent safety measures enacted.

Yours sincerely,

Ms Lynis Lewis
Service Director, Research and Development

Cc: Dr Natasha Vorontsova natasha.vorontsova.2012@live.rhul.ac.uk ; Professor Andrew MacLeod
A.Macleod@rhul.ac.uk

¹ http://www.crn.nihr.ac.uk/Resources/NIHR%20CRN%20CC/CSP/20130503_CSP%20amendments%20guidance_v1.0Final.pdf

Appendix B. Participant information sheet and consent form

Information Sheet

Version 2 13/5/2014



Doctorate
in Clinical
Psychology

Barnet, Enfield and Haringey 
Mental Health NHS Trust

Doctorate in Clinical Psychology
Department of Psychology
Royal Holloway, University of
London
Egham, Surrey
TW20 0EX

PARTICIPANT INFORMATION SHEET: PERSECUTION AND PERSONAL GOALS

We would like to invite you to participate in a research study. Before you decide, you need to understand why the research is being done and what it would involve for you. Please tell us if anything is unclear or if you would like more information. Talk to other people about the study if you want to.

Key facts:

- This study is about living with the fear of other people trying to harm you, and about personal goals for the future.
- You would meet with the researcher for about two hours.
- We will ask you about what you usually do to cope with being sad or worried, and about goals that you would like to achieve in the next year.

What is the purpose of the study?

Many people will experience the fear of being hurt by others at some point. But for some people, worries like this can become very strong and long-lasting. We want to find out what makes the fear persist. In a similar way, we all experience sadness sometimes, but some people become depressed for long periods of time. We think that being sad or worried could interfere with people thinking and making plans about their future.

People may hold many different personal goals, in areas such as relationships, learning, employment and leisure. Having personally motivating goals for the future might be important in helping people to overcome difficult life events and to move towards desired future states. Personal goals are often used in psychological therapies, to guide progress towards how people want their lives to be. We want to find out more about personal goals and motivations, and how these relate to experiences of sadness and worry.

This study is part of a Clinical Psychology Doctorate project. The outcome of the research will be published in a scientific journal, but individual participants will not be identified. We hope that a better understanding of these processes will help us to improve psychological talking therapies for people who have distressing worries about other people.

Why have I been invited to take part?

30 people will take part in the study. All will be adults (aged 18+) who can speak and read English well enough to complete the assessments. You have been asked to participate because you may sometimes have worries about being harmed by others.

Do I have to take part?

No, you do not have to take part. It is up to you to decide. We will explain the study and go through this information sheet, which is yours to keep. We will then give you a consent form to sign if you agree to take part. You are free to withdraw at any time, without giving a reason. This would not affect your care in any way.

What will happen if I take part?

If you agree to take part, you will meet with the researcher for around two hours. This can be one meeting or more shorter meetings, as you prefer. The researcher will ask you about your mood and any worries you might have about being harmed by others. You will be asked to fill in five multiple-choice questionnaires, which will ask about experiences of feeling sad or worried. You will also be asked to think about personal goals for the next year, and about what makes these goals important to you.

We would like to record your meeting or meetings with the researcher using a digital voice recorder. This makes the meetings shorter because we do not have to write your answers down as you say them. The meetings do not have to be recorded if you do not want them to be.

We would also be very interested to know about your experiences of persecution and depression, and what you thought about taking part in the study. We might want to publish a direct quote from you. Your name would not be published. We will not publish any quotes from you if you do not want us to.

We would like to send a letter to your GP to let him/her know that you are taking part in our research. We will not do this if you do not want us to.

If you agree to take part in the study, we will look at your medical notes to find out about what medication you take and any diagnosis that has been given to you. We will not use your notes for any other purpose.

Expenses and payment

You will be paid £10 to cover your expenses and to reimburse you for the time you spend in the study.

What are the potential risks of taking part?

It is not expected that participation in the study has any risks. However, if you find any of the questions asked upsetting, and would like to talk about this, please tell the researcher.

What will happen to the information I give in the study?

All your answers to the questionnaires will be kept on paper and in files on our computer for up to ten years, and will then be destroyed. Paper questionnaires will be kept in a locked cabinet in a locked office. Computer files containing personal information about you will be encrypted so that nobody except for the researcher can open them. The recordings will be kept as electronic files. They will be kept securely and anonymously and will be identifiable only by a number instead of your name.

The information you give will usually be available only to the research team. However, the researcher will share with your clinical team any important information that is relevant to the care you receive.

In the unlikely event that you become unable to continue to take part in the study, the information that you had given up to that point would continue to be used confidentially for the purposes described. If you requested that your data be withdrawn from the study completely and destroyed, then we would do this.

If you have a concern about the study

If you have a concern about this study, you should speak to us or a member of your clinical team. If you remain unhappy and would like to complain formally, you can do this through the NHS Patient Advice and Liaison Service. Telephone: 020 8702 3932, email: complaints@beh-mht.nhs.uk, postal address: Barnet, Enfield and Haringey Patient Advice and Liaison Service, Trust Headquarters Block B2, St Ann's Hospital, St Ann's Road, London, N15 3TH.

All research in the NHS is reviewed by an independent group of people, called a Research Ethics Committee, to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given favourable opinion by the Camden & Islington NHS Research Ethics Committee, reference 14/LO/0549.

CONTACT DETAILS

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Doctorate
in Clinical
Psychology

Barnet, Enfield and Haringey **NHS**
Mental Health NHS Trust

Doctorate in Clinical Psychology
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TW20 0EX

CONSENT FORM

Persecution and Personal Goals.

PLEASE TICK IF YOU AGREE:

- I confirm that I have read and understand the information sheet. I have had the opportunity to consider the information and to ask questions.
- I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected.
- I understand that relevant sections of my medical notes and data collected during the study may be looked at by members of the research team, regulatory authorities, or the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records.
- I understand that my clinical team will be informed of any important medical information that might arise during the study.
- I agree to take part in the above study.
- I agree to take part in an interview about my experiences.
- I agree to have my meeting(s) with the researcher recorded with a digital voice recorder.
- I agree to the researcher publishing direct quotes from me, which will not mention my name.
- I agree to my GP being informed that I am taking part in this study.

Name of participant

Date

Signature

Name of researcher

Date

Signature

Appendix C. Study measures

Visual Analogue Scales of mood

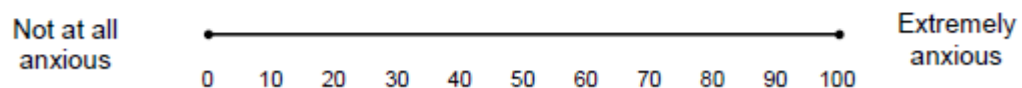
Visual Analogue Scales of Mood

Version 1 14/3/14

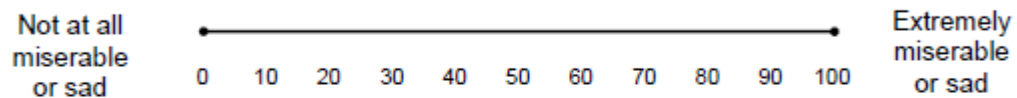
Mood Scales

For each of the questions below, please put a vertical mark like this | through the horizontal line indicating how you feel **right now**. The numbers are there as a guide.

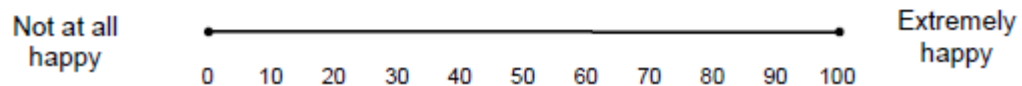
1. Please mark on the line below how anxious you feel **RIGHT NOW**:



2. Please mark on the line below how miserable or sad you feel **RIGHT NOW**:



3. Please mark on the line below how happy you feel **RIGHT NOW**:



Green et al. Paranoid Thoughts Scale (Green et al., 2008)

Q1. GPTS

Version 1 14/3/14

Questionnaire 1

Please read each of the statements carefully.
They refer to thoughts and feelings you may have had about others over the last month.
Think about the last month and indicate the extent of these feelings from 1 (Not at all) to 5 (Totally). Please complete both Part A and Part B.

N.B. Please do not rate items according to any experiences you may have had under the influence of drugs.

Part A.	<i>Not at all</i>	<i>Somewhat</i>			<i>Totally</i>
	1	2	3	4	5
1. I spent time thinking about friends gossiping about me	1	2	3	4	5
2. I often heard people referring to me	1	2	3	4	5
3. I have been upset by friends and colleagues judging me critically	1	2	3	4	5
4. People definitely laughed at me behind my back	1	2	3	4	5
5. I have been thinking a lot about people avoiding me	1	2	3	4	5
6. People have been dropping hints for me	1	2	3	4	5
7. I believed that certain people were not what they seemed	1	2	3	4	5
8. People talking about me behind my back upset me	1	2	3	4	5
9. I was convinced that people were singling me out	1	2	3	4	5
10. I was certain that people have followed me	1	2	3	4	5
11. Certain people were hostile towards me personally	1	2	3	4	5
12. People have been checking up on me	1	2	3	4	5
13. I was stressed out by people watching me	1	2	3	4	5
14. I was frustrated by people laughing at me	1	2	3	4	5
15. I was worried by people's undue interest in me	1	2	3	4	5
16. It was hard to stop thinking about people talking about me behind my back	1	2	3	4	5

1

Part B.	<i>Not at all</i>	<i>Somewhat</i>			<i>Totally</i>
	1	2	3	4	5
1. Certain individuals have had it in for me	1	2	3	4	5
2. I have definitely been persecuted	1	2	3	4	5
3. People have intended me harm	1	2	3	4	5
4. People wanted me to feel threatened, so they stared at me	1	2	3	4	5
5. I was sure certain people did things in order to annoy me	1	2	3	4	5
6. I was convinced there was a conspiracy against me	1	2	3	4	5
7. I was sure someone wanted to hurt me	1	2	3	4	5
8. I was distressed by people wanting to harm me in some way	1	2	3	4	5
9. I was preoccupied with thoughts of people trying to upset me deliberately	1	2	3	4	5
10. I couldn't stop thinking about people wanting to confuse me	1	2	3	4	5
11. I was distressed by being persecuted	1	2	3	4	5
12. I was annoyed because others wanted to deliberately upset me	1	2	3	4	5
13. The thought that people were persecuting me played on my mind	1	2	3	4	5
14. It was difficult to stop thinking about people wanting to make me feel bad	1	2	3	4	5
15. People have been hostile towards me on purpose	1	2	3	4	5
16. I was angry that someone wanted to hurt me	1	2	3	4	5

Beck Depression Inventory (BDI-II; Beck, Steer, & Brown, 1996)

Omitted due to copyright restrictions

Beck Anxiety Inventory (BAI; Beck, Epstein, Brown, & Steer, 1988)

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Psychotic SYMptoms RATING Scales: Delusions Scale (PSYRATS; Haddock, McCarron, TARRIER, & Faragher, 1999).

PSYRATS-D

Version 1 14/3/14

PSYRATS-D

Establish central belief during SCAN interview and write down below.

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.....

1.	Amount of preoccupation	0	1	2	3	4
2.	Duration of preoccupation	0	1	2	3	4
Avoidance effort		Avoidance success				
3.	Conviction	0	1	2	3	4
4.	Amount of distress	0	1	2	3	4
5.	Intensity of distress	0	1	2	3	4
6.	Disruption	0	1	2	3	4

Questions and Scoring Criteria

1. Amount of preoccupation with delusions

How much time do you spend thinking about?
- all the time / daily / weekly etc.?

- 0 - No delusions, or beliefs which the subject thinks about less than once a week
- 1 - Subject thinks about beliefs at least once a week
- 2 - Subject thinks about beliefs at least once a day
- 3 - Subject thinks about beliefs at least once an hour
- 4 - Subject thinks about delusions continuously or almost continuously. Subject can only think of other things for a few seconds or minutes.

2. Duration of preoccupation with delusions

When the beliefs come to your mind, how long do they persist?
- few seconds / minutes / hours, etc.?

- 0 - No delusions
- 1 - Thoughts about beliefs last for a few seconds, fleeting thoughts
- 2 - Thoughts about beliefs last for several minutes
- 3 - Thoughts about beliefs last for at least 1 hour
- 4 - Thoughts about beliefs usually last for hours at a time

Do you try to avoid thinking about it? How hard do you try (0-100 scale)?

How much do you succeed avoiding it (0 – 100 scale)?

3 Conviction (at the time of interview)

At the present time, how convinced are you that your beliefs are true? Can you estimate this on a scale from 0 – 100, where 100 means that you are totally convinced by your beliefs and 0 means that you are not convinced at all?

- 0 - No conviction at all
- 1 - Very little conviction in reality of beliefs, less than 10%
- 2 - Some doubts relating to conviction in beliefs, between 10 and 49%
- 3 - Conviction in belief is very strong, between 50 and 99%
- 4 - Conviction is 100%

4 Amount of distress

Do your beliefs cause you distress?
How much of the time do they cause you distress?

- 0 - Beliefs never cause distress
- 1 - Beliefs cause distress on the minority of occasions
- 2 - Beliefs cause distress on less than 50% of occasions
- 3 - Beliefs cause distress on the majority of occasions when they occur between 50 and 99% of the time
- 4 - Beliefs always cause distress when they occur

5 Intensity of distress

When your beliefs distress you, how severe does this feel?
How distressing would you say it is on a scale of 0 – 100, where 0 is not at all distressing and 100 is so bad it couldn't be any worse?

- 0 - No distress
- 1 - Beliefs cause slight distress
- 2 - Beliefs cause moderate distress
- 3 - Beliefs cause marked distress
- 4 - Beliefs cause extreme distress, could not be worse

6 Disruption to life caused by beliefs

How much disruption do your beliefs cause you?
- Do they prevent you working or carrying out a day-time activity?
- Do they interfere with your relationships with family or friends?
- Do they interfere with your ability to look after yourself, e.g. washing, changing clothes, etc.?

- 0 - No disruption to life: able to maintain independent living with no problems in daily living skills. Able to maintain social and family relationships (if present)
- 1 - Beliefs cause minimal amount of disruption to life, e.g. interferes with concentration although able to maintain daytime activity and social and family relationships and be able to maintain independent living without support
- 2 - Beliefs cause moderate amount of disruption to life, causing some disturbance to daytime activity and/or family or social activities. The patient is not in hospital, although may live in supported accommodation or receive additional help with daily living skills
- 3 - Beliefs cause severe disruption to life, so that hospitalisation is usually necessary. The patient is able to maintain some daily activities, self-care and relationships while in hospital. The patient may be also be in supported accommodation, but experiencing severe disruption of life in terms of activities, daily living skills and/or relationships
- 4 - Beliefs cause complete disruption of daily life, requiring hospitalization. The patient is unable to maintain any daily activities and social relationships. Self-care is also severely disrupted.

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

Q4. Brief Core Schema Scales

Version 1 14/3/14

Questionnaire 4

This questionnaire lists beliefs that people can hold about themselves and other people. Please indicate whether you hold each belief by circling either **NO** or **YES**. If you hold the belief (**YES**), then please indicate how strongly you hold it by circling a number 1- 4, i.e. you “believe it slightly” (1), you “believe it moderately” (2), you “believe it very much” (3) or you “believe it totally” (4).

Try to judge the beliefs on how you have generally viewed yourself and others over time. Do not spend too long on each belief. There are no right or wrong answers and the first response to each belief is often the most accurate.

				Believe it slightly	Believe it mod.	Believe it very much	Believe it totally
MYSELF							
I am unloved	NO	YES	→	1	2	3	4
I am worthless	NO	YES	→	1	2	3	4
I am weak	NO	YES	→	1	2	3	4
I am vulnerable	NO	YES	→	1	2	3	4
I am bad	NO	YES	→	1	2	3	4
I am a failure	NO	YES	→	1	2	3	4
I am respected	NO	YES	→	1	2	3	4
I am valuable	NO	YES	→	1	2	3	4
I am talented	NO	YES	→	1	2	3	4
I am successful	NO	YES	→	1	2	3	4
I am good	NO	YES	→	1	2	3	4
I am interesting	NO	YES	→	1	2	3	4
				Believe it slightly	Believe it mod.	Believe it very much	Believe it totally
OTHER PEOPLE							
Other people are hostile	NO	YES	→	1	2	3	4
Other people are harsh	NO	YES	→	1	2	3	4
Other people are unforgiving	NO	YES	→	1	2	3	4
Other people are bad	NO	YES	→	1	2	3	4
Other people are devious	NO	YES	→	1	2	3	4
Other people are nasty	NO	YES	→	1	2	3	4
Other people are fair	NO	YES	→	1	2	3	4
Other people are good	NO	YES	→	1	2	3	4
Other people are trustworthy	NO	YES	→	1	2	3	4
Other people are accepting	NO	YES	→	1	2	3	4
Other people are supportive	NO	YES	→	1	2	3	4
Other people are truthful	NO	YES	→	1	2	3	4

Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990)

Q5. PSWQ

Version 1 14/3/14

Questionnaire 5

Please read each statement and circle an appropriate number: 1, 2, 3, 4, or 5, which indicates how much the statement applies to you.
1 = not at all typical of me, 5 = very typical of me.

	Not at all typical of me			Very typical of me	
	1	2	3	4	5
1. If I do not have enough time to do everything, I do not worry about it	1	2	3	4	5
2. My worries overwhelm me	1	2	3	4	5
3. I do not tend to worry about things	1	2	3	4	5
4. Many situations make me worry	1	2	3	4	5
5. I know I should not worry about things, but I just cannot help it	1	2	3	4	5
6. When I am under pressure I worry a lot	1	2	3	4	5
7. I am always worrying about something	1	2	3	4	5
8. I find it easy to dismiss worrisome thoughts	1	2	3	4	5
9. As soon as I finish one task, I start to worry about everything else I have to do	1	2	3	4	5
10. I never worry about anything	1	2	3	4	5
11. When there is nothing more I can do about a concern, I do not worry about it any more	1	2	3	4	5
12. I have been a worrier all my life	1	2	3	4	5
13. I notice that I have been worrying about things	1	2	3	4	5
14. Once I start worrying, I cannot stop	1	2	3	4	5
15. I worry all the time	1	2	3	4	5
16. I worry about projects until they are all done	1	2	3	4	5

Wechsler Test of Adult Reading (WTAR; Ginsberg, 2003)

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FAS test (Benton & Hamsher, 1976)

FAS Test

Version 1 14/3/14

FAS Test Instructions

I'm going to say a letter of the alphabet and I want you to give me as many words that begin with that letter as quickly as you can. For example if I say 'B' you might give me bad, bed.

There are only two rules. I don't want you to give me words that are proper names or places such as 'Bob' or 'Blackpool'. Also, do not use the same word again with a different ending such as 'eat, eating, eaten' as that would be cheating.

Begin when I say the letter. The first letter is F. OK, go ahead.

Do the same for A and for S.

2. Social relationships

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3. Romantic relationships

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4. Education, training, learning

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5. Employment/career

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6. Hobbies/recreation/leisure

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7. Volunteer work/charity/political activities

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8. Physical/health issues

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9. Spirituality

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10. Mental health issues

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Now I would like you to look at all of the personal goals that we've brainstormed and pick the three that will be most important to you over the next year.

Next, I would like you to list all of the reasons that you have for pursuing each of these goals, and I will write them down.

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3.

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Finally, I would like you to make four ratings on a scale for each of your three goals. Please rate, on a scale of 0 (not at all for this reason) to 10 (completely for this reason), your agreement with the following statements.

Goal 1:

1. You pursue this goal because somebody else wants you to or because the situation demands it.

0 1 2 3 4 5 6 7 8 9 10

Not at all for this reason Completely for this reason

2. You pursue this goal because you would feel ashamed, guilty or anxious if you didn't.

0 1 2 3 4 5 6 7 8 9 10

Not at all for this reason Completely for this reason

3. You pursue this goal because you really believe that it's an important goal to have.

0 1 2 3 4 5 6 7 8 9 10

Not at all for this reason Completely for this reason

4. You pursue this goal because of the fun and enjoyment that it provides you.

0 1 2 3 4 5 6 7 8 9 10

Not at all for this reason Completely for this reason

Goal 2:

1. You pursue this goal because somebody else wants you to or because the situation demands it.

0 1 2 3 4 5 6 7 8 9 10

Not at all for this reason

Completely for this reason

2. You pursue this goal because you would feel ashamed, guilty or anxious if you didn't.

0 1 2 3 4 5 6 7 8 9 10

Not at all for this reason

Completely for this reason

3. You pursue this goal because you really believe that it's an important goal to have.

0 1 2 3 4 5 6 7 8 9 10

Not at all for this reason

Completely for this reason

4. You pursue this goal because of the fun and enjoyment that it provides you.

0 1 2 3 4 5 6 7 8 9 10

Not at all for this reason

Completely for this reason

Goal 3:

1. You pursue this goal because somebody else wants you to or because the situation demands it.

0 1 2 3 4 5 6 7 8 9 10

Not at all for this reason

Completely for this reason

2. You pursue this goal because you would feel ashamed, guilty or anxious if you didn't.

0 1 2 3 4 5 6 7 8 9 10

Not at all for this reason

Completely for this reason

3. You pursue this goal because you really believe that it's an important goal to have.

0 1 2 3 4 5 6 7 8 9 10

Not at all for this reason

Completely for this reason

4. You pursue this goal because of the fun and enjoyment that it provides you.

0 1 2 3 4 5 6 7 8 9 10

Not at all for this reason

Completely for this reason