

**Future-Directed Thinking and Psychological Well-Being  
in  
Borderline Personality Disorder**

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June 2014**

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

## **Acknowledgements**

Special thanks to Prof. Andrew MacLeod for support and supervision of this study, Dr Tennyson Lee and Dr Patrick Grove for discussions on developing this study and involving services, and all the clinical staff at the three Personality Disorder Services (not named for confidentiality reasons) for their support with recruitment.

Thank you to friends and family for their on-going support and friendly ear.

Final thanks to Dennis Blackburn for proof reading and suggestions.

## **Abstract**

The aim of the present study was to further understand psychological well-being (PWB) and future-directed thinking in individuals with a diagnosis of Borderline Personality Disorder (BPD). A cross-sectional mixed design was used with 24 individuals with a diagnosis of BPD and 24 community participants (Controls). Participants were measured on PWB and a measure of future-directed thinking. Future-thoughts provided by participants were also content analysed, and it was hypothesised the BPD Group would have particularly marked deficits within interpersonal future thoughts. Consistent with previous findings (MacLeod et al., 2004), BPD participants had fewer positive future-directed thoughts compared to Controls, in the absence of any differences in negative future-directed thoughts. The BPD Group had significantly lower PWB scores on all six of the Ryff Psychological Well-being dimensions. The Control Group generated significantly more positive future-directed thoughts related to Relations with Others and Recreational activities, as well as more thoughts related to Having/Raising Children than the BPD Group. The findings extend the understanding of BPD individuals by profiling their well-being and describing in more detail their future-directed thinking.

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## **1.0. INTRODUCTION**

### **1.1. Purpose of Research**

Borderline Personality Disorder (BPD) is a complex and heterogeneous clinical diagnosis that has high co-morbidity with other mental health disorders. Clinical diagnostic criteria and underlying theories are still being tested and explored for this client group, whilst individuals with a BPD diagnosis continue to cause strain on mental health service resources, as well as difficulties for themselves and their surroundings.

One factor that differentiates a diagnosis of BPD from other mental health diagnoses is individuals' prevalent problems with interpersonal relationships. Theories and evidence-based mental health interventions for BPD have acknowledged this phenomenon and have made interpersonal dysfunction a main focus of many clinical treatment models. However, there is still scope for further understanding and research into BPD and interpersonal difficulties.

Even though there is increasing research involving individuals with a BPD diagnosis, there is still no specific research looking at psychological well-being profiles in this clinical group. The present study considered previous research exploring psychological well-being in co-morbid mental health disorders, as well as theories and models of BPD, when investigating this area of research. It was predicted that those with a diagnosis of BPD would have markedly lower psychological well-being profiles, specifically within the domain of interpersonal relations.

Finally, existing research into the relationship between future-directed thinking and BPD is limited. Although there is future-directed thinking research exploring mental health difficulties such as suicidal ideation and depression, and some of the participants in these studies would most likely meet DSM-IV BPD criteria, only MacLeod et al. (2004) specifically consider future-directed thinking in individuals with a diagnosis of BPD. MacLeod et al.'s (2004) study highlighted that BPD participants, in keeping with other mental health disorders, identify significantly fewer numbers of positive future experiences to look forward to, in the absence of increased negative anticipation. However, the scope of MacLeod et al.'s (2004) study did not include exploration of the basis of this reduction in positive future-directed thinking. The present study aimed to investigate this issue further and explore the content of future-directed thinking in BPD, and specifically to consider its association with interpersonal interactions and other BPD traits.

## **1.2. Borderline Personality Disorder**

### **1.2.1. Classification**

Borderline Personality Disorder (BPD) is classified by the Diagnostic Statistical Manual of Mental Disorders (DSM-IV) as being the diagnosis of those individuals who experience difficulties with impulsivity, unstable images of self, unstable interpersonal relationships, and significant difficulties in emotion and mood management (see Figure 1), onset usually occurs in early adulthood (Association, 2000). The BPD diagnosis fits into the DSM-IV Cluster B category for personality disorder (PD), along with histrionic, narcissistic and antisocial personality disorders. There is considerable overlap with these personality disorder diagnoses, as well as

overlap with other mental health diagnoses within the DSM-IV. In order to be diagnosed with BPD, individuals are required to meet five of the nine DSM-IV criteria, making this a highly heterogeneous client group (Lejuez et al., 2003).

BPD is increasingly reported in mental health settings and within the general population. Trull, Jahng, Tomko, Wood, and Sher (2010) reported that 1-3% of the general population meet criteria for a diagnosis of BPD, whilst Korzekwa, Dell, Links, Thabane, and Webb (2008) reported 10% of psychiatric out-patients met criteria for a BPD diagnosis.

**DSM-IV BPD Criteria:**

A pervasive pattern of instability of interpersonal relationships, self-image and affects, and marked impulsivity beginning by early adulthood and present in a variety of contexts, as indicated by five (or more) of the following:

1. Frantic efforts to avoid real or imagined abandonment. Note: Do not include suicidal or self-mutilating behaviour covered in Criterion 5.
2. A pattern of unstable and intense interpersonal relationships characterised by alternating between extremes of idealisation and devaluation.
3. Identity disturbance: markedly and persistently unstable self-image or sense of self.
4. Impulsivity in at least two areas that are potentially self-damaging (for example, spending, sex, substance abuse, reckless driving, binge eating). Note: Do not include suicidal or self-mutilating behaviour covered in Criterion 5.
5. Recurrent suicidal behaviour, gestures, or threat, or self-mutilating behaviour.
6. Affective instability due to a marked reactivity of mood (for example, intense episodic dysphoria, irritability, or anxiety usually lasting a few hours and only rarely more than a few days).
7. Chronic feelings of emptiness.
8. Inappropriate, intense anger or difficulty controlling anger (for example, frequent displays of temper, constant anger, recurrent physical fights).
9. Transient, stress-related paranoid ideation or severe dissociative symptoms.

*Figure 1: DSM-IV Criteria for a Diagnosis of Borderline Personality Disorder.*

The equivalent diagnosis in the International Classification of Diseases, 10th revision (ICD-10; Organization, 2004) is a diagnosis of Emotionally Unstable Personality Disorder, Borderline Type (F 60.31). As with the DSM-IV diagnostic criteria, the ICD-10 diagnosis highlights instability of emotions, self-image and relationships as the key features of the diagnosis. Both diagnostic manuals are widely used in mental health services, including those services which were used for participant recruitment in the present study, however there is research which suggests low consistency between these two diagnostic manuals. Zimmerman (1994) studied 52 out-patients diagnosed using both diagnostic manuals and found that less than a third of participants received the same primary PD diagnosis, demonstrating lack of consistency between the two manuals. However, diagnostic reliability may improve as the diagnostic criteria are addressed in updated versions of the diagnostic manuals (the DSM-5, 2013, and ICD-11, due in 2017) and by the use, and the on-going review, of standardised interview schedules.

However, the use of standardised interview schedules for diagnosis in itself creates difficulties as evidenced by Zimmerman (1994), who reported that the level of agreement between interview schedules is “moderate”. Standardised interview instruments (i.e., the Structured Clinical Interview for DSM-IV Axis II Personality Disorders; SCID II; Gibbon, Spitzer, & First, 1997) tend to include questions based on the DSM-IV and ICD-10 diagnostic criteria and therefore it is understandable that their reliability mirrors that of the diagnostic manuals they are based on. Clarification of the diagnostic criteria and agreement between clinical professionals is growing, although some confusion still exists, and professionals acknowledge that

further understanding of theories and diagnostic presentations is needed in both research and clinical application.

The revision of the DSM-IV provided an opportunity to re-examine the diagnostic criteria for BPD. Trull and Widiger (2013) highlighted many limitations to the present versus absent, categorical, diagnosis of Personality Disorders, including high co-morbidity between allegedly distinct disorders, arbitrary boundaries for distinguishing present versus absence of the disorder, and high heterogeneity among individuals with the same diagnosis. However after discussion, the criterion for a BPD diagnosis in the DSM-5 remains the same as the DSM-IV, the main change being the DSM-5 no longer separates disorders within Axes. The DSM-5 does however include an alternative approach to the diagnosis of PD in Section III of the manual. Here a five-domain dimensional model aligned closely with the five factor model of personality is proposed for clinicians to consider for further research. The diagnostic criteria proposed for a BPD diagnosis in the DSM-5's Section III includes emotional liability, anxiousness, separation insecurity, depressivity, impulsivity, risk taking, and hostility. These seven traits align closely with the Five Factor Borderline Inventory scale (FFBI; Leichsenring, 1999) specifically, affective dysregulation, anxious uncertainty, despondence, behaviour dysregulation, rashness, and dysregulated anger. However, until further research on a dimensional model is clarified the present versus absence criteria will continue to be used, and as the DSM-IV was still in use at time of writing, its BPD diagnostic criteria was utilised in the present study.

BPD has shown to have high co-morbidity with other mental health disorders such as Major Depression, Generalised Anxiety Disorder, Post-Traumatic Stress Disorder, Bipolar Disorder, and substance misuse, as well as the other Cluster B Personality Disorders (NICE, 2009). Fyer, Frances, Sullivan, Hurt, and Clarkin (1988) noted that “pure” BPD is very rare, and that BPD traits are more likely to be present in individuals together with other mental health disorders. The diagnosis of BPD is so heterogeneous that it is understandable that there is such high co-morbidity with other disorders. Individuals are required to meet five of the nine DSM-IV BPD criteria and therefore there are numerous ways individuals can be deemed to meet a BPD diagnosis. Consequently, there is debate as to whether individuals are clinically distinguishable from other mental health disorders and therefore suitable for specialist services, or whether they are better grouped by their co-morbid disorder symptoms (i.e., depression or Bipolar Disorder) as opposed to their BPD traits. The BPD participants in the present study were therefore also highly heterogeneous and this was considered during analysis. Additionally, the high co-morbidity of BPD with other mental health disorders, such as depression and anxiety, suggests that research that explores these co-morbid mental health disorders are also relevant and should be considered when discussing BPD research questions.

In an attempt to understand BPD further and how it fits in with other mental health disorders, a number of theoretical perspectives have been explored. Services used for participant recruitment in the present study and their treatment models (i.e., MBT and DBT) are derived from these theories. Therefore, it is important to

understand their structures and the possible impact that treatment involvement may have on participants and outcomes.

### **1.2.2. Theories of Borderline Personality Disorder**

Despite increasing research, research is still considering the underlying mechanisms that lead to developing symptoms of BPD or those mechanisms that maintain the diagnosis (Lejuez et al., 2003). Barnow et al. (2009) suggested that BPD cannot be explained by a single theoretical perspective, and instead an understanding of all of the theoretical perspectives proposed will increase our understanding of the diagnosis. Cognitive and psychodynamic theories both suggest that BPD is characterised by specific difficulties with social cognitions, which contribute to interpersonal problems when the individual is under increased stress, such as when they perceive rejection or abandonment (Arntz & Haaf, 2012), whilst Linehan (1993) argued that the key understanding of BPD is found within the individual's difficulties with emotional regulation. Interventions based on theoretical perspectives have been introduced in the NHS such as Cognitive Behaviour Therapy, Schema Therapy, Mentalisation Based Therapy, Dialectic Behaviour Therapy, and Psychodynamic Therapeutic Communities (NICE, 2009) and these are the most widely used treatment interventions for BPD within the United Kingdom and the NHS.

The Cognitive Theory of BPD suggests that dysfunctional cognitive schemas cause emotional dysregulation and interpersonal problems in individuals (Barnow et al., 2009), as well as affecting information processing and social problem solving (McMurran, Duggan, Christopher, & Huband, 2007). These maladaptive assumptions are hypothesised to maintain and develop the disorder and to make

individuals with BPD distinctive from other DSM-IV Axis II disorders (Baer, Peters, Eisenlohr-Moul, Geiger, & Sauer, 2012). Individuals' distorted beliefs and assumptions about the world and themselves lead to thoughts that they are bad, powerless and vulnerable, and the world around them is dangerous and hurtful (Beck, Freeman, & Davis, 2004). These negative schemas, and in particular dysfunctional interpersonal schemas, are thought to be more rigid in this diagnostic group (Fonagy, 2000). Pretzer (1990) supported this theory and proposed a set of core beliefs held by those with a diagnosis of BPD (i.e., the world and others are dangerous, the self is powerless and vulnerable, and they are inherently unacceptable and deserve punishment). The by-product of these maladaptive thoughts are hyper-vigilance, dichotomous thinking, and a poor sense of self, all of which affect interpersonal relationships (Baer et al., 2012). This can be seen in individuals responses in social interactions and in behavioural outcomes. Barnow et al. (2009) observed that clients with a diagnosis of BPD rated people in film clips as being more negative and aggressive compared to "healthy" Control participants ratings. The BPD Group also rated people as being less positive compared to the depressed participants' ratings of the same faces. Additionally, the BPD group reported more extreme interpersonal styles, as rated by the Inventory of Interpersonal Problems (IIP; Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988), than the Control Group, specifically within the domains of domineering, vindictive, cold, socially avoidant, and intrusive behaviour (Barnow et al., 2009).

Arntz and Haaf (2012) hypothesised that dichotomous thinking styles may specifically contribute to the unstable and extreme interpersonal behaviour



displayed by individuals with a diagnosis of BPD. They suggested that dichotomous thinking increases the negative and biased way in which people see themselves and others. In their study Arntz and Haaf (2012) asked participants to rate clinicians who were acting as either rejecting, accepting or neutral. The BPD participants showed more dichotomous thinking in their evaluations than Cluster C PD participants and Control participants. An acknowledged limitation of Arntz and Haaf's (2012) study is that it used artificial behaviour.

Attachment theory proposes that individuals with a diagnosis of BPD have hyperactive attachment systems that are a result of an individual's history and biological predispositions (Fonagy & Bateman, 2006). Fonagy (2000) suggests that those with a diagnosis of BPD have preoccupied attachment styles, which are associated with unresolved experiences of trauma and a limited opportunity to develop reflective skills. A securely attached relationship with a caregiver gives a child the opportunity to explore their caregiver's thoughts and actions as well as learn about their own emotional responses; whereas a lack of such a relationship may lead to a reduced reflective capacity and an unstable sense of self (Fonagy, 2000). Attachment problems in childhood may also lead to "all good" and "all bad" representations of others as well as hyper-vigilance in interpreting and reacting to perceived rejection or criticism (Dozier, Stovall, & Albus, 1999). Choi-Kain, Fitzmaurice, Zanarini, Laverdière, and Gunderson (2009) explored this idea and observed that individuals with a diagnosis of BPD reported higher levels of preoccupied and fearful attachment styles compared to those with a diagnosis of Major Depressive Disorder or to "healthy" Control participants. They also observed

that preoccupied and fearful attachment styles were correlated with interpersonal difficulties in the BPD Group. Choi-Kain et al. (2009) suggested that the preoccupied and fearful attachment styles were more important than universal attachment insecurity. Agrawal, Gunderson, Holmes, and Lyons-Ruth (2004) agreed with Choi-Kain et al.'s (2009) findings and suggested that ambivalent attachment styles are also important.

Attachment theory is the basis of Mentalisation Based Therapy (MBT). MBT is an intervention model which is used in one of the recruitment sites in the present study. As explained by Gunderson (2007) "Mentalisation refers to the ability to recognise feelings and intentions in self and others" (p. 1638). Poor attachment styles and absence of a relationship with a loving caregiver, are associated with an underdeveloped capacity to mentalise, and arguably contributes to the defining features in a diagnosis of BPD (Arntz & Haaf, 2012). Fonagy (2000) described how early trauma in individuals with a diagnosis of BPD may contribute to deficits in later mentalisation. These individuals are generally characterised by a desire to avoid thinking about their caregiver as bad or wishing them harm. The deficit in mentalisation leads to only one evaluation of reality being possible, where the self and other cannot be seen in more than one way (Fonagy & Target, 1996). This reduced capacity to mentalise in individuals with a diagnosis of BPD leads to rejection sensitivity, as they fear abandonment, and demonstrates an intolerance of being alone. This can be evidenced by those with a BPD diagnosis' negative emotional states and self-harming behaviour (Gunderson, 2007). A main aim of MBT is to help individuals identify and understand emotions and current actions, as well

as the context of past and current relationships. MBT facilitates learning of how to communicate emotions in a helpful manner and how to understand others responses to the client's emotional expression (Bateman & Fonagy, 2003). The therapy considers the "here and now", and the relationship between the therapist and the client. Bateman and Fonagy (1999) evaluated the outcomes of MBT and found that significant improvements in mood and interpersonal functioning were associated with eighteen months of MBT service involvement. MBT treatment participation was also associated with reduced deliberate self-harm, shorter length of in-patient stay, and a reduction in self-reported depression, anxiety and interpersonal problems associated with the diagnosis of BPD (Fonagy & Bateman, 2007).

Linehan (1993) proposed a bio-social model of BPD, arguing that the key underlying component of the diagnosis is emotional dysregulation and a biological predisposition that leads to difficulties with relationship instability and impulsivity. From this theory Dialectical Behavioural Therapy (DBT) was developed, another intervention model used in the recruitment sites in the present study. DBT is a manualised treatment programme that teaches mindfulness, interpersonal effectiveness, distress tolerance and emotional regulation within a skills group setting, alongside individual psychotherapy sessions. It is the most widely researched treatment intervention for BPD, and shows positive outcomes, such as a reduction in deliberate self-harm and reduced impulsivity compared with treatment as usual (Verheul et al., 2003).

Thus, a number of theories have been developed which attempt to understand BPD, and evidence-based treatment programmes have been developed showing positive outcomes for individuals involved. However, notwithstanding these treatment programmes, individuals with a diagnosis of BPD continue to place a strain on mental health services and resources, and their symptoms continue to impact greatly on themselves and the individuals' systems.

### **1.2.3. Impact of BPD on the Individual and their system**

As previously discussed, individuals with a diagnosis of BPD have an increased level of negative evaluations compared to Major Depression and "healthy" Control participants (Barnow et al., 2009). This attentional bias towards negative stimuli in individuals with a diagnosis of BPD leads to increased negative interpretations of neutral or ambiguous stimuli related to self, others, or the world around them and a greater tendency to recall negative memories (Baer et al., 2012). Difficulties with controlling attention and negative biases, within those with a BPD diagnosis, leads to thoughts of the past, the future, or current pain rather than to the task at hand, making problem solving and social interactions difficult (Linehan, 1993). Individuals with a diagnosis of BPD are also more likely to report increased negative affect levels compared to other Axis II disorders or healthy Controls (Dixon-Gordon, Yiu, & Chapman, 2013; Reed & Zanarini, 2011).

One of the defining features of BPD is increased impulsivity. Fonagy (2000) suggested that this may be due to a lack of awareness of their emotional states and the use of physical-action-centered strategies; these are particularly evident in relationships the individual perceives as threatening. Individuals with a diagnosis of

BPD also show low avoidance tendencies, and careless problem solving styles that lead to difficulties for both the individual and their surroundings (McMurran et al., 2007). One way the impulsivity of individuals with a diagnosis of BPD is displayed is through their increased risky or deliberate self-harming behaviour. Impulsivity is one of the diagnostic features that create a feeling of risk around this client group. However, the greatest outcome improvements in treatment programmes are seen in impulsive behaviour and deliberate self-harm, as opposed to affective symptoms or social functioning (McGlashan et al., 2005).

Problems with experiences and expression of emotions are also considered a central difficulty to the diagnosis of BPD (Gratz, Rosenthal, Tull, Lejuez, & Gunderson, 2010). Linehan (1993) proposed that emotional dysregulation is the core feature of BPD and it is this dysfunction that leads to the other core symptoms of BPD, namely interpersonal difficulties and impulsivity. Observation and self report has shown that individuals with a diagnosis of BPD experience emotions that are easily triggered, last longer, and are more extreme than those reported by "healthy" Control participants (Linehan, 1993). Tragesser, Lippman, Trull, & Barrett, (2008) suggested that difficulties with emotions are most pronounced when the individual perceives they are being teased, whilst Sharp et al. (2011) concluded that emotional dysregulation may interfere with the individual's cognitive empathy abilities. Additionally, individuals with a diagnosis of BPD are particularly intolerant to stress due to underlying deficits in their regulatory capabilities, and an unwillingness to tolerate distress is thought to be associated with avoidance behavior (Gratz et al., 2010).

Thus, both research and clinical observations have shown that BPD traits can have a pervasive impact on individuals and their systems. However, factors such as impulsivity, emotional dysregulation, and deliberate self-harm are not unique to the diagnosis of BPD and are shared with other co-morbid mental health disorders. One feature that is claimed to differentiate individuals with a diagnosis of BPD to a greater degree from other mental health disorders is the presence of interpersonal difficulties.

#### **1.2.4. Interpersonal Difficulties in BPD**

Interpersonal dysfunction is one of the core features of BPD and differentiates this disorder from other DSM-IV Axis II disorders (Gunderson, 2007). Barnow et al. (2009) argued that seven of the nine DSM-IV BPD criteria can be seen as relating to interpersonal dysfunction (e.g., fears of abandonment, persistently unstable sense of self, unstable and intense relationships, and stress related paranoid ideation). Therefore, individuals can meet the diagnostic criteria for BPD where all five of their BPD traits are substantially related to interpersonal difficulties.

Interpersonal dysfunction in BPD is characterised by intense and stormy relationships, fears of abandonment, and extreme shifts between idealization and devaluation of relationship partners (see Gunderson, 2007 for review). Difficulties are often identified within family, close friends, romantic partners or other “in-group” members (Skodol et al., 2013), but they are also evident within individuals’ clinical engagement. Clinical reports and research identify interpersonal difficulties as causing stress and negative affect such as anxiety, depression, and anger (McMurran et al., 2007). Interpersonal dysfunction is also a central feature in both

Cognitive and Psychodynamic theories of BPD. Cognitive theories focus on dichotomous thinking and negative interpretations of others' behaviour, whilst Psychodynamic theories feature factors such as splitting, poor mentalisation, as well as negative views of others. Treatment programmes (i.e., MBT and DBT) focus primarily on facilitating skills within interpersonal behaviour, along with the other BPD traits, however the main outcomes associated with treatment involvement are within reduced deliberate self-harm, lower impulsivity, and low mood, which may in turn affect interpersonal behaviour and relationships.

Social cognitive skills are an important part of human interactions and are important in building short and long term relationships. These social cognitive skills require individuals to gauge the intentions and behaviours of others through facial and behavioural cues and react accordingly (Roepke, Vater, Preißler, Heekeren, & Dziobek, 2012). Difficulties associated with evaluating others more negatively is identified in individuals with a diagnosis of BPD (see Dixon-Gordon et al., 2013). Individuals with BPD have been seen to rate neutral facial expressions as more negative compared to Control participants (Wagner & Linehan, 1999). Although BPD participants do not differ significantly to Controls in understanding others' underlying behaviour when rating rejecting, accepting or neutral interactions, they tend to evaluate these actions in a more extreme way (Arntz & Haaf, 2012). Domes et al. (2008) found those with a BPD diagnosis were not significantly different to Controls in recognizing basic emotions in faces, but showed greater bias towards labeling ambiguous facial expressions as angry compared to "healthy" Controls. Individuals with a BPD diagnosis have also been compared to other mental health

diagnoses, such as Major Depression, in their evaluation of others. BPD participants were shown to evaluate others as more hostile and malevolent (Barnow et al., 2009) and to have a reduced tendency to feel empathy for others in emotionally distressing situations (Dziobek et al., 2011).

Those with a diagnosis of BPD have also been described as having dichotomous thinking (a tendency to make extreme evaluations about others), which is believed to contribute to their interpersonal difficulties (Pretzer, 1990). Psychodynamic theories describe splitting, “all good” or “all bad” thinking, as leading to those with a BPD diagnosis evaluating their experiences and the actions of others with extreme polarity (Coifman, Berenson, Rafaeli, & Downey, 2012). In these cases, individuals and situations cannot be both “good” and “bad”, and therefore, are represented in only one way. Evidence is sought out to support one position and evidence against the polar position ignored or disregarded. Clients with a diagnosis of BPD tend to engage in risky and impulsive behaviour to compensate, avoid or regulate feelings that are triggered by these styles of evaluations. Coifman et al. (2012) identified that these extremes in polarisation can even occur in the absence of stressful situations, and therefore are not merely a reaction to distress but a default thinking style in those with a diagnosis of BPD.

Individuals with a diagnosis of BPD have been found to describe their interpersonal behaviour as either more conflictual or submissive, having greater variability (Russell, Moskowitz, Zuroff, Sookman, & Paris, 2007), greater emptiness in romantic relationships, and experiencing greater anger in interactions when compared to community Controls (Clifton, Pilkonis, & McCarty, 2007). There is a



correlation between BPD symptoms, interpersonal sensitivity, need for social approval, and lack of sociability (Stepp, Pilkonis, Yaggi, Morse, & Feske, 2009). Interpersonally preoccupied or “needy people” have also been found to be more predisposed to experience higher levels of depression following perceived interpersonal stresses (Gunderson, 2007) and individuals with a BPD diagnosis are characterised as viewing the world and those in it as hostile, untrustworthy and dangerous. Consequently individuals believe they will experience rejection and abandonment and therefore believe that protective action is necessary (Baer et al., 2012).

These interpersonal difficulties impact individuals across all aspects of their life. Hill et al. (2008) showed that individuals with a BPD diagnosis demonstrate lower functioning across work, friendships, and romances. However, when compared to individuals with other PD and DSM-IV Axis I disorders, only dysfunction in romantic relationships was specific to BPD. Stepp et al. (2009) also observed that individuals with BPD had fewer social contacts compared to “healthy” Control participants or individuals with other PD diagnoses, and that they experienced more angry, ambivalent, disagreeable and sad interactions. An acknowledged limitation of Stepp et al.’s (2009) study is that they only recorded interactions over a period of one week. Clifton et al. (2007) found that the number of social interactions of participants diagnosed with BPD did not differ to those without a diagnosis of PD, but those with a diagnosis of BPD reported more former romantic partners. Clifton et al (2007) therefore agreed with Stepp et al. (2009) that interaction within the BPD Group had increased conflicts compared to “healthy” Control participants, and that

those with a diagnosis of PD experience rejection, exclusion and abandonment to a greater degree. This suggests that the quality of relationships may be more important than the quantity (see also Coifman et al., 2012).

BPD is also associated with increased sensitivity to anger and negative moods, which may also be a major factor associated with interpersonal difficulties (e.g., Russell et al., 2007; Stepp et al., 2009). As a result of their increased sensitivity, individuals with BPD traits are often characterised as overly assertive, lacking intimacy, keeping others at a distance, having difficulties communicating their needs, or having low self-confidence (Ryan & Shean, 2007). These patterns of dysfunctional interactions have been shown to repeat through life spans and past patterns of interactions and relationships are often a helpful aid in predicting future interactional styles.

Thus, we can see from the research that those with BPD traits have significant difficulties with interpersonal relations, and authors such as Arntz and Haaf (2012) call for further research to clarify the cognitive, emotional, and behavioural processes behind these difficulties. Additionally, although there are reported significant improvements in an individual's BPD symptoms through evidence-based clinical interventions, these are often confined to impulsivity and self-harm behavior, and difficulties in affect and interpersonal functioning remain largely unchanged after treatment (McGlashan et al., 2005). Additionally, evidence-based interventions for BPD (i.e., MBT and DBT) emphasize the importance of interpersonal skills, and increasing a sense of mastery within interpersonal interactions (Linehan, 1993).

Research therefore shows that BPD is associated with dysfunctional interpersonal behaviour, impulsivity and emotional dysregulation, impacting on the individual and their world around them. It is likely that these traits will also be associated with individual's psychological well-being; however, this is yet to be specifically explored within those with a BPD diagnosis and was therefore a focus of the present study.

### **1.3. Psychological Wellbeing**

#### **1.3.1. Definitions of Well-being**

“Well-being is a complex (multidimensional) structure that concerns optimal experiences and functioning” (Ryan & Deci, 2001, p.141) and includes aspects of mental and physical health, supportive social relationships, and the ability to cope in stressful situations (McDowell, 2010). There is little agreement about a final definitive definition of well-being and it is increasingly being explored by positive psychology. Positive psychology focuses on an individual's strengths and virtues (as opposed to absences in functioning) and increasing these strengths. Building on the current strengths of the individual is often a focus of evidence-based mental health interventions. However, there are still gaps in the well-being research literature within specific clinical populations, such as within individuals with a diagnosis of BPD.

Most well-being studies and measures derive from Hedonic or Eudaimonic well-being theories. Hedonic well-being is often characterised as being happy, relaxed, and with an absence of problems, whereas Eudaimonic well-being is associated with being challenged, involving a level of effort, personal growth and

development, where happiness is seen as a by-product of “a life well lived” (Waterman, 1993). The present study focuses on one operationalisation of Eudaimonic well-being, that of psychological well-being as defined by Ryff (1989), and how it resonates to BPD. However, it is also worth considering the research that focuses on Hedonic well-being and subject well-being as this will also add to overall understanding of well-being and BPD.

### **1.3.2. Hedonic and Subjective Well-being**

Hedonic well-being refers to how and why people experience their lives as positive. It combines both negative and positive emotions, includes levels of life satisfaction, and often focuses on the experience of pleasant feelings (Diener, Suh, Lucas, & Smith, 1999). Ryan and Deci (2001) described how everyday discourse is central to hedonic well-being, highlighting that questions such as “how are you?” are common in conversational language and reflect a common human preoccupation with factors related to hedonic well-being.

Subjective well-being is empirically based and focuses on how an individual feels, their level of contentment, and their satisfaction with life (Ryan and Deci, 2001). Diener, Lucas, and Oishi (2002) highlighted the components of subjective well-being as being life satisfaction, positive affect, and the absence of negative affect. The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) is a popular measure for exploring these concepts of well-being in individuals. The PANAS requires individuals to reflect on their affective experiences within different life domains and time periods to give an overall subjective well-being judgment score. Schwarz and Strack (1999) suggested a limitation of this

measure is that individuals tend to report what is cognitively accessible to them at the time, and therefore this understanding of well-being relies on the individual being able to effectively assess their affect towards different life domains and their current subjective well-being. Based on diagnosis traits of BPD, it is reasonable to suggest that this type of reflection on current subjective well-being may be particularly difficult for individuals with a diagnosis of BPD. Those with a diagnosis of BPD are more likely to view themselves and their world negatively, and therefore their reported current subjective well-being may not truly reflect their actual experiences. Additionally, the subjective well-being of those with a BPD diagnosis may fluctuate frequently and significantly over time, and therefore such reported interpretations may not be helpful in predicting future well-being or understanding what leads to current subjective well-being in those with a diagnosis of BPD. Robbins and Kliewer (2000) explored subjective well-being and acknowledged that there are limitations within this definition of well-being when applied to those with thought disorders or diminished reality-testing capabilities (i.e., those with psychosis or bipolar disorder during manic states) since individuals, during manic states, may report artificially inflated levels of happiness, so that subjective well-being may not always be associated with healthy, individually beneficial behaviour.

Diener et al. (2002) discussed whether subjective well-being is better thought of as a trait, as one of the strongest predictors for a high level of subjective well-being is personality. Diener et al. (2002) also described that individuals might not report subjectively high levels of well-being, but might have an acceptable level of life satisfaction; therefore these may be separable constructs. Psychological well-

being, on the other hand, considers happiness as a by-product of well-being. Ryff and colleagues suggest a multi-dimensional construct of well-being that has been widely used in research in different population groups, but not specifically in individuals with a diagnosis of BPD (Ryff, 1989).

### **1.3.3. Eudaimonic and psychological well-being**

Eudaimonic well-being is described as “the unique striving towards excellence based on the individual’s distinct potential” (Ryff & Singer, 2008, p.14) and focuses on goal attainment and purpose for the individual and their surroundings, rather than happiness. Eudaimonic well-being takes into account the individual’s surroundings and the fact that opportunities for self-fulfillment and realisation are not equal and thus influence an individual’s growth and human fulfillment. Eudaimonic well-being is more than personal happiness and takes into account what a person is doing, rather than how it makes them feel.

Ryff described psychological well-being as “the striving for perfection that represents the realisation of one’s true potential” (Ryff, 1995, p.100) and “the by-product of a life that is well-lived” (Ryff & Singer, 2008, p.5). Their interpretation of psychological well-being draws on the views of mental health, clinical, and developmental theories. They describe it as a process of engaging in life and its different factors, including intellectual, social, physical and emotional factors. Ryff created a psychological well-being scale with six psychological well-being dimensions suggesting that a multi-dimensional understanding of psychological well-being was more valid than a single dimension.

Ryff's psychological well-being dimensions are:

- Self-Acceptance (being able to positively evaluate oneself and one's past life, acknowledging the presence of good and bad qualities in the self).
- Environmental Mastery (being able to choose and create environments that meet one's specific needs).
- Purpose of Life (having goals, intentions and a sense of direction which contributes to the feeling that life is meaningful).
- Autonomy (being able to evaluate oneself according to personal standards and not look to others for approval).
- Positive Relations with Other (having warm and trusting interactions with other people and being able to display empathy affection and intimacy).
- Personal Growth (being open to new experiences and considering the self as growing and expanding over time).

The Ryff Psychological Well-Being Scale was originally validated on a sample of well-educated, socially connected, financially comfortable and physically healthy men and women (Ryff, 1989). It has been extensively used in a number of different population samples and settings, including the National Survey of Families and Households II and the Wisconsin Longitudinal Study (see Ryff, 1995 for review) and also various studies on mental health difficulties (Fava, Ottolini, & Tossani, 2001; Nierenberg et al., 2010; Ruini et al., 2003; Ryff, 1989). Clarke, Marshall, Ryff, and Wheaton (2001) also provided "support (for) the multidimensional structure of the Ryff measure (of psychological well-being)" (p.86).

Research looking at psychological well-being and mental health disorders has consistently shown a negative correlation between the two. Individuals with depression and anxiety appear to be the most well researched groups within psychological well-being studies. Their high co-morbidity with other disorders (including BPD) mean that these findings can be applied to a number of individuals and facilitate other research and treatment programmes.

Within the dimensions of psychological well-being, research has shown differences in clinical populations compared to “healthy” Controls. Nierenberg et al. (2010) found extremely low levels of Environmental Mastery and Self-Acceptance, low levels of Purpose in Life and Positive Relations with Others, but scores within the normal range for Personal Growth and Autonomy in individuals with minor depression as compared to a baseline population norm. Edmondson (2012) found that depression scores, as measured by the PHQ-9, were significantly negatively correlated with Personal Growth, and mildly negatively correlated with Self-Acceptance, but that there were no other significant correlations within the other domains. Additionally Edmondson (2012) explored the psychological well-being profile of participants with depression and found that Environmental Mastery was the lowest at three standard deviations below the population norm, Self-Acceptance was two standard deviations below the norm, Personal Growth, Relations with Others, and Purpose in Life were all one standard deviation below the population norm, whilst Autonomy was the closest to the population norm, falling less than one standard deviation from the norm.



#### **1.3.4. Factors related to Well-being**

There are a number of factors that are associated with an individual's reported level of well-being. Well-being is arguably socially constructed and therefore bound by an individual's perspectives and values (Compton, 2001). Methodological and measurement considerations may also affect an individual's perceived well-being when these factors are not taken into consideration or are not controlled for. DeNeve (1999) stated that 3% of the variance in well-being outcomes is explained by the individual's demographics and specific circumstances, therefore controlling for or considering these factors in research is important.

Relationship status, such as being married or being in a stable relationship, has been found to be positively correlated with life satisfaction (Argyle, 1999; Diener et al., 1999). Both Ryan and Deci (2001), and Burns and Machin (2013), suggested this positive correlation may be a result of the social support that these relationships provide. Additionally, it is the quality of these relationships, as opposed to their frequency or duration, that makes the most difference, whilst the quality of relationships has been identified as the best protective factor against the effect of negative life events on measures of well-being (Ryan & Deci, 2001). The positive effects of social support has been consistently observed in both clinical populations (Ames & Roitzsch, 2000) and the general population (Falcón, Todorova, & Tucker, 2009) and is an important consideration when exploring individual variations in well-being.

Age has also been found to be correlated with levels of well-being. Ryff and Singer (2008) found that Purpose in Life and Personal Growth psychological well-

being scores declined with age, but Environmental Mastery and Autonomy increased. However, the differences observed in their study were small. Personal Growth and Purpose in Life domains have also been linked to education within Ryff's psychological well-being profile scores. Adler and Ostrove (1999) suggested that education level was connected to an individual's awareness of problems and social inequality, and awareness of these factors have implications for the individual's health. Current job status, often measured alongside education, may also affect an individual's well-being and level of life satisfaction. For instance, there is evidence that job loss impacts negatively on mental health (Kaplan et al., 1989), and it may also impact on well-being. It is suggested that job loss may affect satisfaction in other areas of the individual's life, such as loss of social ties, therefore it is not merely the lack of monetary income that may be a direct consequence of job loss (Rain, Lane, & Steiner, 1991). However, monetary benefits should not be dismissed as there is a positive correlation between income and life satisfaction (Diener et al., 1999).

Personality traits may additionally contribute to global life satisfaction. It has been observed that levels of extraversion and neuroticism can be associated with reported psychological well-being (Diener et al., 1999). Schimmack, Radhakrishnan, Oishi, Dzokoto, and Ahadi (2002) suggested that personality traits might be more significant in hedonic well-being evaluations, where there is a balance between positive and negative affect, rather than Eudaimonic well-being where this is not the case. Christopher (1999) described how psychological well-being factors may be more entrenched in Western cultural definitions and beliefs about "a good life" than

other cultural norms and beliefs, and this must be considered when making inferences from results. Josefsson et al. (2011) described cooperativeness as being rooted in social support and collective cultures (e.g., Western cultures), whereas self-directedness is found in individualistic cultures.

These factors associated with well-being may also affect an individual's perceived abilities to obtain sought after goals. Goals and values are seen as a means of acquiring an individual's needs, and specific goals individuals strive for correlates with psychological well-being (Schwartz, 1992). People experience well-being when they strive to obtain a valued goal (Schmuck & Sheldon, 2001). Goals which focus on finances, attractiveness and popularity correlate with low psychological well-being and low levels of satisfaction, whereas goals such as self-acceptance, physical fitness and community feeling are correlated with higher Ryff psychological well-being scores (Ryan, 1996). Ryan and Deci (2001) identified that these self-endorsed goals are associated with increased well-being in both males and females and across a variety of cultures. They also describe how it is the individual's belief that they are moving towards a personally relevant goal that is a particularly reliable predictor of well-being, giving the individual a sense of ownership, life structure, and personal meaning. Similar results were reported by Brunstein (1993) who found that an individual's well-being is maximized when the goal being pursued is personally important and fits with their motives and values. Sheldon et al. (2010) described how goals which increase feelings of autonomy, competence and relatedness were associated with increased well-being. In addition, well-being is enhanced if the goal is challenging yet achievable (Nakamura & Csikszentmihalyi,

2002), and behaviour is approach rather than avoidance focused (Elliot & Sheldon, 1997).

Finally, Chida and Steptoe (2008) suggested that current well-being is an important factor to consider when trying to accurately predict an individual's future health. Research suggests that it would be helpful for clinical services to understand the impact of psychological well-being further, as well as how it interacts with future-directed thinking. There is an increasing amount of research looking at both psychological well-being and future-directed thinking in clinical client groups; however, this is not well covered in the Borderline Personality Disorder literature. The present study hopes to extend this research.

#### **1.4. Future- Directed Thinking**

Individuals frequently engage in mental time travel, where they both relive past experiences and imagine possible future outcomes (D'Argembeau, Renaud, & Van der Linden, 2011). Future-directed thinking is increasingly becoming acknowledged as an area of importance within research and clinical practice as its links to mental health disorders makes it a natural focus of many clinical treatment plans. There is a large body of research linking individuals' abilities to generate positive and negative future experiences with a number of mental health disorders (e.g., Hunter & O'Connor, 2003; MacLeod et al., 1998; MacLeod et al., 2004; O'Connor, Connery, & Cheyne, 2000), feelings of hopelessness (see MacLeod et al., 2013), and also with suicidal ideation (see MacLeod et al., 2013). Previous research has focused on individuals' thoughts about the future, and has linked these thoughts to past experiences and episodic thinking. However, research has also moved to consider

future-directed thinking within a fluency paradigm. The Future Thinking Task (MacLeod et al., 1993) does just this and has become a widely used tool to measure future-directed thinking by recording the things people predict or expect to experience rather than merely how they feel about the future.

#### **1.4.1. Thoughts of the past in thinking about the future**

Individuals have the ability to reflect and re-experience previous events and to use these to project their thoughts into the future and imagine similar potential experiences reoccurring. Atance and O'Neill (2001) described this as episodic future thinking, suggesting that the connection between episodic memory (the ability to remember personal and individual events from the past) and future-directed thinking may explain how we learn about and predict our future actions and wishes (Atance & O'Neill, 2001; Okuda et al., 2003). Previous experiences and autobiographical memory help us determine what is plausible in the future (Conway & Pleydell-Pearce, 2000; Johnson & Sherman, 1990) and shares neural networks and similar cognitive structures (Rasmussen & Berntsen, 2009).

Memories of the past, however, still differ from future-directed thoughts. D'Argembeau et al. (2011) described memories of the past as being more detailed and containing more sensory details and context than thoughts about the future. Additionally, positive thoughts of future events have greater sensory and contextual details than negative thoughts of future events, whilst both temporally close future or past events have more contextual details than the distant future events (D'Argembeau et al., 2011). Trope and Liberman (2003) noted that the further into the future the event is from the present the more likely it is to contain general

abstract features in its recall as opposed to concrete details. Ross and Wilson (2000) described how recent future events are more likely to be related to a current self-concept whereas those in the distant future are likely to reflect the individual's change over time. Future events are also often rated as being more positive than past events (Berntsen & Bohn, 2010). Thus it is often harder to project ourselves further into the future, but imagining close future events is less complex as we are able to draw on our past and current experiences to guide us. Schacter and Addis (2007) proposed just this, suggesting that people make assumptions about their future using their episodic memory (i.e., "where do I usually spend the weekend?", "who do I tend to spend my time with?"). Negative events may not be as vivid or contextually sensitive as positive events, but Taylor (1991) suggested that they evoke stronger physiological, cognitive, behavioural, and social reactions than positive or neutral events. Mood in turn has consistently been shown to affect an individual's cognitive processing, including perception, memory, attention, and decision making (Schwarz & Clore, 2003).

Additionally, as past memories and experiences can affect future-directed thinking, individual goals and desires can have the same effect. However, as stated by Oettingen and Mayer (2002), merely thinking about the future is not enough to generate the thoughts and behaviour needed to create positive outcomes, and a number of cognitive processes contribute to goal attainment. Fortunato and Furey (2011) agree that the way an individual processes information, and their cognitive skills, influences their view of their future and their psychological resilience to setbacks. Cognitive vulnerability, as described by O'Connor, Connery, and Cheyne

(2000) is characterised by negative coping styles and hinders an individual's abilities to think about the future. Optimistic individuals are more likely to experience healthy outcomes (Scheier & Carver, 1992), display successful problem solving skills (Oettingen & Mayer, 2002), have greater standards and aspirations, and greater motivation to perform successfully in the future (Bandura, 1997). Avoidant individuals however, use skills such as wishful thinking and over-generalised memory styles that are connected to lower effort, performance, social problem solving difficulties, and reduced psychological well-being (Conway & Pleydell-Pearce, 2000). These findings have led to behavioural and cognitive techniques in clinical practice designed to help individuals understand and access particular memories (MacLeod & Moore, 2000), as well as to form positive schemas (Padesky, 1994).

This previous research provides a helpful starting point from which to explore future-directed thinking within specific populations. Clinical research has focused on the events individuals generate when asked about future-directed thoughts, and puts a numerical value on this, rather than general feelings towards an individual's future. The Future Thinking Task (MacLeod et al., 1993) was developed to help focus this research.

#### **1.4.2. The Future Thinking Task**

The Future Thinking Task (FTT) is a measure of fluency that explores what experiences or events people can generate for the future. MacLeod et al. (1998) describe it as an objective measure that directly quantifies future-directed thinking as opposed to a self-report measure of possible thoughts about the future. Self report measures of future-thinking are influenced by factors such as current mood,

the individual's physical surroundings (Hepburn, Barnhofer, & Williams, 2006), as well as the individual's thoughts and beliefs about the future they may wish to conceal (Greenwald et al., 2002). These factors should not be dismissed in analysis of outcomes. The FTT also regards positive and negative future-directed thinking as separate aspects of an individual's experiences, and consequently measures them separately.

Since its development, the FTT has been a widely used measure of future-directed thinking and has been used in a number of studies both within the general public (e.g., MacLeod & Conway, 2007), and within specific clinical populations (e.g., Bjärehed, Sarkohi, & Andersson, 2010; Hunter & O'Connor, 2003; MacLeod & Conway, 2007).

#### **1.4.3. Clinical Populations and Future-directed Thinking**

Future-directed thinking has been described as originating from hopelessness and cognitive vulnerability theories (O'Connor et al., 2000). However, O'Connor et al. (2000) suggested that the cognitive processes underlying hopelessness are not yet fully understood, and therefore further investigations into future-directed thinking and hopelessness in general are of benefit for the literature. Research has shown that a negative view of the future is often linked to, or described as, a component of hopelessness. This research has shown that difficulties in generating events which individuals are looking forward to is an important component underlying hopelessness and suicidal ideation (e.g., Hunter & O'Connor, 2003; MacLeod et al., 1993; MacLeod, Tata, Kentish, & Jacobsen, 1997; O'Connor et al., 2000), that can also be replicated within mood induced "healthy" Control participants (Hepburn et



al., 2006). Previous research has often only found a significant correlation within positive future-directed thinking and hopelessness, and not with negative future-directed thinking (e.g., MacLeod & Conway, 2007; MacLeod, Pankhania, Lee, & Mitchell, 1997; MacLeod et al., 1993).

Future-directed thinking has been widely explored in individuals with a diagnosis of depression with many of the recent studies using the FTT. MacLeod et al. (1997) described how individuals with high Beck Depression Inventory scores significantly differed in the number of positive future events they were able to generate compared to those with low BDI-II scores. Additionally, MacLeod et al. (1997) showed that participants with high BDI scores did not differ in the number of negative events generated. These results have been consistently supported in other studies looking at both depression and suicidal behaviour (e.g., Hunter & O'Connor, 2003; MacLeod, Pankhania, et al., 1997; MacLeod et al., 1997), all of which have used the FTT to explore future-directed thinking. Bjärehed et al. (2010) replicated these findings with depressed individuals without suicidal ideation. However, specific understanding of why individuals with depression may differ from Control participants is still being explored. One view is that depressed individuals are unable to access possible future positive experiences, whilst others suggest that low mood may bias an individual's evaluation of future events leading to possible positive events being judged more negatively. Hepburn et al. (2006) replicated these findings in "healthy" Control participants where positive and negative moods were induced. Each group showed a reduced fluency for mood-incongruent events under induced mood compared to baseline mood. However, Hepburn et al. (2006) acknowledged

the methodological difficulties of making interpretations based on mood induced data even though their findings support previous literature.

Future-directed thinking using the FTT has also been examined in individuals with anxiety disorders. MacLeod et al. (1997) showed that depressed and anxious individuals differ from matched “healthy” Controls in their ability to generate future events by higher anticipation of negative but not lower positive future events. Kosnes, Whelan, O’Donovan, and McHugh (2013) replicated these findings, showing that anxious individuals showed higher negative future-directed thinking, but did not differ on positive future expectations, compared to those with a diagnosis of depression. They suggest that understanding this pattern can help differentiate those with co-morbid depression and anxiety from those with no anxiety symptoms. This has both theoretical and clinical implications.

Future-directed thinking has also been explored in those with a diagnosis of Bipolar Disorder. Boulanger, Lejeune, and Blairy (2013) found that those with a diagnosis of Bipolar Disorder generated fewer future positive and negative events and that these individuals expressed greater emotional intensity towards future events than Controls. King et al. (2011) also investigated individuals with Bipolar Disorder and their capacity to imagine detailed future events. They found that individuals with a diagnosis of Bipolar Disorder generated significantly fewer episodic details than “healthy” Controls, regardless of whether they were positive or negative future events. Bipolar Disorder and BPD are often co-morbidly presented and therefore these findings add further background for the present study.

#### **1.4.4. Suicidal Behaviour, BPD and Future-directed Thinking**

As previously stated, there is very little research looking at future-directed thinking in BPD, with only one study using the FTT (MacLeod et al., 2004). However, there are several studies that explore future-directed thinking in individuals with deliberate self-harming behavior that are relevant to consider in this case. It was hypothesised that a substantial number of participants in these studies might meet criteria for a diagnosis of BPD as deliberate self-harm is one of the nine DSM-IV traits of BPD.

Previous research characterises individuals with suicidal ideation as experiencing more stressful life events, socioeconomic disadvantages, and interpersonal difficulties that can lead to reduced opportunities in their futures (see Hepburn et al., 2006 for review). Hunter and O'Connor (2003) conceptualised deliberate self-harm and suicidal ideation as a derivative of perceived negative social and self approval linked with an inability to think positively about the future. A negative view of the future, usually talked about as hopelessness, has been found to play a particularly central role in suicidal ideation (Petrie, Chamberlain, & Clarke, 1988) and completed suicide (Beck, Brown, & Steer, 1989). Studies using the FTT have identified that individuals with suicidal thoughts or behaviour produce significantly fewer positive future experiences than "healthy" Controls. However, as with previous studies, there is no difference in number of negative future experiences (e.g., Hunter & O'Connor, 2003; MacLeod et al., 1993; MacLeod et al., 1997; O'Connor, Fraser, Whyte, MacHale, & Masterton, 2008). MacLeod et al. (1993) identified that this is the case for both the immediate and longer term future.

The only failure to replicate this finding was by O'Connor et al. (2000) who found no significant difference between the Suicidal Group and Control participants in terms of positive future thoughts. They suggested that this was due to the make-up of their Control sample which was recruited from a hospital setting. Therefore, although not specifically highlighted as individuals with a diagnosis of BPD, these studies provide relevant findings for the present study to consider.

One study that did explore future-directed thinking in individuals with a diagnosis of BPD is MacLeod et al. (2004). They explored future-directed thinking in the three DSM-IV PD Clusters. Their results found that only Cluster B PD symptoms were related to a reduced positive future-directed thinking style, and within this Cluster those with BPD and Dissocial PD showed the clearest reduced positive future-directed thinking. They suggested that Cluster B PD might be linked to a reduced positive future-directed thinking style due to the individuals' increased unstable and disruptive lifestyle, and poor planning abilities. MacLeod et al. (2004) suggested that further research could look to replicate their findings as well as look at the underlying factors associated with the reduced positive future-directed thinking in this group. The present study aims to do this.

As the FTT has no direct coding system for future items generated, a specific coding system was generated for this purpose in the present study. Other studies looking at items generated using the FTT have categorised experiences using systems such as the Ryff Psychological Well-Being Scale dimensions (Edmondson, 2012). The connection between psychological well-being and future thinking has been explored in other studies, suggesting that analysing the well-being content of future thinking

might be an appropriate coding approach. Atance and O'Neill (2001) suggested that thinking about the future and its potential events will impact on an individual's long term well-being and success; therefore increased negative future-directed thinking will have negative psychological well-being implications. Additionally, MacLeod and Conway (2007) highlighted that both subjective and psychological well-being were related to positive future thinking when thinking about their own future, but not when individuals thought about others. Finally, Fortunato and Furey (2011) proposed that the combination of past, present, and future thinking contributes to both psychological well-being and distress. The limitation of using Ryff's Psychological Well-Being Scale dimensions to code future-directed thinking is that it does not cover in detail all areas of a "good quality of life". Therefore, it was felt a quality of life category system would be appropriate to use for categorising the future-directed thinking in the present study.

#### **1.4.5. Quality of Life Scale**

In order to explore quality of life, Flanagan (1978), through the American Institute for Research (AIR), surveyed nearly 5,000 people in America from a variety of ages, races, socioeconomic statuses, and different regions of the country, on the factors that people thought defined "a good life". They were asked questions such as "Think of the last time you did something very important or had an experience that was especially satisfying", "(What made) the biggest change in the quality of your life... in the past 5 years?", and "Think of a time you saw something happen to another person that was harmful or made their life worse in some way" (Flanagan,

1978, p.01). From this Flanagan created 15 categories under 5 headings (see Figure 2).

1. Physical and Material Well-being
  - a. Material well-being and financial security
  - b. Health and personal safety
2. Relations with other people
  - a. Relations with spouse (girlfriend/boyfriend)
  - b. Having and raising children
  - c. Relations with parents, siblings, other relatives
  - d. Relations with Friends
3. Social Community and civic activities
  - a. Activities related to helping or encouraging others
  - b. Activities related to local and national governments
4. Personal Development and Fulfillment
  - a. Intellectual development
  - b. Personal understanding and planning
  - c. Occupational role
  - d. Creativity and personal expression
5. Recreation
  - a. Socialising
  - b. Passive and observational recreational activities
  - c. Active and participatory recreational activities
6. Independence

Figure 2: Categories and factors within Flanagan's Quality of Life Scale, with Burckhardt, Anderson, Archenholtz, and Hägg (2003) item Independence.

In the second stage of developing these categories, Flanagan and colleagues (1978) surveyed people through a national report using a 5-point scale to ask how important each of the 15 factors were in determining their current quality of life, and thus confirmed them as appropriate Quality of Life Scale measure items. They found that similar outcomes were reported in different age groups, and between males and females. Burckhardt et al. (2003) explored Flanagan's Quality of Life items construct validity within participants that had physical health difficulties, and the general population. They reporting high internal consistency ( $\alpha = .82$  to  $.92$ ) and high test retest reliability ( $r = 0.78$  to  $r = 0.84$ ). Burckhardt et al.'s (2003) results also supported the idea that the Quality of Life Scale has a stable structure across diverse samples in health, culture and gender.

Burckhardt, Woods, Schultz, and Ziebarth (1989) adapted the original Flanagan Quality of Life Scale for use within chronically ill patients by adding the factor "Independence" to the original scale. In their 2003 study, Burckhardt and colleagues also reduced Flanagan's five major categories (see Figure 2) to three categories through factor analysis. Burckhardt et al. (2003) suggested that the Flanagan Relationship items loaded on a single factor along with Material Well-Being and Financial Security to create the major category "Relationships and Material Well-being". They proposed that Material Well-Being and Close Relationships are connected through a sense of security. Their second factor was "Personal, Social and Community Commitment" which was formed through collapsing Personal Development and Social Community categories into one, and including the factor Socialising. The third factor was "Health and Functioning" which included Health,

Occupational Role, and Active Recreation, along with the newly created Independence factor. This Quality of Life Scale has been used in a wide range of studies, and an adaptation of its categories has been utilised in the present study to code the content of the future-directed thinking experiences generated by participants.

### **1.5. The present study**

Individuals with a diagnosis of BPD are a heterogeneous group with complex presentations, and research into this clinical group provides increased theoretical development. However, the majority of this research focuses on treatment outcomes and there is ongoing need to understand the development and maintenance of the disorder, and how it interacts with factors such as psychological well-being and future-directed thinking. There is sparse literature within individuals with a BPD diagnosis and future-directed thinking, with only one previous study looking at this directly (MacLeod et al., 2004), and no studies directly looking at psychological well-being profiles within the diagnosis of BPD. The present study hoped to bridge this gap in the literature.

MacLeod et al. (2004) identified a lack of positive future-directed thinking associated with the presence of Cluster B PD, but identified no significant difference to Control participants when considering negative future-directed thinking. Their results begin to provide a quantitative understanding of BPD and future-directed thinking, but does not cover exploration into the content of these future expectations and why this group (Cluster B PD) may differ from other PD groups and Controls. Based on reviews of the literature and the significant difficulties clients



with BPD have with interpersonal relationships, the present study hypothesises that relationship-focused future-directed thinking may be an area of specific difficulty for clients with BPD, as opposed to general deficits on all aspects of positive future-directed thinking. Interpersonal difficulties are often described as the diagnostic trait that uniquely separates clients with a diagnosis of BPD from other mental health disorders with which they share high co-morbidity.

The existing research is also lacking specific literature on how BPD can be defined within a psychological well-being framework. Previous research that looks at psychological well-being profiles in other mental health disorders suggests that this would be an equally beneficial addition to the BPD literature and may provide an additional means to exploring how the diagnoses of BPD impacts on the individual and their functioning, as well as provide a means of distinguishing BPD from its co-morbid partners. Positive links have been identified between psychological well-being and future-directed thinking and therefore merit being explored together. Additionally, it can be argued that future-directed thinking and psychological well-being can add to both the theoretical and treatment literature within BPD, as well as contributing to an understanding of the factors that may maintain this disorder's features.

Therefore, the present study aimed to extend understanding of interpersonal functioning in those with a BPD diagnosis by examining current relationship well-being within the context of a wider psychological well-being framework, and by examining interpersonal interactions in future-directed thinking.

The three hypotheses for the present study are:

1. Participants with a diagnosis of BPD will have lower overall Ryff psychological well-being scores than control participants and especially markedly lower scores for the Positive Relations with Others psychological well-being domain.
2. Participants with a diagnosis of BPD will generate significantly fewer positive future-directed thinking items than Control participants in the absence of any difference on negative future-directed thinking items, replicating results from MacLeod et al. (2004).
3. Participants with a diagnosis of BPD will produce fewer positive future directed thoughts relating to interpersonal relations compared to control participants; this deficit will be more marked than it is for other types of future thoughts.

## **2.0 METHOD**

### **2.1. Sample**

#### **2.1.1 Clinical Participants**

Twenty-four participants with a diagnosis of Borderline Personality Disorder (BPD; DSM-IV) or Emotional Unstable Personality Disorder - Borderline Type (ICD-10) were recruited from three different Personality Disorder Services (hereafter called the "BPD Group"). The mean age of clinical participants was 34.46 (SD = 8.13); 62.5% were female and 37.5% male. Each PD service differed in their treatment intervention (i.e., Mentalisation Based Therapy, psychodynamic Therapeutic Community, and Dialectical Behaviour Therapy).

Inclusion criteria for the BPD Group were a diagnosis of BPD confirmed from a clinical assessment at their current PD service and adequate spoken English to complete timed verbally presented measures. Diagnosis of BPD was established through record of a formal assessment with the clinical staff at participants PD services upon referral to the service, using the Structured Clinical Interview for DSM-IV (SCID-II, Gibbon et al., 1997) and clinical interviews. A BPD Screening Inventory (MSI-BPD, Zanarini et al., 2003) was used in the present study to confirm diagnosis was still present. Co-morbid disorders were not recorded or controlled for. Spoken English ability was confirmed by the referring clinical team as well as during the research meeting with the participant; verbal fluency was measured as part of the study. BPD participants from all stages of the treatment phases were invited to take part.

### **2.1.2. Control participants**

Twenty-four community Control participants were recruited from the general population (hereafter called the “Control Group”). The mean age of Control Group participants was 33.62 (SD = 6.86); 62.5% were female and 37.5% male. Recruitment was through advertisements in a local Jobcentre-Plus Centre, Library, Sports Centre, and online advertising through Gumtree London. Participants were asked to contact the researcher if they were interested in hearing more about the study or taking part.

Control Group participants were eligible to take part if they matched demographics required and had a basic comprehension level of spoken English. Spoken English ability was confirmed during telephone calls to arrange meetings and within the research meeting itself; verbal fluency was measured as part of the study. Exclusion criteria were individuals having a current mental health diagnosis, being currently involved in mental health services, and meeting a threshold for BPD symptoms on the McLean Screening Instrument for BPD (MSI-BPD, Zanarini et al., 2003).

### **2.1.3. Power**

A large effect size was predicted for this study based on previous studies using similar measure and samples comparing two groups on positive future thinking scores (MacLeod et al., 2004). Previous studies suggested the number of participants required was 26 for each participant group in an independent t-test, with alpha set to 0.05 and power set to 0.8 (Cohen, 1988). All eligible PD service users were approached by a member of the clinical team at their PD service, and 24

individuals in total agreed to take part. Thus the actual power level in the present study was 0.77 based on 24 participants in each group for an independent t-test, with alpha set to 0.05 (Clark-Carter, 2009).

## **2.2. Measures**

### **2.2.1. Demographic Information Sheet**

Participants' age, gender, current employment status, relationship status, highest level of education, and ethnic origin were collected. This form (see Appendix I) was designed specifically for the present study and was piloted on two volunteers, one of whom was a service user at one of the PD services used for recruitment in the present study. Categories for ethnicity were based on categories used by the Office for National Statistics ([www.ons.gov.uk](http://www.ons.gov.uk)).

### **2.2.2. Patient Health Questionnaire (PHQ-9, Kroenke, Spitzer, & Williams, 2001)**

The PHQ-9 is a nine-item self-report measure of depression with one item of each of the nine DSM-IV criteria for depression (see Appendix I). It originates from the PRIME-MD diagnostic instrument for common mental disorders (Kroenke et al., 2001). Participants are asked to report on how much the nine items have "bothered" them over the last two weeks (e.g., "Little interest or pleasure in doing things"; "Trouble concentrating on things, such as reading the newspaper or watching television") on a scale of "not at all" (0) to "nearly every day" (3). Cut-off scores can be used to identify none, mild, moderate, moderately severe, and severe depression, but were not used specifically in the present study.

Spitzer, Williams, Kroenke, Hornyak, and McMurray (2000) reported excellent internal reliability of the PHQ-9 (Cronbach's  $\alpha = 0.89$ ), and test-retest scores (0.84).

A likelihood ratio showed substantial associations between higher PHQ-9 scores and likelihood of major depression, and a ROC analysis (0.95) confirmed that the PHQ-9 discriminates well between Major Depression and those without the diagnosis (see Spitzer et al., 2000).

The PHQ-9 has shown to be a valid and reliable measure and is extensively used in clinical practice and research. Its shorter length makes it a valuable measure when a number of measures are being administered at once.

### **2.2.3. Generalised Anxiety Disorder Assessment (GAD-7, Spitzer, Kroenke, Williams, & Lowe, 2006)**

The GAD-7 is a brief clinical measure used as a screening tool and severity measure for Generalised Anxiety Disorder (see Appendix I). Participants rate on a seven-item scale their anxiety symptoms (e.g., “Feeling nervous, anxious or on edge”, “Becoming easily annoyed or irritable”). Participants rate how much each item has “bothered” them over the last two weeks from “not at all” to “nearly every day”. Cut-off points can be used to identify scores for none, mild, moderate, and severe anxiety; cut-off scores were not specifically used in the present study.

The GAD-7 has shown to have excellent internal consistency (Cronbach  $\alpha$  = 0.92), test-retest reliability was good (0.83), and good validity (Spitzer et al. 2006). Spitzer et al. (2006) also reported good construct validity between the GAD-7 and the Beck Anxiety Inventory ( $r = 0.72$ ) and the Symptoms Checklist-90 ( $r = 0.74$ ); both recognised as reliable measures of anxiety and widely used.

The GAD-7's validity and efficiency as a screening tool and bases within the DSM-IV criteria for General Anxiety Disorder makes it a regularly used tool in practice and research.

#### **2.2.4. Ryff Psychological Well-being Scale 54 item version (RPWBS, Ryff, 1989).**

The Ryff Psychological Well-being Scale (see Appendix I) is a widely used, theoretically grounded, measure of psychological well-being (see Abbott, Ploubidis, Huppert, Kuh, & Croudace, 2009; and Springer & Hauser, 2006 for reviews). It consists of positive and negative worded statements related to Ryff's six Psychological Well-Being dimensions:

- Autonomy (e.g., "I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people").
- Environmental Mastery (e.g., "In general, I feel I am in charge of the situation in which I live").
- Personal Growth (e.g., "I am not interested in activities that will expand my horizons").
- Purpose in Life (e.g., "I live life one day at a time and don't really think about the future").
- Positive Relations with Others (e.g., "Most people see me as loving and affectionate").
- Self-Acceptance (e.g. "When I look at the story of my life, I am pleased with how things have turned out").

Participants rate on a 6 point scale how much they agree or disagree with each statement.

The present study used the mid-length version of the scale consisting of 54 items (9 per scale). This version is a very widely used alternative to the original 78-item scale and has been shown to good psychometric properties (Sewell, Hauser, Springer, & Hauser, 2004). Additionally, Ryff and Keyes (1995) reported that the shortened versions correlated from 0.70 to 0.89 with the original 20-item version. The 54-item version was used as the original version is long to administer, and the 18 item version does not have as good internal consistency of subscales (Hauser et al., 1992).

#### **2.2.5. The McLean Screening Instrument for Borderline Personality Disorder (MSI-BPD, Zanarini et al., 2003)**

The MSI-BPD is a ten item screening measure for BPD (see Appendix II). The MSI-BPD is based on the Diagnostic Interview for DSM-IV PD, (Zanarini, Frankenburg, Sickel, & Yong, 1996) which is a reliable semi-structured interview for diagnosing Axis II disorders. The MSI-BPD has one item per BPD criterion (e.g., “Have any of your closest relationships been troubled by a lot of arguments or repeated breakups?”) apart from paranoia/dissociation where the authors felt that including two questions was more appropriate. Participants are required to self-report yes/no to each of the ten items. The MSI-BPD was verbally presented in the present study.

Zanarini et al. (2003) highlighted that the MSI-BPD is not a diagnostic instrument and instead is best used as a screening instrument for use in settings and research where a screening may be more appropriate. A cut off score of 7 suggests that a diagnosis of BPD should be explored.



The measure was originally evaluated using 200 males and females where good sensitivity (0.81) and specificity (0.85) for a DSM-IV diagnosis of BPD was reported Zanarini et al., (2003). Zanarini et al., (2003) also reported good test-re-test reliability and high internal consistency ( $\alpha = .74$ ). Patel, Sharp, and Fonagy (2011) reported moderate sensitivity (0.69), specificity (0.67), and diagnostic accuracy (0.74) in community participants, whilst Chanen et al. (2008) reported weaker sensitivity (0.68), specificity (0.75), diagnostic accuracy (0.73), and a kappa (0.35) when the MSI-BPS was compared to the Structured Clinical Interview for DSM-IV—Axis II (SCID-II) within young adults.

#### **2.2.6. Standard Verbal Fluency Control Measure (FAS)**

A standard test measure of verbal fluency (the FAS) was used in the present study. Participants were asked to verbally generate words that began with the letters F, A, and S and were given a minute for each. Participants were told that they could not use names, places, or the same word with different endings; examples were given using the letter T (see Appendix III for instructions).

The FAS acted as a practice for the participants in talking aloud for one minute, and for measuring participant's verbal fluency, which may have affected their performance on the Future Thinking Task (FTT). The FAS is often used in research studies where the FTT is used.

#### **2.2.7. Future Thinking Task (FTT, MacLeod et al., 1993).**

The Future Thinking Task is a future-directed thinking fluency test where individual are asked to tell the researcher about positive and negative things they think will happen in the future. They are given a minute to say aloud as many potential future

experiences that they believe will happen within three time periods – the next week including today, the next year, and the next 5-10 years. For each time period participants are asked to generate positive and negative future experiences, with a minute for each condition.

Participants are introduced to the FTT (see Appendices IV for instructions) and presented each time period verbally one at a time in the same order (the next week, the next year, the next 5-10 years). The order of the presentation of the positive and negative conditions was counter balanced.

Participants are asked to think about things that they think will “definitely happen or more than likely happen”; and they are informed that these can be anything that they like, either important things or trivial things. The researcher does not prompt the participant or give any examples. There was opportunity to clarify instructions if needed. If participants’ answers were ambiguous they were asked to clarify the item after the minute was finished.

For the positive condition, participants were asked to think about things they were looking forward to. In the negative condition, they were asked to think about things they were not looking forward to or were worried about happening in the future. Participants said aloud a brief description of the experiences they thought would happen in the future and these were written down by the researcher.

### **2.3. Future Thinking Task Coding:**

The Future Thinking Task (FTT) items content were coded using a coding system based on Flanagan’s Quality of Life Scale (Flanagan, 1978). Flanagan created 15 factors that fit into 5 category headings, to which Burckhardt et al. (2003) added the

factor Independence (see Figure 2, p. 45). Burckhardt et al. (1989) reported high internal consistency ( $\alpha = .82$  to  $.92$ ) and high test retest reliability ( $r = 0.78$  to  $r = 0.84$ ) for the Flanagan Quality of Life Scale, whilst Wood, Wylie, and Sheafor (1969) also reported high correlation between Flanagan's Quality of Life Scale and the Life Satisfaction Index-Z ( $r = 0.67$  to  $0.75$ ).

Flanagan's 15 individual factors plus Burckhardt et al.'s item Independence was included in the present study, along with two extra factors "Health and Well-being of Others" and "Mental Recovery and Mental Well-being" (see Table 1). It was felt that these two factors were important to record in the present study and were not adequately represented in the original 16 items.

Table 1:

Categories and factors used in the coding of the FTT items

Factor Name	Description
<b>Physical/Mental Material Well-being</b>	
Material well-being and financial security	Having good food, having or making a better home, possessions, comforts, and expectations of these for the future, monetary and financial security.  Negative: Including debt, financial difficulties, not having secure living conditions, negative feelings towards obtaining and maintaining a good home, food, comforts and possessions.
Health and personal safety	Enjoying freedom from sickness, possessing physical fitness, avoiding accidents and other health hazards.  Negative: Getting ill, having physical health problems and death, problems related to alcohol, drugs, and aging.

Mental recovery and mental wellbeing	<p>Attending Mental Health Services, feeling mentally well, and skills that relate to mental well-being.</p> <p>Negative: Being mentally unwell, feeling low in mood, forgetting, or not using skills, or not making use of services.</p>
<b>Relations with Other People</b>	
Relations with parents, siblings, other relatives	<p>Communicating with, or doing things with, parents, siblings, or other relatives, visiting, enjoying, sharing, understanding, being helped by and helping them. The feeling of belonging and having someone to discuss things with.</p> <p>Negative: Having negative relationships, arguments, poor expectations of family relationships or maintaining them, estrangements or not spending time with parents, siblings, or other relatives.</p>
Having and raising children	<p>Having children and becoming a parent. Watching their development, spending time and enjoying them, molding, guiding, helping, appreciating, and learning from them/with.</p> <p>Negative: Not having children, not being able to spend time with them, children misbehaving, negative feelings towards having children.</p>
Relations with spouse or significant other	<p>Being loved, companionship, sexual satisfaction, understanding, communication, appreciation, devotion, and contentment in marriage or with a girlfriend or boyfriend</p> <p>Negative: Having a negative relationship with a spouse, not getting to spend time with a spouse or enjoying spending time with a spouse, or not having a spouse or not finding a partner.</p>

<p>Relations with Friends</p>	<p>Activities, interests, acceptance, visits, giving and receiving help, love, trust, support, and guidance with close friends.</p> <p>Negative: Having arguments or not having a positive mutual relationship with friends, not being able to spend time with friends or not enjoying time with friends, losing touch with friends.</p>
<p>Socializing</p>	<p>Entertaining at home or elsewhere, attending parties or other social gatherings, meeting new people, interacting with others, (i.e., through clubs, birthdays, making new friends.)</p> <p>Negative: Negative thoughts about attending general social gatherings, birthday celebrations, not wanting to or finding it hard to meet new people generally.</p>
<p>Health and wellbeing of others</p>	<p>Close friends, family and children enjoying good health, fitness and general well-being.</p> <p>Negative: Death or poor health of loved ones, physical or mental interventions that will be difficult for the loved one to take part in.</p>
<p>Activities related to helping or encouraging others</p>	<p>Helping or encouraging adults or children (other than relatives or close friends), as an individual or as a member of an organization, (i.e., church, club, or a volunteer group.)</p> <p>Negative: Not wanting to, or feeling pressure to, help others and be involved in the general community (not included relations with relatives, close friends or children).</p>

<b>Personal Development and Fulfillment</b>	
Activities related to local and national government	<p>Following the media and other communications, and voting; having living conditions affected by regulation, laws, procedures, and policies of governing agencies, individuals and groups.</p> <p>Negative: Negative consequences or feelings to the above. Not being able to participate in the above.</p>
Intellectual development	<p>Learning, attending school, acquiring knowledge, problem solving, improving understanding, comprehension, or appreciation in intellectual areas out of school.</p> <p>Negative: Not being able or interested in intellectual development. Difficulties with attending education or learning; negative consequence of obtaining the above.</p>
Personal understanding	<p>Purpose, and guiding principles in life; becoming more mature, gaining insight and acceptance, experiencing and awareness of personal growth and development, and realizing the ability to influence own life; making decisions, planning life activities and roles; coping better, and being in a better place.</p> <p>Negative: Not having insight, not being able to cope or develop in some way; not being interested in exploring own personal understanding.</p>
Occupational role	<p>Having interesting, challenging, rewarding, worthwhile work in a job or home; doing well, using one's abilities, learning and producing, obtaining recognition, and accomplishing on the job.</p> <p>Negative: Not having a job or not enjoying their current job role. Consequences of unemployment and looking for a job.</p>

Creativity and personal expression	<p>Showing ingenuity, originality, imagination in music, art, writing, handicrafts, drama, photography, practical or scientific matters, or everyday activities; expression through personal projects, accomplishments or achievements.</p> <p>Negative: Not being able to express oneself creatively or not enjoying the above.</p>
Independence ability to do for oneself	<p>Being self sufficient and not relying on others. Enjoying being independent and doing things for oneself.</p> <p>Negative: Not being able or not enjoying doing things alone, feeling abandoned or not feeling capable of acting alone.</p>
<b>Recreation</b>	
Passive and observational recreational activities	<p>Participating in passive recreation, such as watching television, cooking, listening to music, reading, going to the movies, and going to entertainment or sports events; appreciating the art and beauty of life, enjoying time off from work.</p> <p>Negative: Not having anything to focus on, not enjoying or being able to participant in the above.</p>
Active and participatory recreational activities	<p>Participating in active recreation, such as sports, hunting, fishing, boating, camping, vacation travel, and sightseeing, shopping etc.; playing sedentary or active games, singing, playing an instrument, dancing, acting, etc.</p> <p>Negative: Not looking forward to or enjoying the above, difficulties with planning activities (e.g. holidays) or the negative consequences of being involved in the above.</p>

The individual factors were reduced to four main categories (Physical/Mental & Material Well-being, Relations with Other People, Personal Development, and

Recreation). Future-directed thinking items that did not fit into the above categories (such as those items related to care or time spent with pets) were recorded but not coded.

Inter-rater reliability was tested with a Trainee Clinical Psychologist. Coding was discussed and category definitions explained. The second rater coded five random participants' data (10%). The inter-rater agreement for the two raters was  $\kappa = .937$ , indicating high level of agreement between the two raters.

#### **2.4. Procedure:**

This study was subjected to NHS and Royal Holloway ethical approval (see Appendix V for letter confirming ethical approval).

Participants in the BPD Group were informed about the study by a clinician at their current PD service. An information sheet (see Appendix VI) was given to service users that met criteria, participants then confirmed that they were happy for the researcher to contact them to arrange an appointment. The information sheet was piloted on two volunteers; one was a service user at one of the PD Services used for recruitment in the present study. After participants opted into the study and agreed that they may be contacted, a meeting was arranged over the telephone or via email. It was stressed that participation was voluntary and that they could leave the study at any time.

The BPD Group participants were met by the researcher at their PD service. Meetings lasted on average 45 minutes. Participants were given another copy of the



Information Sheet which was verbally explained. Participants had an opportunity to ask questions at all stages of the meeting, as well as before and after the meeting. If participants agreed to participate in the study, they were asked to sign the consent form and give details of their GP surgery (see Appendix VII). Letters to GP's detailing the participant's involvement were sent to GP's after the meeting (see Appendix VIII). Participants were reassured that GP's could not request the individuals data without the individuals permission.

Control Group participants were informed of the study either from Gumtree, leisure sports forums, the library, or the jobcentre (where the researcher approached them under the permission of the jobcentre plus staff). All participants were given an information sheet, with the contact details for the researcher, to arrange an appointment (see Appendix VI). The information sheet was piloted along with the BPD Group information sheet. Again, Control Group participants opted into the study by agreeing to meet the researcher at the London university offices.

All participants then completed the measures in the following order, the FAS, Future Thinking Task (FTT), McLean Screening Instrument for BPD (MSI-BPD), and a questionnaire booklet containing the GAD-7, PHQ-9 and the Ryff Psychological Well-being scale. The FAS, FTT, and MSI-BPD were completed verbally with the researcher; whilst the GAD-7, PHQ-9 and Ryff Psychological Well-being Scale were self-report measures completed by the participant whilst the researcher was present. Two of the BPD Group participants identified difficulties with reading, therefore the GAD-7, PHQ-9 and Ryff Psychological Well-being Scale was administered verbally in these cases. The process was piloted with a volunteer.

After all the measures were completed the participants were given a debrief sheet (see Appendix IX) and an opportunity to ask questions about the study. The same debrief sheet was used in both participant groups and was piloted along with the information sheets. The debrief sheet contained information of who to contact for further information, who to contact if they had any concerns, and their individual participant number. Participants in the BPD Group were given £5 for taking part, whilst those in the Control Group were entered into a cash prize draw.

It was agreed with the PD services to hold a group feedback session at each of the three PD services over the summer (2014) as well as produce summary sheets for their clients. Control Group participants were informed that they could contact the researcher after June (2014) for feedback on the study and a summary sheet if they were interested.

### **3.0. RESULTS:**

#### **3.1. Data entry**

Data was analysed using IBM SPSS Statistical Data Editor version 21. All data was explored for missing data and normal distribution. Skewedness and Kurtosis was calculated and deemed within normal distribution if z-scores were below 2.58 (Field, 2013), all data was within normal distribution limits. Outliers that were more than three standard deviations from the mean were Winsorised.

The PHQ-9 and GAD-7 scores for the BPD Group were within normal distribution; there was one outlier that was winsorised in the PHQ-9 data for the BPD Group. The Control Group's PHQ-9 and GAD-7 scores were also within normal distribution; there was one outlier in the PHQ-9 data and three outliers on the GAD-7 data. The FAS total scores for both the BPD and Control Group were within normal distribution, and there were no outliers. Internal consistency was calculated and shown to be high for the PHQ-9 (Cohen  $\alpha = 0.903$ ) and the GAD-7 (Cohen  $\alpha = 0.925$ ).

The Ryff Psychological Well-being categories (Positive Relationships with Others, Environmental Mastery, Personal Growth, Self-Acceptance, Purpose in Life and Autonomy) were all within normal distribution for the BPD Group; one outlier was winsorised in the Self-Acceptance category. In the Control Group the Ryff Psychological Well-Being categories were all within normal distribution; there was one outlier winsorised for both the Purpose of Life category and Personal Growth. Internal consistency was tested for the Ryff Psychological Well-being Scale (see Table 2 for Cronbach alphas), only Purpose in Life was below .7 suggesting weaker internal consistency than the other subscales.

Table 2:

Cronbach alphas for the internal consistency of the Ryff Psychological Well-being Scale Subscale Categories

<b>Subscale Category</b>	<b>Cronbach alpha</b>
Positive Relationships with Others	.736
Environmental Mastery	.781
Personal Growth	.804
Self-Acceptance	.775
Purpose in Life	.651
Autonomy	.861

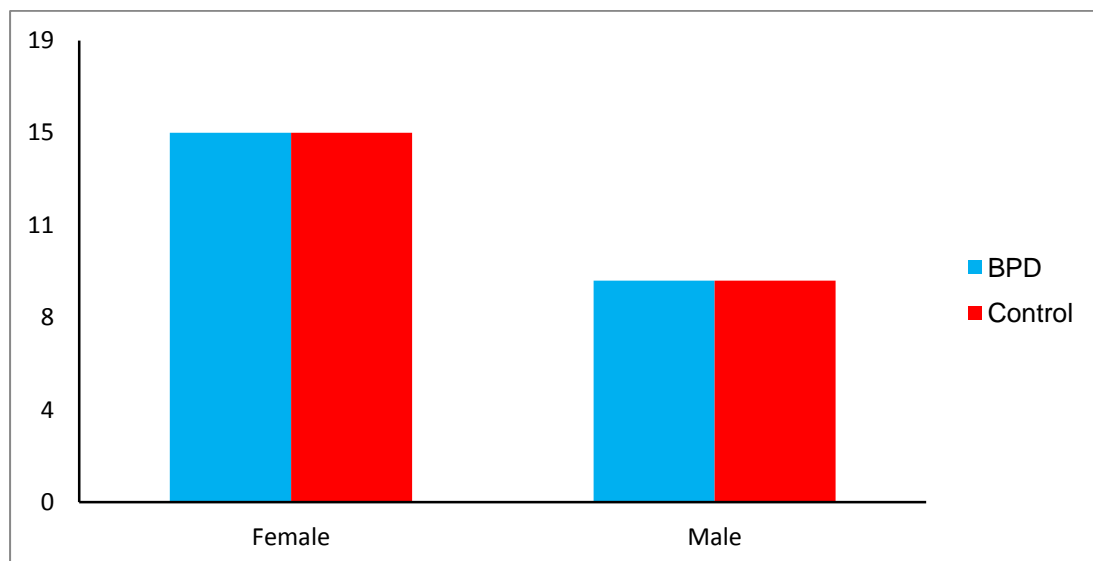
Future Thinking Task positive and negative scores for the three time periods (the next week, the next year, the next 5-10 years) were all within normal distribution for the BPD Group and the Control Group; there were no outliers for the three time periods for positive or negative scores.

### **3.2. Descriptive Statistics:**

The mean age for the BPD Group was 34.46 years old (SD = 8.13) whilst the mean age for the Control Group was 33.63 years old (SD = 6.86). An independent t-test showed that the two participant groups did not differ significantly in their mean age

( $t(46) = 0.384, p = .703$ ). Both the BPD Group and the Control Group had 15 female participants and 9 male participants (see Figure 3).

Pearson Chi-Squares were carried out on the other demographic categories (Relationship Status, Education Status, Current Employment Status, and Ethnicity). Results showed that Relationship Status ( $X^2(2) = 2.12, p = .347$ ), Educational Status ( $X^2(4) = 3.03, p = .552$ ), and Ethnicity ( $X^2(9) = 6.37, p = .702$ ), did not differ significantly between the two groups (see Figures 4, 5 and 6). Current Work Status was collapsed to unemployed/employed, there was no significant difference between the BPD Group and the Control Group ( $X^2(1) = .873, p = .350$ ); see Figure 7 for the participants Current Employment Status.



*Figure 3: BPD and Control Group Gender Status*

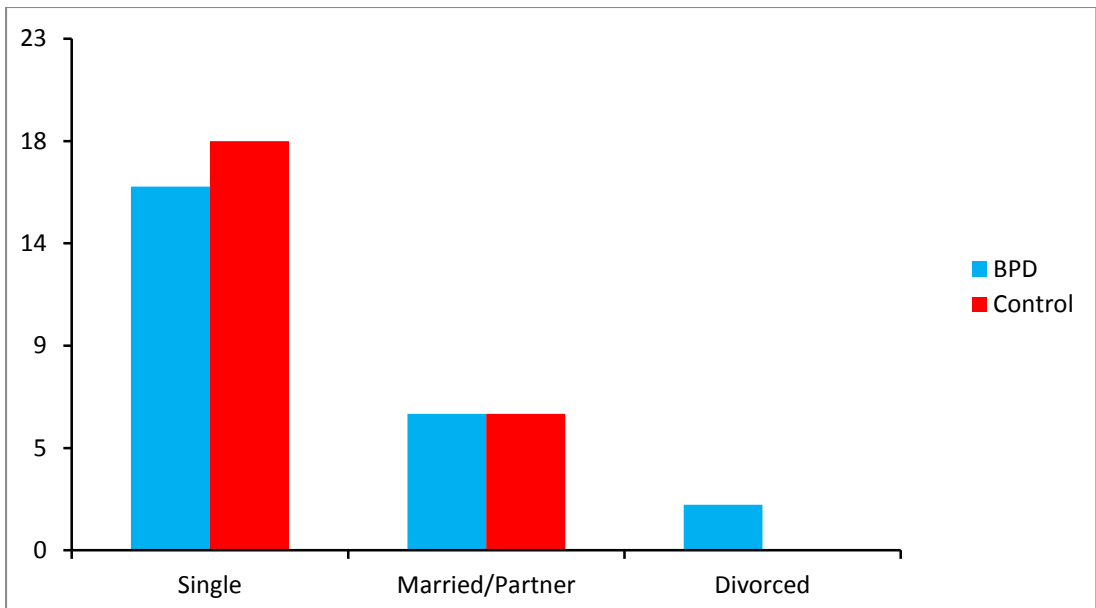


Figure 4: BPD and Control Group Relationship Status

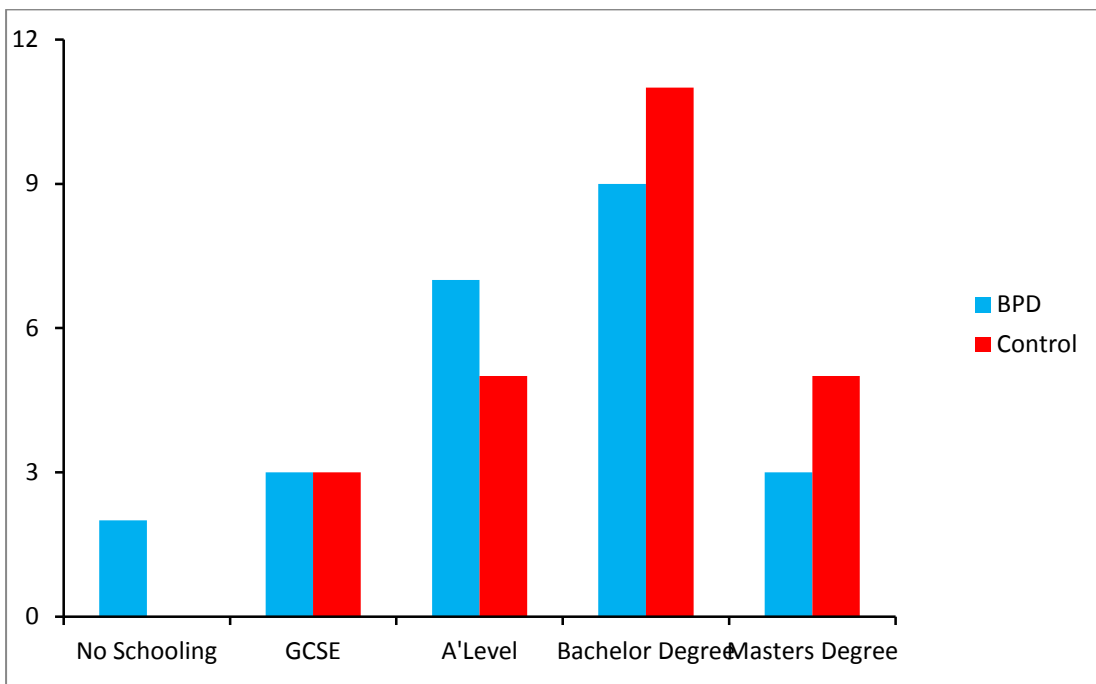


Figure 5: Educational status for BPD and Control Group

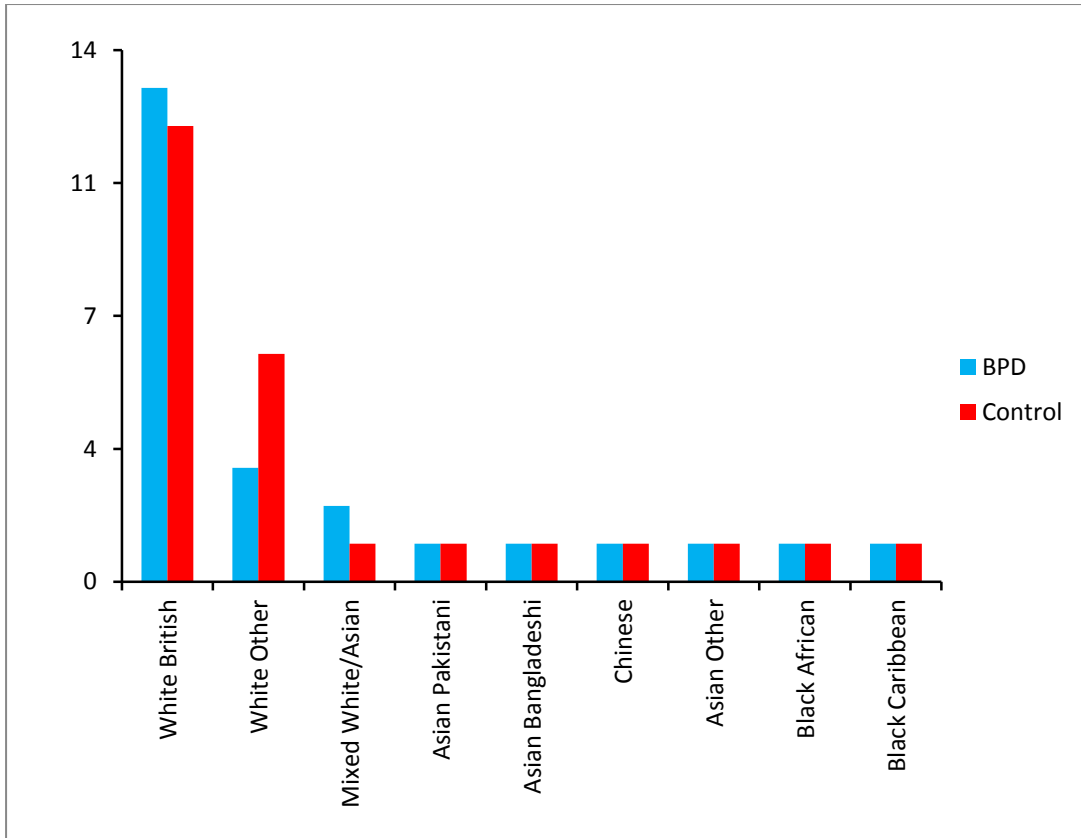


Figure 6: Ethnicity reported for BPD and Control Group participants

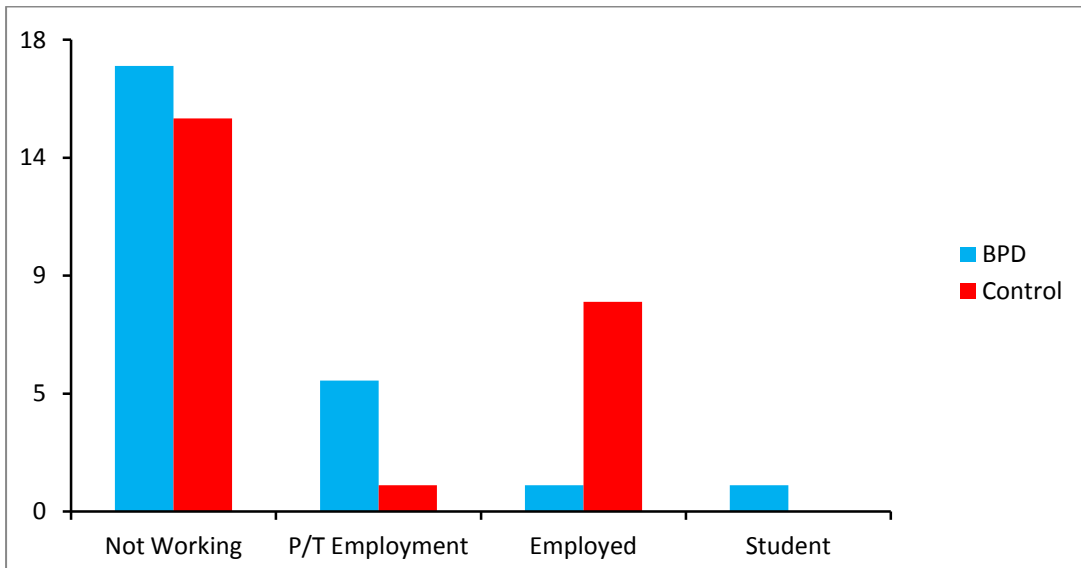


Figure 7: Current Employment Status for the BPD and Control Groups

### 3.3. FAS, PHQ-9 and GAD-7:

#### 3.3.1. FAS Scores

The FAS scores for both the BPD Group and the Control Group were compared (see Table 3). An independent t-test compared the FAS total scores in the BPD Group and the Control Group. Results showed that there was no significant difference between the FAS total scores of the BPD Group or the Control Group ( $t(46) = .961, p = .341$ ) indicating comparable levels of verbal fluency for the BPD Group and the Control Group.

Table 3

Table of the FAS total scores for BPD and Control Groups

	Mean	Std. Deviation
BPD Group	38.25	10.24
Control Group	41.29	11.64

#### 3.3.2. PHQ-9 Scores

The mean scores for the BPD Group and the Control Group are displayed in Table 4. An independent t-test was used to compare the PHQ-9 scores for the two groups. Results showed that the BPD Group had a significantly higher level of reported depression as measured by the PHQ-9 than the Control Group ( $t(38) = 7.61, p < .001$ ). The Control Group mean scores were within the “none” cut off score on the PHQ-9 (<5) indicating no difficulties with depression; the mean score for the BPD Group was within the “moderate” cut off score for depression (<15).



Table 4

Means and standard deviations for the PHQ-9 scores for both the BPD and Control Group

Participant Group	Mean	Std. Deviation
Control Group	4.21	3.48
BPD Group	14.75	5.83

The PHQ-9 scores for the BPD group were correlated with the MSI-BPD scores. Kendall's tau was used as there was only a small data set, with results showing no significant correlation ( $r_{\tau}(22) = .300, p = .076$ ).

### 3.3.3. GAD-7 Scores

An independent t-test was used to compare the GAD-7 scores for the two groups (see Table 5 for mean scores). Results showed that the BPD Group had a significantly higher level of reported general anxiety as measured with the GAD-7 than the Control Group ( $t(32) = 9.096, p < .001$ ). The Control Group had a mean score within the "none" cut off score on the GAD-7 ( $< 5$ ); the BPD Group's mean GAD-7 score indicated "moderate" general anxiety ( $< 15$ ).

Table 5:

Means and standard deviations for the GAD-7 scores for the BPD and Control Groups

Participant Group	Mean	Std. Deviation
Control	2.88	2.07
BPD	12.17	4.56

The GAD-7 scores for the BPD group were correlated with the MSI-BPD scores. Kendall's tau was used as there was only a small data set, with results showing no significant correlation ( $r_{\tau}(22) = .269, p = .113$ ).

### 3.4.1. Psychological Well-being

Hypothesis 1 for the present study was that the BPD Group would have significantly lower Ryff Psychological Well-being scores than the Control Group.

A Group (BPD Group vs Control Group) X Well-being (Positive Relationships with Others, Environmental Mastery, Personal Growth, Self-Acceptance, Purpose in Life, and Autonomy) mixed model ANOVA was carried out. Mauchly's test of Sphericity was significant therefore Huynh-Feldt was used. A significant main effect of Well-being ( $F(4.02,184.83) = 18.38, p < .001$ ), suggested that the Ryff Psychological Well-being category scores differed from one and other. There was also a significant main effect for Group ( $F(1,46) = 51.65, p < .001$ ) where the Control Group had a higher Well-being score than the BPD group. The interaction of Group and Well-

being was also significant ( $F(4.02,184.83) = 5.18, p < .001$ ) indicating that the groups varied significantly in their Well-being category scores.

Fisher's protected t-tests compared the BPD Group and Control Group on the six Well-being categories (see Table 6 for means). Control Group participants scored significantly higher (more positive) than the BPD Group on Positive Relations with Others ( $t(46) = 5.17, p < .001$ ); Environmental Mastery ( $t(46) = 7.48, p < .001$ ); Personal Growth ( $t(46) = 3.08, p < .001$ ); Self-Acceptance ( $t(46) = 6.93, p < .001$ ); and Purpose in Life ( $t(46) = 5.98, p < .001$ ). The Control Group also scored higher on the Autonomy category ( $t(46) = 2.52, p = .015$ ), but with a Bonferroni corrected significance level of 0.008, this was not significant. Therefore, the Control Group had significantly higher levels of Psychological Well-being than the BPD Group on all six dimensions, although less clearly so for Autonomy, supporting the Hypothesis 1 prediction.

Table 6:

Means and standard deviations for the BPD and Control Group's Ryff Psychological Well-being category scores

	Participant Group	Mean	Std. Deviation
Positive Relationships with others	BPD	30.42	8.129
	Control	43.46	9.297
Environmental Mastery	BPD	25.13	7.787
	Control	41.54	7.413
Personal Growth	BPD	40.04	7.737
	Control	46.13	5.818
Self-Acceptance	BPD	25.08	7.546
	Control	39.38	6.723
Purpose in life	BPD	31.88	7.249
	Control	43.08	5.633
Autonomy	BPD	32.25	10.654
	Control	39.42	8.992

Correlations were also conducted between the six Ryff Psychological Well-being dimensions for both the BPD and Control Group (see Tables 7 and 8). The strongest correlations for the BPD Group were between Environmental Mastery and Self-Acceptance ( $r(24) = .607, p = .002$ ); Personal Growth and Self-Acceptance ( $r(24) = .699, p < .001$ ); and Purpose in Life and Self-Acceptance ( $r(24) = .605, p = .002$ ).

Table 7:

Correlations between the six dimensions of PWB for the BPD Group

	Positive Relation with Others	Environmental Mastery	Personal Growth	Self-Acceptance	Purpose in Life	Autonomy
Positive Relation with Others		.025 (p = .907)	.184 (p = .391)	.121 (p = .575)	-.049 (p = .819)	-.321 (p = .126)
Environmental Mastery			.219 (p = .303)	.607 (p < .001)	.503 (p = .012)	.269 (p = .203)
Personal Growth				.699 (p < .001)	.493 (p = .014)	.379 (p = .068)
Self Acceptance					.605 (p = .002)	.397 (p = .055)
Purpose in Life						.418 (p = .042)
Autonomy						

The strongest correlations for the Control Group were between Positive Relations with Others and Environmental Mastery ( $r(24) = .794, p < .001$ ); Environmental Mastery and Purpose in Life ( $r(24) = .707, p < .001$ ); and Personal Growth and Self-Acceptance ( $r(24) = .630, p = .001$ ).

Table 8:

Correlations between the six dimensions of PWB for the Control Group

	Positive Relation with Others	Environmental Mastery	Personal Growth	Self-Acceptance	Purpose in Life	Autonomy
Positive Relation with Others		.794 (p < .001)	.440 (p = .031)	.664 (p < .001)	.555 (p = .005)	.524 (p = .009)
Environmental Mastery			.487 (p = .016)	.595 (p = .002)	.707 (p < .001)	.489 (p = .015)
Personal Growth				.630 (p = .001)	.537 (p = .007)	.185 (p = .387)
Self-Acceptance					.527 (p = .008)	.549 (p = .005)
Purpose in Life						.418 (p = .042)
Autonomy						

### 3.4.2. Ryff Psychological Well-being (PWB) Profile for the BPD Group

A PWB profile was calculated for the BPD Group, where the Control Groups mean dimension scores were used as a comparison “population norm”. The BPD Group Profile dimension scores represented the standard deviations from the Control Group (population norm). Each dimension score was calculated as the distance from the population norm mean and divided by the population norm standard deviation.

The BPD Group had scores below the population norm for all six dimensions (see Figure 8). Environmental Mastery, Self-Acceptance and Purpose in Life were all more than two standard deviations from the population norm; Positive Relations with Others and Personal Growth were within one standard deviation below the

population norm; Autonomy was the closest dimension to the population norm where it was less than one standard deviation below the population norm.

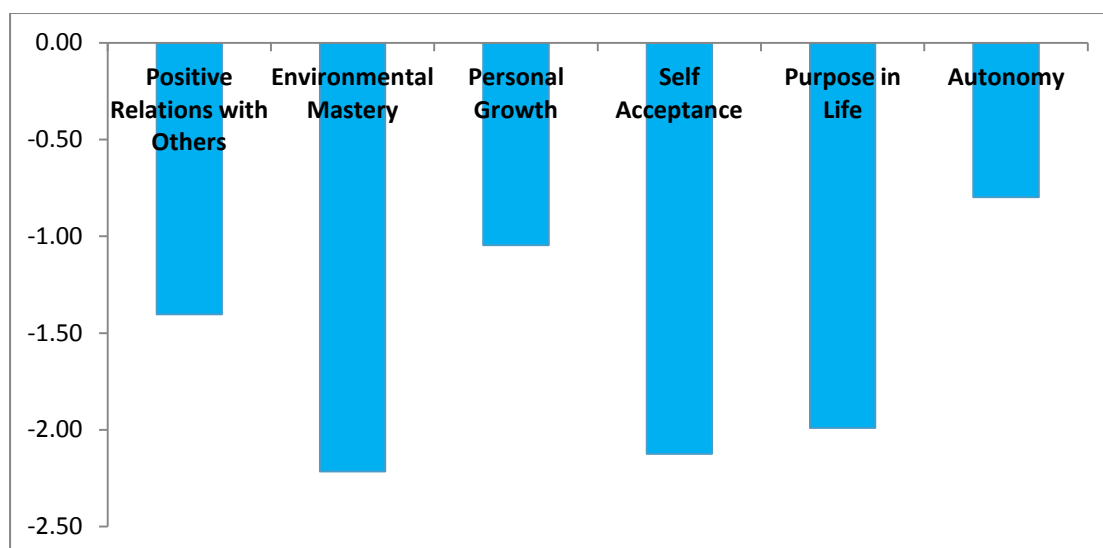


Figure 8: Graph of the BPD Group's mean differences for the six categories from the population mean

A repeated measures ANOVA showed a main effect of BPD Profile scores ( $F(4.99,115) = 9.67, p < .001$ ). Pair-samples t-tests compared the BPD Group's mean differences in category profile scores to each other. Significant differences were found between Environmental Mastery and Positive Relations with Others; Environmental Mastery and Autonomy; Environmental Mastery and Personal Growth; Personal Growth and Self-Acceptance; Self-Acceptance and Autonomy; and Purpose in Life and Autonomy (see Table 9).

Therefore, the BPD Group has greatest deficits in Environmental Mastery, Self-Acceptance, and Purpose in Life within their Psychological Well-being profile. Positive Relations with Others scores were higher than these three factors, against

the prediction that the BPD Groups deficits in Positive Relations with Others would be more marked than the other dimensions.

Table 9:

Mean differences between the Ryff Psychological Well-being factor Profile scores for the BPD Group.

	Positive Relations with Others	Environmental Mastery	Personal Growth	Self - Acceptance	Purpose in Life	Autonomy
Positive Relations with Others	0.813 (p = .007)	0.356 (p = .241)	0.722 (p = .014)	0.588 (p = .084)	0.605 (p = .091)	
Environmental Mastery		1.169 (p = .001)	0.091 (p = .649)	0.225 (p = .361)	1.418 (p < .001)	
Personal Growth			1.078 (p < .001)	0.944 (p = .002)	0.249 (p = .395)	
Self - Acceptance				0.134 (p = .549)	1.327 (p < .001)	
Purpose in Life					1.193 (p < .001)	
Autonomy						



### **3.5. Future-directed Thinking Task (FTT)**

#### **3.5.1. Total FTT scores within the three time periods**

Hypothesis 2 in the present study predicted that the BPD Group would have significantly fewer positive things to look forward to than the Control Group, but not a significant difference in negative future experiences, supporting MacLeod et al.'s (2004) findings.

Total scores for the three time periods (the next week, the next year, and the next 5-10 years) were collected (see Table 10 for the means).

Table 10:

Mean FTT Positive and Negative Scores generated by the BPD and Control Groups for the next week, the next year and in 5-10 years.

	Participant Group	Mean	Std. Deviation
Positive Next Week	BPD	4.54	1.82
	Control	6.71	2.40
Positive Next Year	BPD	5.08	1.77
	Control	6.54	2.84
Positive Next 5-10 Years	BPD	4.54	2.00
	Control	5.75	1.96
Negative Next Week	BPD	3.92	1.67
	Control	3.79	1.47
Negative Next Year	BPD	4.29	1.85
	Control	3.67	2.04
Negative Next 5-10 Years	BPD	4.12	1.57
	Control	3.92	1.53

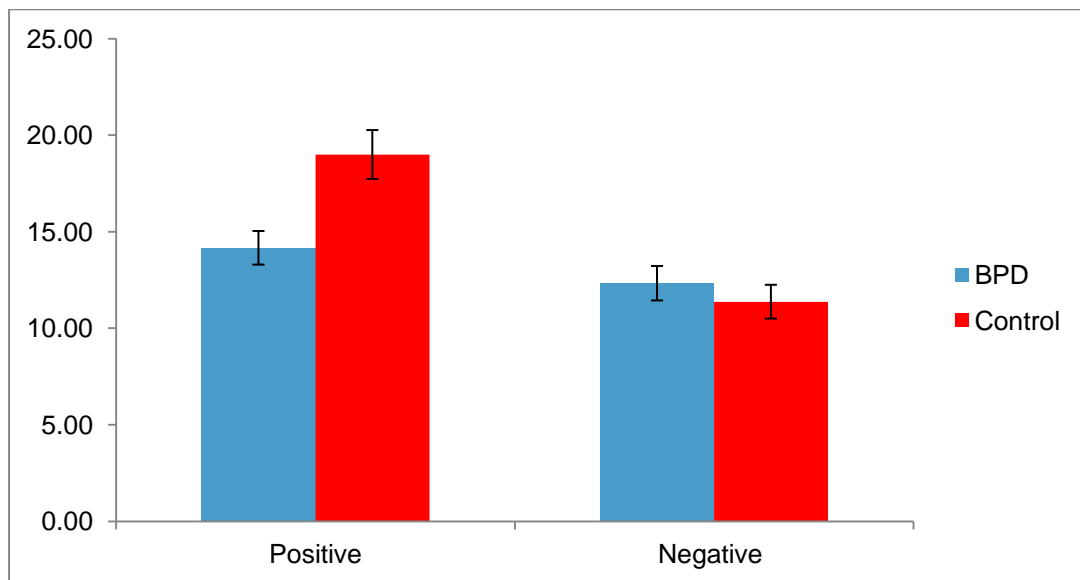
A Group (BPD vs Control) x Valence (Positive vs Negative) x Time (the next week, the next year, the next 5-10 years) 3-way mixed model ANOVA was carried out. Mauchly's test of Sphericity was not significant and therefore Sphericity was assumed. Results showed a significant main effect of Valence ( $F(1,46) = 45.1, p$

<.001) due to participants generating more positive than negative experiences. The main effect of Time was not significant ( $F(2,92) = 1.24, p = .295$ ), showing that participants did not generate significantly different numbers of future experiences at the three time periods (the next week, the next year, or the next 5-10 years). The main effect for Group was also not significant ( $F(1,46) = 2.56, p = .116$ ), showing that the BPD Group and the Control Group generated similar overall numbers of future events.

The interaction of Valence and Group was significant ( $F(1,46) = 16.9, p < .001$ ), showing that the BPD Group and the Control Group significantly differed in the number of positive and negative experiences they generated. The interaction between Time and Group was not significant ( $F(2,92) = 1.36, p = .295$ ), and the interaction between Time and Valence was not significant ( $F(2,92) = 2.28, p = .108$ ). Finally, the three-way interaction between Time, Valence and Group was not significant ( $F(2,92) = 0.77, p = .464$ ).

To understand the significant Group X Valence interaction, Fisher's protected t-tests compared the BPD Group and the Control Group in the number of positive and negative experiences they generated as a total over the three time periods (see Figure 9). The Control Group generated significantly more positive experiences than the BPD Group ( $t(46) = 3.15, p = .003$ ). However, there was no significant difference in the number of negative experiences the Control Group and the BPD Group produced. Therefore the hypothesis that participants with a diagnosis of BPD would generate fewer positive future experiences compared to the general population, in the absence of increased negative future experiences, was supported. Pairwise

comparison t-tests showed that there was no significant difference in the number of positive and negative FTT scores generated by the BPD Group ( $t(23) = 1.68, p = .106$ ). However, the Control Group generated more positive than negative FTT scores ( $t(23) = 8.54, p < .001$ ).



*Figure 9: Means for total positive and negative FTT items generated by the BPD and Control Group*

### **3.5.2 Future Thinking Task Coded Category Scores**

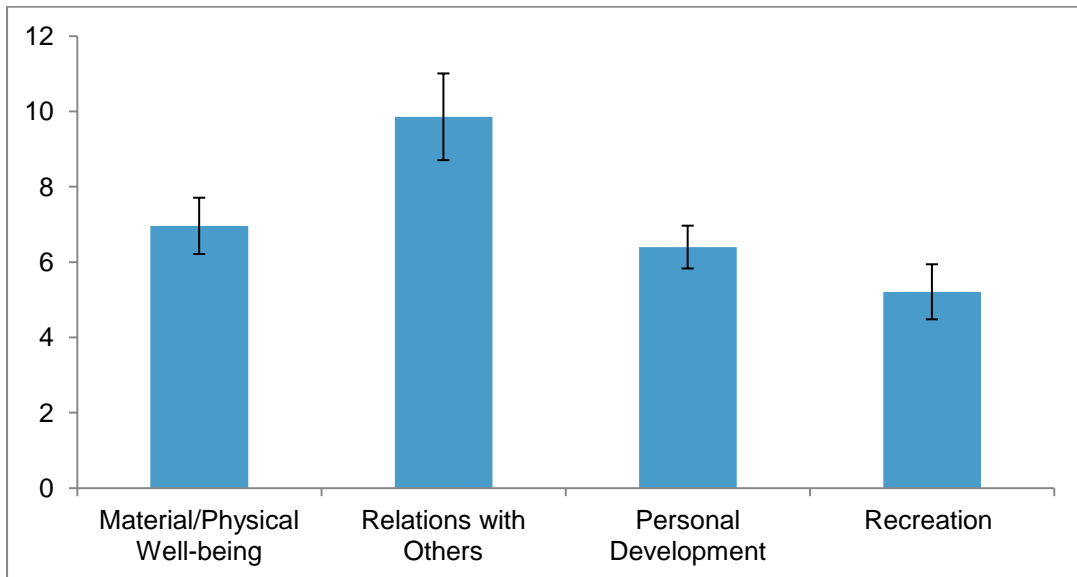
Hypothesis 3 predicted that the BPD Group would generate fewer anticipated positive future experiences involving interpersonal relationship content, relative to other content, and the general population.

As there was no main effect of Time in the previous FTT results, and due to small numbers in the individual categories, total positive and negative scores for the four main FTT categories were used in this analysis. A Group (BPD vs Control) x Valence (Positive vs Negative) x FTT Category (Physical/Mental Material Well-being,

Relations with Others, Personal Development, and Recreation) 3-way mixed ANOVA was tested. Mauchly's test of Sphericity was not significant and therefore Sphericity was assumed. Results showed a main effect of FTT Category ( $F(3,138) = 14.23, p < .001$ ) indicating significant differences between the scores on the four FTT Categories. A main effect of Valence was also found ( $F(1,46) = 37.45, p < .001$ ), where participants generated more positive items than negative items. There was no main effect of Group ( $F(1,46) = 2.09, p = .16$ ). There was a significant interaction between FTT Categories and Group ( $F(3,138) = 8.87, p < .001$ ), indicating the BPD and Control Group differed in the Category Scores they produced; there was also a significant interaction between FTT Categories and Valence ( $F(3,138) = 18.30, p < .001$ ), indicating that the Category scores differed for positive and negative FTT scores. A significant interaction between Valence and Group ( $F(1,46) = 16.64, p < .001$ ) was indicated and has already been reported on in the present study's findings. Finally, there was a trend towards significance on the 3 way interaction between FTT Category, Valence and Group ( $F(3,138) = 2.49, p = .063$ ), justifying further exploration of positive and negative valences in the FTT categories within the BPD and Control Groups.

In order to explore the significant findings within the FTT Category scores, Post-hoc comparisons were carried out (see Figure 10). Results showed that there was a significant difference between Relations with Others scores and the other three categories (Physical/Material Well-being, Personal Development, and Recreation); there was also a significant difference between Physical/Material Well-being scores and Recreation. Participants as a whole generated significantly more

Relations with Others future experiences than the other three categories. Future experiences involving Recreation was the least mentioned by the participants as a whole and this was significantly less than Relations with Others and Physical/Material Well-being but not than Personal Development.



*Figure 10: Total FTT Category scores generated by the study participants*

To explore the significant interaction between Valence and FTT Categories, pairwise t-tests were carried out. Results showed that there was a significant difference between the positive and negative scores within all the categories. Participants as a whole generated significantly more negative than positive Physical/Material Well-being ( $t(47) = 3.39, p = .001$ ), whereas, they generated significantly more positive Relations with Others items than negative items ( $t(47) = 3.46, p = .001$ ), significantly more positive than negative Personal Development items ( $t(47) = 2.2, p = .033$ ), and significantly more positive than negative Recreation items ( $t(47) = 7.22, p < .001$ ) (see Figure 11).

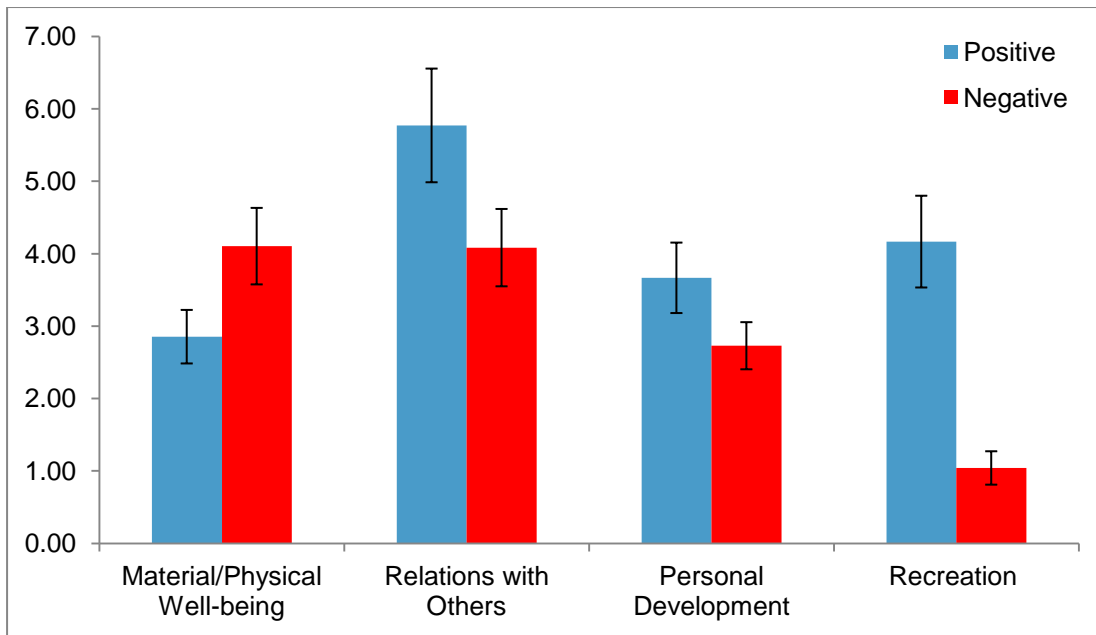


Figure 11: Mean scores for the positive and negative category scores for all participants.

A Group (BPD Group vs Control Group) X FTT Category (Physical/Mental Well-being, Relations with Others, Personal Development, Recreation) mixed model ANOVA was carried out for positive items generated. Mauchly's test of Sphericity was not significant and therefore Sphericity was assumed. There was a significant main effect of FTT Category ( $F(3,138) = 9.844, p < .001$ ), and a significant interaction between Group and FTT Category ( $F(3, 138) = 7.395, p < .001$ ). To explore the interaction between Group and FTT Category, Fisher's protected t-tests were carried out (see Figure 12). Results showed that the BPD Group produced significantly more positive Physical/Material Well-being items than Controls ( $t(46) = 2.06, p = .045$ ); whereas the Control Group produced significantly more positive Relations with Others items ( $t(46) = 2.68, p = .010$ ) and significantly more Recreation items ( $t(46) = 4.23, p < .001$ ) than the BPD Group. There was no significant difference in the

number of positive Personal Development items produced ( $t(46) = .240, p = .811$ ) between the two groups.

A Group (BPD Group vs Control Group) X FTT Category (Physical/Mental Well-being, Relations with Others, Personal Development, Recreation) mixed model ANOVA was carried out for negative items generated. Mauchly's test of Sphericity was not significant and therefore Sphericity was assumed. There was a significant main effect of FTT Category ( $F(3,138) = 28.29, p < .001$ ), and a significant interaction between Group and FTT Category ( $F(3, 138) = 4.105, p = .008$ ). Fisher's protected t-tests were carried out for the Group x FTT Category interaction for negative valence (see Figure 12). The BPD Group generated significantly more negative Physical/Material Well-being items than the Control Group ( $t(46) = 2.53, p = .015$ ). There was no significant difference in the other three categories for the number of negative FTT items generated between the two groups; Relations with Others ( $t(46) = 1.11, p = .274$ ), Personal Development ( $t(46) = .630, p = .5.32$ ), and Recreation ( $t(46) = 0.253, p = .801$ ).



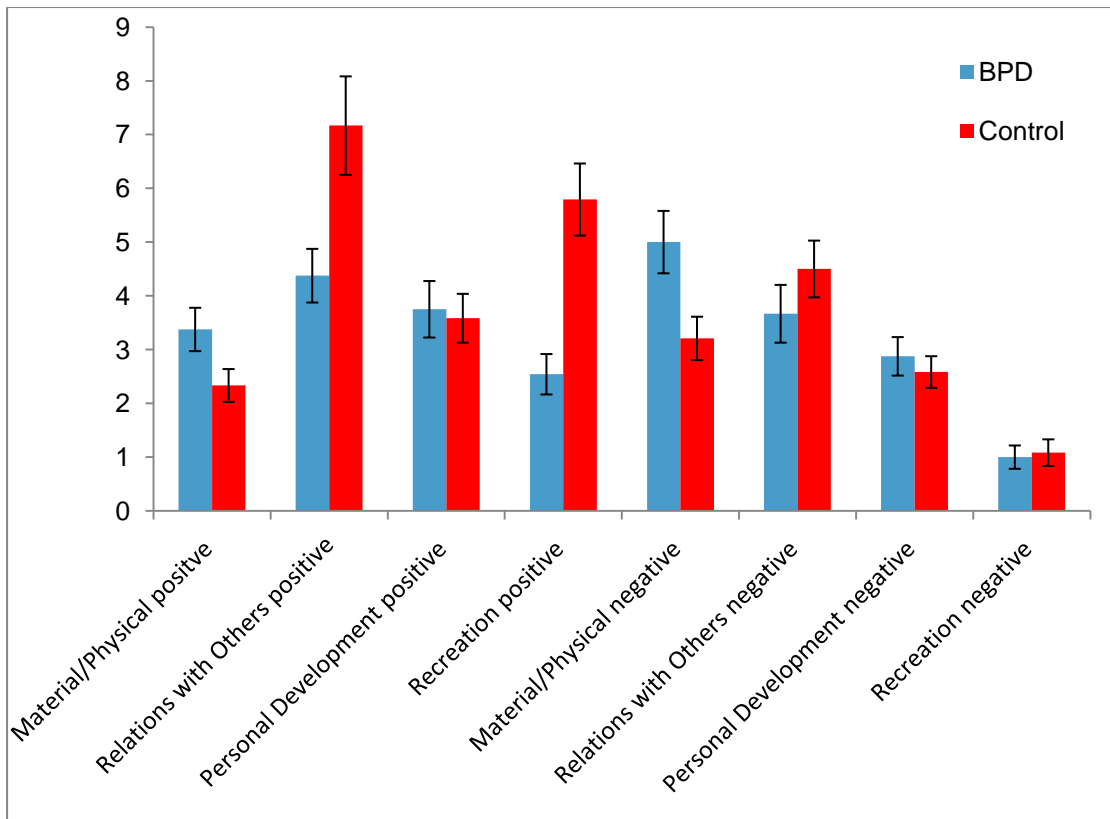


Figure 12: Means for the Category scores produced by the BPD and Control Group for positive and negative FTT items.

Therefore, the hypothesis that the BPD Group would produce fewer positive Relations with Others experiences than the Control Group to was supported. It was predicted that Relations with Others would be lower than the other categories for the BPD Group but this was not the case, however, Relations with Others was the most mentioned category by all participants and could possibly explain this.

### 3.5.3. Future Thinking Task Individual Factor within the Category Codes

The seven individual factors within the FTT Relations with Others category (Relations with Family, Having/Raising children, Relations with a Significant Other, Relations with Friends, Helping Others, Socialising, and Others Well-being) and the two individual factors within the FTT Recreation category (Passive, and Active Activities)

were explored (see Figures 13 and 14). These factors were selected for further analysis as they related to Hypothesis 3 which predicted differences within these individual factors for the BPD and Control Groups. Mann-Whitney tests were used to identify differences in the factors generated by the two participant Groups as numbers were small within the individual factors and not normally distributed, therefore a non-parametric analysis was required.

There was no significant difference in the positive individual FTT factors generated within the Relation with Other category, apart from Having/Raising Children ( $Z = -2.9$ ,  $p = .004$ ). The other factors were not significant; Relations with Family ( $Z = -1.77$ ,  $p = .076$ ), Relations with Significant Other ( $Z = -.94$ ,  $p = .348$ ), Relations with Friends ( $Z = -.27$ ,  $p = .790$ ), Socialising ( $Z = .000$ ,  $p = 1.000$ ), Health of Others ( $Z = .000$ ,  $p = 1.000$ ), and Helping Others ( $Z = -1.73$ ,  $p = .084$ ). Both the individual Recreation factors (Passive activities and Activities) were significantly different between the number of positive items generated by the BPD Group and the Control Group; Passive Activities ( $Z = -3.23$ ,  $p = .001$ ), and Activities ( $Z = -2.45$ ,  $p = .014$ ), where the Control Group generated significantly more positive items on these two factors.

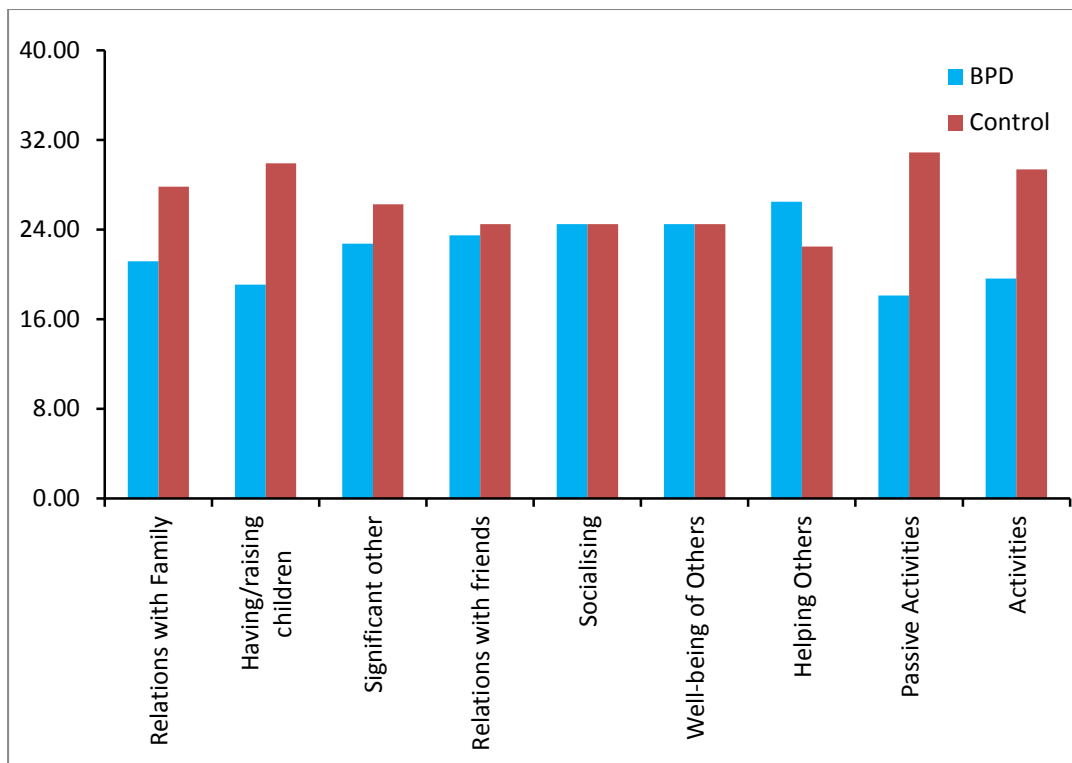
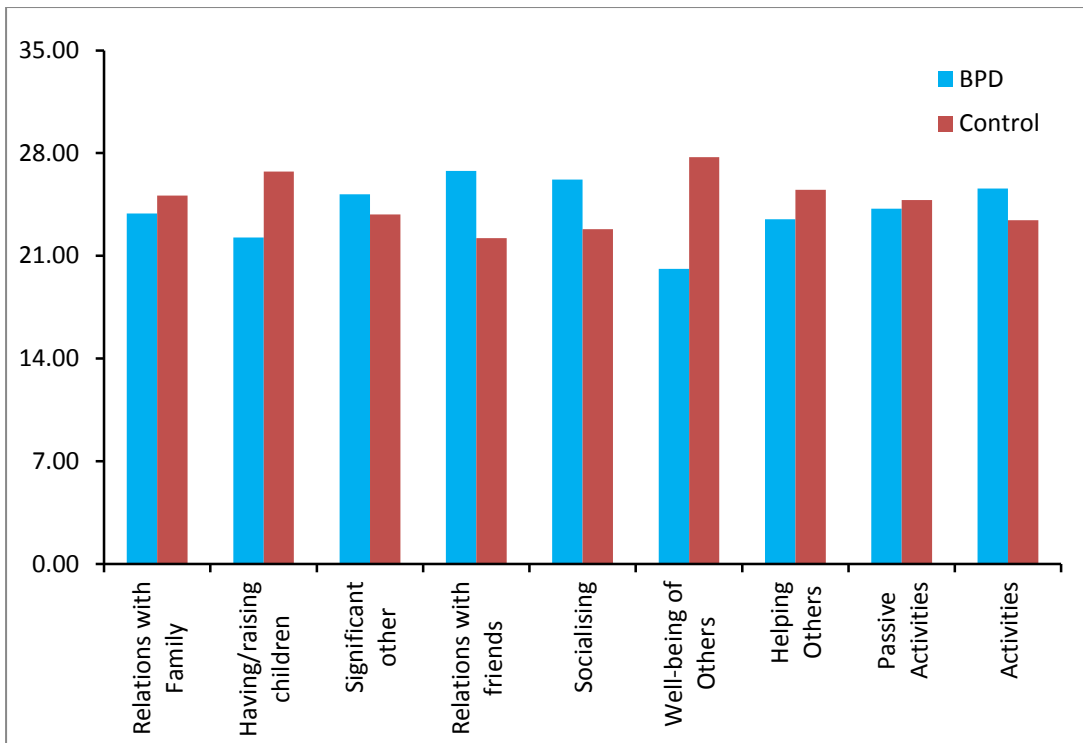


Figure 13: Mean rank scores for positive items generated by the BPD and Control Group on Relations with Others and Recreation factors

Additionally, results showed that there was no significant difference in the number of negative items generated by the BPD and Control Group for the Relations with Other factors apart from Well-being of Others ( $Z = -2.07, p = .038$ ), where the Control Group generated more negative items. The other individual factors showed no significant difference; Relations with Family ( $Z = -.35, p = .730$ ), Having/Raising children ( $Z = -1.26, p = .206$ ), Relations with a Significant Other ( $Z = -.36, p = .700$ ), Relations with Friends ( $Z = -1.36, p = .172$ ), Socialising ( $Z = -.94, p = .349=8$ ), and Helping Others ( $Z = -1.43, p = .153$ ). Finally, both the factors within Recreation were not significantly different for negative items generated by the BPD Group and the Control Group; Passive Activity ( $Z = -.161, p = .872$ ), and Activity ( $Z = -.69, p = .491$ ).



*Figure 14: Mean rank scores for negative items generated by the BPD and Control Group on Relations with Others and Recreation factors*

Therefore, results for the individual factors within the four FTT categories did not support Hypothesis 3 that the BPD Group would have significantly fewer things to look forward to within the Relations with Others category, with exception of the individual factor Having/Raising Children.

## **4.0 DISCUSSION**

The aim of the present study was to explore future-directed thinking and psychological well-being in those with a diagnosis of BPD. It was predicted that the BPD Group would have significantly lower Ryff Psychological Well-Being scores, and generate significantly fewer positive future-directed thoughts, in the absence of any differences in negative future-directed thoughts when compared to Control participants. Difficulties in interpersonal interactions, one of the main distinguishing features of BPD diagnostic criteria, was thought to be central to these predicted outcomes. It was suggested that these findings would give greater insight into the diagnosis of BPD and how it relates to other mental health disorders, as well as being of relevance for clinical interventions.

### **4.1. Summary of findings**

The BPD and Control Groups were matched on demographics (age, gender, ethnicity, employment status, education status, and relationship status) there was no significant differences between the two groups, there was also no significant difference in the two groups' verbal fluency scores (FAS scores). Previous research (e.g., Rain et al., 1991; Ryan & Deci, 2001) has highlighted how these factors can influence both well-being and future-directed thinking, and therefore matching of these factors was considered a strength of the present study.

Depression and anxiety were both measured in the present study using the PHQ-9 and GAD-7. The Control Group reported mean scores significantly lower than the BPD Group on the PHQ-9 and GAD-7. The Control Group reported an average of "no" difficulties associated with anxiety or depression, whilst the BPD Group

reported an average of “moderate” depression and anxiety. The Control Group also verbally reported no involvement in mental health services, thus providing a comparison baseline score of no BPD diagnosis or mental health difficulties. These findings confirmed the prediction that the BPD Group would produce some level of anxiety and depression, as affect instability is identified as part of the diagnosis of BPD, and there is reported high co-morbidity between BPD, depression and anxiety.

Psychological well-being was measured on the Ryff Psychological Well-Being Scale. The BPD Group reported significantly lower psychological well-being scores on all six of the Ryff Psychological Well-Being categories (Positive Relations with Others, Environmental Mastery, Personal Growth, Purpose in Life, Self-Acceptance, and Autonomy) than the Control Group. This supported the present study’s hypothesis which predicted that the BPD Group would have lower psychological well-being scores than the Control Group. The highest Ryff Psychological Well-Being dimension scores in the Control Group were Personal Growth, Positive Relations with Others, and Purpose in Life. Psychological well-being profile scores for the BPD Group were all below the population mean norm. The greatest differences between the BPD Group and the population norm were Environmental Mastery (being able to choose and create environments that meet ones specific needs), Self-Acceptance (being able to positively evaluate oneself and one’s past life, acknowledging the presence of good and bad qualities in the self), and Purpose in Life (having goals, intentions and a sense of direction which contributes to the feeling that life is meaningful). The psychological well-being dimensions closest to the population mean were Positive Relations with Others (having warm and trusting interactions

with other people and being able to display empathy affection and intimacy), Personal Growth (being open to new experiences and considering the self as growing and expanding over time), and Autonomy (being able to evaluate oneself according to personal standards and not look to others for approval).

Future-directed thinking was measured using the Future Thinking Task (FTT). As predicted by the second hypothesis in the present study, results showed that the Control Group generated significantly more positive future-directed thoughts than the BPD Group, whilst there was no significant difference in the number of negative future-directed thoughts generated between the two groups. These findings also supported previous findings by MacLeod et al. (2004). Additionally, the results in the present study found that there was no significant difference in the number of positive and negative future-directed thoughts generated by the BPD group, in contrast to the Control Group who generated significantly more positive than negative future-directed thoughts. There was no main effect of time on the FTT results, suggesting that the participants did not generate different numbers of future experiences within the three time periods (the next week, the next year, the next 5-10 years).

To explore the content of the FTT experiences generated, future thoughts were coded based on four "Quality of Life" categories (Relations with Others, Physical/Mental & Material Well-being, Personal Development, and Recreation). Participants as a whole generated more Relations with Others future experiences than the other three categories (Physical/Mental & Material Well-being, Personal Development and Recreation experiences). The BPD Group generated significantly

more positive Physical/Mental & Material Well-being thoughts than the Control Group, whereas the Control group generated significantly more positive future experiences relating to Relations with Others and Recreation than the BPD Group. There was no significant difference in the number of positive Personal Development future thoughts generated by the two groups. The BPD Group generated significantly more negative future experiences categorised as Physical/Mental & Material Well-being than the Control Group. There were no significant differences between the BPD and Control Group in the number of negative future experiences generated in the other three categories (Relations with Others, Personal Development, and Recreation). Within the four main FTT (Relations with Others, Physical/Mental & Material Well-being, Personal Development, and Recreation), the BPD Group generated more thoughts categorised as Relations with Others than the other three categories. These findings supported the hypothesis that the BPD Group would generate fewer future thoughts related to Relations with Others compared to the Control Group, but did not support the hypothesis that Relations with Others would be mentioned less than the other three FTT categories by the BPD Group.

The differences in the number of experiences generated for each individual factor within the Relations with Others category (i.e., Relations with Family, Having/Raising Children, Relations with a significant other, Relations with Friends, Helping others, Socialising, and Well-being of Others) and the Recreation category (i.e., Passive, and Active Activities) were further explored. Results showed that there was no significant difference between the BPD Group and the Control Group in the number of positive experiences generated that related to the category Relations



with Others; other than within the individual factor Having/Raising Children where Controls generated significantly more positive experiences. The Control Group also generated significantly more positive Passive and Active Recreation future experiences than the BPD Group. Finally, there was no significant difference in the number of negative future thoughts generated for the Relations with Others category individual factors, other than within the individual factor Helping Others, where Controls generated significantly more negative items. There was no significant difference in the number of negative expected experiences generated for the two individual factors within the Recreation category (Passive and Active Activities).

#### **4.2. BPD and Psychological Well-being**

As previously reported, the BPD Group had a significantly lower psychological well-being dimension scores than the Control Group which supports previous findings on Ryff Psychological Well-being scores for other mental health disorders. Studies on participants with depression and anxiety have consistently reported lower Ryff Psychological Well-Being scores compared to the general population (e.g., Fava et al., 2001; Nierenberg et al., 2010; Ruini et al., 2003). As there are no other Ryff Psychological Well-being studies exploring those with a diagnosis of BPD, comparison to previous studies exploring depression and anxiety is the closest available alternative. Mood instability, such as symptoms of anxiety and depression, are part of the DSM-IV diagnostic criteria for BPD, additionally the high co-morbidity with these disorders, therefore make comparing findings with these published psychological well-being literature findings relevant. As stated by Fyer et al. (1988),

“pure” BPD is not common and difficulties with low mood and anxiety are seen as part of the BPD profile, therefore it would not be appropriate to partial out anxiety and depression as these cannot legitimately be separated from the diagnosis of BPD. As there are no other studies specifically exploring BPD and psychological well-being using the Ryff Psychological Well-Being Scale, the results of the present study provide interesting findings in the area of psychological well-being and BPD.

Previous studies have also explored Ryff Psychological Well-being profiles of participant groups in more detail. The six psychological well-being dimension scores for the Control Group act as a baseline for comparison and the clinical groups standard deviation differences to these mean baseline scores are explored. In the present study the greatest differences in the BPD Groups psychological well-being dimensions from the population norm was within Environmental Mastery, Self-Acceptance, and Purpose in Life, all of which were close to two standard deviations below the population mean. The other three dimensions (Autonomy, Relations with Others, and Personal Growth) were all close to one standard deviation below the population norm. In a previous study, Ryff (1995) reported that Environmental Mastery was negatively correlated with depression. Nierenberg et al. (2010) additionally, reported low levels of Environmental Mastery, Self-Acceptance, Purpose in Life, and Positive Relations with Others in individuals with minor depression. Edmondson (2012) explored psychological well-being profiles in depressed participants and reported that Environmental Mastery and Self-Acceptance fell the furthest below the population mean. The results from the

present study therefore show a comparable Ryff Psychological Well-being profile for those with a diagnosis of BPD to those reporting symptoms of depression.

Difficulties with Environmental Mastery (being able to choose and create environments that meet ones specific needs) and Self-Acceptance (being able to positively evaluate oneself and ones' past life, acknowledging the presence of good and bad qualities in the self) may be explained by the BPD Group's dichotomous thinking styles and their greater levels of negative evaluations of themselves, others and the world around them (Pretzer, 1990). The BPD Group's dysfunctional information processing and social problem solving skills (McMurran et al., 2007) may make it difficult for these individuals to manipulate their current environment, and thus they may believe that they do not possess adequate Environmental Mastery to create an environment that meets their specific needs and well-being. As stated by Beck et al. (2004) this client group often displays maladaptive beliefs, namely that they are bad and the world around them is dangerous, and this can perhaps be linked to low levels of Environmental Mastery and Self-Acceptance. Additionally, difficulties with emotional dysregulation and impulsivity leads to problems in the individual's social world, leading to the individual feeling that their current needs are not being met. In order to cope, individuals adopt careless and avoidant behaviours, such as self-harming behaviour (McMurran et al., 2007), this may be associated with low Environmental Mastery and Self-Acceptance.

A chronic feeling of emptiness, associated with the diagnosis of BPD, may also relate to difficulties in Self-Acceptance and Purpose in Life. Individuals have little belief in their skills and in the purpose of striving for a positive experience, as

their previous experiences often leave the individual feeling hopeless (Barnow et al., 2009). Reduction in Purpose in Life (having goals, intentions and a sense of direction which contributes to the feeling that life is meaningful) can also be related to difficulties with beliefs that life is good and fair, and difficulties with emotional regulation and hopelessness that lead to the avoidance of situations and striving (Beck et al., 2004). If individuals are experiencing hopelessness and avoiding situations that they feel will be negative, this will likely have negative effects on their thoughts related to Purpose in Life.

Autonomy is defined as being able to evaluate oneself according to personal standards and not looking to others for approval. Results in the present study showed that the BPD Group had lower Autonomy scores than the Control Group, and an Autonomy psychological profile scores just less than one standard deviation from the population norm. Higher scores in this domain for the BPD Group, as opposed to the other psychological well-being domains, may be understood by considering that this client group is less able to rely on others and therefore not looking to others for approval. Fear of rejection and experiences of negative childhood attachments in those with a diagnosis of BPD (Fonagy, 2000) may lead to individuals adopting an individualistic style of interactions and outlook on life. Additionally, this domain investigates an individual's ability to evaluate oneself according to personal standards. Individuals with a diagnosis of BPD have been found to evaluate themselves more negatively or to apply higher standards due to fears of not being good enough and therefore, worthy of abandonment and punishment (Baer et al., 2012).

Based on previous research and theories of BPD, it was predicted that the BPD Group would have the lowest psychological well-being dimension scores within Positive Relations with Others (having warm and trusting interactions with other people and being able to display empathy affection and intimacy). Difficulties with interpersonal relations have continuously been highlighted within BPD (e.g., Barnow et al., 2009; Gunderson, 2007; Linehan, 1993). However, in the present studies results this dimension (Relations with Others) was not significantly lower than the other psychological well-being dimensions. One explanation for this is the effect of the BPD participant's involvement in treatment programmes (i.e., DBT and MBT programmes) that focus on interpersonal relation skills. Individuals with a diagnosis of BPD often have a history of dysfunctional relationships, and treatment programmes like MBT and DBT specifically aim to help individuals identify and understand these relationships further. Therefore, interpersonal relationships may be more central in the BPD Group's thoughts and desires and they may wish to appear more adept in this area. Alternatively, treatment may be having a positive effect on this dimension of their psychological well-being. Additionally, as the Ryff Psychological Well-Being Scale is a self-report scale of agreement with statements regarding psychological well-being, the BPD Group may use their own previous experiences as a baseline rather than a perceived population norm. Thus, individuals may have rated themselves higher on dimensions like Relations with Others since, at the present, their personal reflected experience on this dimension felt more positive than their previous extremely negative Relations with Others experiences. Finally the results may also reflect the general findings of other studies that all individuals

mention Relations with Others to a greater extent than other psychological well-being dimensions (Nierenberg et al., 2010). There was still a significant reduction in the dimension Relations with Others from the population norm in the BPD group, suggesting there are still difficulties in this area of psychological well-being for the BPD Group.

Interpersonal difficulties have regularly been highlighted as a specific deficit within individuals with a diagnosis of BPD (e.g., Barnow et al., 2009; Gunderson, 2007; Linehan, 1993). Preoccupied attachment styles and poor mentalisation within this client group leads to hyper-vigilance in attachments with fear of abandonment, and rejection (Choi-Kain, Fitzmaurice, Zanarini, Laverdiere, & Gunderson, 2010). Dichotomous thinking, often described within this client group, may also correlate with reduced Positive Relations with Others. Individuals employ “all good” or “all bad” thinking styles to situations and others, which then leads to negative interpretations of others and dysfunctional relationship styles, as individuals attempt to cope with emotions triggered by this style of thinking (Pretzer, 1990). Those with a BPD diagnosis are often described as having more conflictual relationships, where others are labeled as untrustworthy, rejecting, and hostile (Russell et al., 2007). Therefore, the BPD Group participants experience greater emptiness and anger in relationships with more frequent relationship breakdowns, thus scoring lower on a Positive Relations with Others psychological well-being domain than the general population.

### **4.3. BPD and Future-directed thinking**

Results from the present study supported previous research into future-directed thinking where “healthy” Controls were observed to have generated more positive future experiences than clinical populations (e.g., MacLeod et al., 1997; MacLeod et al., 1993; MacLeod et al., 1997). In the present study the Control Group generated significantly more positive future experiences than the BPD Group, with no significant differences in the number of negative future experiences generated. Previous research using the FTT has focused on a number of mental health disorders that are often co-morbidly presented with BPD, such as depression and suicidal ideation (e.g., Conaghan & Davidson, 2002; Hunter & O’Connor, 2003; MacLeod et al., 1993; MacLeod & Salaminiou, 2001; MacLeod et al., 1997), anxiety (e.g., Kosnes et al., 2013), and Bipolar Disorder (e.g., Boulanger et al., 2013) therefore, it was expected that the BPD Group would be similar to these previous studies. Specifically, results from the present study were predicted to support MacLeod et al.’s (2004) findings, as the only previous study to specifically look at BPD and future-directed thinking.

In the present study, it was hypothesised that low positive future thinking could be related to a number of BPD traits and difficulties. For example, individuals with a diagnosis of BPD have increased distorted beliefs about themselves and others. They have a bias towards experiencing and perceiving the world as bad and the self as powerless and vulnerable (Pretzer, 1990). Therefore, experiences that have the potential to be perceived as positive may be experienced in a more neutral or negative way, leading to the BPD Group generating fewer potential positive future

experiences. Difficulties with emotional regulation and impulsivity can also be correlated with difficulties in thinking and planning for the future (Linehan, 1993). The BPD Group may have more things to look forward to, but their preoccupation with the past and the here-and-now means they are not able to concentrate on the future. Additionally, fear of abandonment and rejection, caused by unhelpful attachment styles and low mentalisation (Fonagy, 2000), can lead to dysfunctional behaviour styles and avoidance, both of which would have a negative correlation with positive future thinking. Avoidant behaviour, and thus potential positive future experiences being avoided, may be a result of difficulties with distress tolerance in the BPD Group. Previous negative experiences by the BPD Group may also lead to future avoidance as they fear the effect further disappointment will have on their emotional management and behaviour (i.e., self-harming behavior). Finally, dichotomous thinking where situations and others are perceived as “all bad” or “all good” may lead to difficulties with generating positive experiences. “Healthy” Controls may be better at segmenting main experiences into smaller experiences to evaluate things they are look forward to or worried about whereas individuals with a diagnosis of BPD may focus on the expected negative experiences only, and may not be able to identify potential positive smaller experiences within larger future experiences.

Exploration of the BPD Group’s FTT scores showed that there was no significant difference between the number of positive and negative expected future experiences generated. This suggested that the BPD Group identified as many things they dread, as things they look forward to. Studies of anxiety (e.g., Kosnes et al.,



2013) and eating disorders (e.g., Godley, Tchanturia, MacLeod, & Schmidt, 2001) report higher levels of negative future-directed thinking than the general population and other clinical groups, such as depressed individuals. The BPD Group responses in the present study however, did not produce significantly more negative future thoughts, and therefore were more comparable to the depression and suicidal ideation FTT literature findings than anxiety and eating disorder groups.

One factor of note in the present study is that the BPD Group generated an increased number of experiences that they named in both the positive and negative trials of the FTT (e.g., “I am looking forward to lunch with friends next week”, “I am worried about my friend not turning up for lunch next week”). This highlighted their difficulty with perceiving positive outcomes, where the items they generated were also things they could potentially worry about. This may be linked to an individual’s unstable sense of self and thoughts that they are bad and deserve punishment, (i.e., they do not deserve to have a good time with their friends, and their friends will not want to spend time with them). Additionally, the BPD Group may not fully believe that their future holds positive things and therefore they may hold a belief that positive things may also turn out badly. Due to their cognitive dissonance, this group therefore labels things as both things to look forward to and things worry about. The Control Group however is better able to wish for and perceive positive futures for themselves in the absence of negative beliefs and concerns about specific experiences. Further research would be needed to explore cognitive dissonance and experiences that the BPD Group categorised as both positive and negative.

One of the aims of the present study was to expand on MacLeod et al.'s (2004) findings. As stated, the results of the present study supported MacLeod et al.'s (2004) findings that the BPD Group produced significantly fewer positive future-directed thoughts, with no significant difference in negative future-directed thoughts, compared to the Control Group. The present study aimed to further this understanding by exploring the content of the future thoughts produced. Few of the previous studies using the FTT have explored the content of the future-directed thoughts generated. Results from the present study showed that participants as a whole generated more future-directed thoughts about Relations with Others than Physical/Mental Material Well-being, Personal Development, or Recreational experiences. This reflects the social nature of humans and the importance of social interactions, relationships, and community involvement. Godley et al. (2001) also found that Social/Interpersonal and Leisure/Pleasure domains were the most common positive themes mentioned by individuals with an eating disorder when they were asked to think about the future using the FTT.

Exploring the content of the experiences generated by the FTT showed that the BPD Group generated significantly more positive Physical/Mental Material Wellbeing items, whereas the Control Group generated significantly more positive experiences relating to Relations with Others, and Recreation. There was no significant difference in the number of Personal Development category items produced in the two groups. It was hypothesised that the difference in Physical/Mental Material Well-being in positive items related to the BPD Groups current involvement in treatment programmes, and as a result these participants

frequently mentioned improvements in their mental health and their engagement in clinical services in things they were looking forward. All BPD Group participants were met at their service site to complete measures and this may have led them to consider the study as a part of their current treatment programme and thus they mentioned their clinical service and hopes for future mental health more than if they had not been involved in services, or had completed the measures at an alternative location. However, this increase in the Physical/Mental Material Well-being item may also reflect the BPD Group's beliefs about their current levels of mental well-being and their wish to continue or improve on this. Finally, the service providers can take positives from the BPD Group participant's frequent referral to positive future thoughts regarding their BPD service and their positive engagement with services. Historically this is a client group that finds it hard to engage with services and the DNA and drop-out rates can be higher than other clinical groups.

The significantly fewer positive Relations with Others and Recreational items generated by the BPD Group compared to the Control Group can possibly be linked to various BPD traits and theories. As was the case with psychological well-being, it was predicted that the BPD Group would have fewer things to look forward to related to Relations with Others, based on the client group's difficulties with interpersonal relations. As previously stated, this client group tends to anticipate that they will experience relationships with increased hostility, anger, and disruptions. Individuals with a diagnosis of BPD tend to evaluate others as more hostile and malevolent (Barnow et al., 2009) and have hyper-vigilant attachment styles that are sensitive to perceived rejection and abandonment (Choi-Kain et al.,

2009). Hill et al. (2008) discussed how these dysfunctional relationships and interpersonal interactions can be seen in different areas of the individual's life (including work, friends, and significant others), and that individuals tend to repeat interaction patterns from their past relationships. Stepp et al. (2009) observed that individuals with a diagnosis of BPD are more likely to report fewer social interactions than "healthy" Controls and other PD diagnosis groups, however, Clifton et al. (2007) found that the number of social interactions in their BPD Group did not differ to Controls. Clifton et al. (2007) did find however that the BPD Group reported an increase in dysfunctional relationships. Therefore, the reduction in positive future experiences involving Relations with Others generated by the BPD Group in the present study can be related to both a reduction in social interactions, reducing the potential for future positive interactions, as well as dysfunctional relationships that mean that there are few things for the BPD Group to look forward to in the relationships that they have. Fear of rejection and abandonment also leads to avoidant behaviour, suggesting that the BPD Group do not generate as many possible future experiences involving others, and that they avoid these types of interactions. Additionally, an intolerance of being alone may also lead to unhelpful, negative interactions for the BPD Group, thus producing fewer interactions to look forward to.

Positive future thinking items rated as Recreational Activities can also be linked to interpersonal relationships. Although by definition these were activities where another person was not mentioned as taking part, they can be viewed as opportunities for individuals to engage with others or opportunities to provide

mutual interest and information when meeting friends or others. Therefore, through avoidance or negative views of the world around them, the BPD Group may not rate possible Recreational experiences as positive as would generally be the case with “healthy” Controls. Additionally, their impulsivity and difficulties with problem solving skills may lead to the BPD Group having difficulties generating possible positive future Recreational experiences. Finally, the trait of chronic feelings of emptiness may also be linked to difficulties in engaging in positive future Recreational experiences, where those with BPD traits view themselves and their life around them as empty.

In the present study the individual factors within the Relations with Others category (Relations with Family, Relations with a Significant Other, Relations with Friends, Having/Raising Children, Socialising, Well-being of Others, and Helping Others) and the Recreation category (Passive and Active Activities) were explored for positive experiences generated. Results showed there was no significant difference between the BPD Group and the Control Group in the positive experiences generated relating to the Relations with Others individual factor items, other than the factor Having/Raising Children, where Controls generated significantly more positive experiences within this category factor. Participant’s parental status was not recorded and therefore it is unclear whether the Control Group has a greater wish to start a family, or enjoying spending more time with their children, than the BPD Group, it is expected that both may play a part. Greene’s (1989) study explored the relationship between hopelessness and depression. She observed that those with low hopelessness scores tended to have young children. Greene (1989)

observed that none of the group with high hopelessness scores in her study had children under the age of ten, whereas those with low hopelessness scores mentioned their children in hopes about the future more frequently. Additionally, women in the low hopelessness group without children tended to mention their desire to start a family in their future more than those with high hopelessness scores. Greene (1989) suggested that the role of being a parent to young children acts as a protective factor against feelings of hopelessness. This may also be connected to the BPD Group's low scores on Purpose in Life on the Ryff Psychological Well-being Scale, where a parental role may lead to feelings of purpose. Greene's (1989) findings are not replicated within the depression literature (e.g., Brown & Harris, 1978) and would need exploring further within those with a diagnosis of BPD.

Results in the present study also showed that the Control Group generated significantly more positive future thoughts related to Passive and Active activities than the BPD Group. It is possible that the Control Group participants have a greater opportunity to engage in activities and therefore experience greater enjoyment when participating in recreational activities. The current findings support previous theories regarding individuals with BPD having difficulties in engaging in activities whether alone or with others. These findings can also be linked to low scores of Environmental Mastery in the Ryff Psychological Well-being scale for the BPD Group where there may be a possible correlation between low mastery and low recreation future thoughts.

Exploration of the negative future-directed items generated in the present study showed that the BPD Group generated significantly more negative items categorised as Physical/Mental & Material Wellbeing but there was no significant difference in the number of negative items generated in the other three categories (Relations with Others, Personal Development, and Recreation). Like the positive FTT items, the BPD Group's current involvement in treatment programmes may be a factor linked to the increased negative Physical/Mental Material Well-being, since the BPD Group may be worried about their future mental health and possible relapses. As there were no significant differences in the other FTT categories it can be suggested that BPD traits are not correlated with overall worrying about things in the future. Methods of avoidance or use of emotional regulation maladaptive techniques, such as deliberate self-harm, may reduce the level of negative feeling for possible future experiences within the BPD Group. Further research into beliefs about the outcome of experiences is needed to explore this further.

Results showed that there was no significant difference in the number of negative items generated for the Relations with Others individual factors, other than Well-being of Others, where Controls generated significantly more items. This may be due to the Control Group being more aware of others around them and having more positive relationships with others. Although the BPD Group also mentioned worrying about others passing away or of becoming ill in the future, they may have fewer significant others to consider, or their relationships may be regarded as unsupportive, and therefore the possible reduction in well-being of others is not perceived as negatively as it is by Controls. Finally, there was no significant

difference in the number of expected negative future experiences for the Recreation factors.

It should be mentioned that the numbers of thoughts within the individual factors that make up the four main FTT categories generated in the present study are low and it is possibly more beneficial to consider the main four FTT categories rather than their individual factors. However, it can be suggested that the results support the notion that individuals with BPD have difficulties in all areas of their interpersonal lives, including family, friends, work and significant others.

#### **4.4. Implications for clinical practice**

A number of the findings from the present study have relevant theoretical and clinical implications.

Both the psychological well-being and future-directed thinking findings support suggestions that individuals with a diagnosis of BPD have greater difficulties than the general population on factors relating to interpersonal functioning, impulsivity and problem solving, increased negative views of self, the world and others, and increased feelings of hopelessness, fear of rejection and chronic emptiness. Deficits in the BPD Group's psychological well-being scores and future-directed thoughts can be validly connected to BPD traits that contribute to diagnostic criteria, and that lead to behavioural and cognitive difficulties within this client group.

Clinically, these findings support the focus on goal setting and well-being that many treatment programmes already employ. Treatment programmes aim to enable clients to develop skills in factors such as interpersonal relations, distress



tolerance, and emotional regulation so as to break recurring patterns in the individual's relationships and engagement with their surroundings. There is a focus on understanding the past and present and how this can affect the future. The present study's findings can help PD services in further understanding the value of goal setting, as well as specifically asking clients about their current psychological well-being and future-directed thinking.

Specifically, clinicians may expect that those with a diagnosis of BPD may have fewer things to look forward to and need more support in thinking about how they can increase positive future expectations. Based on the results from the present study, treatment programmes may wish to consider specifically how they can support those with a diagnosis of BPD to increase their positive future-directed thoughts related to Relations with Others and Recreational Activities. The theoretical basis and focus of many treatment programmes designed for BPD specific services already encourage skills that support a possible increase in future positive experiences in these two areas, such as increased mentalisation within MBT programmes, and interpersonal development, distress tolerance, and emotional regulation skills within DBT programmes.

Clinical services may also wish to consider how they can promote feelings of Environmental Mastery and Purpose in Life within those with a diagnosis of BPD. Similarly, skills developed on treatment programmes like MBT and DBT may already encourage individuals to consider how they can feel more in control of their environment as well as considering their role and unique contributions to their own and others' lives. Low feelings of Self-Acceptance may reduce as individuals are

able to mentalise more effectively and tolerate their own distress and thereby increase positive views of the self, and accept themselves more.

The results for the present study suggest that it is worth considering aspects of psychological well-being (as measured by Ryff) and future-directed thoughts within assessments and formulations of those with a diagnosis of BPD. Here clinicians can begin to identify protective factors, as well as difficulties, which can be built upon during treatment phases. For example, by considering the things individuals already look forward to in the future, considering the skills needed to attain them, what areas of psychological well-being individuals may possess, and also how these can support other areas of psychological well-being.

Measures such as the PHQ-9 for depression and the GAD-7 for anxiety, as well as general mental health scales, are often included in service outcome measures to monitor change over time. The Ryff Psychological Well-being Scale can be included in outcome measure batteries to aid understanding of progress through treatment. The FTT, meanwhile, can be used to focus the services discussions around future goals and beliefs.

#### **4.5. Limitations of the Study**

There are a number of limitations to the present study that should be considered when evaluating the findings. Firstly the participant numbers were small and the power in the study was 0.77 as opposed to the aimed for power level of 0.80. Replication of the present study would provide additional data which, it is anticipated, would further support the findings generated.

Secondly, the heterogeneous nature of the diagnosis of BPD and the difficulties with diagnosing this client group should be addressed. Diagnosis of participants in the BPD Group were given by the clinical services involved in the present study and confirmed with a BPD Screening Instrument, the Control Group however were asked if they had previously been given a diagnosis of BPD and this was confirmed with the BPD screening tool. The scope of the present study, and the training requirements for confirming diagnosis meant that it was not practical to conduct full diagnostic interviews. One means of controlling for this limitation would be to replicate the study with the inclusion of diagnostic interviews or consider BPD traits on a continuum rather than a present/absent diagnosis criterion, which would also fit with other research suggesting a continuum status for DSM-5 diagnosis of BPD.

Another consideration in the interpretation of the results of the present study is the “stable instability” (Schmideberg, 1959) of the BPD Groups symptoms. Although, it is reported that individuals who meet diagnostic criteria for BPD are likely to meet criteria over a number of years, with the structure of the disorder remaining stable over time (Sanislow et al., 2002), the traits of this disorder are arguably less stable (Grilo et al, 2005). DSM-IV specifically cites instabilities within individuals’ relationships, affect, and identity; however fluctuations have also been seen within the other BPD traits. This “stable instability” creates complications when generalising results to those with BPD as their reported psychological well-being and thoughts about the future may be influenced by these instabilities and therefore only a representative of the individual’s current state as opposed to a

generalizable outcome. However, as previously discussed, this is a heterogeneous client group and any generalization of outcomes should be considered with this in mind.

Co-morbidity between depression, anxiety, and BPD has previously been discussed. Previous psychological well-being and future-directed thinking research has focused on depression and anxiety and the present study's results have been compared to these earlier studies. It may be of interest to consider whether it is the BPD traits or the anxiety and depression that is most associated with the findings. In the present study no identifiable relationship was observed between the BPD traits checklist scores (MSI-BPD) and the scores for anxiety (GAD-7) or depression (PHQ-9), further supporting the factor that the relationship between these disorders is complex and one cannot predict the other. A potential benefit for controlling for depression and anxiety in the BPD group would be to further break down the traits of this group and attempt to answer the question of whether findings were related to the diagnosis of BPD or merely due to clients having some level of anxiety or depression. However as previously discussed, factors such as mood regulation are troublesome to attempt to control for as mood instability, including anxiety and depression, is one of the central factors in the diagnosis of BPD. Miller and Chapman (2001) discuss how controlling for a variable in these circumstances risks making the findings meaningless, altering it in a substantive way, "removing too much of the independent variable of interest" (pp.40) and leaving a group variance with poor construct validity for BPD.

A further consideration in the present study is the BPD Group's involvement in PD Services. BPD participants were recruited from three different PD services, each using a different model of treatment plan (i.e., MBT, DBT, and a Psychodynamic Therapeutic Community Programme). There was no limitation as to their stage in treatment, where all current clients in treatment with a BPD diagnosis were eligible to take part. Participants ranged from just starting their treatment programme to being in a "step down" or the finishing stages of treatment. This variability may have impacted their current level of psychological well-being and future-directed thinking, to the extent these programmes are aimed at helping individuals with factors such as engaging in interpersonal skills, goal setting and emotional regulation. Participants further on in the treatment process may be more in tune in thinking about their futures and their current well-being and thus generate more positive answers. Additionally, the BPD Group may have been biased in their reporting of current levels of psychological well-being and their future prospects as they wish to appear "well" to highlight the effort they are putting into their treatment plan. However, despite being involved in treatment the BPD Group still produced significantly lower psychological well-being scores and fewer positive future thoughts than the Control Group and the population norm. An interesting addition to the current study would be to explore the correlation between treatment involvement, psychological well-being and future-directed thinking. Due to small numbers of participants at each stage of treatment, there was not scope for this in the present study.

A further limitation in the present study was that it did not record the extent to which participants believed that future experiences would occur and how much

enjoyment or distress the outcome would cause. Studies such as Godley et al. (2001) and MacLeod et al. (2005) included a scale to the FTT to measure how likely participants thought generated future thoughts would happen and the level of pleasure they would bring. Further research could attempt to compare the present study's findings with findings obtained using these different scales.

A final limitation to the present study is that a number of statistical tests and comparisons were carried out, indicate possible Type I errors (false positives due to chance). The number of comparisons conducted as part of the design of the present study meant that Bonferroni corrections were not feasible, due to increasing the likelihood of Type II errors, following the argument put forward by Rothman (1990), who stated that not adjusting for multiple comparisons can "lead to fewer errors of interpretation when the data under evaluation are... actual observations on nature, (and) scientists should not be so reluctant to explore leads that may turn out to be wrong that they penalize themselves by missing possibly important findings" (Rothman, 1990, p.43). However, the novel results of the present study indicate the need for further research and replication.

#### **4.6. Further research**

A number of further research points have already been mentioned whilst considering the possible limitations of the present study, such as a greater sample size, a depression and anxiety comparison group, considering BPD on a spectrum as opposed to present/absent criteria, correlations with treatment programme stages, and inclusion of a likelihood and pleasure scale on the FTT. However, as this is the first known research paper on BPD and psychology well-being, and only the second

paper specifically exploring BPD and future-directed thinking, therefore there are a number of additional interesting considerations that could be explored further.

The present study begins to explore the content of future-directed thinking in individuals with a diagnosis of BPD. An interesting supplementary exploration would be to consider the likelihood of these expectations, and the impact of these would have on the individual if they were completed or if they failed to obtain their anticipated positive future experiences. The present results provide a greater understanding of the content of future-directed thinking in individuals with a diagnosis of BPD but do not address how these individuals attempt to obtain these future experiences and what would happen if they failed to obtain them. Based on previous research and theories, there is an understanding that stressful situations, emotional regulation, and coping with rejection and disappointment are areas of difficulties for those with a diagnosis of BPD and therefore, we may hypothesis that such individuals will have a greater negative reaction if their anticipated positive future experiences are not achieved. Additionally poor social problem solving and impulsivity may suggest that individuals with BPD may have greater difficulties in perceived planning in obtaining their desired positive futures. Finally, their previous experience with obtaining positive outcomes may lead individuals with BPD to consider future positive outcomes as less likely than the general population. Future studies would need to explicitly explore these questions and it is suggested that this may best be a focus of a longitudinal study as opposed to a cross-sectional study as in the case of the present study.

Another interesting consideration for future research is whether those with a diagnosis of BPD are able to maintain reported levels of PWB over a period of time. Difficulties with emotional regulation and impulsivity in BPD Groups suggest that these may affect reported levels of PWB and that this group's reported PWB scores may fluctuate over time to a greater extent than other clinical groups or the general population. Further research is needed to explore this point.

Finally, a future study worthy of consideration is for PD services to explore their treatment interventions and correlations with future-directed thinking and psychological well-being in a longitudinal method. Discussion with the services involved in this study raised the question as to whether there would be a significant difference in clients' psychological well-being scores and future-directed thinking abilities at assessment and end of treatment and whether these hypothesised increases in scores would be maintained after a period of no involvement in the treatment programme.

#### **4.7. Conclusion**

The present study aimed to explore future-directed thinking and psychological well-being in clients with a diagnosis of Borderline Personality Disorder. It was hypothesised, based on previous research and BPD theories, that such individuals would have significantly lower psychological well-being scores and would generate fewer positive possible future experiences. As there was no previous psychological well-being research within BPD, the hypotheses were based on studies involving depression and anxiety participants. There is however extensive research within future-directed thinking within suicidal ideation, but one study specifically on BPD



and future-directed thinking (MacLeod et al., 2004). Predictions for the present study were based on MacLeod et al.'s (2004) findings.

Results showed that the BPD Group had lower psychological well-being scores across all six domains created by Ryff, and links were made to the criteria for a BPD diagnosis and the difficulties experienced by this client group. The BPD Group also showed lower psychological well-being scores within the Relations with Others category compared to the Control Group. Therefore, hypothesis one in the present study was supported. However Relations with Others was not the lowest psychological well-being score within the BPD Groups psychological well-being profile.

Additionally, results showed that the BPD Group generated significantly fewer possible positive future experiences than the Control Group, with no difference in negative experiences, supporting the second hypothesis in the present study and replicating MacLeod et al.'s (2004) findings. Exploration of the content of the future experiences showed that the BPD Group generated significantly fewer positive experiences relating to Relations with Others, specifically within Having/Raising Children, and Recreation items compared to the Control Group. However the BPD Group did not generate fewer positive Relations with Other experiences in comparison to the other three categories. Therefore the third hypothesis in the present was partly supported. Despite limitations to the present study and the need for further research, it is suggested that the present findings provide valuable outcomes that have clinical and theoretical implications.

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## **6.0. APPENDICES**

**Appendix I:** Participant Questionnaire containing the Demographic Information Sheet, the Patient Health Questionnaire (PHQ-9, (Kroenke et al., 2001), the Generalised Anxiety Disorder Assessment (GAD-7, (Spitzer et al., 2006), and the Ryff Psychological Well-being Scale 54 item version (RPWBS, Ryff, 1989).

**Appendix II:** The McLean Screening Instrument for Borderline Personality Disorder (MSI-BPD, Zanarini et al., 2003).

**Appendix III:** Instructions for the Standard Verbal Fluency Control Measure (FAS).

**Appendix IV:** Instructions for the Future Thinking Task (FTT)

**Appendix V:** Ethics letter

**Appendix VI:** Information Sheets for BPD and Control Group

**Appendix VII:** Consent form for BPD and Control Group

**Appendix VIII:** GP letter for BPD and Control Group

**Appendix IX:** Debrief sheet for BPD and Control Group

**Appendix I: Participant Questionnaire:**



**Participant No.** \_\_\_\_\_.

**QUESTIONNAIRE BOOKLET**

**Well-being and future thinking in borderline personality disorder**

Please complete all of the following questions. All the questions are about you and ask you to circle an answer that most represents you. There are no right or wrong answers to the questions. Do not skip any questions; if you are unsure just give your best answer. If you would like any help with this booklet please ask the researcher.

<p><b>Gender?</b> <input type="checkbox"/> Female    <input type="checkbox"/> Male</p> <p><b>Age?</b> _____</p> <p><b>How would you describe your ethnic group?</b></p> <ul style="list-style-type: none"><li>• <b>White</b> <input type="checkbox"/> English / Welsh / Scottish / Northern Irish / British <input type="checkbox"/> Irish <input type="checkbox"/> Gypsy or Irish Traveller <input type="checkbox"/> Any other White background</li><li>• <b>Mixed / Multiple ethnic groups</b> <input type="checkbox"/> White and Black Caribbean <input type="checkbox"/> White and Black African <input type="checkbox"/> White and Asian <input type="checkbox"/> Any other Mixed / Multiple ethnic background,</li><li>• <b>Asian / Asian British</b> <input type="checkbox"/> Indian <input type="checkbox"/> Pakistani <input type="checkbox"/> Bangladeshi <input type="checkbox"/> Chinese <input type="checkbox"/> Any other Asian background</li><li>• <b>Black / African / Caribbean / Black British</b> <input type="checkbox"/> African <input type="checkbox"/> Caribbean <input type="checkbox"/> Any other Black / African / Caribbean background,</li></ul>	<p><b>Education:</b> <i>What is your highest level completed?</i> <input type="checkbox"/> No schooling completed <input type="checkbox"/> Primary School <input type="checkbox"/> GCSE or equivalent <input type="checkbox"/> A'Level or equivalent <input type="checkbox"/> Bachelor's degree or equivalent <input type="checkbox"/> Master's degree or equivalent <input type="checkbox"/> Professional degree or equivalent <input type="checkbox"/> Doctorate degree or equivalent</p> <p><b>What is your current relationship status?</b> <input type="checkbox"/> Single <input type="checkbox"/> Married/Partner <input type="checkbox"/> Separated <input type="checkbox"/> Divorced <input type="checkbox"/> Widowed</p> <p><b>Current employment status?</b> <input type="checkbox"/> Not working <input type="checkbox"/> Employed full time <input type="checkbox"/> Full time student <input type="checkbox"/> Part time employed and/or part time student</p>
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<ul style="list-style-type: none"> <li>• <b>Other ethnic group</b></li> <li>[ ] Arab</li> <li>[ ] Any other ethnic group</li> </ul>	
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**Section A (PHQ-9):**

Over the last 2 weeks, how often have you been bothered by the following problems?

	Not at all	Several Days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling/staying asleep, sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down.	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television.	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual.	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way.	0	1	2	3

**Section B (GAD-7):**

Over the last 2 weeks, how often have you been bothered by the following problems?

	Not at all	Several Days	More than half the days	Nearly every day
1. Feeling nervous, anxious or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3



**Section C (Wellbeing scale):**

The following set of questions deal with how you feel about yourself and your life. Please remember there are no right or wrong answers.

<b>Circle the number that best describes your present agreement or disagreement with each statement</b>	Strongly Disagree	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Strongly Agree
1. Most people see me as loving and affectionate	1	2	3	4	5	6
2. In general, I feel I am in charge of the situation in which I live.	1	2	3	4	5	6
3. I am not interested in activities that will expand my horizons.	1	2	3	4	5	6
4. When I look at the story of my life, I am pleased with how things have turned out.	1	2	3	4	5	6
5. Maintaining close relationships has been difficult and frustrating for me.	1	2	3	4	5	6
6. I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people.	1	2	3	4	5	6
7. The demands of everyday life often get me down.	1	2	3	4	5	6
8. I live life one day at a time and don't really think about the future.	1	2	3	4	5	6
9. In general, I feel confident and positive about myself.	1	2	3	4	5	6
10. I often feel lonely because I have few close friends with whom to share my concerns.	1	2	3	4	5	6
11. My decisions are not usually influenced by what everyone else is doing.	1	2	3	4	5	6
12. I do not fit very well with the people and the community around me.	1	2	3	4	5	6
13. I tend to focus on the present, because the future nearly always brings me problems.	1	2	3	4	5	6

14. I feel like many of the people I know have got more out of life than I have.	1	2	3	4	5	6
15. I enjoy personal and mutual conversations with family members and friends.	1	2	3	4	5	6
16. I tend to worry about what other people think of me.	1	2	3	4	5	6
<b>Circle the number that best describes your present agreement or disagreement with each statement</b>	Strongly Disagree	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Strongly Agree
17. I am quite good at managing the many responsibilities of my daily life.	1	2	3	4	5	6
18. I don't want to try new ways of doing things - my life is fine the way it is.	1	2	3	4	5	6
19. Being happy with myself is more important to me than having others approve of me.	1	2	3	4	5	6
20. I often feel overwhelmed by my responsibilities.	1	2	3	4	5	6
21. I think it is important to have new experiences that challenge how you think about yourself and the world.	1	2	3	4	5	6
22. My daily activities often seem trivial and unimportant to me.	1	2	3	4	5	6
23. I like most aspects of my personality.	1	2	3	4	5	6
24. I don't have many people who want to listen when I need to talk.	1	2	3	4	5	6
25. I tend to be influenced by people with strong opinions.	1	2	3	4	5	6
26. When I think about it, I haven't really improved much as a person over the years.	1	2	3	4	5	6
27. I don't have a good sense of what it is I'm trying to accomplish in life.	1	2	3	4	5	6
28. I made some mistakes in the past, but I feel that all in all everything works out for the best.	1	2	3	4	5	6

29. I generally do a good job of taking care of my personal finances and affairs.	1	2	3	4	5	6
30. I used to set goals for myself, but that now seems like a waste of time.	1	2	3	4	5	6
31. In many ways, I feel disappointed about my achievements in life.	1	2	3	4	5	6
32. It seems to me that most other people have more friends than I do.	1	2	3	4	5	6
33. I enjoy making plans for the future and working to make them a reality.	1	2	3	4	5	6
34. People describe me as a giving person, willing to share my time with others.	1	2	3	4	5	6
35. I have confidence in my opinions, even if they are contrary to the general consensus.	1	2	3	4	5	6
<b>Circle the number that best describes your present agreement or disagreement with each statement</b>	Strongly Disagree	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Strongly Agree
36. I am good at juggling my time so that I can fit everything in that needs to be done.	1	2	3	4	5	6
37. I have a sense that I have developed a lot as a person over time.	1	2	3	4	5	6
38. I am an active person in carrying out the plans I set for myself.	1	2	3	4	5	6
39. I don't experience many warm and trusting relationships with others.	1	2	3	4	5	6
40. It is difficult for me to voice my own opinions on controversial matters.	1	2	3	4	5	6
41. I don't enjoy being in new situations that require me to change my old familiar ways of doing things.	1	2	3	4	5	6

42. Some people wander aimlessly through life, but I am not one of them.	1	2	3	4	5	6
43. My attitude about myself is probably not as positive as most people feel about themselves.	1	2	3	4	5	6
44. I often change my mind about decisions if my friends or family disagree.	1	2	3	4	5	6
45. For me, life has been a continuous process of learning, changing, and growth.	1	2	3	4	5	6
46. I sometimes feel as if I've done all there is to do in life.	1	2	3	4	5	6
47. I know that I can trust my friends, and they know they can trust me.	1	2	3	4	5	6
48. The past had its ups and downs, but in general, I wouldn't want to change it.	1	2	3	4	5	6
49. I have difficulty arranging my life in a way that is satisfying to me.	1	2	3	4	5	6
50. I gave up trying to make big improvements or changes in my life a long time ago.	1	2	3	4	5	6
51. If I compare myself to friends and acquaintances, it makes me feel good about who I was.	1	2	3	4	5	6
<b>Circle the number that best describes your present agreement or disagreement with each statement</b>	Strongly Disagree	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Strongly Agree
52. I judge myself by what I think is important, not by the values of what others think is important.	1	2	3	4	5	6
53. I am able to build a home and a lifestyle for myself that is much to my liking.	1	2	3	4	5	6
54. There is truth to the saying that you can't teach an old dog new tricks.	1	2	3	4	5	6

## **Appendix II: The McLean Screening Instrument for Borderline Personality Disorder**

### **(MSI-BPD, Zanarini et al., 2003):**

1. Have any of your closest relationships been troubled by a lot of arguments or repeated breakups? Yes\_\_\_No\_\_\_
2. Have you deliberately hurt yourself physically (e.g., punched yourself, cut yourself, burned yourself)?  
How about made a suicide attempt? Yes\_\_\_No\_\_\_
3. Have you had at least two other problems with impulsivity (e.g., eating binges and spending sprees, drinking too much and verbal outbursts)? Yes\_\_\_No\_\_\_
4. Have you been extremely moody? Yes\_\_\_No\_\_\_
5. Have you felt very angry a lot of the time? How about often acted in an angry or sarcastic manner? Yes\_\_\_No\_\_\_
6. Have you often been distrustful of other people? Yes\_\_\_No\_\_\_
7. Have you frequently felt unreal or as if things around you were unreal? Yes\_\_\_No\_\_\_
8. Have you chronically felt empty? Yes\_\_\_No\_\_\_
9. Have you often felt that you had no idea of who you are or that you have no identity? Yes\_\_\_No\_\_\_
10. Have you made desperate efforts to avoid feeling abandoned or being abandoned (e.g., repeatedly called someone to reassure yourself that he or she still cared, begged them not to leave you, clung to them physically)? Yes\_\_\_No\_\_\_

### **Appendix III: Instructions for the Standard Verbal Fluency Control Measure (FAS):**

#### **Instructions for FAS:**

"First I'd like you to think of as many words as you can beginning with a certain letter of the alphabet. I will ask you to do this for 3 different letters. You will have a minute in each case to think of as many words as you can beginning with that letter. Please say the words aloud and I will write them down. The words can be anything that comes to mind. There are three rules, the word can't be a person's name (For example if the letter was "T" you can't use "Thomas") use can't use place names (for example "Tibet" or "Tottenham"), and use cant use the same word wioth different endings (For example if use used "Table", you then couldn't use "Tables", Tabled"). Do you understand? Ok, I want you to give me as many words as you can beginning with the letter F".

(subjects are asked to do this for the letters F, A and S in that fixed order and given one minute to think of words for each of the letters). The Researcher writes down the words, or if the participant is going too fast to do this, just indicates on the scoring sheet that a valid response was given.

#### **Appendix IV: Instructions for the Future Thinking Task (FTT):**

Instructions for FTT:

"Now I'd like to ask you to think about things that might happen to you in the future. I will give you 3 different time periods in the future, one at a time, and I'd like you to try to think of things that might happen to you in those time periods. Like before, I will give you a minute to try to think of as many things as you can. It doesn't matter whether the things are trivial or important, just say what comes to mind. But, they should be things that you think will definitely happen or are at least quite likely to happen. If you can't think of anything or if you can't think of many things, that's fine, but just keep trying until the time limit is up.

First I'm going to ask you to think of positive things in the future. So, I'd like you to try to think of things that you are looking forward to, in other words, things that you will enjoy. So, I want you to give me as many things as you can that you're looking forward to over the next week including today".

(R gives one minute and writes down as close to verbatim as time allows what subject says)

Now, I'd like you to do the same but this time I want you to give me things that you're looking forward to over the next week.

(R does same as for one week)

Now, I'd like you to do the same but this time I want you to give me things that you're looking forward to over the next five to ten years.

(R does same as for previous)

"Now, I'd like you to think of things that you're worried about or not looking forward to, in other words, things that you would rather not be the case or rather not happen. So, I want you to give me as many things as you can that you're worried about or not looking forward to over the next week including today".

(R does same as for previous )

"Now I want you to give me as many things as you can that you're worried about or not looking forward to over the next year"

(R does same as for previous)

Finally, I want you to give me as many things as you can that you're worried about or not looking forward to over the next five to ten years"

(R does same as for previous)

The order of presentation of negative and positive conditions should be counterbalanced across subjects, although within each condition the time periods are always presented in the same order (week, year, 5-10 years).

If subject says during the thinking time that they can't think of anything or, for example, that there is nothing that they are looking forward to over the next week, say "that's OK, but just keep trying to think until I tell you to stop".



## Appendix V: Ethics letter:

Lothian NHS Board

South East Scotland  
Research  
Ethics Committee 01



Waverley Gate  
2-4 Waterloo Place  
Edinburgh  
EH1 3EG  
Telephone 0131 536 9000  
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[www.nhslothian.scot.nhs.uk](http://www.nhslothian.scot.nhs.uk)

Date 23 August 2013  
Your Ref  
Our Ref

Enquiries to: Joyce Clearie  
Extension: 35674  
Direct Line: 0131 465 5674  
Email:

Joyce.Clearie@nhslothian.scot.nhs.uk

23 August 2013

Ms Samantha Blackburn  
Trainee Clinical Psychologist  
Camden and Islington NHS Foundation Trust  
Royal Holloway University  
Egham, Surrey  
TW20 0EX

Dear Ms Blackburn

**Study title:** Psychological well-being and future-directed thinking in  
borderline personality disorder  
**REC reference:** 13/SS/0144  
**IRAS project ID:** 126956

Thank you for your letter of 22 August 2013, responding to the Proportionate Review Sub-Committee's request for changes to the documentation for the above study.

The revised documentation has been reviewed and approved by the sub-committee.

We plan to publish your research summary wording for the above study on the NRES website, together with your contact details, unless you expressly withhold permission to do so. Publication will be no earlier than three months from the date of this favourable opinion letter. Should you wish to provide a substitute contact point, require further information, or wish to withhold permission to publish, please contact the Co-ordinator Ms Joyce Clearie, [joyce.clearie@nhslothian.scot.nhs.uk](mailto:joyce.clearie@nhslothian.scot.nhs.uk).

### Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above



Headquarters  
Waverley Gate, 2-4 Waterloo Place, Edinburgh EH1 3EG

Chair Mr Brian Houston  
Chief Executive Tim Davison

*Lothian NHS Board is the common name of Lothian Health Board*

research on the basis described in the application form, protocol and supporting documentation as revised.

#### **Ethical review of research sites**

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

#### **Conditions of the favourable opinion**

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

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

*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.*

**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).**

**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.**

#### **Approved documents**

The documents reviewed and approved by the Committee are:

<i>Document</i>	<i>Version</i>	<i>Date</i>
Participant Information Sheet: PIS BPD Group	3	22 August 2013
Participant Information Sheet: PIS Control Group	3	22 August 2013
Participant Consent Form: PCF	3	22 August 2013
GP/Consultant Information Sheets	1	22 August 2013

Questionnaire: Questionnaire Booklet	3	22 August 2013
Other: Debrief Sheet	3	22 August 2013
Response to Request for Further Information		
Questionnaire: Zanarini BPD Screening questionnaire	1	
Advertisement	1	
Other: Verbal Fluency instructions	1	09 August 2013
Other: Academic Supervisor CV Macleod		
REC application		12 July 2013
Protocol	1	12 July 2013
Investigator CV	Blackburn	12 July 2013
Evidence of insurance or indemnity		01 August 2012
Questionnaire: PHQ		
Questionnaire: GAD 7		

#### Statement of compliance

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

#### After ethical review

##### Reporting requirements

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

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

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

##### Feedback

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

Further information is available at National Research Ethics Service website > After Review

<b>13/SS/0144</b>	<b>Please quote this number on all correspondence</b>
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We are pleased to welcome researchers and R & D staff at our NRES committee members' training days – see details at <http://www.hra.nhs.uk/hra-training/>

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

Yours sincerely



**Mr Lindsay Murray**  
Chair

Email: [joyce.clearie@nhslothian.scot.nhs.uk](mailto:joyce.clearie@nhslothian.scot.nhs.uk)

Enclosures: *"After ethical review – guidance for researchers"* [\[SL-AR2\]](#)

Copy to: *Ms Samantha Blackburn*

*Ms Katherine Ouseley, East London NHS Foundation Trust*

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

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Our ref: LOA-NHSR

Samantha Blackburn  
Trainee Clinical Psychologist  
Royal Holloway University of London  
c/o Camden & Islington NHS FT  
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**Joint Research Management Of**

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26<sup>th</sup> September 2013

Dear Ms Blackburn

**Letter of access for research**

As an existing NHS employee you do not require an additional honorary research contract with this NHS organisation. We are satisfied that the research activities that you will undertake in this NHS organisation are commensurate with the activities you undertake for your employer. Your employer is responsible for ensuring such checks as are necessary have been carried out. This letter confirms your right of access to conduct research through East London NHS Foundation Trust for the purpose and on the terms and conditions set out below. This right of access commences on with immediate effect and ends on 30<sup>th</sup> September 2014 unless terminated earlier in accordance with the clauses below.

You have a right of access to conduct such research as confirmed in writing in the letter of permission for research from this NHS organisation. Please note that you cannot start the research until the Principal Investigator for the research project has received a letter from us giving permission to conduct the project.

You are considered to be a legal visitor to East London NHS Foundation Trust premises. You are not entitled to any form of payment or access to other benefits provided by this organisation to employees and this letter does not give rise to any other relationship between you and this NHS organisation, in particular that of an employee.

While undertaking research through East London NHS Foundation Trust, you will remain accountable to your employer Camden & Islington NHS Foundation Trust but you are required to follow the reasonable instructions of your nominated manager Dr Tennyson Lee, Consultant Psychiatrist in this NHS organisation or those given on his behalf in relation to the terms of this right of access.

Where any third party claim is made, whether or not legal proceedings are issued, arising out of or in connection with your right of access, you are required to co-operate fully with any investigation by this NHS organisation in connection with any such claim and to give all such assistance as may reasonably be required regarding the conduct of any legal proceedings.

You must act in accordance with East London NHS Foundation Trust policies and procedures, which are available to you upon request, and the Research Governance Framework.

You are required to co-operate with East London NHS Foundation Trust in discharging its duties under the Health and Safety at Work etc Act 1974 and other health and safety legislation and to take reasonable care for the health and safety of yourself and others while on East London NHS Foundation Trust premises. Although you are not a contract holder, you must observe the same standards of care and propriety in dealing with patients, staff, visitors, equipment and premises as is expected of a contract holder and you must act appropriately, responsibly and professionally at all times.

You are required to ensure that all information regarding patients or staff remains secure and *strictly confidential* at all times. You must ensure that you understand and comply with the requirements of the NHS Confidentiality Code of Practice and the Data Protection Act 1998. Furthermore you should be aware that under the Act, unauthorised disclosure of information is an offence and such disclosures may lead to prosecution.


East London NHS Foundation Trust will not indemnify you against any liability incurred as a result of any breach of confidentiality or breach of the Data Protection Act 1998. Any breach of the Data Protection Act 1998 may result in legal action against you and/or your substantive employer.

You should ensure that, where you are issued with an identity or security card, a bleep number, email or library account, keys or protective clothing, these are returned upon termination of this arrangement. Please also ensure that while on the premises you wear your ID badge at all times, or are able to prove your identity if challenged. Please note that this NHS organisation accepts no responsibility for damage to or loss of personal property.

We may terminate your right to attend at any time either by giving seven days' written notice to you or immediately without any notice if you are in breach of any of the terms or conditions described in this letter or if you commit any act that we reasonably consider to amount to serious misconduct or to be disruptive and/or prejudicial to the interests and/or business of this NHS organisation or if you are convicted of any criminal offence. Your substantive employer is responsible for your conduct during this research project and may in the circumstances described above instigate disciplinary action against you.

If your circumstances change in relation to your health, criminal record, professional registration or any other aspect that may impact on your suitability to conduct research, or your role in research changes, you must inform the NHS organisation that employs you through its normal procedures. You must also inform your nominated manager in this NHS organisation.

Yours sincerely



Nick Good  
R&D Projects Manager

cc: Dr Tennyson Lee, ELFT  
Albert Kujat, HR CANDI NHS FT

## **Appendix VI: Information Sheets for BPD and Control Group:**



### **RESEARCH STUDY INFORMATION SHEET**

#### **Well-being and future thinking in borderline personality disorder**

You have been given this information sheet so you can make an informed decision about whether you would like to take part in a research study that is being carried out through Royal Holloway University London and the NHS. Some frequently asked questions are below, along with contact details if you would like to take part or hear more.

#### **What is the study about and who will benefit from it?**

We would really appreciate your help with a study that aims to extend understanding of borderline personality disorder by examining current psychological well-being and future-directed thinking (how we think about things in the future that we are looking forward to and do not looking forward to).

The way people think about the future and their beliefs about their well-being are important factors for a good quality of life. Previous studies have looked at thinking about the future in people who have experienced different kinds of psychological distress (e.g., anxiety, depression) but we would like to explore how people who experience borderline personality difficulties think about the future.

We hope the results from this study will provide greater understanding to borderline personality disorder for clients and clinicians and provide information that can guide treatment programmes and support current theories. For example, given that current specialist programmes for BPD focus to a degree on goal setting and future thinking, this study could help improving this area of treatment by understanding more about how people think about their own futures.

#### **Who is being asked to take part?**

We are inviting people with a diagnosis of borderline personality disorder to take part in this study and will be advertising the study through East London Personality Disorder Services. Members from the general public with similar ages and backgrounds will also be taking part in this study as a comparison group.

We only ask that you have good spoken English to take part.

#### **What will I have to do?**

Participants will be invited to meet with Samantha Blackburn, a Trainee Clinical Psychologist, at the Personality Disorder Service which they currently attend. This meeting should take no longer than 1 hour.

Participants will be asked to give some demographic details (e.g. their gender and age, current employment status and relationship status), complete four short self-report questionnaires on thoughts and feelings, and answer some questions about how they think about the future.

Participants will be given £5 as a thank you for giving their time to this study.

**What will happen to my information?**

Participation and all information given in the study are confidential. Participants will be given a unique participant number to ensure that individuals cannot be identified. All questionnaires and participants' details will be kept on a secure computer system within the Clinical Psychology Department on Royal Holloway University of London campus. Data from individuals will be analysed and reported as part of a group and not as individual participants, so no individual can be identified from the results. All raw data (questionnaires completed) will be destroyed at the end of the study.

**What if I decide I don't want to continue being involved?**

You can withdraw from the study at any point. If you withdraw from the study your details and any completed questionnaires will be securely destroyed. Any withdrawal will not affect any involvement in any services and will remain confidential.

**How do I know the study is ethical?**

The researchers have consulted with a number of different people including clinicians at Tower Hamlets Personality Disorder Service and a service user representative. The study has also gone to a NHS Research Ethics committee who give a favourable opinion on the study. Details of this are available from

[Samantha.blackburn.2011@live.rhul.ac.uk](mailto:Samantha.blackburn.2011@live.rhul.ac.uk)

In keeping with ethics requirements we would like to let your GP know that you are taking part in this study. This is for information only and in keeping with the complete confidentiality of the study your results will not be passed on to your GP. You can also contact your local NHS Patient Advice and Liaison Service (East London NHS PALS 0800 783 4839) for information on taking part in research studies or any concerns or complaints about this study. You can also contact Prof. Andrew MacLeod about this study at [A.Macleod@rhul.ac.uk](mailto:A.Macleod@rhul.ac.uk) with questions or concerns about this study.

**Who should I contact to take part?**

If you are interested in hearing more about the study or taking part you can contact Samantha Blackburn on [Samantha.blackburn.2011@live.rhul.ac.uk](mailto:Samantha.blackburn.2011@live.rhul.ac.uk). You can also speak to staff at your personality disorder service who have been informed of the study and can help you contact me.

Feedback on the findings will be available to all participants taking part or from others interested in the study. You can contact

[Samantha.blackburn.2011@live.rhul.ac.uk](mailto:Samantha.blackburn.2011@live.rhul.ac.uk) for information on this.

Thank you for reading about this study.

I look forward to hearing from you.

Kind regards,

Samantha Blackburn  
Trainee Clinical Psychologist





## **RESEARCH STUDY INFORMATION SHEET**

### **Well-being and future thinking in borderline personality disorder**

#### **Control Group Information**

You have been given this information sheet so you can make an informed decision about whether you would like to take part in a research study that is being carried out through Royal Holloway University London and the NHS. Some frequently asked questions are below, along with contact details should you wish to take part or hear more.

#### **What is a Control Group?**

Members of the public are being invited to take part in this study to act as a control group. Control groups are groups of people that provide information that the other research group can be compared to. Therefore, even though you do not have a diagnosis of borderline personality disorder, your answers to questions are important to this study.

#### **What is the study about and who will benefit from it?**

This study aims to extend understanding of borderline personality disorder by examining current psychological well-being and future-directed thinking. Borderline personality disorder is a serious psychological problem where people experience a lot of extreme emotional ups and down, have quite unstable lives and relationships, can be impulsive, and quite often self-harm. This study will try to understand the way that thinking about the future might be involved in this kind of psychological problem.

The way people think about the future is important for well-being and has been explored in relation to a number of different psychological difficulties. The present study is attempting to find out more about future-directed thinking in borderline personality disorder. We hope the results from this study will aid greater understanding of borderline personality disorder for clients and clinicians and provide information that can guide treatment programmes and interventions, and support current theories.

#### **Why am I being asked to take part?**

We are inviting members of the general public with similar ages and backgrounds to our borderline personality disorder participants to take part. Members of the public will provide information that we can compare with the borderline personality group's information.

To take part, we ask only that you have a good level of spoken English and are not currently accessing a mental health service.

#### **What will I have to do?**

Participants will be invited to meet with Samantha Blackburn, Trainee Clinical Psychologist, at a convenient local place. This can be at the university offices at Bedford Square or our local library. This should take no longer than 1 hour. Participants will be asked to give some demographic details (e.g. their gender and age, current employment status and relationship status), complete four short self-report questionnaires on thoughts and feelings, and answer some questions about how they think about the future. Participants will be entered into a prize draw as a thank you for giving your time and taking part. The prizes are: First Prize £100, Second Prize £50, Third Prize £25.

**What will happen to my information?**

Participation and all information given in the study are confidential. Participants will be assigned a unique participant number to ensure that individuals cannot be identified. All questionnaires and participants' details will be kept on a secure computer system within the clinical psychology department on Royal Holloway university campus. Data from individuals will be analysed and reported as part of a group and not as individual participants, so no individual can be identified from the results. All raw data (questionnaires completed) will be destroyed at the end of the study.

**What if I decide I don't want to continue being involved?**

You can withdraw from the study at any point. If you withdraw from the study your details and any completed questionnaires will be securely destroyed. Any withdrawal will not affect any involvement in any services and will remain confidential.

**How do I know the study is ethical?**

The researchers have consulted with a number of different people including clinicians at Tower Hamlets Personality Disorder Service and a service user representative. The study has also gone to a NHS Research Ethics committee who give a favourable opinion on the study. Details of this are available from [Samantha.blackburn.2011@live.rhul.ac.uk](mailto:Samantha.blackburn.2011@live.rhul.ac.uk).

In keeping with ethics requirements we would like to let your GP know that you are taking part in this study. This is for information only and in keeping with the complete confidentiality of the study your results will not be passed on to your GP. You can also contact your local NHS Patient Advice and Liaison Service (East London NHS PALS 0800 783 4839) for information on taking part in research studies or any concerns or complaints about this study. You can also contact Prof. Andrew MacLeod about this study at [A.Macleod@rhul.ac.uk](mailto:A.Macleod@rhul.ac.uk) with questions or concerns about this study.

**Who should I contact to take part?**

If you are interested in hearing more about the study or taking part you can contact Samantha Blackburn on [Samantha.blackburn.2011@live.rhul.ac.uk](mailto:Samantha.blackburn.2011@live.rhul.ac.uk).

Feedback on the findings will be available to all participants taking part or from others interested in the study. You can contact [Samantha.blackburn.2011@live.rhul.ac.uk](mailto:Samantha.blackburn.2011@live.rhul.ac.uk) for information on this.

Thank you for reading about this study. I look forward to hearing from you.

Kind regards, Samantha Blackburn, Trainee Clinical Psychologist

**Appendix VII: Consent form for BPD and Control Group:**

**CONSENT FORM**

**Well-being and future thinking in borderline personality disorder**

I \_\_\_\_\_ (Participants name) confirm the following:

- |  | (initial)                |
|--|--------------------------|
| • That I have been explained the study and have been given an information sheet with further information.                          | <input type="checkbox"/> |
| • That I am aware that all my personal details and answers to questions are confidential and anonymous.                            | <input type="checkbox"/> |
| • I have been given my personal participation number and I am aware that I can stop participating at any point, or remove my data. | <input type="checkbox"/> |
| • That I am happy to take part in this study at this time.   | <input type="checkbox"/> |
| • I give consent for you to let my GP know that I am taking part in this study<br>GP name and address: .....<br>.....              | <input type="checkbox"/> |

*Please sign to confirm the above:*

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Participant

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Witness of consent

Date \_\_\_\_\_

Samantha Blackburn  
Trainee Clinical Psychologist

**Appendix VIII: GP letter for BPD and Control Group:**



Samantha Blackburn  
Royal Holloway University London  
Egham, Surrey  
TW20 0EX  
[Samantha.blackburn.2011@live.rhul.ac.uk](mailto:Samantha.blackburn.2011@live.rhul.ac.uk)

DATE

Dear Dr

This letter is to inform you that (participants name) is taking part in a psychology research study entitled “Well-being and future thinking in borderline personality disorder”, conducted by Samantha Blackburn under the supervision of Professor Andrew MacLeod at Royal Holloway University of London, and favourably viewed by South East Scotland and East London NHS Foundation Trust research ethics committees (13/SS/0144).

The study involves participants completing some standard psychology questionnaires and thinking about their futures. The measures have been administered many times in previous studies and there is no reason to expect any adverse reaction on the part of participants but in keeping with the requirements of the ethics committee we are letting you know of their participation.

Please feel free to get in touch if you would like to contact us.

Yours sincerely,

Samantha Blackburn  
Trainee Clinical Psychologist  
Royal Holloway University of London

## **Appendix IX: Debrief sheet for BPD and Control Group:**



**MY PARTICIPANT No. IS: \_\_\_\_\_.**

### **RESEARCH STUDY DE-BRIEF SHEET**

#### **Well-being and future thinking in borderline personality disorder**

Thank you for taking part in this study. At the start of the study you were given information on the aim of the study, and details about what your involvement would be explained. This sheet provides further information on the study and what happens next.

#### **Reminder about the study's aims and who will benefit from it:**

This study aims to extend understanding of borderline personality disorder by examining current psychological well-being and future-directed thinking. We hope the results from this study will aid greater understanding of borderline personality disorder for clients and clinicians and provide information that can guide treatment programmes and interventions and support current theories.

#### **What will happen to my information?**

Participation and all information given in the study are confidential; you were given a unique participant number (also on the top of this form) to ensure that individuals cannot be identified. All questionnaires and participant's details will be kept on a secure computer system. Data from individuals will be analysed and reported as part of a group and not as individual participants, so no individual can be identified. All raw data will be destroyed after the completion of the study.

#### **What if I decide I don't want to continue being involved?**

Even though you have completed the study you can still decide to remove your information if you are not happy. This can be done up to analysis of the data in January 2014. Please email [Samantha.blackburn.2011@live.rhul.ac.uk](mailto:Samantha.blackburn.2011@live.rhul.ac.uk) with your participant number to discuss this further.

#### **Who should I contact to get information of the outcomes of the study?**

If you are interested in hearing more about the outcomes of the study please contact [Samantha.blackburn.2011@live.rhul.ac.uk](mailto:Samantha.blackburn.2011@live.rhul.ac.uk) who will email you a summary of the study when it is complete. The study and the results will also be presented to others through journals and conferences. You can also contact Prof. Andrew MacLeod about this study at [A.Macleod@rhul.ac.uk](mailto:A.Macleod@rhul.ac.uk)

#### **Who else can I contact after the study?**

We hope that your involvement in the study isn't too disruptive, however if you would like to talk to anyone about your involvement in the study you can email Samantha Blackburn or, if applicable, contact your PD Service or the Samaritans (08457 909090).

For independent information on taking part in research, or if you have any concerns you can also contact your local NHS Patient Advice and Liaison Service (East London NHS PALS 0800 783 4839).

Thank you again for taking part in this study.

Kind regards,

Samantha Blackburn, Trainee Clinical Psychologist