Borderline personality disorder among individuals with bipolar disorder: Prevalence, correlates, and experiences of the comorbid diagnosis.

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Achievements and awards

Notable presentations.

Midlands Partnership NHS Foundation Trust Seminar, St George's Hospital, 2018.

International Society for Affective Disorders, London, 2019.

Postgraduate Research Conference, University of Worcester, 2019: Best Presentation Award.

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School of Allied Health and Community Seminar, University of Worcester, 2022.

“Hidden illnesses.”

Submission to Images of Research, University of Worcester, 2018

My research concerns the diagnosis of borderline personality disorder in people who have bipolar disorder. Research in borderline personality disorder and bipolar disorder individually has identified the confusion associated with these diagnoses, and the difficulty of having an invisible illness. My research will explore what it is like for a person to have a diagnosis of both borderline personality disorder and bipolar disorder. This image is my attempt to visualise how multiple diagnoses may add to the existing confusion of mental-ill health, with one disorder hidden within another.

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List of abbreviations

AUDADIS = Alcohol Use Disorder and Associated Disability Interview Schedule

BD = bipolar disorder

BD-I = bipolar I disorder

BD-II = bipolar II disorder

BDNOS = bipolar disorder not otherwise specified

BDRN = Bipolar Disorder Research Network

BIAS = borderline interpersonal affective systems

BLEQ = Brief Life Events Questionnaire

BMI = body mass index

BPD = borderline personality disorder

CI = confidence interval

CLEQ = Childhood Life Events Questionnaire

CMHT = Community Mental Health Team

DBT = dialectical behaviour therapy

DIDP = Diagnostic Interview for Personality Disorders

DSM = Diagnostic and Statistical Manual of Mental Disorders

EUPD = emotionally unstable personality disorder

HRA = Health Research Authority

ICD = International Classification of Diseases

IP = inpatient

IPDE = International Personality Disorder Examination

K-SADS = Schedule for Affective Disorders and Schizophrenia for School-Age Children

MDQ = Mood Disorder Questionnaire

MIDAS = Methods to Improve Diagnostic Assessment and Services

MINI = Mini-International Neuropsychiatry Interview

NESARC = National Epidemiological Survey on Alcohol and Related Conditions

NHS = National Health Service

NICE = National Institute for Health and Care Excellence

OP = outpatient

OR = odds ratio

PDE = Personality Disorder Examination

PDQ = Personality Disorder Questionnaire

PTSD = post-traumatic stress disorder

RDC = research diagnostic criteria

REC = Research Ethics Committee

SABD = schizoaffective bipolar-type

SADS = Schedule for Affective Disorders and Schizophrenia

SCAN = Schedules for Clinical Assessment in Neuropsychiatry

SCID-I = Structured Clinical Interview for DSM Axis-I Disorders

SCID-II = Structured Clinical Interview for DSM Axis-II Disorders

SIDP = Structured Interview for DSM Personality Disorders

SSRI = selective serotonin reuptake inhibitor

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Abstract

Background: Borderline personality disorder (BPD) is prevalent among individuals with bipolar disorder and is associated with severe illness course. Research comparing the prevalence and correlates of BPD between bipolar I and II disorders is limited and no existing research explores the experience of living with both diagnoses.

Aim. To examine the prevalence, clinical correlates, and experiences of BPD among individuals with bipolar I or II disorder in the UK.

Methods: Lifetime prevalence of BPD diagnosis was examined among 1157 individuals with best-estimate main lifetime DSM-IV diagnosis of bipolar I (*n*=808) or II (*n*=349) disorder from the UK Bipolar Disorder Research Network (BDRN). Association of BPD with sociodemographic and lifetime clinical variables, including history of childhood abuse, was examined in bipolar I and II disorder. Thematic analysis was conducted on interviews with 15 participants reporting both diagnoses.

Results: 16.4% (95% CI 14.4-18.6%) reported BPD. BPD was significantly more common in bipolar II disorder (24.4%; 95% CI 20.1-29.1%) than bipolar I disorder (13.0%, 95% CI 10.8-15.4%) (*p*<.001; OR 2.16). Bipolar disorder was diagnosed first in most participants (59.4%, 95% CI 51.1-67.4%) and more participants found BPD unhelpful to their treatment (45.2**%**, 95% CI 37.0-53.6%) than helpful (27.4%, 95% CI 20.6-35.5%). Significant predictors of BPD in bipolar I disorder included history of suicide attempt (OR 1.86), presence of an anxiety disorder (OR 2.18) and heavier alcohol use (OR 1.01); in bipolar II disorder, the significant predictor was heavier alcohol use (OR 1.01). Themes from interviews highlighted differences in how participants viewed the two diagnoses: “an unknown diagnosis – a known diagnosis”; “feeling

dismissed – feeling treated"; "keeping the diagnosis a secret – disclosing the diagnosis"; and "not identifying as BPD – identifying as bipolar disorder."

Conclusion: A clinical diagnosis of BPD was common among those with bipolar disorder (one in six) and twice as likely in bipolar II disorder compared to bipolar I disorder. BPD was associated with more severe illness outcomes and other comorbidities and was perceived by the participants as more stigmatising than bipolar disorder and a barrier to treatment. Participants felt much better informed about bipolar disorder than BPD and felt better able to discuss bipolar disorder with others. Clinicians should consider screening for BPD particularly among individuals with bipolar II disorder and other comorbidities. Improvements to education and information about BPD may help reduce stigma and improve outcomes for those with both diagnoses.

Thesis overview.

In this thesis, three studies examining the diagnosis of borderline personality disorder (BPD) among individuals with bipolar disorder in the Bipolar Disorder Research Network (BDRN) are presented. It will begin by providing background to the research and explaining the overall methods and methodology, before presenting each of the three studies in turn. The studies will then be integrated and discussed as a whole, and conclusions drawn. The rest of this thesis will be structured as follows:

- In **Chapter 1**, the background for the thesis will be examined, with further discussion in the literature reviews of individual study chapters. Bipolar disorder and BPD will be introduced in detail and the justification for this thesis explained. The chapter will conclude with the aims of this thesis.

- In **Chapter 2**, the methodology of this thesis, which took a pragmatic approach to mixed methods, will be explained and justified, and the methods of BDRN are detailed. Specific methods will be provided for each of the individual studies in their respective chapters.
- In **Chapter 3**, a study examining the prevalence of BPD clinical diagnosis in a subsample of BDRN participants will be presented. The chapter will begin with a review of the existing literature on the prevalence of BPD in bipolar disorder, before outlining the methods of the study. Results will be presented and then discussed.
- In **Chapter 4**, the second study of this thesis, examining the sociodemographic and clinical factors associated with a clinical diagnosis of BPD in bipolar disorder, will be presented. The chapter will begin with a review of the existing literature on the correlates of BPD in bipolar disorder and the methods of this study, before presenting the results and a detailed discussion.
- In **Chapter 5**, the experiences of individuals who have been diagnosed with both BPD and bipolar disorder will be explored through the final study conducted as a part of this thesis. The qualitative literature providing background for this study will be examined, before the methods of the study are discussed. Analysis of the data will be presented before discussion of the findings.
- In **Chapter 6**, the results of the three individual studies will be considered alongside each other in an integrated discussion. The thesis will then be concluded through discussion of the key findings, strengths and limitations and potential implications of the research.

Chapter 1. Background.

1.1. Chapter overview.

In this chapter, the background to this thesis is explored, with an emphasis on the epidemiology, diagnosis and prognosis of the individual diagnoses of bipolar disorder and BPD. Evidence suggests that the two can co-occur, with an estimated one in five individuals with bipolar disorder also having BPD. Where this comorbidity is present, the research suggests it is associated with a greater severity of bipolar disorder illness. However, existing studies are limited in sample size and the definitions of disorders used. Aims of this thesis will be outlined at the end of the chapter.

1.2. Mood disorders.

Mood disorders are severe mental illnesses with a high lifetime prevalence, estimated at between 14 to 18% (Kessler et al., 2012; Waraich et al., 2004). Individuals with mood disorders experience changes to their emotions, moods, and motivation, often episodically with periods that are relatively symptom-free (First & Endicott, 2013). However, these symptom-free periods are often complicated by comorbid, or co-occurring, conditions, as prevalence rates of mood disorders are increased in individuals with other mental or physical illnesses (Chatterji & Bergen, 2013; Merikangas & Low, 2004). Understanding comorbidity within mood disorders can help further understanding of mood disorders themselves and symptoms experienced between and within mood episodes.

Mood episodes and disorders are usually diagnosed according to either the Diagnostic and Statistical Manual of Mental Disorders (DSM) (American Psychiatric Association, 2000, 2013) or the International Classification of Diseases (ICD) (World Health Organization, 2018), depending on the country. The diagnosis of a mood disorder relies on clinical judgement and assessment of signs and symptoms and past history, and usually is formed from a diagnosis of mood episodes. **Figure 1.1** outlines mood episodes as classified in the DSM-IV and DSM-5. For either a depressive or hypomanic or manic episode to be diagnosed, a certain number of symptoms must be present for a specified length of time. Following the publication of DSM-5, both elevated or irritable mood and abnormal and persistently increased activity or energy must also be present (Angst et al., 2020; Kessing et al., 2021). For a depressive episode, symptoms must be present for two weeks, and symptoms must be present for one week for a manic episode and four days for a hypomanic episode. Mixed episodes consist of both depressive and manic symptoms concurrently, although DSM-5 has removed this as a distinct

episode and replaced it with the specifier 'Mixed', which can be used with both depressive and manic episodes (American Psychiatric Association, 2013). In ICD-10 and ICD-11, there is no length of time specified for the symptoms to be present for a mood episode, however the definitions of symptoms are similar to DSM. Many of the symptoms of a mood episode alone overlap with other psychiatric disorders and possible comorbid conditions.

Figure 1.1. *Outline of mood episode criteria in the Diagnostic and Statistical Manual of Mental Disorders (DSM).*

Major depressive episode

- Depressed mood and/or diminished interest or pleasure in activities for at least two weeks.
- 5 out of 9 criteria for at least two weeks.
  - Depressed mood
  - Diminished interest or pleasure in activities
  - Significant increase/decrease in appetite or weight
  - Insomnia or hypersomnia
  - Psychomotor agitation or retardation
  - Fatigue or low energy
  - Feelings of worthlessness or excessive or inappropriate guilt
  - Diminished ability to think or indecisiveness
  - Recurrent thoughts of death, suicidal ideation or a suicide attempt

Hypo/manic episode

- Elevated or irritable mood for at least a week in case of mania, or at least 4 days in hypomania. In DSM-5, increase in activity/energy was added as a necessary marker for hypo/manic episodes.
- Manic episode requires marked impairment.
- 3 or more symptoms for elevated mood, 4 or more for irritable mood.
  - Inflated self-esteem or grandiosity
  - Decreased need for sleep
  - Pressured speech
  - Flight of ideas
  - Distractibility to external stimuli
  - Increase in social/sexual or occupational/academic or psychomotor agitation
  - Excessive involvement in pleasurable activities with high potential for painful consequences

Mixed episodes

Simultaneous presence of the symptoms of a manic and depressive episode, occurring every day for at least a week. In DSM-5, mixed episodes have been removed as discrete episodes and replaced with the specifier "mixed".

Adapted from DSM-IV (American Psychiatric Association 2000) and DSM-5 (American Psychiatric Association 2013).

1.3. Bipolar disorder.

1.3.1. Epidemiology and diagnosis.

Bipolar disorder is a severe mood disorder characterised by mania or hypomania, and usually episodes of depression. An estimated 1 to 5% of the global population have been reported to have a form of bipolar disorder, depending on the subtypes of bipolar disorder included (Blanco et al., 2017; Cassano et al., 2002; Merikangas et al., 2007). In a community sample of 7546 adults in England, the Adult Psychiatric Morbidity Survey identified individuals who were likely to have bipolar disorder based on the Mood Disorder Questionnaire and found a rate of 2% within the sample (Humpston et al., 2021). Rates tend to widen when subsyndromal bipolar symptoms, or the bipolar spectrum, are included in the prevalence, with a prevalence closer to 5% (Cassano et al., 2002; Merikangas et al., 2007). Average age at onset for bipolar disorder is late adolescence or early adulthood (Bauer & Pfennig, 2005; Blanco et al., 2017; Rowland & Marwaha, 2018). However, prevalence and age at onset of bipolar disorder are further complicated by the high levels of comorbidity in the disorder, which will be discussed further in **1.4**.

1.3.2. Aetiology.

Evidence to date suggests that bipolar disorder is likely to be caused by an interaction between genetic and environmental factors. Family studies have suggested that heritability and genetics play a large part in the development of bipolar disorder, with a recent twin study finding that bipolar disorder had a heritability of 60% (Johansson et al., 2019). The genetics and heritability of bipolar disorder are well-established, however no specific gene or genes

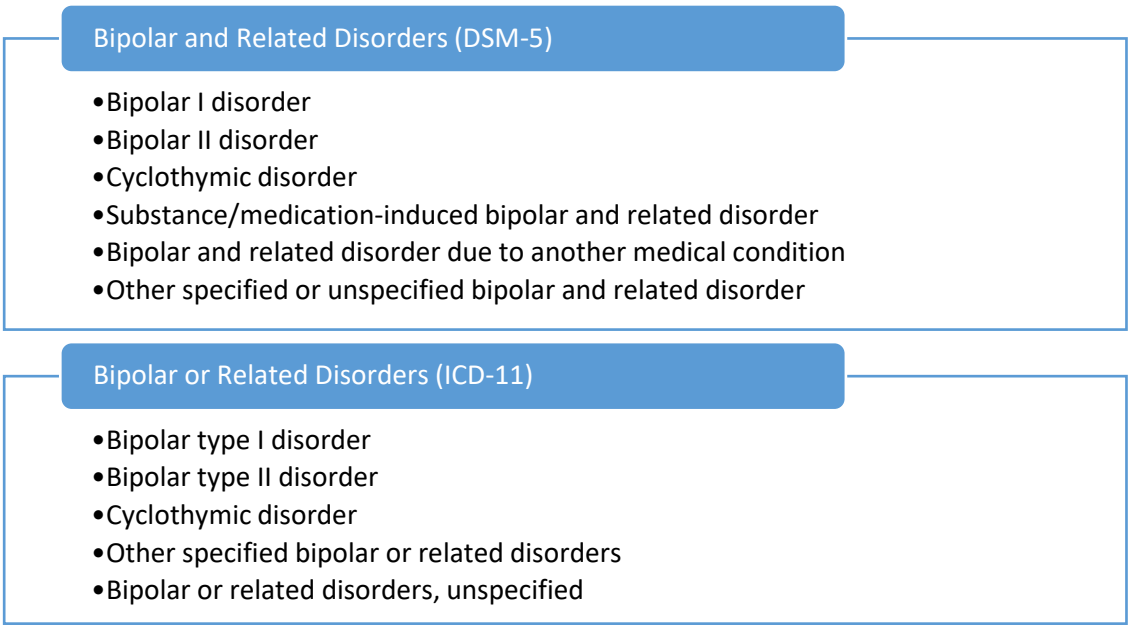
have yet been identified that substantially increase risk of developing the disorder. International efforts are underway to better understand the neurobiology of bipolar disorder and the Psychiatric Genomics Consortium recently identified DNA variations in synaptic signalling pathways in individuals with bipolar disorder, particularly those involved in communication between neurons (Mullins et al., 2021). In terms of neurophysiology, research has found that the hippocampus is reduced in volume in bipolar disorder, as well as decreased cortical volumes and thickness, both of which may be implicated in memory and emotions (Hibar et al., 2016; Li et al., 2019; Rossi et al., 2001). Currently, research suggests bipolar disorder develops from interactions among a variety of different genes which then interact with environmental stressors, such as childhood adversity or stress (Merikangas & Paksarian, 2015; Strakowski, 2014). Studies have found that individuals with bipolar disorder are more likely to report a history of childhood trauma and maltreatment than healthy controls (Daruy-Filho et al., 2011; Quidé et al., 2020), with one retrospective analysis in 60 bipolar disorder participants finding that childhood emotional neglect in particular was associated with later receiving a diagnosis of bipolar disorder (Watson et al., 2014). The aetiology of bipolar disorder, particularly the potential environmental factors, overlaps with other psychiatric disorders, and understanding the development of bipolar disorder can be further confused by the high levels of comorbidity within the disorder. Understanding these comorbidities and the similarities and differences in their aetiology may help to further clarify how bipolar disorder develops.

1.3.3. Bipolar disorder subtypes.

Although research often examines bipolar disorder as one group, the term ‘bipolar disorder’ covers a range of disorders, as shown in **Figure 1.2**. When it was first introduced as a

disorder in DSM-I (American Psychiatric Association, 1980), bipolar disorder was known as manic depression and was a single disorder. Since then, the concept of bipolar disorder has undergone several changes reflecting research of the time, including a greater focus on its heritability, length of mood episodes and quality of mood episodes, leading to the development of a range of disorders understood as a part of the bipolar spectrum (Mason et al., 2016; Strakowski, 2014).

Figure 1.2. *Bipolar disorders in DSM-5 and ICD-11.*



Adapted from DSM-5 (American Psychiatric Association, 2013) and ICD-11 (World Health Organization, 2018).

Most commonly, bipolar disorder is differentiated into bipolar I disorder, characterised by episodes of mania and, in most cases, depression, and bipolar II disorder, characterised by hypomania and depression. Whilst historically bipolar II disorder was believed to be less severe than bipolar I disorder, more recent research has suggested that bipolar II disorder is associated with more chronic dysthymia or depression, as opposed to the discrete episodes of bipolar I disorder (Guzman-Parra et al., 2021; Mason et al., 2016). Significant differences

between bipolar I and II disorder have been highlighted in the literature. **Table 1.1.** summarises these differences. In particular, bipolar II disorder has been associated with a greater number of depressive episodes and a higher proportion of time ill, whilst bipolar I disorder has been associated with a higher number of manic and hypomanic episodes and greater functional impairment (Karanti et al., 2019; Mantere et al., 2004, 2008). Despite evidence that there are differences between bipolar I disorder and bipolar II disorder, many studies examining bipolar disorder examine it as a single disorder (for example, Humpston et al., 2021; Parmentier et al., 2012; Pascual-Sanchez et al., 2020; Richardson & White, 2019). This is important to this thesis, as comorbidity has also been found to be different between bipolar I disorder and bipolar II disorder: in a Swedish registry study comparing 4806 individuals with bipolar I disorder to 3960 individuals with bipolar II disorder, they found that individuals with bipolar II disorder were almost twice as likely as those with bipolar I disorder to have a comorbid personality disorder (Karanti et al., 2019). Findings such as this highlight the importance of considering both bipolar I disorder and bipolar II disorder in comorbidity research. Differences between bipolar I and II disorder found in the literature suggest that combining the two may miss potentially significant findings which otherwise may help further understanding of bipolar disorder as a whole.

Table 1.1. Differences in bipolar I disorder and bipolar II disorder.

Bipolar I Disorder	Bipolar II Disorder
More likely to be male [6 8].	More likely to be female [6 8].
Lower proportion of time ill [5].	Higher proportion of time ill [5].
Greater functional impairment [4].	Greater symptom burden [4].
Older at first signs of illness [4].	Younger at first signs of illness [4].
Shorter delay between onset of symptoms and diagnosis [6].	Older at first contact with mental health services [4 6].
Lower prevalence of suicide attempts [4].	Higher prevalence of suicide attempts [4].
More likely to have been hospitalised [4 6 7 8].	Less likely to have been hospitalised [4] .

Bipolar I Disorder	Bipolar II Disorder
More lifetime (hypo)manic episodes [4 6].	More lifetime depressive episodes [4 2 7].
Lower current depression scores [8].	Higher current depression scores [8].
Higher rate of endocrine, nutritional and metabolic diseases [4].	Higher rate of psychiatric comorbid conditions, including anxiety disorders, eating disorders and personality disorders [1 2 4 8].
Presence of anxiety disorder associated with lower health-related quality of life [1].	Presence of anxiety disorder associated with no change in health-related quality of life [1].
More likely to receive electro-convulsive therapy and mood stabilisers (particularly lithium, valproate and olanzapine) as well as psychoeducation [4 8].	More likely to receive psychotherapy, antidepressants and lamotrigine [4 8].
Less likely to have children, more likely to live in supported housing and be out of work or education [4].	More likely to have children, live in ordinary as opposed to supported housing and be working or studying [4].
More neurocognitive difficulties [3].	Less neurocognitive difficulties [3].
[1] Albert et al., 2007; [2] Baek et al., 2011; [3] Carla et al., 2006; [4] Karanti et al., 2019; [5] Mantere et al., 2008; [6] Mantere et al., 2004; [7] Vieta et al., 1997; [8] Vinberg et al., 2017.	

1.3.4. Experiences of living with bipolar disorder.

There is a large body of research exploring the experiences of individuals living with bipolar disorder (Crowe et al., 2012; Fernandez et al., 2014; Inder et al., 2008, 2010; Jönsson et al., 2008; Mandla et al., 2017; Michalak et al., 2006; Proudfoot et al., 2009). This research has highlighted the experience of uncertainty in everyday life with bipolar disorder, with themes across studies emphasising feelings of instability and a lack of control (Crowe et al., 2012; Fernandez et al., 2014; Inder et al., 2008; Mandla et al., 2017; Michalak et al., 2006). Crowe et al. (2012), for example, interviewed 21 participants with bipolar disorder about the impact of the disorder on their lives, and found that most participants equated the diagnosis with a lack of control and a loss of autonomy. Feelings of instability were further reflected in studies which considered views of the future. An Australian study that analysed emails between 26 participants with newly diagnosed bipolar disorder and peer supporters with bipolar disorder

found that uncertainty about the future was a key theme in the emails, with participants questioning whether the diagnosis would ever allow them to live a normal life (Proudfoot et al., 2009). There is a limited amount of qualitative research exploring experiences of comorbidity in bipolar disorder, however it is possible that having comorbid conditions only increases these experiences of uncertainty. One study exploring the experiences of individuals with bipolar disorder and comorbid substance use disorder found that participants found life difficult due to moving between drug- and alcohol-induced recklessness and bipolar disorder mood episodes, however the greater cause of uncertainty was attempting to distinguish where one disorder began and the other ended (Ward, 2011). Further qualitative research with individuals with comorbid conditions in bipolar disorder will add to existing understanding of what it means to live with bipolar disorder and help further understand the treatment and prognosis of the disorder.

1.3.5. Treatment and prognosis.

Bipolar disorder is a lifelong illness, however with treatment individuals can recover. The first line of treatment for bipolar disorder is pharmacotherapy or a combination of pharmacotherapy and psychotherapy (Rakofsky & Rapaport, 2018). Mood stabilisers, which are medications effective in treating and preventing the recurrence of mood episodes, are often prescribed, and lithium in particular has proven to be efficacious in the majority of individuals with bipolar disorder (Kishi et al., 2020; Rakofsky & Rapaport, 2018; Severus et al., 2018). Anticonvulsants such as valproate, carbamazepine and lamotrigine are also regularly prescribed to treat bipolar disorder (Rakofsky & Rapaport, 2018). Although they are often prescribed, antidepressants are not normally recommended for use in individuals with bipolar disorder, unless they are used alongside a mood stabiliser, as alone they may switch the

polarity from depressive to manic (Rhee et al., 2020). Psychotherapy may be used in conjunction with medication to help understand mood triggers, increase medication adherence and provide symptom management techniques. Interventions recommended for use in bipolar disorder include individual, family and group psychoeducation, Cognitive Behavioural Therapy and Interpersonal and Social-Rhythm Therapy (Miklowitz & Johnson, 2006). One of the key difficulties in treating bipolar disorder is the gap between mood episode age at onset and diagnosis, with one study finding only 20% of individuals later diagnosed with bipolar disorder who initially presented with a depressive episode were diagnosed with bipolar disorder within the first year of treatment (Goldberg et al., 2001) and a review suggesting that there is often a gap of five to ten years before correct diagnosis (Grande et al., 2016). This highlights the difficulty of diagnosing bipolar disorder, which can be partially explained by the overlap of symptoms with other disorders and the high rates of comorbid conditions present in bipolar disorder.

Prognosis for bipolar disorder depends on treatment and is further complicated by comorbidities. Treatments may decrease the frequency and duration of mood episodes; however, functional impairment persists outside of mood episodes for many individuals with bipolar disorder, and bipolar disorder is consistently recognised as one of the leading causes of medical disability globally (Alonso et al., 2011). Individuals with bipolar disorder are at increased risk of premature mortality, with one meta-analysis estimating a pooled life expectancy of 67 years (Chan et al., 2022). This is, in part, explained by the increased comorbidity with physical illnesses in bipolar disorder (Forty et al., 2014), which is discussed in detail in section **1.4.1.** below. Suicidality also plays a part in reducing life expectancy in bipolar disorder. A meta-analysis found that 34% of 33,719 participants with bipolar disorder attempted suicide (Dong et al., 2019), and reviews estimate 15 to 20% of deaths in bipolar disorder may be attributable to suicide (Grande et al., 2016; Strakowski, 2014). The

International Society for Bipolar Disorder's task force on suicide found that depressive polarity of current or recent episodes, depressive polarity of first illness episode, substance use disorders, family history of suicide, earlier age at onset and female gender were significantly associated with suicide attempt in individuals with bipolar disorder (Schaffer et al., 2015). Of note to this thesis, they also found that comorbid disorders had a significant association with past suicide attempts in bipolar disorder.

1.4. Comorbidities in bipolar disorder.

1.4.1. Medical comorbidities in bipolar disorder.

Comorbidity refers to the co-occurrence of two or more independent conditions within one individual (Cramer et al., 2010; Strakowski, 2014). Bipolar disorder is associated with a high degree of comorbidity with a number of medical illnesses. A Taiwanese study found an increased incidence rate of most medical illnesses in 11,884 individuals in the first five years following a bipolar disorder diagnosis compared to controls representing the general population (Chen et al., 2021). This confirms the findings of previous research suggesting high levels of medical illness in bipolar disorder. A Brazilian study found that in a sample of 203 participants with bipolar disorder, 90% had at least one medical comorbidity, with older age, higher body mass index (BMI) and longer illness duration all associated with a high burden of medical comorbidities (Gomes et al., 2020), and a UK study of 1720 individuals with bipolar disorder and 1340 controls found that those with bipolar disorder had increased odds of the majority of medical illnesses examined, including being over 20 times more likely to have memory loss or dementia, over six times more likely to have thyroid disease, and over four times as likely to have kidney disease (Forty et al., 2014). Premature mortality due to severe

comorbid medical conditions is a key concern in bipolar disorder. For example, in the Taiwanese study of 11,884 participants with bipolar disorder the highest incidence rates for medical illnesses were forms of heart disease and heart failure, both associated with an increased mortality (Chen et al., 2021). The high levels of medical illness in bipolar disorder raises questions about parity of esteem, and whether mental health needs are being met equally to physical health needs in individuals with bipolar disorder. As bipolar disorder is associated with a high degree of comorbidity, there are also concerns about whether each illness – medical or psychiatric – are being treated as needed within the individual affected. Understanding comorbidity in bipolar disorder and the experiences of individuals with multiple diagnoses can help address these concerns.

1.4.2. Psychiatric comorbidities in bipolar disorder.

Additional psychiatric disorders are more common in individuals with bipolar disorder than the general population. Estimates of the rate of comorbidity vary across studies, ranging from about 40% (Merikangas & Paksarian, 2015) to over 90% (Bauer & Pfennig, 2005). A longitudinal Finnish study found that 33% of 144 participants with bipolar disorder met criteria for a comorbid psychiatric disorder at three evaluation points across 18 months, and only 29% of participants had no comorbid disorder at any evaluation point, with anxiety disorders the most prevalent and stable of comorbid conditions (Mantere et al., 2010). High rates of anxiety disorders have consistently been associated with bipolar disorder, with an estimated 35 to 50% of individuals with bipolar disorder also having an anxiety disorder (Amuk & Patel, 2020; Gamage et al., 2020; Inoue et al., 2020). The World Health Survey comorbidity website, which provides data visualisation on comorbidity between mental disorders, suggests that bipolar disorder is highly associated with other psychiatric conditions, with hazard ratios ranging from

14 (alcohol abuse) to 33 (agoraphobia) in examined comorbidities (Lim et al., 2018). Research has found that individuals with bipolar disorder and a comorbid psychiatric disorder are more likely to relapse or not respond to treatment and experience a greater severity of illness, with higher suicidality and a greater number of medications (Amuk & Patel, 2020; Gamage et al., 2020; Post et al., 2018; Üçok et al., 1998).

1.4.3. Personality disorder comorbidities in bipolar disorder.

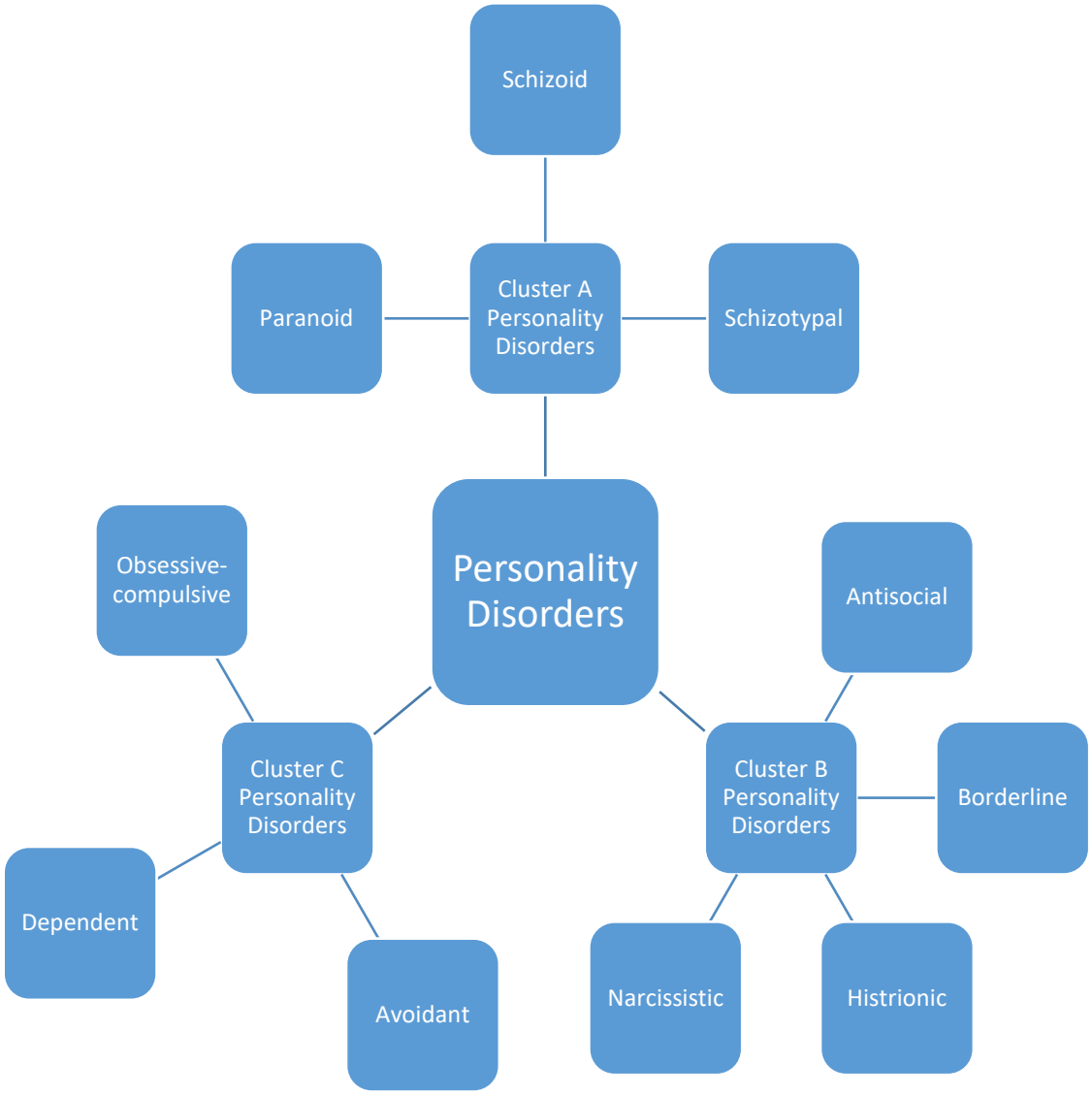
Personality disorders are pervasive patterns of traits that cause functional impairment (Centre for Mental Health et al., 2018; Samuels et al., 2002). Research has identified that bipolar disorder and personality disorders have a high degree of comorbidity and that their co-occurrence confers a greater severity of illness (Brieger et al., 2003; Friborg et al., 2014). Much of the existing comorbidity research in this area examines personality disorders as groups rather than individual diagnoses. Personality disorders in mood disorders are highly prevalent, with about 40% of individuals with a mood disorder also being diagnosed with a personality disorder at some time (Brieger et al., 2003; Friborg et al., 2014). Within bipolar disorder, an estimated 38 to 57% of individuals will have at least one personality disorder diagnosis (Altindag et al., 2006; Barbato & Hafner, 1998; Bezerra-Filho et al., 2017). However, research in this area has varied results, with disagreement over the most common personality disorder diagnosis in bipolar disorder. For example, both Altindag et al. (2006) and Brieger et al. (2003) found that obsessive-compulsive personality disorder was most common in bipolar disorder, affecting about one in five individuals. However, a meta-analysis by Bezerra-Filho et al. (2015) found that borderline personality disorder, the focus of this thesis, was the most common personality disorder in bipolar disorder. Furthermore, research has found varying results on the impact of personality disorders on bipolar disorder illness, with some researchers

suggesting personality disorders have little impact (Altindag et al., 2006) and others finding they are associated with increased morbidity (Barbato & Hafner, 1998).

1.5. Personality disorders.

Personality disorders are relatively common in the global population. The World Health Organization's world mental health survey screened for personality disorders across 21,162 participants in 13 countries, and found an estimated prevalence of 6% (Huang et al., 2009). Meta-analyses have estimated a prevalence rate of 8% (Winsper et al., 2019) and rates in the UK have been estimated at 4% of the population (Coid et al., 2006). In DSM-5, personality disorders are split into three clusters (as shown in **Figure 1.3**). Personality disorders in the same cluster have a similar underlying symptomatology. Cluster A personality disorders affect an estimated 4% of the population and are characterised by odd, eccentric thinking or behaviour and social awkwardness and withdrawal (Winsper et al., 2019). Cluster B personality disorders have a similar prevalence, affecting an estimated 3% of the population, and are characterised by dramatic, overly emotional, or unpredictable thinking and behaviour (Winsper et al., 2019). Lastly, Cluster C personality disorders affect an estimated 5% of the population and are characterised by anxious, fearful thinking or behaviour, and internalisation of problems and difficulties managing interpersonal relationships (Winsper et al., 2019).

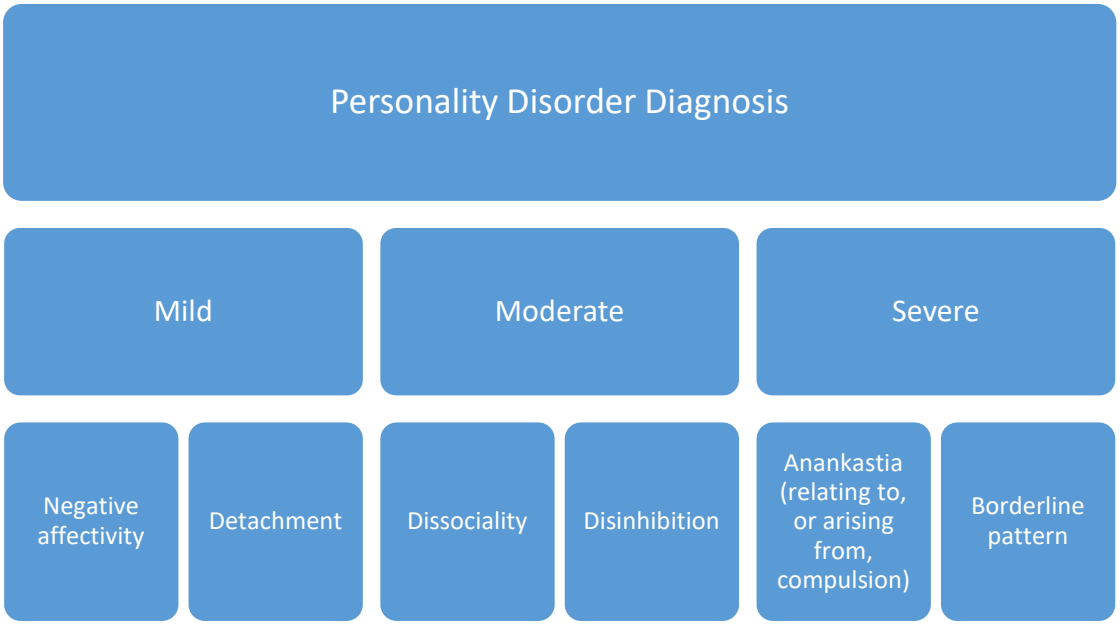
Figure 1.3. *Personality disorders in DSM-5 (American Psychiatric Association, 2013).*



Note: DSM-5 also includes General Personality Disorder, and Other Personality Disorders, including changes in personality due to medical condition and other specified personality disorder or unspecified personality disorder. As well as the discrete categories, Section III of the DSM contains the DSM-5 Alternative Model for Personality Disorders.

The way in which personality disorders are defined and diagnosed has changed with the most recent classification systems. Historically, personality disorders were diagnosed on Axis II of the DSM-IV, with other mental disorders in Axis I: this distinction has been dropped in DSM-5 (American Psychiatric Association, 2000, 2013). There has been debate about how personality disorders are diagnosed, with some arguing that a dimensional model should be used to better understand personality disorders rather than a categorical model (Morey et al., 2015). In DSM-5, this has led to the inclusion of an Alternative Model of Personality Disorders in Section III, however the categorical diagnoses of personality disorders remain the main form of diagnosis alongside mental disorders in Section II (American Psychiatric Association, 2013). ICD-11 has adopted a dimensional model of personality disorders, as illustrated in **Figure 1.4**. This means the way in which personality disorders are conceptualised and understood hinges on the diagnostic manual in use, which may impact clinical practice and how personality disorders are diagnosed and further confuses diagnosing personality disorders in existing conditions, such as bipolar disorder.

Figure 1.4. *Personality disorder diagnosis in ICD-11 (World Health Organization, 2018), with severity markers and trait domain qualifiers.*



1.6. Borderline personality disorder.

1.6.1. Epidemiology and diagnosis.

The focus of this thesis is the diagnosis of borderline personality disorder (BPD) among individuals with bipolar disorder. BPD is characterised by difficulties in interpersonal relationships, self-image, affect regulation and impulse control. Individuals with BPD experience high levels of personal and emotional instability, with significant impairment and difficulties in maintaining relationships alongside self-harm and suicidality (McManus et al., 2016). It has been suggested that affective instability, or repeated, rapid, intense shifts in mood, is the most important symptom for a diagnosis of BPD to be valid (Zimmerman et al., 2017), which makes BPD particularly important to examine in the affective shifts of bipolar disorder. An estimated 1 to 3% of the global population has BPD (McManus et al., 2016; NICE: National Institute for Health and Care Excellence, 2009; Tomko et al., 2014). It has been estimated that this number rises to 5 to 10% in primary care settings and 15 to 20% in psychiatric hospitals and outpatient clinics (Edery, 2019; Lenzenweger, 2008), meaning that it is likely BPD patients make up a large amount of the 33 to 52% of psychiatric outpatients that have personality disorders (Evans et al., 2017). In the UK, BPD has been found to be more prevalent in those who are living alone, under sixty years old and in receipt of benefits (McManus et al., 2016). Rates of BPD have also been found to be significantly higher in individuals with bipolar disorder, with estimates suggesting one in five individuals with bipolar disorder may meet diagnostic criteria for BPD (Fornaro et al., 2016; Frías et al., 2016).

The challenge of diagnosing personality disorders is the focus of much research, and this is particularly true in the case of BPD. The difficulty of defining BPD led to Akiskal calling borderline “an adjective in search of a noun” (Akiskal et al., 1985). In DSM-IV, BPD could be

diagnosed whenever any five of nine possible symptoms presented (see **Figure 1.5**), representing a possible 256 combinations of symptoms (American Psychiatric Association, 2000; Distel et al., 2009; Goldman, 2021; Trull et al., 2011). Because of this, researchers have argued that the conceptualisation of BPD is too broad (Goldman, 2021). The way in which BPD is diagnosed has changed in recent years, with both DSM-5 and ICD-11 introducing significant modifications to personality disorder diagnoses (as outlined in **1.5**), however the nine core symptoms of BPD previously outlined in DSM-IV remain the same in DSM-5 (Campbell et al., 2020; Kaufman & Meddaoui, 2021; Suzuki et al., 2015; Trull et al., 2011). Rather than a discrete BPD diagnosis, ICD-11 has introduced the descriptor 'borderline' to its dimensional model of personality disorders and emphasised the role of identity and self within personality disorders in general (Campbell et al., 2020; Kaufman & Meddaoui, 2021; Luty, 2020). Furthermore, ICD-11 has dropped the term "emotionally unstable personality disorder", which was used in place of BPD in ICD-10 (Luty, 2020). These continuing changes to the concept and diagnosis of BPD mean that research into the disorder is constantly shifting, with one study suggesting that the shift changes the emphasis in BPD from antagonism and disinhibition in DSM-IV to submissiveness and risk aversion in DSM-5 (Samuel et al., 2012). The type of diagnostic criteria used in different studies therefore affects the conceptualisation of BPD being examined and makes it difficult to compare across studies. There is also some confusion for those diagnosed: the use of three different terms (BPD, emotionally unstable personality disorder or 'borderline' as a descriptor) may be difficult to understand as a patient, with confusion over whether there are differences between these three diagnoses or whether they represent the same thing. Furthermore, research exploring clinical diagnosis of BPD often does not account for these different labels, meaning that potentially clinically useful findings may be missed.

Figure 1.5. *The nine symptoms of borderline personality disorder, according to DSM-5 (American Psychiatric Association, 2013).*

Five or more of the following symptoms are required to make a diagnosis:	Frantic efforts to avoid real or imagined abandonment
	A pattern of unstable and intense interpersonal relationships
	Markedly and persistently unstable self-image or sense of self
	Impulsivity in at least two areas that are self-damaging (such as substance abuse, reckless driving)
	Recurrent suicidal behaviour, gestures or threats, or self-mutilating behaviour
	Affective instability due to a marked reactivity of mood
	Chronic feelings of emptiness
	Inappropriate, intense anger, or difficulty controlling anger
	Transient, stress-related paranoid ideation or severe dissociative symptoms

1.6.2. Aetiology.

Family studies of BPD have suggested moderate to high heritability, with twin studies finding a concordance rate of about 35% in identical twins (Kendler et al., 2008; Torgersen et al., 2008). However, the development of BPD is often linked to traumatic life events such as childhood abuse, with some viewing BPD as a form of complex post-traumatic stress disorder (PTSD) (Kulkarni, 2017). A meta-analysis of 11,366 individuals with BPD found that 71% of participants reported at least one adverse childhood experience and that BPD participants were over 13 times more likely to have experienced childhood adversity than healthy controls (Porter et al., 2019). Although studies such as this suggest a strong correlation between childhood adversity and the development of BPD, there is no evidence that the presence of childhood adversity is necessary to develop this disorder (Distel et al., 2009; Lieb et al., 2004). Instead, the most widely used theory of the development of BPD, Linehan's biosocial theory,

posits that BPD develops from transactions between individuals with biological vulnerabilities and specific environmental influences within an invalidating environment (Crowell et al., 2009; Linehan, 1993). A more recent theory, the borderline interpersonal-affective systems (BIAS) model, argues that harmful early life relationships and subsequent conflictual relationships lead those with BPD to develop an increased sensitivity to interpersonal threat, leading to heightened emotional reactivity and destructive behaviours to regulate emotions and meet interpersonal needs (Fitzpatrick et al., 2021). Both theories suggest the importance of early life events, although the biosocial theory puts more emphasis on the genetic vulnerabilities. Studies have supported the role of genetic vulnerabilities by showing that individuals with BPD have neuropsychiatric abnormalities. The hippocampus and amygdala, both involved in emotion regulation, have been found to be as much as 16% smaller in people with BPD than healthy controls (Dell'osso et al., 2009; Edery, 2019; Schienle et al., 2015). This overlaps with bipolar disorder, where the hippocampus has also been found to be smaller, suggesting a shared vulnerability to emotion dysregulation between the two disorders (Hibar et al., 2016; Li et al., 2019; Rossi et al., 2001).

1.6.3. Experiences of living with borderline personality disorder.

There is a smaller body of research exploring qualitative experiences of BPD than there is in bipolar disorder, and much of the existing literature has focused on the anticipation and experience of stigma in treatment (Carrotte et al., 2019; Fallon, 2003; Nehls, 1999; Perseius et al., 2005; Rogers & Acton, 2012). An American study by Nehls (1999) consisted of interviews with 30 individuals with BPD, analysed with an interpretative phenomenology approach, which aimed to discover what experiences were meaningful to individuals living with BPD. Three key themes were developed: living with a label, living with self-destructive behaviour, and living

with limited access to care. All three themes involved the interaction of individuals with BPD with healthcare professionals, mainly underscored by perceived stigma and negative experiences (Nehls, 1999): participants reported feeling labelled, rather than diagnosed, and felt that their self-destructive actions were seen as manipulative and insincere, rather than the expression of emotional pain they believed them to be. A hermeneutic analysis of the narrative interviews and biographical materials of ten Swedish women with BPD highlighted similar topics in their theme "the good and the bad act of psychiatric care in the drama of suffering," however two themes highlighted other experiences of living with BPD: "life on the edge" and "the struggle for health and dignity – a balance act on a slack wire over a volcano" (Perseius et al., 2005). Both themes highlighted the experiences of individuals living with BPD as one of constant uncertainty, characterised by intense swings between "normality" and emotional pain. This uncertainty may be further highlighted where BPD is comorbid with other conditions, however there is little existing qualitative research on the experience of having BPD alongside other disorders.

1.6.4. Treatment and prognosis.

Although BPD is considered a long-term condition, individuals can improve with engagement with appropriate treatment and time. The first line of treatment for BPD is psychotherapy, the most empirically supported of which is Dialectical Behaviour Therapy (DBT), which was developed specifically to treat BPD (Edery, 2019; Linehan, 1993). Alongside psychotherapy, adjunctive pharmacotherapy may be used to target specific symptoms of BPD – for example selective serotonin reuptake inhibitors (SSRIs) for the management of affective dysregulation – however there are currently no medications licenced to treat BPD (Dell'osso et al., 2009). Despite this, the Adult Psychiatric Morbidity Survey in England found that 38% of

those screening positive for BPD were currently on psychotropic medication whilst only 20% were receiving counselling or psychological therapy (McManus et al., 2016). Individuals with BPD are often intensive service users, with one Australian study finding that 583 BPD participants attended the emergency room a total of 2807 times during one year, compared to 583 matched controls with depression only who attended 1092 times (Broadbear et al., 2022). However, despite intensive service use, outcome from treatment is often modest in individuals with BPD due to potential low engagement and issues with accessing appropriate resources (Martens, 2009; NICE: National Institute for Health and Care Excellence, 2009). As BPD is often comorbid with other psychiatric conditions, it is important that individuals receive treatment for each disorder, as the modest outcomes of treatment in BPD may partially be explained by the complexity of treating comorbid disorders.

Treatment for BPD is vital due to the association of BPD with attempted and completed suicide (Broadbear et al., 2020; Grilo & Udo, 2021). The prognosis of BPD is positive in that many people will remit with age (Dell'osso et al., 2009), with one study finding only 44% of 154 participants with BPD retained that diagnosis at a two-year follow-up (Grilo et al., 2004). However, an estimated one in ten individuals with BPD will complete suicide (Dell'osso et al., 2009; Edery, 2019; NICE: National Institute for Health and Care Excellence, 2009). The presence of suicidality in BPD is not surprising as it is one of the diagnostic criteria, and the rates of suicide attempts and completed suicide are high. The Collaborative Longitudinal Study of Personality Disorders in the USA followed 701 individuals with either one of four personality disorders (schizotypal, borderline, avoidant and obsessive-compulsive) or major depressive disorder with no personality disorder (Yen et al., 2020). In ten years of follow-up, they found that individuals with a diagnosis of BPD were six times more likely to exhibit suicidal behaviour compared to individuals with other personality disorders or major depressive disorder. One study of completed suicide in Australia found that, within five years, there were 1506 suicides

where a mental health disorder was diagnosed; of these, 12% had a diagnosis of BPD (Broadbear et al., 2020). A study of completed suicide in Italy supported these findings, with death by suicide accounting for 27% of years of life lost in BPD, compared to only 9% of total years of life lost across the sample. Suicidality is therefore a major concern in BPD and there is a large amount of literature in this area (Broadbear et al., 2020; Grilo & Udo, 2021; Söderholm et al., 2020; Yen et al., 2020).

1.7. Borderline personality disorder in bipolar disorder.

1.7.1. The diagnostic overlap.

Much of the existing research examining BPD and bipolar disorder within the same study is concerned with the overlap between the two disorders and the diagnostic difficulty in differentiating the two in practice. Both disorders share affective instability – a trait predisposing to marked, rapid shifts in affective states (Renaud et al., 2012) – as a symptom, with individuals with BPD or bipolar disorder likely to report difficulty regulating emotions and mood. Research has suggested that clinicians do not feel confident in differentiating the two in practice. A mixed methods study with psychiatrists and nurses in the UK found that clinicians struggled to differentiate bipolar disorder and BPD in practice and felt determining the diagnosis of bipolar disorder was more important as this was the primary focus for treatment (Saunders et al., 2015). In particular, it has been suggested that bipolar II disorder is difficult to differentiate from BPD: both are marked by a depressive polarity and the hypomanic shifts in bipolar II disorder may be more difficult to differentiate from the affective instability of BPD than manic episodes (Agius et al., 2012; Benazzi, 2000). At the moment, best practice for differentiating the two involves an in-depth psychiatric interview to determine differentiating

factors. To this end, a large body of research has been developed examining the similarities and differences between BPD and bipolar disorder, and recent research has found that the two can be reliably differentiated by self-report screening instruments and machine learning models (Arribas et al., 2018; Bayes et al., 2021; Palmer et al., 2021).

1.7.2. Comorbid borderline personality disorder in bipolar disorder.

Evidence suggests that BPD and bipolar disorder can co-occur, and that the comorbidity is associated with a greater severity of illness. Recently, researchers have argued that comorbid BPD in bipolar disorder is likely to be more common than estimated, and represents a prevalent clinical scenario (Parker et al., 2022). Studies have consistently shown that BPD is prevalent in bipolar disorder, with meta-analyses suggesting one in five individuals with bipolar disorder will also have BPD (Fornaro et al., 2016; Frías et al., 2016). This is vital, as BPD has also been associated with a greater severity of illness in bipolar disorder. Studies suggest the presence of BPD is associated with, for example, a greater number of episodes (McDermid et al., 2015), higher suicidality (Zimmerman et al., 2014), and a less positive response to treatment (Swartz et al., 2005). As outlined in this chapter, positive prognosis for both BPD and bipolar disorder are dependent on appropriate treatment, and the evidence of poorer outcomes from treatment where the two are comorbid is evidence of the need to further examine this comorbidity. Learning more about the prevalence and presentation of BPD in bipolar disorder is vital to further understand the association of BPD diagnosis with severe bipolar disorder illness and to address negative correlates of the BPD diagnosis, such as suicidality. The literature exploring the prevalence and correlates of BPD in bipolar disorder will be examined further in **Chapter 3** and **Chapter 4**, however it is important to note that existing research in these areas is limited by sample size, the use of bipolar disorder samples

that do not account for the differences between bipolar I and II disorder, and the definitions of BPD used in studies reporting clinical diagnosis, which often do not account for the use of 'borderline' as a descriptor in practice. Furthermore, whilst existing research has suggested BPD is prevalent in bipolar disorder and associated with a greater severity of bipolar disorder illness, there is a lack of qualitative research with individuals with comorbid BPD and bipolar disorder to help further understand these findings. In order to build on previous findings and further understanding of this complex comorbidity, research examining the prevalence and correlates of BPD in bipolar I and II disorder and qualitative research exploring the experiences of individuals who have received both diagnoses is necessary.

1.8. Research questions.

The thesis aims to explore the clinical diagnosis of BPD in individuals with bipolar disorder in the UK through addressing the following questions:

- What is the prevalence of a clinical diagnosis of BPD or being described as borderline by a healthcare professional in individuals with bipolar I or II disorder in the UK? (**Chapter 3**).
- In individuals with bipolar I or II disorder, what sociodemographic and clinical variables are associated with a clinical diagnosis of BPD or being described as borderline by a healthcare professional? (**Chapter 4**).
- What are the experiences of individuals who have received a diagnosis of both BPD and bipolar disorder? (**Chapter 5**).

1.9. Chapter summary.

BPD and bipolar disorder are two severe mental illnesses characterised by high psychosocial morbidity. Where they co-occur, existing research suggests that outcomes can be poorer and clinical correlates more severe than when either disorder occurs independently. In order to better understand the comorbidity of BPD in bipolar disorder, this thesis examines whether individuals reporting a diagnosis of BPD in bipolar disorder represent a prevalent group with unique sociodemographic and clinical characteristics and experiences. In doing so, it will help further understanding of the two disorders and their comorbidity for both researchers and clinical practitioners. The next chapter examines the methods and methodology used to address this issue.

Chapter 2. Methodology and Bipolar Disorder Research Network (BDRN).

2.1. Chapter overview.

In this chapter, it will be argued that understanding of the comorbidity of bipolar disorder and BPD can be improved by conducting a large study within one sample of individuals with bipolar disorder. Three studies are presented in this thesis, situated in the Bipolar Disorder Research Network's (BDRN) large sample of individuals with bipolar disorder in the UK. By taking a pragmatic mixed methods approach, the research aimed to examine whether individuals receiving a clinical BPD diagnosis represent a prevalent subgroup within bipolar disorder with specific correlates and experiences. The methods of the three individual studies will be outlined in their individual chapters.

2.2. Methodology.

2.2.1. Pragmatism.

A pragmatic approach was adopted for this thesis. Classical pragmatism (outlined in **Figure 2.1**) argues that a statement is only as true as it is useful (Biesta, 2010; Dewey, 1998; Scheffler, 1974) and the pragmatic research approach therefore emphasises practical application (Feilzer, 2010; Shannon-Baker, 2016). Pragmatic researchers argue that methods should fit what is best for the research question in order to provide practical suggestions and solutions for societal issues (Morgan, 2014). Knowledge is only valid if it participates in the world and creates needed change (Biesta, 2010; Dewey, 1998), therefore the role of research in the pragmatism philosophy is to create warranted assertions based on competent inquiry that can be used to facilitate change. Pragmatism therefore involves a process of identifying something that has become problematic and conducting competent inquiry into the subject in order to provide warranted assertions about what might work (Dewey, 1998; Morgan, 2014).

Figure 2.1. *Key tenets of pragmatism, adapted from Johnson and Onwuegbuzie (2004)*

- Prefers action over philosophising.
- Recognises the existence and importance of a physical world whilst also emphasising the emergent social and psychological world, including subjective thoughts.
- Places high regard on the reality and influence of the inner world of human experience in action.
- Views knowledge as being both constructed and based on the reality of the world we experience and live in.
- Endorses fallibilism by arguing knowledge is rarely perfect, certain or absolute. Current truths, knowledge and assertions are tentative and may change over time.
- Justification comes in the form of warranted assertability.
- Views theories instrumentally (they become true and they are true to different degrees based on how well they currently work).
- Views instrumental truths as a matter of degree (some estimates are more true than others).
- Considers human inquiry (what people do every day as they interact with their environments) to be analogous with experimental and scientific inquiry. Everyone tries out different things to see what works, what solves problems and what helps them to survive, in order to obtain warranted evidence that provides tentative answers.

The pragmatic approach is often adopted for studies that involve mixed methods due to its emphasis on practicality over philosophy and the need to answer each research question with the method most suited to it, over and above concerns about the philosophy informing those methodological decisions (Feilzer, 2010; Shannon-Baker, 2016). Pragmatism also places high regard on the reality and influence of the inner world of human experience on action, as well as understanding that there is an objective reality that in turn affects human experience (Biesta, 2010; Feilzer, 2010; Johnson & Onwuegbuzie, 2004). Competent inquiry in pragmatism therefore should consider both the natural or physical world and the subjective world, making it uniquely suited to research that employs both quantitative and qualitative measures.

2.2.2. Mixed methods.

Mixed methods research designs allow the researcher to explore both individual experiences and the objective nature of the world. Mixed methods means using both quantitative and qualitative methods within the same research (Doyle et al., 2016; Dures et al., 2011; Johnson & Onwuegbuzie, 2007). It is closely linked to pragmatic ideals of competent inquiry and inter-subjectivity (or the existence of both an outer, objective world and an inner, subjective world) in research (Morgan, 2007). Following the argument that signs of quality in mixed methods include a clearly stated rationale, identification of the design and an explicit commentary on integration (Creamer, 2018), this section will address each of these points in turn regarding this thesis.

2.2.2.1. Rationale for mixed methods.

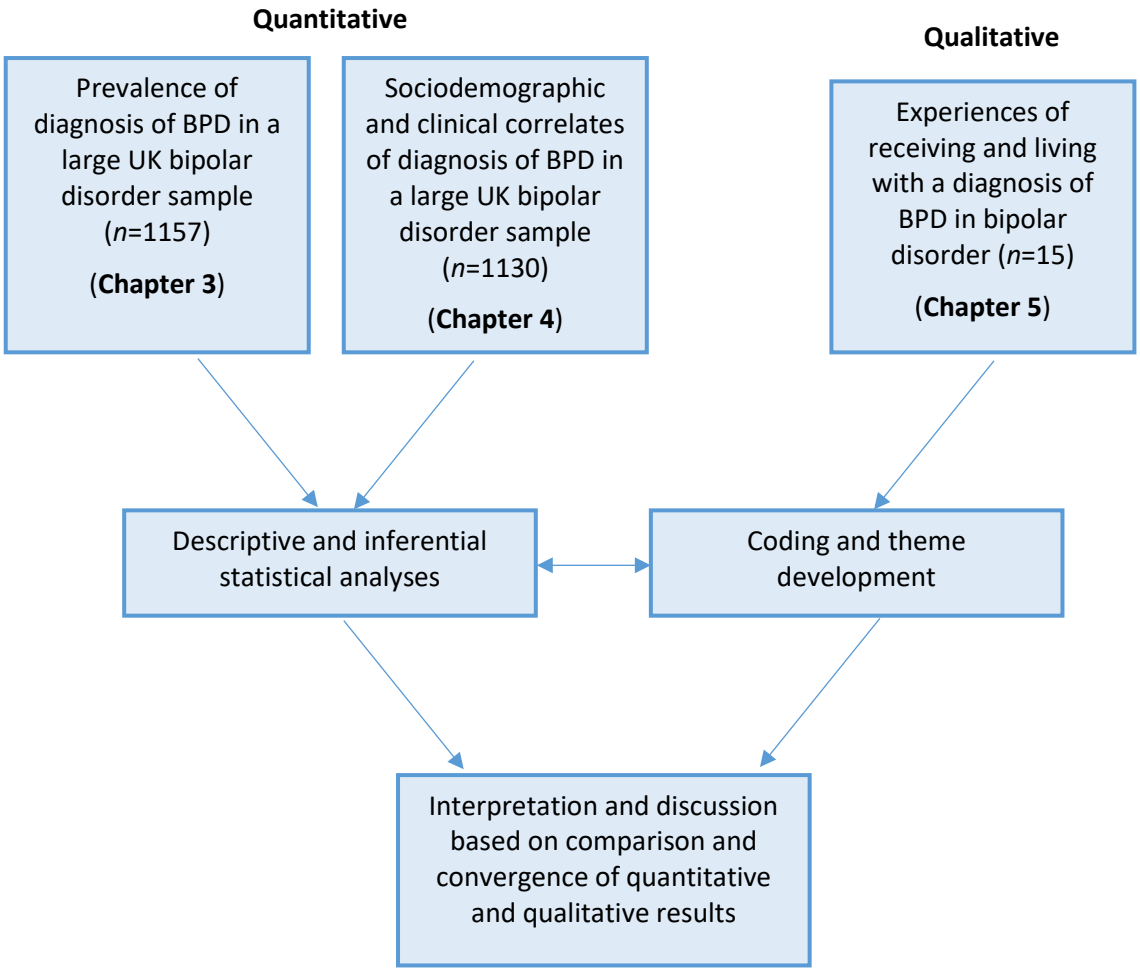
As stated in the last chapter, there is a lack of research currently exploring the prevalence, correlates and experiences of a diagnosis of BPD in individuals with bipolar disorder: by adopting a mixed methods approach the research presented in this thesis will address this gap through a holistic and detailed exploration of the diagnosis of BPD in bipolar disorder, combining quantitative and qualitative methodology to better understand the diagnosis of BPD among individuals with bipolar disorder from both objective and subjective viewpoints. Mixed methods are particularly suited to the study of human behaviour and health, as it encourages an all-encompassing approach to research which more richly represents the complexity of natural behaviour (Lieber & Weisner, 2010), making it uniquely suited to the current examination of a diagnosis of BPD in bipolar disorder. Mixed methods is also suited to research that aims to add understanding or depth to an under-researched area (Dures et al., 2011; Johnson & Onwuegbuzie, 2007). By mixing qualitative and quantitative methods, mixed methods research takes the strengths of the deductive, statistical nature of quantitative research and the inductive, subjective nature of qualitative research and combines them to provide a more complete picture of the phenomena under study, to look at the relationships and links underlying this phenomena and to illustrate the ways in which the quantitative and qualitative data can complement and contradict each other in order to provide a greater understanding (Cresswell & Plano-Clark, 2018; Doyle et al., 2016; Dures et al., 2011; Johnson & Onwuegbuzie, 2004).

2.2.2.2. A convergent research design.

The research in this thesis used a convergent design, which Cresswell and Plano-Clark (2018) describe as obtaining different but complementary data on the same topic concurrently

but separately and giving equal importance to all data. Specifically, a parallel variant of a convergent design (as illustrated in **Figure 2.2**) was used: two parallel strands of data were analysed independently and will be brought together during the integration in **Chapter 6**. Quantitative data will be analysed to examine the prevalence and correlates of a diagnosis of BPD in bipolar disorder, whilst qualitative data will be analysed to explore the experiences of individuals who have received both a diagnosis of BPD and bipolar disorder. As part of the convergent design, although analyses were performed separately they were performed during the same time period, which researchers have argued allow insights from the qualitative study to help inform the quantitative interpretation and vice versa (Åkerblad et al., 2020). Whilst a key aim of the qualitative study was therefore to help understand the quantitative findings, conducting it concurrently with the quantitative studies also allowed areas of interest raised in interviews to be considered in the quantitative analysis.

Figure 2.2. *A diagram of the convergent mixed methods design.*



BPD = borderline personality disorder

2.2.2.3. Integration of data.

Key to the use of mixed methods is the way in which the results from different studies are treated, with one of the main criticisms raised against mixed methods being the presentation of findings through juxtaposition rather than integration (Feilzer, 2010). Integration is key in mixed methods, as it has been argued that deliberation on how the qualitative and quantitative components interact can produce stronger conclusions than either component alone (Åkerblad et al., 2020; Creamer, 2018). Integrating the results of the qualitative and quantitative studies in this thesis will allow a more complete picture of the

diagnosis of BPD amongst individuals with bipolar disorder. In **Chapter 6**, the results of all three studies will be examined in a narrative integration, exploring common concepts across the results and ways in which the results confirm, disconfirm or expand each other, as suggested by Cresswell and Plano-Clark (2018). Integration will be thematic and based around key results of the studies, contrasted and combined in the final discussion. In order to achieve this, the results and themes and codes from the quantitative and qualitative research respectively will be placed together to enable discussion around areas of convergence and divergence and to deliberate the possible connections between results and how the results taken together may help inform clinical practice and contribute to wider knowledge on BPD in bipolar disorder. In particular, conducting and integrating a qualitative study in this way will allow the results of the two quantitative studies to be contextualised with the experiences of individuals diagnosed with both disorders, enabling conclusions to be drawn from a variety of data.

2.3. Bipolar Disorder Research Network (BDRN).

2.3.1. BDRN recruitment.

The sample for this research comes from the Bipolar Disorder Research Network's (BDRN) sample of individuals with bipolar disorder. BDRN is a UK multi-site research team based at the University of Worcester and Cardiff University which aims to investigate genetic and non-genetic determinants of bipolar disorder and related mood disorders. Over 7000 participants have been recruited to the research programme to date.

BDRN participants are recruited to the ongoing research through a combination of systematic and non-systematic approaches. Individuals are eligible to participate in BDRN's

research if they are able to give written informed consent, are at least 18 years old, have a lifetime history of a major affective disorder and are of UK white ethnicity (due to a focus on genetic analysis within BDRN). Exclusion criteria include the onset of affective disorder occurring after 65 years of age and if the affective disorder is secondary to substance abuse, medication, or physical illness.

2.3.1.1. Systematic recruitment.

Participants are systematically recruited into BDRN through National Health Service (NHS) trusts across the UK. Potential participants are identified by Clinical Studies Officers (researchers employed by the NHS to facilitate identification and recruitment of participants to studies) or members of their psychiatric clinical team through case load screening in Community Mental Health Teams (CMHTs) and lithium clinics nationwide. Posters and study information leaflets also advertise the research in the waiting rooms of the CMHTs and lithium clinics. Individuals who are eligible to be involved with BDRN are provided with brief information about the research either in person or through an information pack, and asked if they would be willing to participate.

2.3.1.2. Non-systematic recruitment.

Participants are also non-systematically recruited into BDRN through the BDRN website (www.bdrn.org), coverage of the study through national and local media (including radio, television and newspapers) and national patient support charities. BDRN advertises to members of Bipolar UK (a national charity supporting and advising over 80,000 individuals and families affected by bipolar disorder, www.bipolaruk.org) through newsletters and blogs and at annual national conferences hosted by the charity.

2.3.2. BDRN assessments.

Data from BDRN assessments were used in both quantitative studies presented in this thesis. On recruitment into BDRN, participants are provided with a detailed participant information sheet and members of BDRN's study team obtain written consent. Participants then complete a semi-structured interview with a trained member of BDRN's study team, lasting approximately one and a half hours. The following sections will briefly outline BDRN's methods for assessing and rating lifetime psychiatric history, including diagnosis, with more detailed information on variables relevant to both of the quantitative studies of this thesis given in the following chapters.

2.3.2.1. Semi-structured interview.

On joining BDRN, all participants undergo a semi-structured interview conducted by BDRN study team members who are either a research psychologist or research psychiatrist trained in administering the assessment. Interviews are arranged in the participant's own home or an alternative location convenient to the participants or conducted by telephone if necessary. The interview includes the Schedules for Clinical Assessment in Neuropsychiatry (SCAN) (Wing et al., 1990), a widely used research psychiatric tool that is used to determine the presence and severity of psychopathology associated with major adult psychiatric disorders.

2.3.2.2. Psychiatric case-note screen.

Where available, psychiatric and/or general practice case-notes of consenting participants are screened to supplement interview data. Case-note review has been conducted for approximately 72% of all individuals with bipolar disorder recruited into BDRN.

2.3.3. Lifetime consensus ratings.

Data from the interview and psychiatric case-notes are combined to produce a detailed vignette for every participant in BDRN. Vignettes summarise participants' lifetime psychopathology, demographic and social information, lifetime substance use and family history of psychiatric illness. Variables used in BDRN studies are formed from ratings made from these vignettes. Relevant sociodemographic and clinical variables, including lifetime psychiatric ratings, will be discussed in further detail in individual study chapters. As an example, presence or absence of anxiety disorder was defined as the lifetime presence of any known anxiety disorder and was rated based on participant questionnaire report of a doctor diagnosis, data collected at interview and case-note review.

Best-estimate main lifetime diagnosis is made according to DSM-IV (American Psychiatric Association 2000) on the basis of all data included in the vignette. Where there is ambiguity, at least two members of the study team make blind ratings and consensus is reached via discussion where necessary. Inter-rater reliability was formally assessed using 20 cases: mean kappa statistics was 0.85 for DSM-IV diagnosis, representing very good agreement between raters.

2.3.4. Ongoing contact with BDRN participants.

When joining BDRN, participants can agree to further contact with BDRN in connection with the research using a separate point on the consent form. BDRN stay in contact with participants through newsletters and questionnaire mailshots, where participants receive a booklet of questionnaires to complete based on areas of interest to the research. Data used in this thesis was drawn from one of these questionnaires, completed by BDRN participants as part of a mailshot (described in detail in **Chapter 3**.)

2.3.5. BDRN ethics approval.

BDRN has Health Research Authority (HRA) NHS Research Ethics Committee (REC) approval (MREC/97/7/01) and local Research and Development approval in all participating NHS Trusts and Health Boards.

2.4. Chapter summary.

This chapter examined the pragmatic, mixed methods approach adopted in this thesis to explore the diagnosis of BPD in bipolar disorder. By adopting this approach, the researcher kept potential real-world implications of the research in mind throughout the process, and was able to integrate findings from both quantitative and qualitative research to support these implications. The following three chapters present three studies used to answer whether individuals receiving a BPD diagnosis in bipolar disorder represent a prevalent subgroup within bipolar disorder with specific correlates and experiences, all conducted with BDRN's sample, beginning with the following chapter presenting the prevalence study of this thesis.

Chapter 3. Prevalence of clinical diagnosis of borderline personality disorder in bipolar disorder.

3.1. Chapter overview.

In this chapter, the first of three studies undertaken as a part of this thesis is described, focusing on the prevalence of BPD in bipolar disorder. Previous prevalence research of BPD in bipolar disorder has been limited by small sample sizes and a lack of consideration of bipolar disorder subtypes, as discussed in **Chapter 1**. In this chapter, the existing prevalence literature will be discussed in detail. The current study, presented here, used the BDRN's large, well-characterised sample of individuals with bipolar disorder (introduced in **Chapter 2**) to examine self-reported clinical diagnosis of BPD. Comorbid BPD was examined in both bipolar I and II disorder, to compare the prevalence rates between these subgroups.

3.2. Introduction.

3.2.1. Prevalence of borderline personality disorder in bipolar disorder.

As discussed in **Chapter 1**, BPD is a cluster B personality disorder that represents one of the most widely researched personality disorders in bipolar disorder (Fornaro et al., 2016; Frías et al., 2016; Zimmerman & Morgan, 2013). Rates of BPD in bipolar disorder vary greatly across studies (see **Table 3.1.**), ranging from 0% (Smith et al., 2005) to 55% (Post et al., 2018). Two meta-analyses have suggested BPD affects approximately one in five individuals with bipolar disorder (Fornaro et al., 2016; Frías et al., 2016). Frías et al. (2016) included 28 studies in their meta-analysis which examined the rate of BPD in bipolar disorder. The studies examining the prevalence of BPD in bipolar disorder reported rates ranging from 0 to 52% across studies with a mean of 22%. Fornaro et al. (2016) reported a prevalence of 22% in 5273 participants with bipolar disorder across 28 papers. Despite including the same number of articles, only 10 papers overlapped between both meta-analyses. The differences in studies included may be explained by the use of different databases in their search strategies - whilst Fornaro et al. (2016) used MEDLINE, Scopus, Embase, PsycINFO and the Cochrane Library to search for studies, Frías et al. (2016) used PsycINFO and PubMed – or it may be explained by the inclusion criteria used by the two meta-analyses, with Frías et al. (2016) only including studies that were cross-sectional or longitudinal and Fornaro et al. (2016) using any experimental or observational study, excluding case reports. It is interesting that despite the small number of overlapping articles between the two studies, both papers reported a similar prevalence rate, as well as reporting a large variance in rates reported, and significant methodological differences between studies.

A third meta-analysis conducted in this area found that in 1255 participants with bipolar disorder across studies, the frequency of BPD was 16% (Zimmerman & Morgan, 2013). However, when considering prevalence in different types of bipolar disorder, Zimmerman and Morgan's (2013) meta-analysis found a BPD rate of 11% in 598 participants with bipolar I disorder and a rate of 23% in 261 participants with bipolar II disorder. A previous meta-analysis found similar rates of BPD in bipolar I disorder, with a median of 11% in 830 participants, however rates in 137 participants with bipolar II disorder were lower at 16% (Paris et al., 2007). The rate for BPD found in bipolar II disorder in Zimmerman and Morgan's (2013) meta-analysis was closer to the average rate found in both later meta-analyses (Fornaro et al., 2016; Frías et al., 2016). Fornaro et al. (2016) also reported rates within bipolar I and II disorders across studies and found that 13% of individuals with bipolar I disorder had BPD and 27% of individuals with bipolar II disorder had BPD, suggesting a significant difference between rates of BPD in bipolar disorder subtypes.

Table 3.1. *Findings of research examining rates of borderline personality disorder in bipolar disorder, ordered alphabetically by author.*

Authors	Year	Country	Sample (Bipolar Disorder)	Sample Composition	Diagnostic Criteria	Diagnostic Method: Bipolar Disorder	Diagnostic Method: BPD	Percentage of BPD in Bipolar Disorder
Agius et al.	2012	UK	195 BD	Outpatients	DSM-IV	Clinical diagnosis, CMHT assessment	Clinical diagnosis, CMHT assessment	5.6%
Alnaes and Torgersen [2 3 4]	1988	Norway	19 BD	Outpatients	DSM-III	SCID-I	SIDP	0.0%
Altindag et al.	2006	Turkey	70 BD-I	Outpatients	DSM-IV	Clinical diagnosis	SCID-II	7.1% in BD-I
Baltacioglu et al.	2017	Turkey	105 BD-I	Outpatients	DSM-IV	SCID-I	SCID-II	24.8%
Barbato and Hafner [2 3]	1998	Australia	42 BD-I	Outpatients	DSM-IV	Clinical diagnosis; case-note reviews	IPDE	14.3% in BD-I
Baryshnikov et al.	2017	Finland	99 BD	Outpatients and inpatients	ICD-10-DCR	Clinical diagnosis	Clinical diagnosis	17.2%
Benazzi	2002	Italy	78 BD-II	Outpatients	DSM-IV	SCID-I	SCID-II	11.5% in BD-II
Benazzi [1 2]	2008	Italy	138 BD-II	Outpatients	DSM-IV	SCID-I	SCID-II	45.9% in BD-II
Benazzi [1 2 3 4]	2000	Italy	50 BD-II	Outpatients	DSM-IV	SCID-I	SCID-II	12.0% in BD-II
Brieger et al. [2 3 4]	2003	Germany	60 BD I	Inpatients	DSM-IV	SCID-I	SCID-II	6.7% in BD-I
Carpenter et al. [2 3]	1995	USA	23 BD-I	Outpatients	DSM-III-R and RDC	Unspecified	PDE	0.0%
Carpiniello et al.[2 3]; Lai et al.	2011	Italy	57 BD	Outpatients	DSM-IV	SCID-I	SCID-II	31.6%

Authors	Year	Country	Sample (Bipolar Disorder)	Sample Composition	Diagnostic Criteria	Diagnostic Method: Bipolar Disorder	Diagnostic Method: BPD	Percentage of BPD in Bipolar Disorder
Comtois et al. [2] [3]	1999	USA	34 BD	Outpatients	DSM-III-R	SCID-I	SCID-II	23.5%
Dunayevich et al. [2] [3]	2000	USA	56 BD	Inpatients	DSM-III-R	SCID-I	SCID-II	5.4%
Elliot & Ragsdale	2021	USA	876 BD	Community sample	DSM-5	AUDADIS-5	AUDADIS-5	44.3%
Galfalvy et al. [1]	2006	USA	64 BD	Outpatients	DSM-III-R	SCID-I	SCID-II, IPDE	23.4%
Gasperini et al. [2] [3]	1993	Italy	54 BD	Outpatients	DSM-II	Diagnostic Interview Schedule	SIDP	5.5%
George et al. [1] [2] [3] [4]	2003	USA	52 BD	Outpatients	DSM-III-R	SCID-I	PDE	9.1%
Goldberg and Garno [1]; Garno, Gunawardane and Goldberg [1]; Garno et al. [1] [2] [3]	2009; 2008; 2005	USA	100 BD	Outpatients	DSM-IV	SCID-I	SCID-II	16.0%
Grant et al. [1]	2008	USA	Not specified (note: part of a larger study on BPD prevalence)	Community sample	DSM-IV	AUDADIS-IV	AUDADIS-IV	35.9% in BD-I; 26.7% in BD-II
Hidalgo-Mazzei et al.	2015	USA	251 BD	Outpatients	DSM-IV	SCID-I	SCID-II	25.1%
Hossain et al.	2019	USA	316,025 BD	Inpatients	ICD-9	Discharge diagnosis	Discharge diagnosis	6.9%

Authors	Year	Country	Sample (Bipolar Disorder)	Sample Composition	Diagnostic Criteria	Diagnostic Method: Bipolar Disorder	Diagnostic Method: BPD	Percentage of BPD in Bipolar Disorder
Humpston et al.	2021	UK	130 BD	Community sample	DSM-IV	MDQ	SCID-II	29.6%
Jackson et al.[4]	1991	Australia	26 BD-I	Inpatients	DSM-III	SCID-I	SIDP	23.0% in BD-I
Joyce et al. [1 2 3]	2004	New Zealand	41 BD-II	Clinical trials	DSM-III-R	SCID-I	SCID-II	46.3% in BD-II
Joyce et al. [1]	2010	New Zealand	110 BD, inc. 39 BD-I	Participants who had received treatment for depression	DSM-IV	MINI	SCID-II	18.2%; 28.2% in BD-I
Lewinsohn, Klein and Seeley [1]	2000	USA	17 BD	Community sample	DSM-IV	K-SADS	PDE	26.7%
Loftus and Jaeger [1 2 3]	2006	USA	51 BD-I	Outpatients and inpatients	DSM-IV	SCID-I	SCID-II	19.6% in BD-I
Lublóy et al.	2020	Hungary	7876 BD	Registry study	ICD-10	Clinical diagnosis	Clinical diagnosis	10.9% in outpatients; 2.2% in inpatients
Mantere et al. [1]	2006	Canada	101 BD-I; 90 BD-II	Outpatients	DSM-III-R, DSM-IV	SCAN (BD-I), SCID-I (BD-II)	SCID-II	25.6% in BD-I; 18.8% in BD-II
McDermid et al. [1 2]	2015	USA	1172 BD-I; 428 BD-II	Community sample	DSM-IV	AUDADIS-IV	AUDADIS-IV	29.0% in BDI; 24.0% in BDII
Moor et al. [1]	2012	New Zealand	100 BD, aged 15-36 years	Outpatients and non-treatment seeking	DSM-IV	SCID	SCID-II	17.0%

Authors	Year	Country	Sample (Bipolar Disorder)	Sample Composition	Diagnostic Criteria	Diagnostic Method: Bipolar Disorder	Diagnostic Method: BPD	Percentage of BPD in Bipolar Disorder
Neves et al. [1]	2010	Brazil	198 BD	Outpatients and inpatients	DSM-IV	MINI	SCID-II	21.7%
Neves et al. [1]	2009	Brazil	239 BD	Outpatients and inpatients	DSM-IV	MINI	SCID-II	20.5%
Parker et al.	2016	Australia	137 BD	Outpatients and non-treatment seeking	DSM-IV	MINI, clinical diagnoses	DIDP-IV, clinical diagnoses	28.0% by DSM, 13.0% by clinical diagnoses
Perugi et al. [2]	2013	18 countries worldwide	2658 in major depressive episode with bipolarity specifier	Outpatients and inpatients	DSM-IV	MINI	Criteria checklist	14.5%
Perugi, Fornaro and Akiskal [2 3]	2011	Italy	26 BD	Outpatients	DSM-IV	SCID-I	SCID-II	47.0%
Peselow, Sanfilipo and Fieve [2 3]	1995	USA	47 BD	Outpatients	DSM-III	SADS	SIDP	23.4%
Pica et al. [2 3 4]	1990	Australia	26 BD (16 BD, 10 SABD)	Inpatients	DSM-III-R	SCID-I	SIDP	11.5%
Post et al.	2022	USA and Europe	546 BD in USA 247 BD in Europe	Outpatients	DSM-IV	SCID-I	PDQ	45.6% in USA 23.9% in Europe
Post et al.	2020	International	392 BD	Outpatients	DSM-IV	SCID-I	PDQ	33.7%

Authors	Year	Country	Sample (Bipolar Disorder)	Sample Composition	Diagnostic Criteria	Diagnostic Method: Bipolar Disorder	Diagnostic Method: BPD	Percentage of BPD in Bipolar Disorder
Post et al.	2018	USA	727 BD	Outpatients	DSM-IV	SCID-I	PDQ	55.0% currently depressed; 22.6% currently euthymic
Preston et al. [1] [2] [3]	2004	USA	35 BD	Outpatients	DSM-IV	SCID	SCID-II	40.0%
Rossi et al. [1] [2] [3] [4]	2001	Italy	71 BD	Inpatients	DSM-III-R	SCID-I	SCID-II	29.6%
Rosso et al. [1]	2009	Italy	186 BD: 71 BD-I; 115 BD-II	Outpatients	DSM-IV	SCID-I	SCID-II	8.6% 5.6% in BD-I; 10.4% in BD-II
Schiavone et al. [1]	2004	Italy	39 BD	Inpatients	DSM-IV	SCID-I	SCID-II	41.0%
Skodol et al. [1]	1999	USA	45 BD-I; 23 BD-II	Outpatients	DSM-IV	SCID-I	SIDP	9.2% in BD-I; 4.1% in BD-II
Smith, Muir and Blackwood [1]	2005	UK	41 BD	Outpatients	DSM-IV	SCID-I	IPDE	0.0%
Üçok et al. [2] [3] [4]	1998	Turkey	90 BD	Outpatients	DSM-III-R	SCID-I	SCID-II	10.0%
Vieta et al. [1] [2] [3] [4]	2000	Spain	40 BD-II	Outpatients	DSM-III-R	SADS	SCID-II	12.5% in BD-II
Vieta et al. [2] [3] [4]	2001	Spain	129 BD-I	Outpatients	DSM-III-R	SCID-I	SCID-II	6.2% in BD-I
Wilson et al. [2] [3]	2007	USA	30 BD-II	Outpatients and inpatients	DSM-III-R and DSM-IV	SCID-I	SCID-II	50.0% in BD-II

Authors	Year	Country	Sample (Bipolar Disorder)	Sample Composition	Diagnostic Criteria	Diagnostic Method: Bipolar Disorder	Diagnostic Method: BPD	Percentage of BPD in Bipolar Disorder
Yen et al. [1]	2015	USA	271 BD	Outpatients	DSM-IV	K-SADS	SIDP	12.2%
Zeng et al.	2015	USA	54 BD	Inpatients	DSM-IV	SCID-I	SCID-II	29.6%
Zimmerman and Mattia [2] [3]	1999	USA	8 BD-I; 15 BD-II	Outpatients	DSM-IV	SCID-I	SCID-II	34.1% in BD-I; 33.3% in BD-II
Zimmerman et al.	2014	USA	263 BD	Outpatients	DSM-IV	SCID-I	SIDP	26.2%

[1]Included in Frias et al. meta-analysis, 2016.

[2]Included in Fornaro et al. meta-analysis, 2016.

[3]Included in Zimmerman & Morgan meta-analysis, 2013.

[4]Included in Paris et al. meta-analysis, 2007.

AUDADIS-IV/5 = Alcohol Use Disorder and Associated Disability Interview Schedule; BD = bipolar disorder, not accounting for subtypes; BD-I = bipolar I disorder; BD-II = bipolar II disorder; BPD = borderline personality disorder; DIDP-IV = Diagnostic Interview for Personality Disorders IV; DSM = Diagnostic and Statistical Manual for Mental Disorders; CMHT = Community Mental Health Team; ICD-10-DCR; International Classification of Diseases 10 Diagnostic Criteria for Research; IPDE = International Personality Disorder Examination; K-SADS = Schedule for Affective Disorders and Scizophrenia for School-Age Children; MDQ = Mood Disorder Questionniare; MINI = Mini-International Neuropsychiatry Interview; PDE = Personality Disorder Examination; PDQ = Personality Disorder Questionnaire; RDC = research diagnostic criteria; SABD = schizoaffective bipolar-type; SADS = Schedule for Affective Disorders and Schizophrenia; SCAN = Schedules for Clinical Assessment in Neuropsychiatry; SCID-I = Structured Clinical Interview for DSM Axis-I Disorders; SCID-II = Structured Clinical Interview for DSM Axis-II Disorders; SIDP = Structured Interview for DSM Personality Disorders

3.2.2. Limitations of the existing literature.

The variation of prevalence rates found for BPD in bipolar disorder may reflect some limitations of existing literature, which will be discussed in detail below. The definitions and assessments used for both bipolar disorder and BPD vary between studies. In terms of gaps in the literature, there is currently limited UK research into BPD in bipolar disorder, and existing research across countries often uses small sample sizes that may not be generalisable to the wider bipolar population.

3.2.2.1. Definitions/assessments of bipolar disorder.

The diagnostic criteria used for bipolar disorder and the methods used to diagnose it may influence the variation in the prevalence of bipolar disorder between different samples. One of the key differences in studies outlined in **Table 3.1** includes the use of DSM-III or DSM-IV diagnostic criteria. As outlined by Mason et al. (2016) differences between the two DSMs included the development of bipolar II disorder from an atypical bipolar I diagnosis in DSM-III to its own diagnosis class in DSM-IV and the elaboration on hypomanic episodes from their introduction in DSM-III as a less severe manic episode to an episodic diagnosis that must have lasted at least 4 days and be clearly different from non-depressed mood. As the concept of bipolar disorder has progressed, the way in which BPD is identified within bipolar disorder may also have changed, and there may be differences in the individuals included in the bipolar disorder sample to begin with.

Of the 56 studies included in **Table 3.1**, only 19 examined the rates of BPD in a bipolar disorder subtype as opposed to an overall bipolar disorder sample. Studies that have examined the differences in BPD prevalence between bipolar I disorder and bipolar II disorder have reported different findings: for example, whilst Zimmerman and Mattia (1999) and McDermid

et al. (2015) reported a higher prevalence in bipolar I disorder, other studies have suggested that BPD has a greater prevalence in bipolar II disorder, reporting rates of over 40% (Benazzi, 2008; Joyce et al., 2010; Wilson et al., 2007). Furthermore, there are only six studies in **Table 3.1** which compare the prevalence of BPD between bipolar I and II disorder, four in the USA (Grant et al., 2008; McDermid et al., 2015; Skodol et al., 1999; Zimmerman & Mattia, 1999), one in Canada (Mantere et al., 2006) and one in Italy (Rosso et al., 2009). All six studies used diagnostic interviews, with no current research comparing the prevalence of clinical diagnosis of BPD between bipolar I and II disorder, to help understand if there is a difference in clinical practice between diagnosing BPD in bipolar I and II disorder. Examining both disorders within one large, well-characterised sample is vital to clarify the different prevalence rates of BPD between bipolar I and II disorder.

3.2.2.2. Definitions/assessments of borderline personality disorder.

The diagnostic methods used for BPD, such as use of a clinical measurement or reported diagnosis, may contribute to variation in the prevalence rate. Research has suggested difficulty in differentiating between bipolar disorder and BPD (Bayes & Parker, 2017; Friborg et al., 2014; Parker et al., 2016; Saunders et al., 2015) and studies have suggested that the rates for both disorders are highly dependent on the diagnostic method used. As **Table 3.1** shows, Parker et al. (2016) found that rates of BPD comorbidity in 190 individuals with bipolar disorder varied according to the diagnostic method used, with a prevalence of 28% according to the MINI International Neuropsychiatric Index (which provides ratings for a DSM-IV diagnosis) and 13% according to clinical opinion. Agius et al. (2012) and Neves et al. (2010) had a similar sample size of individuals with bipolar disorder (195 and 198, respectively), and found different rates of BPD (6% and 22%, respectively). This variation may be explained by Agius et al.'s (2012) use

of existing clinical diagnoses of BPD versus Neves et al.'s (2010) use of Structured Clinical Interviews for DSM-IV Axis II disorders (SCID-II) to identify presence of BPD, particularly as using existing clinical diagnoses may not account for the use of 'borderline' as a descriptor or borderline traits.

The diagnostic criteria used can also affect the prevalence of BPD. A key example of this comes from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC), a large community study in the USA which collected structured interview data on 34653 participants: two different research reports were written with the same data reporting BPD prevalence in the general USA population, but whereas Grant et al. (2008) used more liberal diagnostic rules for BPD (requiring only one of the requisite number of DSM-IV BPD symptoms to be present and causing social or occupational dysfunction) and found a prevalence rate of 6%, Tomko et al. (2014) followed stricter diagnostic rules (requiring five of the requisite number of DSM-IV BPD symptoms) and found a prevalence rate of 3% within the same community (non-bipolar disorder) sample.

Many of the studies in **Table 3.1** also used structured clinical interviews or trait measurements to measure BPD, relying on strict diagnostic definitions and cut-off points. This may not accurately reflect clinical practice in diagnosing BPD, with studies suggesting that the rates of BPD diagnosis vary according to whether clinical diagnosis or structured clinical interviews are used (Bayes & Parker, 2017). Furthermore, evidence suggests that clinicians do not always choose to disclose a diagnosis of BPD to a patient (Sisti et al., 2016). The term 'borderline' may be used as a descriptor rather than a diagnosis instead, particularly since the introduction of the dimensional model of personality disorders in ICD-11 (World Health Organization, 2018). In order to measure clinical practice in diagnosing BPD in bipolar disorder, therefore, it is important to measure both reported clinical diagnosis of BPD and individuals

who have been described as borderline by a healthcare professional. No existing research has examined BPD in bipolar disorder in this way.

3.2.2.3. Lack of research examining the clinical diagnosis of borderline personality disorder in bipolar disorder.

The lack of existing research examining clinical diagnosis of BPD in bipolar disorder also means the features of receiving this comorbid diagnosis are not well understood. Existing research has not explored the manner in which a comorbid diagnosis of BPD in bipolar disorder is received: for example, whether or not bipolar disorder or BPD is diagnosed first, whether the two are diagnosed at the same time, or whether or not it is normal to experience a change in diagnosis from one to the other. Increasing understanding of the way in which individuals with bipolar disorder receive this comorbid diagnosis may help understand the comorbidity and overlap between the two disorders, and further understanding of the clinical practice of diagnosing BPD in bipolar disorder. For example, a high level of changes in diagnosis between BPD and bipolar disorder may support previous arguments that the two are difficult to distinguish in clinical practice (as discussed in **1.7.1.**). Furthermore, there is no research exploring the way in which BPD is diagnosed in clinical practice in bipolar disorder, in terms of whether or not individuals receive a diagnosis of BPD or emotionally unstable personality disorder (EUPD), and whether they find receiving the BPD diagnosis helpful to their treatment. All of these factors are potential variables of interest in understanding the way BPD and bipolar disorder interact in one individual, and studies examining these areas are necessary to further understanding of the two disorders.

3.2.2.4. Limited UK research into this topic.

Current research into the rates of BPD has taken place in different countries, with limited research in the UK. Since psychopathology is influenced by a combination of biological, genetic and environmental factors, prevalence rates from other countries cannot be assumed to be true in the UK (Juhasz et al., 2012; Patel & Winston, 1994). Currently, only three published studies report a prevalence rate of BPD in bipolar disorder in the UK (Agius et al., 2012; Humpston et al., 2021; Smith et al., 2005); see **Table 3.1**). Agius et al. (2012) examined the clinical diagnoses of BPD and bipolar disorder in 195 patients from their Community Mental Health Team (CMHT) database, and found that comorbid BPD patients represented 6% of all bipolar disorder patients. However, the use of a single CMHT database means that this study was limited to one region in the UK and relies on the diagnostic criteria and methods of a small group of clinicians, therefore the findings may not be generalisable to individuals with bipolar disorder across the UK, particularly those not under the care of a CMHT. Smith, Muir and Blackwood (2005) focused on a sample of 41 young adults with bipolar disorder in the UK in a current episode of major depression and found none reached diagnostic criteria for BPD, however the sample was young adults in a major depressive episode recruited from a university health centre and cannot be generalised to a wider bipolar disorder population in the UK. In terms of BPD traits, they found that their bipolar disorder sample reported significantly higher median levels of BPD traits than a major depressive disorder group (Smith et al., 2005). The most recent of these papers, Humpston et al. (2021), examined correlates of bipolar disorder in the Adult Psychiatric Morbidity Survey, a general population survey of adults living in private households in England, and found that 30% of 130 individuals with bipolar disorder met criteria for BPD according to a self-completed SCID-II questionnaire. Bipolar disorder was not stratified by subtype in any of the three UK studies and all three

included small sample sizes; it is therefore unlikely that these three studies represent the prevalence of clinical diagnosis of BPD in bipolar disorder in the UK.

3.2.2.5. Use of small samples often drawn from clinical populations.

Small sample sizes are a common problem in the prevalence literature for BPD in bipolar disorder, with prevalence rates being reported in samples as small as 41 people with bipolar disorder (Smith et al., 2005). Small samples can lead to wide confidence intervals and therefore less precise results and increases the risk of type II errors, or not having enough statistical power to detect a present effect, resulting in a false negative result. Samples are also mostly drawn from clinical populations, with Friborg et al. (2014) noting in their meta-analysis on personality disorders in mood disorders that studies on bipolar disorder often used inpatient samples. Whilst the current examination of BPD rates in the literature found that most studies examining BPD have used outpatient samples, those studies that used inpatient samples were weighted to the higher end of the prevalence rates. The average prevalence rate across studies which only included an inpatient sample was 21%, versus an average of 18% in outpatient overall bipolar disorder samples, suggesting a slight increase where inpatient samples are used.

3.2.3. Aims of the current study.

Based on the limitations of the current literature outlined above, there is a need for further research into the clinical diagnosis of BPD and the use of 'borderline' as a descriptor in clinical settings in bipolar disorder in the UK that uses a large, well-characterised sample of individuals with bipolar disorder and includes and compares prevalence rates in bipolar disorder subtypes. Therefore, this study aims:

- To determine the rate of clinical BPD diagnosis or being described as borderline by a healthcare professional in individuals with bipolar disorder, and in bipolar I and II disorder separately.
- To determine, within individuals with both BPD diagnosis and bipolar disorder, how common a change from one diagnosis to the other was, whether they received a diagnosis of BPD *or* emotionally unstable personality disorder (EUPD), whether they were diagnosed with bipolar disorder or BPD first and whether they found a personality disorder diagnosis helpful to their treatment.

3.3. Methods.

3.3.1. Borderline personality disorder assessment.

A bespoke questionnaire on BPD (**Appendix A**, pg 284) was mailed out to BDRN participants as part of a questionnaire pack in 2016 (the methods of BDRN and the mailshots were discussed in greater detail in **2.3.**). The BPD questionnaire asked whether the individual had ever been told by a doctor or other healthcare professional that they have bipolar disorder and/or BPD or EUPD, or if they had ever been described as borderline or told they have borderline features by a healthcare professional.

If participants indicated that they had received a diagnosis of BPD, they were then asked to answer the following:

- Whether they had been told they had EUPD or BPD, or both.
- Whether they were told they had bipolar disorder or BPD first.

- Whether they were told that they had changed from bipolar disorder to BPD or vice versa.
- Whether being told they had a personality disorder was helpful or unhelpful to their treatment.

This final question had an open text response box to allow participants to expand on how having a personality disorder diagnosis affected their treatment, and will be discussed further in the qualitative study in **Chapter 5**.

3.3.2. Sample.

The BPD questionnaire was mailed out to 5731 BDRN participants as part of BDRN's 2016 questionnaire pack. The sample for this study consisted of the 1601 individuals who responded, representing a response rate of 27.9% out of 5731. Of 1601 individuals who responded, 1157 met the study inclusion criteria of having a DSM-IV best-estimate main lifetime research diagnosis of bipolar I disorder (*n*= 808) or bipolar II disorder (*n*= 349). Participants were excluded if they had a diagnosis other than bipolar I or II disorder (*n*=341) or were missing data on the BPD questionnaire which left the diagnosis of BPD uncertain (*n*=103). Sociodemographic information for the whole sample is summarised below (**Table 3.2**), and differences between those with and without BPD will be analysed in **Chapter 4**.

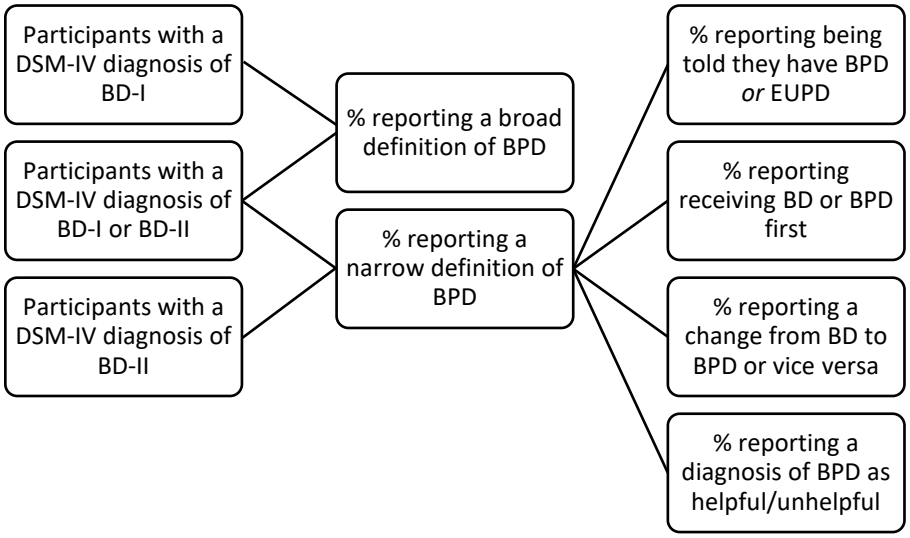
***Table 3.2**. Sociodemographic information for the sample.*

Sociodemographic information	*N* = 1157 (%)
Age (years)	
Range	18-76
Median	48
Gender	
Male	329 (28.4%)
Female	828 (71.6%)
Marital history	
Never married/lived as married	923 (85.5%)
Married/lived as married	157 (14.5%)
Education level	
No higher education	504 (48.3%)
Higher education	540 (51.7%)
Employment history	
Never worked or worked in non-professional career at highest occupation	460 (43.2%)
Worked in professional career at highest occupation	606 (56.8%)

3.3.3. Statistical analyses.

Prevalence rates for BPD were calculated for an overall bipolar disorder sample (including the bipolar I and II disorder samples) and for the bipolar I disorder and bipolar II disorder samples separately, as outlined in **Figure 3.1.** BPD was considered in terms of broadly-defined BPD (including those who reported receiving a diagnosis of BPD/EUPD and those who reported being described as borderline or being told they have borderline features by a healthcare professional) and narrowly-defined BPD (including only those who reported receiving a diagnosis of BPD/EUPD).

Figure 3.1. *Process of the prevalence analysis, including groups and variables examined.*



BPD = borderline personality disorder; BD = bipolar disorder; BD-I = bipolar I disorder; BD-II = bipolar II disorder; EUPD = emotionally unstable personality disorder

Note: a broad definition of BPD includes reported clinical diagnosis and individuals who reported being described as borderline by a healthcare professional; a narrow definition of BPD includes only reported clinical diagnosis.

Within these broadly- and narrowly- defined BPD groups, further frequency statistics were calculated for the order of diagnosis (bipolar disorder or BPD first), any changes in diagnosis (from bipolar disorder to BPD or vice versa), whether participants had been told BPD or EUPD and whether they found a personality disorder diagnosis helpful to their treatment.

Prevalence statistics were calculated using crosstabs in SPSS (v27; IBM Corp., 2020) and 95% confidence intervals (CI) are presented. Chi-square tests were used to compare prevalence/frequency rates between groups, and odds ratios are presented. Statistical significance was determined by a *p* value of less than .05.

3.4. Results.

3.4.1. Prevalence of broadly- and narrowly- defined borderline personality disorder in the bipolar disorder sample.

Table 3.3 presents an overview of the prevalence results for broadly-defined and narrowly-defined BPD in the overall bipolar disorder sample and subgroups. 16.42% (190/1157) of the overall bipolar disorder sample reported being told they have BPD or being described as borderline by a healthcare professional at some time in their lives and 12.96% (150/1157) reported a clinical diagnosis of BPD.

Table 3.3. *Overview of broadly- and narrowly- defined borderline personality disorder in subtypes of bipolar disorder, with 95% CI and sample sizes.*

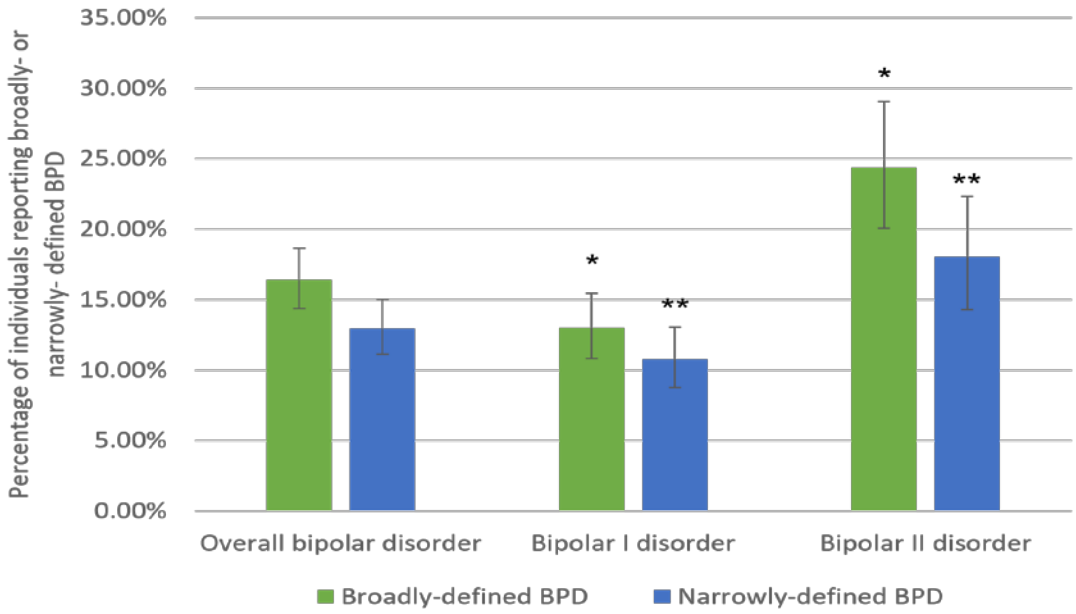
Bipolar Disorder Type	Rate of broadly-defined BPD	Rate of narrowly-defined BPD
Overall bipolar disorder (*n*=1157)	190	150
%	16.42%	12.96%
95% CI	(14.37 – 18.64%)	(11.12 – 14.99%)
Bipolar I disorder (*n*=808)	105	87
%	13.00%	10.77%
95% CI	(10.81 – 15.44%)	(8.77 - 13.04%)
Bipolar II disorder (*n*=349)	85	63
%	24.36%	18.05%
95% CI	(20.08 – 29.06%)	(14.29 – 22.34%)

BPD = borderline personality disorder

When separated into subtypes of bipolar disorder, the prevalence rate of broadly-defined BPD in bipolar I disorder was 13.00% (105/808) whilst the prevalence rate of broadly-defined BPD in bipolar II disorder was significantly higher at 24.36% (85/349) (χ^2 (1) = 22.10, p <.001; OR 2.16, 95% CI 1.57 – 2.97).

Prevalence of narrowly-defined BPD, focusing on clinical BPD diagnosis, was 10.77% (87/808) in bipolar I disorder and significantly higher at 18.05% (63/349) in bipolar II disorder (χ^2 (1) = 10.90, p <.001; OR 1.83, 95% CI 1.28 – 2.60). **Figure 3.2** shows a breakdown of the prevalence of BPD in bipolar disorder subgroups.

Figure 3.2. *Prevalence of broadly- and narrowly- defined borderline personality disorder in bipolar disorder subtypes, with 95% confidence intervals.*



BPD = borderline personality disorder.
* = difference is significant at p <.05.
** = difference is significant at p <.05.

3.4.2. Comparison of reported diagnosis of borderline personality disorder or emotionally unstable personality disorder.

Among individuals who reported receiving a clinical diagnosis of BPD or EUPD (excluding five participants who did not respond to this variable), **Table 3.4** shows the percentage of individuals who were told they had BPD, were told they had EUPD, or were given diagnoses of

both BPD and EUPD. The most common diagnosis given was BPD, ranging from 51.76% in bipolar I disorder to 54.84% in bipolar II disorder.

Table 3.4. *Percentage of individuals reporting borderline personality disorder diagnoses who received a diagnosis of borderline personality disorder versus a diagnosis of emotionally unstable personality disorder.*

	BPD	EUPD	Told both
Overall bipolar disorder (*n*=145*)	78	43	26
Percentage	53.06%	29.25%	17.69%
95% CI	(45.00 - 61.00%)	(22.36 – 36.96%)	(12.18 - 24.45%)
Bipolar I disorder (*n*=87)	44	25	16
Percentage	51.76%	29.41%	18.82%
95% CI	(41.23 – 62.18%)	(20.53 – 39.66%)	(11.63 – 28.10%)
Bipolar II disorder (*n*=62)	34	18	10
Percentage	54.84%	29.03%	16.13%
95% CI	(42.47 – 66.77%)	(16.13 – 41.09%)	(8.61 – 26.73%)

BPD = borderline personality disorder; EUPD = emotionally unstable personality disorder
* Excluding 5 participants with bipolar disorder and a reported clinical diagnosis of BPD who did not respond to this variable.

3.4.3. Reported order of borderline personality disorder and bipolar disorder diagnoses.

Of those who reported receiving both bipolar disorder and BPD diagnoses with available data (138 participants, excluding 12 who did not respond to this variable), **Table 3.5** shows the order of diagnosis reported by participants by bipolar disorder subgroup. There were no statistically significant differences between bipolar disorder subgroups. Within the overall bipolar disorder sample, 59.42% reported receiving a bipolar disorder diagnosis first and 31.16% reported receiving a BPD diagnosis first. In bipolar I disorder, 62.65% reported receiving a bipolar disorder diagnosis first and 31.33% reported receiving a BPD diagnosis first, whilst in bipolar II disorder 54.55% reported receiving a bipolar disorder diagnosis first and 30.91% reported receiving a BPD diagnosis first. A greater proportion of participants were

uncertain about the order of diagnoses received in bipolar II disorder (14.55%) however this did not reach statistical significance.

Table 3.5. *Order of bipolar disorder / borderline personality disorder diagnoses received.*

	Bipolar disorder diagnosed first	BPD diagnosed first	Uncertain
Overall bipolar disorder (*n*=138*)	82	43	13
Percentage	59.42%	31.16%	9.42%
95% CI	(51.10 – 67.35%)	(23.88 – 39.22%)	(5.38 – 15.13%)
Bipolar I disorder (*n*=83)	52	26	5
Percentage	62.65%	31.33%	6.02%
95% CI	(51.96 – 72.48%)	(22.12 – 41.81%)	(2.34 – 12.70%)
Bipolar II disorder (*n*=55)	30	17	8
Percentage	54.55%	30.91%	14.55%
95% CI	(41.44 – 67.19%)	(19.91 – 43.86%)	(7.12 – 25.58%)

BPD = borderline personality disorder

* Excluding 12 participants with bipolar disorder and a reported clinical diagnosis of BPD who did not respond to this variable.

3.4.4. Reported changes in diagnosis, from borderline personality disorder to bipolar disorder or vice versa.

Table 3.6 shows the percentage of individuals who experienced a change in diagnosis within 122 participants with bipolar disorder reporting a clinical diagnosis of BPD (excluding 28 participants who did not respond to this variable). The table shows a non-significant trend towards individuals with bipolar II disorder being more likely than those with bipolar I disorder to experience a change from bipolar disorder to BPD (18.00% versus 13.89%) or BPD to bipolar disorder (16.00% versus 13.89%), however participants with bipolar I disorder were more likely to have experienced a change in both directions (9.72% versus 2.00%). Within bipolar I disorder, the same percentage of individuals experienced a change from bipolar disorder to BPD or vice versa (13.89% in both directions), and within bipolar II disorder the percentage of

individuals reporting a change from bipolar disorder to BPD (18.00%) and BPD to bipolar disorder (16.00%) was also similar.

Table 3.6. *Changes in diagnosis between bipolar disorder and borderline personality disorder.*

	Bipolar disorder to BPD	**BPD to bipolar disorder**	**Both directions**
Overall bipolar disorder (*n*=122*)	19	18	8
Percentage	15.57%	14.75%	6.46%
95% CI	(9.98 – 22.78%)	(9.31 – 21.84%)	(3.15 – 11.99%)
Bipolar I disorder (*n*=82)	10	10	7
Percentage	13.89%	13.89%	9.72%
95% CI	(7.37 – 23.24%)	(7.37 – 23.24%)	(4.46 – 18.14%)
Bipolar II disorder (*n*=50)	9	8	1
Percentage	18.00%	16.00%	2.00%
95% CI	(9.30 – 30.28%)	(7.87 – 27.93%)	(0.22 – 8.97%)

BPD = borderline personality disorder

* Excluding 28 participants with bipolar disorder and a reported clinical diagnosis of BPD who did not respond to this variable.

3.4.5. Whether a personality disorder diagnosis is helpful or unhelpful to treatment.

Table 3.7 shows the percentage of 135 participants reporting BPD diagnosis who found a personality disorder diagnosis helpful or unhelpful in bipolar disorder (excluding 15 participants who did not respond to this variable). More participants reported finding the diagnosis unhelpful rather than helpful in the overall bipolar disorder sample (45.19% versus 27.41%), bipolar I disorder (48.72% versus 25.65%) and bipolar II disorder (40.35% versus 29.82%).

Table 3.7. *Whether participants with bipolar disorder found a diagnosis of borderline personality disorder helpful or unhelpful to their treatment.*

	Helpful	Unhelpful	Did not affect treatment either way	Uncertain of effect
Overall bipolar disorder (*n*=135*)	37	61	25	12
Percentage	27.41%	45.19%	18.52%	8.89%
95% CI	(20.59 – 35.48)	(37.04 – 53.60)	(12.87 – 25.91)	(5.16 – 14.90)
Bipolar I disorder (*n*=78)	20	38	11	9
Percentage	25.65%	48.72%	14.10%	11.54%
95% CI	(17.25 – 36.31)	(37.95 – 59.61)	(8.06 – 23.51)	(6.19 – 20.50)
Bipolar II disorder (*n*=57)	17	23	14	3
Percentage	29.82%	40.35%	24.56%	5.26%
95% CI	(19.53 – 42.66)	(28.62 – 53.30)	(15.23 – 37.10)	(1.80 – 14.37)

BPD = borderline personality disorder

* Excluding 15 participants with bipolar disorder and a reported clinical diagnosis of BPD who did not respond to this variable.

3.5. Summary of main findings.

This prevalence study aimed to examine the rates of a diagnosis of BPD in a large well-characterised UK sample with bipolar disorder. The study examined prevalence using broad and narrow definitions of both disorders. Key findings from this study are summarised below:

- 16.42% of 1157 participants with a diagnosis of bipolar I or II disorder reported being told by a healthcare professional that they have broadly-defined BPD.
- BPD diagnosis was significantly more common in bipolar II disorder than bipolar I disorder, when considering both broadly- (24.36% versus 13.00%) and narrowly- (18.05% versus 10.77%) defined BPD.

- Diagnosis of BPD was more common than diagnosis of EUPD, with about half the participants who have received a comorbid diagnosis reporting BPD diagnosis compared to only a third reporting a EUPD diagnosis.
- Bipolar disorder was diagnosed first in about half of individuals who reported a BPD diagnosis, whilst BPD was diagnosed first in about a third.
- A change in diagnosis from bipolar disorder to BPD or vice versa affected about one in seven in all the bipolar disorder groups, and rates of change in diagnosis were similar in both directions. A greater number of individuals with bipolar I disorder reported a change in both directions compared to bipolar II disorder, however this was a moderate percentage in both subtypes.
- More participants reported finding a personality disorder diagnosis unhelpful to their treatment than helpful.

3.6. Discussion.

3.6.1. Prevalence of borderline personality disorder diagnosis in bipolar disorder in the UK.

This prevalence study represents the first UK examination of the rate of BPD diagnosis in a large, well-characterised bipolar disorder sample. Broadly-defined BPD, including individuals who report being described as borderline by a healthcare professional, was reported by 16% of the overall bipolar disorder sample (*n*=1157), whilst 13% reported narrowly-defined BPD (a BPD diagnosis). The findings of this study suggest almost one in six individuals with bipolar disorder in the UK will receive a BPD diagnosis or be described as borderline by a healthcare

professional, a rate similar to the findings of one in five in previous meta-analyses (Fornaro et al., 2016; Frías et al., 2016). This contrasts to two of the previous studies in the UK, which found prevalence rates much lower than the current study, reporting a rate of BPD diagnosis of 6% and 0% (Agius et al., 2012; Smith et al., 2005). This may reflect the sample of the current study being larger and more representative than these previous studies, which have taken place either in one CMHT (Agius et al., 2012) or in a small sample of youth with bipolar disorder (Smith et al., 2005). The third UK study, conducted by Humpston et al. (2021), found a higher prevalence rate of 30% in 130 individuals with bipolar disorder. The difference may be explained by the lack of inclusion of bipolar disorder subtypes in Humpston et al.'s study – the rate of BPD in bipolar II disorder was significantly higher than the rate in bipolar I disorder in the current study– or it may reflect Humpston et al.'s use of a structured clinical interview (SCID-II) to diagnose BPD, rather than the reported clinical diagnosis of the current study. By using reported clinical diagnosis and including a broadly-defined BPD measure as well as bipolar I and II disorder, this study has built on these previous UK findings by analysing practice of diagnosing BPD in the UK in a large, community sample of individuals with bipolar disorder.

3.6.2. Prevalence of borderline personality disorder diagnosis in bipolar disorder subtypes.

A strength of this thesis is that it has examined the rate of BPD in bipolar disorder subtypes as well as an overall bipolar group, whereas previous research has often not reported the type of bipolar disorder being examined. Only 19 of the studies examining prevalence identified in **Table 3.1** examined prevalence in a specific bipolar disorder subtype, and of these only six studies compared the prevalence of BPD in bipolar I disorder to the prevalence in bipolar II disorder. Within these six, five of the studies found that BPD was significantly more

prevalent in bipolar I disorder than bipolar II disorder (Grant et al., 2008; Mantere et al., 2006; McDermid et al., 2015; Skodol et al., 1999; Zimmerman & Mattia, 1999), contrasting with meta-analyses that have found a higher prevalence of BPD in bipolar II disorder when including individual papers examining prevalence in either bipolar I disorder or bipolar II disorder (Fornaro et al., 2016; Zimmerman & Morgan, 2013). The sixth study (Rosso et al., 2009) found that BPD was more prevalent in bipolar II disorder with a prevalence of 10% versus 6% in bipolar I disorder, however this finding was non-significant and still represents a lower prevalence than the results found in the current study (13% versus 11%). The difference in prevalence rates found between the five studies suggesting BPD is more prevalent in bipolar I disorder and the meta-analyses and sixth study may be explained by individual differences between studies. Of the five studies which found bipolar II disorder had lower rates of BPD than bipolar I disorder, two of these studies had small samples, particularly in bipolar II disorder (15 participants in Zimmerman & Mattia, 1999; 23 participants in Skodol et al., 1999). Two of the studies were from the National Epidemiological Survey on Alcohol and Related Conditions (NESARC) (Grant et al., 2008; McDermid et al., 2015), which had large sample sizes but used lay interviewers who may have found it harder to distinguish between the overlap between bipolar II disorder and the affective lability of BPD, explaining the lower prevalence of BPD in bipolar II disorder in these samples. The final of the five studies that found BPD was more prevalent in bipolar I disorder than bipolar II disorder used different methods of diagnosis for bipolar I and II disorder and used both DSM-III-R and DSM-IV during their study, which may have confused the diagnoses of both bipolar disorder and BPD (Mantere et al., 2006). It is interesting that the study that found BPD was more prevalent in bipolar II disorder than bipolar I disorder was the only study that had a larger sample of bipolar II disorder than bipolar I disorder (115 participants in bipolar II disorder, 71 participants in bipolar I disorder) (Rosso et al., 2009). Whilst the current study had a larger number of bipolar I disorder

participants, the sample size in both bipolar I and II disorder was robust and the use of reported clinical diagnosis rather than a structured clinical interview or lay interviewers means that the overlap between bipolar II disorder and BPD was more likely to have been accounted for by those making the diagnosis.

The current study suggests that the rate of BPD diagnosis is different when taking bipolar disorder subtypes into account. When splitting into subtypes of bipolar disorder, 13% of individuals with bipolar I disorder reported broadly-defined BPD compared to 24% of individuals with bipolar II disorder, showing that individuals who have bipolar II disorder were more than twice as likely to report receiving a diagnosis of BPD or being described as borderline by a healthcare professional, and that prevalence rates for an overall bipolar disorder sample may not take these differences into account. The rates for bipolar I disorder and bipolar II disorder found in the current study align with the prevalence rates previously found by two separate meta-analyses (Fornaro et al., 2016; Zimmerman & Morgan, 2013). In a meta-analysis including 28 articles that investigated the prevalence of BPD in bipolar disorder based on DSM or ICD definitions, Fornaro et al. (2016) found a prevalence rate for BPD of 22% in 5237 individuals with bipolar disorder. When separated into subgroups, Fornaro et al. (2016) calculated a BPD prevalence of 13% of 422 individuals with bipolar I disorder and 27% of 377 individuals with bipolar II disorder. Zimmerman and Morgan (2013) found similar rates among subtypes in a meta-analysis of 24 articles, with a BPD prevalence of 11% in 598 bipolar I disorder participants and a prevalence of 23% in 261 bipolar II disorder participants. These meta-analysis findings are similar to the current study's prevalence results for broadly-defined BPD (13% in bipolar I disorder and 24% in bipolar II disorder). The results of the current study add to these two meta-analyses by showing the differences between bipolar I disorder and bipolar II disorder prevalence rates within one large sample of over 1000 individuals with 802 participants with bipolar I disorder and 349 participants with bipolar II disorder, representing

findings that are similar to the meta-analyses in a single sample that is similar in size to the meta-analyses.

3.6.3. The definition and measurement of borderline personality disorder in bipolar disorder.

The current study expands on previous research by using two definitions of BPD. In this prevalence research, BPD was measured both in terms of a diagnosis (narrowly-defined BPD) and in terms of either a diagnosis or individuals being told they have borderline features or being described as borderline by a healthcare professional (broadly-defined BPD). As shown in **Table 3.1**, most previous studies have used structured clinical interviews to measure BPD in their samples, relying on strict diagnostic definitions and cut-off points. This may not accurately reflect clinical practice in diagnosing BPD, as clinicians may choose to use borderline as a descriptor rather than diagnosis, due to the stigma associated with a BPD diagnosis (Sisti et al., 2016). Furthermore, since the introduction of ICD-11, individuals in the UK may be diagnosed with a personality disorder with the descriptor of borderline, rather than the diagnosis of BPD (World Health Organization, 2018). The current study therefore adds to the existing literature by comparing a narrowly- and broadly- defined prevalence of BPD in bipolar disorder. Narrowly-defined BPD had a prevalence of about one in eight (13%) in the overall bipolar disorder sample whereas broadly-defined BPD had a prevalence of about one in six (17%), which is closer to the prevalence rates of BPD in previous meta-analyses (Fornaro et al., 2016; Frías et al., 2016).

The measurement of BPD may have influenced the findings of the current study. Participants self-reported receiving a clinical diagnosis of BPD or EUPD, or being described as borderline or as having borderline traits or features by a healthcare practitioner. This may

mean the levels of clinical BPD diagnosis in the sample is underestimated as participants may not be aware, may have forgotten or may choose not to disclose that they have received the diagnosis. In contrast, tools used in other studies may have over-estimated the prevalence of BPD. One example is the NESARC's finding of a BPD prevalence rate of 29% in bipolar I disorder (McDermid et al., 2015), far higher than the finding of a broadly-defined prevalence of 13% in the current study and higher than the findings of meta-analyses which have suggested the rate of BPD in bipolar I disorder is between 10 to 12% (Fornaro et al., 2016; Zimmerman & Morgan, 2013). This American based study used data from waves one and two of the NESARC, in which 34,653 systematically recruited participants across America were assessed using the Alcohol Use Disorders and Associated Disabilities Interview Schedule (AUDADIS-IV), which was based on DSM-IV criteria (Grant et al., 2008; McDermid et al., 2015). The interviews were carried out by lay interviewers who had been trained in the use of the AUDADIS-IV, however the lack of clinical knowledge may be one reason why BPD was found to be so prevalent in bipolar I disorder in the NESARC. Since evidence suggests clinicians and researchers struggle to differentiate between BPD and bipolar disorder through clinical diagnostic methods (Parker et al., 2016; Ruggero et al., 2010; Saunders et al., 2015), due to the overlap in symptomatology, it is possible that lay interviewers overestimated the presence of BPD in bipolar disorder participants due to their similar symptoms. Furthermore, this thesis has examined reported clinical diagnosis of BPD, focusing on the diagnosis rather than the disorder itself. Whilst the current study cannot claim to be measuring the presence of BPD as a disorder, it measures the rate that individuals with bipolar disorder in the UK are being told that they have this diagnosis, and represents the first UK evidence of a difference between bipolar I disorder and bipolar II disorder in terms of the number of clinical BPD diagnoses being received.

3.6.4. The labels of emotionally unstable personality disorder and borderline personality disorder.

As far as the researcher knows, this is the first study to look at whether individuals with a BPD diagnosis in bipolar disorder received a label of BPD or EUPD. The study found that BPD was the more common diagnosis over EUPD, with about half of participants reporting a BPD diagnosis and only a third reporting the EUPD diagnosis. This may reflect that despite the clinical use of ICD (which previously used the term EUPD and now uses the descriptor 'borderline' in the dimensional model of personality disorders) in the UK, the National Collaborating Centre for Mental Health NICE guidelines refer to the disorder as BPD (National Collaborating Centre for Mental Health, 2009). 17% of individuals in the overall bipolar disorder sample with narrowly-defined BPD reported receiving both diagnoses. There is no published literature examining which name BPD is more often diagnosed as, however this is important due to potential confusion over the two names and whether they correspond to the same illness, particularly in those receiving a comorbid diagnosis. Understanding the label which BPD is diagnosed as in bipolar disorder is important both due to this potential confusion, and for future research: studies using previous diagnosis of BPD in bipolar disorder need to also account for previous diagnosis of EUPD in order to fully examine this diagnosis.

3.6.5. Changes and order of diagnoses received.

Bipolar disorder was diagnosed first in the majority of individuals with BPD in the overall bipolar disorder sample. This may reflect the stigma against the diagnosis of BPD (as discussed in **1.6.**) leading clinicians to diagnose bipolar disorder in the first instance. Changes from BPD to bipolar disorder or vice-versa were relatively similar across bipolar disorder groups, ranging from between 14% in bipolar I disorder (for changes from BPD to bipolar disorder and vice

versa) to 18% in bipolar II disorder (from bipolar disorder to BPD). In all groups, the percentage of participants who had experienced a change from one diagnosis to the other was similar in both directions. Changes in diagnosis have been explored in previous literature. In particular, the Rhodes Island Methods to Improve Diagnostic Assessment and Services (MIDAS) group has explored changes in diagnosis and suggest that a change from bipolar disorder to BPD is more common than a change in the opposite direction, something that this thesis does not support (Ruggero et al., 2010; Zimmerman, Ruggero, et al., 2010). The MIDAS group is a large ongoing clinical study based at a clinical practice that integrates research assessment methods. The study found that out of 145 participants reporting a previous clinical bipolar disorder diagnosis, 82 (57%) did not have this confirmed by the Structured Clinical Interview for DSM-IV (Ruggero et al., 2010). Within these 82 participants, Zimmerman et al. (2010) found a significant increase in personality disorder diagnoses and 24% of participants who had previously been diagnosed with, but did not meet criteria for, bipolar disorder met criteria for BPD, according to DSM-IV.

There are several reasons why the MIDAS study may have found a higher rate of bipolar disorder diagnosis changed to BPD than this thesis, which found a rate of 16% of participants in the overall bipolar disorder group reporting a change in diagnosis from bipolar disorder to BPD. Firstly, the Rhode Island MIDAS project is based at a private practice group that predominantly treats individuals on a fee-for-service basis, which may suggest participants are likely to be financially secure: it is feasible that due to the knowledge that BPD is often associated with lower income and unemployment (Hastrup et al., 2019) clinicians working with a financially secure, middle class demographic may be less likely to think of BPD as an initial diagnosis, possibly explaining the number of false bipolar disorder positives. Another possibility is that the sample of this thesis meant that there were less likely to be participants who had experienced a change from bipolar disorder to BPD. As BDRN is a bipolar disorder

research group, it is possible that members of the BDRN who have experienced a change in diagnosis and are now considered BPD rather than, as opposed to alongside, bipolar disorder may be less likely to actively engage with mailshots and questionnaires as they may consider them less relevant. More work needs to be done to understand the presentation of BPD diagnosis within bipolar disorder in order to strengthen these findings.

3.6.6. Strengths and limitations.

A strength of this study is the focus on BPD within bipolar I and II disorders. Previous research has considered bipolar disorder as one group that includes bipolar disorder not otherwise specified (BDNOS) and schizoaffective bipolar type (SABD), both of which may have influenced previous findings. Using one overall bipolar disorder sample may also miss differences between bipolar I disorder and bipolar II disorder. This may explain some of the differences between this study and previous research. By clearly defining bipolar disorder subtypes this study helps to clarify the prevalence rates of a diagnosis of BPD in bipolar I and II disorders.

The current study also draws from the BDRN's large sample of individuals with bipolar disorder across the UK, representing outpatients and non-treatment seeking individuals with bipolar disorder in the community. This large, UK-wide sample may have addressed some of the limitations of previous literature, which has often used small samples or restricted samples to inpatients or severe clinical populations. This is also the first large UK study to have examined prevalence of clinical diagnosis of BPD in bipolar disorder.

A limitation of the current prevalence study is the sample composition. Due to the genetic focus of much of its research, the BDRN's sample is predominantly White-British. Previous studies have suggested differences in BPD prevalence according to ethnicity, with

Tomko et al. (2014) finding a significantly higher prevalence of BPD in the USA's general population in Native American and black ethnicities, with a lower prevalence in white and Hispanic ethnicities. As the sample of this thesis is predominantly white, the prevalence of BPD in a general bipolar disorder population may be underestimated due to these differences.

The questionnaire response rate is a further limitation, with a response rate of 28% to the 2016 mailshot which included the BPD questionnaire. This may mean that individuals who responded were more motivated to be actively involved with research at that time, and individuals currently in an episode or suffering with greater severity of illness may not have responded. Furthermore, the use of a mailshot means that the BPD questionnaire was one of several sent to participants at that time, and not all participants will have completed the questionnaire due to lack of interest, feeling that it was not applicable to them or questionnaire fatigue. Due to the association of BPD with a greater severity of bipolar disorder illness (this will be examined further in **Chapter 4**), this may mean that the current study underestimates the prevalence of BPD due to those with a higher severity of illness not responding to the questionnaire.

The measure of BPD is also a potential limitation due to its self-reported retrospective manner, as participants may have forgotten or chosen not to disclose the diagnosis or may not have been informed about the diagnosis to begin with, leading to a possible underestimate of the BPD diagnosis. This study cannot claim to be measuring the presence of lifetime ever BPD as prevalence was measured through self-reported clinical diagnoses rather than a structured clinical interview. However, in order to address the difficulty in differentiating and diagnosing BPD (as discussed in **1.7.1**), the current study emphasised the prevalence and role of a reported clinical diagnosis of BPD. By shifting emphasis onto the prevalence of the diagnosis itself, the study remains clinically significant by examining the rates at which individuals with bipolar disorder are being told they have BPD in the UK and may help further understanding of

the overlap between the diagnosis of BPD and bipolar disorder as it is currently understood. The use of broadly- and narrowly- defined BPD groups in the current study further helped to avoid the potential limitations of strictly defining BPD.

3.7. Chapter summary.

One in six bipolar disorder participants in the current study reported receiving a BPD diagnosis or being described as borderline by a clinician at some time in their lives, suggesting that BPD is a relatively prevalent diagnosis in bipolar disorder. Broadly-defined BPD was significantly more common in bipolar II disorder (one in four participants) than bipolar I disorder (one in eight participants). The majority of participants reporting receiving a BPD diagnosis did not report a change in diagnosis from bipolar disorder to BPD or vice versa, suggesting that comorbidity was the norm, and most received the bipolar disorder diagnosis first. Whilst a third of the participants reported finding a personality disorder diagnosis helpful to their treatment, half of the participants reported finding it unhelpful. The next chapter will continue to explore the diagnosis of BPD in bipolar disorder within the BDRN sample by examining the correlates of receiving a BPD diagnosis, as research has previously suggested that BPD is associated with a greater severity of illness in bipolar disorder.

Chapter 4. Clinical and sociodemographic correlates of a diagnosis of borderline personality disorder in bipolar disorder.

4.1. Chapter overview.

The previous chapter concluded that BPD is a prevalent diagnosis in bipolar disorder, affecting an estimated one in six individuals. In this chapter, the research into BPD in bipolar disorder will be continued by presenting the methods and results of a study exploring the correlates of the diagnosis of BPD in bipolar disorder. As discussed in **Chapter 1**, previous research has been varied in this area, and there are limitations in the samples and diagnostic methods used. The current study used the same large, well-characterised sample as presented in the previous chapter, and examined potential clinical and sociodemographic correlates of a BPD diagnosis in bipolar disorder in both univariate and multivariate analysis.

4.2. Introduction.

In **Chapter 1**, the concept of comorbid personality disorders in bipolar disorder was introduced, with evidence that personality disorders, and BPD in particular, are associated with a greater severity of illness in bipolar disorder. The following section will build on the argument in **Chapter 1** by critically examining the existing literature on the sociodemographic and clinical correlates of BPD in bipolar disorder. This section finishes with an evaluation of the limitations of existing research into the features associated with a diagnosis of BPD in bipolar disorder, including the lack of multivariate models, and an outline of how this thesis will address these limitations.

4.2.1. Sociodemographic correlates of comorbid borderline personality disorder in bipolar disorder.

Existing literature on BPD in bipolar disorder has suggested a sociodemographic profile of the comorbidity similar to the features associated with BPD alone, as shown in **Table 4.1.** (pg. 86). Younger current age in the comorbid BPD and bipolar disorder groups compared to bipolar disorder without BPD has been a consistent finding within studies across the literature (Baltacioglu et al., 2017; Hidalgo-Mazzei et al., 2015; McDermid et al., 2015; Patel et al., 2019; Swartz et al., 2005), perhaps unsurprisingly as rates of BPD diagnosis have been found to decline with age (Swartz et al., 1990; Zanarini et al., 2004). Participants with comorbid BPD and bipolar disorder have also been found to be more likely than participants with bipolar disorder without BPD to be female (Bayes et al., 2016; Hidalgo-Mazzei et al., 2015; Parker et al., 2016; Patel et al., 2019), single or divorced (Baltacioglu et al., 2017) and to have a lower household income (Bayes et al., 2016; Elliott & Ragsdale, 2021; McDermid et al., 2015). These findings are

possibly to be expected as BPD alone has been found to be associated with female gender (Swartz et al., 1990), being single or divorced (Swartz et al., 1990) and job difficulties or lower household income (Hastrup et al., 2019; Swartz et al., 1990). Similar results in comorbid BPD and bipolar disorder research may suggest a certain sociodemographic profile is more likely to receive a diagnosis of BPD. As sociodemographic factors have been significantly associated with BPD in bipolar disorder in previous studies and with BPD alone, it is important to take these factors into account when examining the clinical correlates of BPD in bipolar disorder.

4.2.2. Clinical correlates of comorbid borderline personality disorder in bipolar disorder.

4.2.2.1. Illness course correlates of comorbid borderline personality disorder in bipolar disorder.

Existing research suggests that presence of BPD in bipolar disorder is associated with a more severe bipolar disorder illness course, as shown in **Table 4.1.** (pg. 86). Where BPD is present, research has consistently shown that age at bipolar disorder onset is younger (Baltacioglu et al., 2017; Benazzi, 2002; McDermid et al., 2015). For example, Goldberg and Garno, (2009) examined 100 consecutive evaluations from the Bipolar Disorders Research Program in New York and found that individuals with BPD as well as bipolar disorder had a mean age at onset of 13 years versus an age at onset for individuals with bipolar disorder without BPD of 20 years. The mean age at onset in the comorbid group in Goldberg and Garno's study was young for a bipolar disorder sample, however other studies support the findings: Moor et al. (2012) for example, found that the percentage of BPD decreased with increasing age at bipolar disorder onset, with only 6% of individuals with an age at bipolar

disorder onset of 18 years and over having BPD versus 30% of individuals with an age at onset of under 13 years.

As well as a younger age at bipolar disorder onset, BPD in bipolar disorder has been associated with other measures of bipolar disorder illness severity. BPD has been found to be associated with an increased number of depressive and hypo/manic episodes (McDermid et al., 2015; Swann et al., 2013) and an increased length of time in hospital and greater cost of inpatient treatment (Patel et al., 2019), as well as non-responsiveness to treatment (Post et al., 2020). Comorbid BPD in bipolar disorder has also been found to be associated with increased emotional dysregulation, with a study including 83 participants with bipolar disorder, 53 with BPD and 54 with both disorders finding that the comorbidity was associated with greater deficits in the awareness and understanding of emotional responses and the ability to control emotions than either bipolar disorder or BPD alone (Bayes et al., 2016).

Additionally, presence of BPD in bipolar disorder has been associated with an increased risk of self-harm (Moor et al., 2012) and suicidality (Carpiniello et al., 2011; Galfalvy et al., 2006; Garno et al., 2005; Lai et al., 2011; Patel et al., 2019; Söderholm et al., 2020; Zeng et al., 2015; Zimmerman et al., 2014). Suicidality and self-harm are diagnostic criteria in BPD (American Psychiatric Association, 2013), however bipolar disorder alone is also associated with high levels of suicidality (Schaffer et al., 2015), raising concerns that comorbid BPD has an additive risk on an existing vulnerability. One study found the odds of attempting suicide in bipolar disorder increased as much as six-fold in individuals where BPD is present (Zeng et al., 2015). Although Zeng et al.'s (2015) sample was drawn from an inpatient setting and therefore may represent a greater severity of illness, findings from outpatient samples have supported the greater risk of suicidal behaviour in individuals with bipolar disorder where BPD is present. In the Rhode Island MIDAS project study into suicidality in bipolar disorder with and without BPD, Zimmerman et al. (2014) found that 60% of those with comorbid bipolar disorder and

BPD had previously attempted suicide, compared to slightly more than a third of participants with bipolar disorder and no BPD. Studies such as these suggest comorbid BPD confers an additive risk on bipolar disorder symptoms for a worse illness course and adverse outcomes in bipolar disorder.

4.2.3. Psychiatric and physical comorbid illnesses in borderline personality disorder in bipolar disorder.

As well as a greater severity of bipolar disorder illness, presence of BPD is associated with an increased risk of other psychiatric comorbidities in individuals with bipolar disorder. McDermid et al. (2015) found that the presence of BPD significantly increased the odds of bipolar disorder participants having most other psychiatric disorders examined in their study, particularly in bipolar I disorder where any anxiety disorder (odds ratio (OR) 2.47), post-traumatic stress disorder (OR 2.75) and any substance disorder (OR 2.21) were all found to be significantly increased in participants with BPD. Lai et al. (2011) also found that higher anxiety scores were significantly more likely in bipolar disorder where BPD was present, as well as finding higher levels of alcohol and drug dependence. In examining substance abuse specifically, Hidalgo-Mazzei et al. (2015) found that in their sample of bipolar I disorder participants (*n*=47), bipolar II disorder participants (*n*=70) and comorbid bipolar I or II disorder and BPD participants (*n*=63), comorbid participants were significantly more likely than bipolar II disorder participants to have a substance use disorder, with higher rates of alcohol, cannabis and polysubstance use disorders. However, they found no significant difference between bipolar I disorder and comorbid bipolar disorder and BPD, although there was a non-significant effect in the same direction. This may be due to a true difference between bipolar I and II disorder, or it may be due to the small size of the bipolar I disorder sample. It is also difficult to

interpret the differences between bipolar I and II disorder in this study due to a lack of clarity on the composition of the comorbid group, and whether participants within that group had bipolar I or II disorder.

4.2.4. History of adverse childhood experiences in comorbid borderline personality disorder and bipolar disorder.

Presence of BPD has also been associated with history of adverse childhood experiences in bipolar disorder. In their sample of 100 participants with bipolar disorder, Garno et al. (2005) retrospectively evaluated history of adverse childhood experiences using the Childhood Trauma Questionnaire and found that mean scores on the Childhood Trauma Questionnaire were significantly higher in bipolar disorder participants with a Cluster B personality disorder diagnosis, including BPD. Specifically, where BPD was present in bipolar disorder participants were significantly more likely to report histories of emotional abuse, physical abuse and emotional neglect than individuals with bipolar disorder and no BPD, whilst history of sexual abuse was not found to be significant in relation to presence of BPD. In data taken from the 2001 to 2005 National Epidemiological Survey of Alcohol and Related Conditions (NESARC) study in the USA, McDermid et al. (2015) also found that participants had an increased risk where BPD was present of having experienced all types of childhood abuse in both bipolar I disorder (sexual abuse OR 3.21; physical abuse OR 2.24; emotional abuse OR 3.04) and bipolar II disorder (sexual abuse OR 2.96; physical abuse OR 2.82; emotional abuse OR 3.81). Participants were also approximately three times more likely (OR 2.72) to report multiple childhood traumatic events (three to five) in bipolar I disorder where BPD was present compared to when BPD was absent. This finding was confirmed in the 2012 to 2013 NESARC, with Elliott and Ragsdale (2021) also finding that individuals meeting criteria for both bipolar

disorder and BPD reported significantly higher levels of all childhood adverse experiences than individuals with bipolar disorder alone.

Table 4.1. *Studies examining the sociodemographic and clinical correlates of borderline personality disorder (BPD) in bipolar disorder (BD).*

Study	Country	Sample	Diagnostic Criteria for BD and BPD	Diagnostic Method: BD	Diagnostic Method: BPD	Significant correlates of BPD in BD versus BD without BPD		
						Sociodemographic	**Clinical and Childhood History**	**Multivariate Findings (Non-significant variables)**
Baltacioglu et al. (2017)	Turkey	26 BD+BPD 79 BD (IP)	DSM-IV	SCID-I	SCID-II	• Younger current age • Being single or divorced		n/a
Bayes, Parker and McClure (2016)	Australia	53 BD+BPD 83 BD (OP/ community)	DSM-IV	MINI	DIDP-IV	• Female gender • Unemployment	• Difficulty in emotion regulation	n/a
*Bezerra-Filho et al. (2017)	Brazil	10 BD-I + BPD 110 BD-I (OP)	DSM-IV	SCID-I	SCID-II		• Suicide attempts	n/a
Benazzi (2002)	Italy	9 BD-II + BPD 69 BD-II (OP)	DSM-IV	SCID-I	SCID-II		• Earlier age at BD onset	n/a
Carpiniello et al. (2011)	Italy	18 BD + BPD 28 BD (OP)	DSM-IV	SCID-I	SCID-II		• Suicidality	n/a

Study	Country	Sample	Diagnostic Criteria for BD and BPD	Diagnostic Method: BD	Diagnostic Method: BPD	Significant correlates of BPD in BD versus BD without BPD		
						Sociodemographic	**Clinical and Childhood History**	**Multivariate Findings (Non-significant variables)**
Elliott & Ragsdale (2021)	USA	388 BD + BPD 488 BD (Community)	DSM-5	AUDADIS-5	AUDADIS-5	• Less education • Lower family income • More likely to be out of work due to disability	• History of adverse childhood events	n/a
Galfalvy et al. (2006)	USA	15 BD + BPD 49 BD (OP)	DSM-III-R	SCID-I	PDE SCID-II		• Suicidality	n/a
*Garno et al. (2005)	USA	17 BD + BPD 83 BD (OP/IP)	DSM-IV	SCID-I	SCID-II		• History of childhood emotional and physical abuse • Suicidality	n/a

Study	Country	Sample	Diagnostic Criteria for BD and BPD	Diagnostic Method: BD	Diagnostic Method: BPD	Significant correlates of BPD in BD versus BD without BPD		
						Sociodemographic	**Clinical and Childhood History**	**Multivariate Findings (Non-significant variables)**
Goldberg and Garno (2009)	USA	16 BD + BPD 84 BD (OP/IP)	DSM-IV	SCID-I	SCID-II		• Younger age at BD onset	• Younger age at BD onset • (Current age, gender, ethnicity, manic initial episode, history of any childhood abuse, history of childhood sexual abuse)
Hidalgo-Mazzei et al. (2015)	Spain	63 BD + BPD 47 BD-I 70 BD-II (OP)	DSM-IV	SCID-I	SIDP-IV	• Younger current age • Female gender	• Substance use disorder (BD-II)	n/a
Lai et al. (2011)	Italy	18 BD + BPD 39 BD (OP)	DSM-IV	SCID-I	SCID-II		• Suicidality • Higher anxiety scores • Higher levels of alcohol and drug-dependence	n/a

Study	Country	Sample	Diagnostic Criteria for BD and BPD	Diagnostic Method: BD	Diagnostic Method: BPD	Significant correlates of BPD in BD versus BD without BPD		
						Sociodemographic	**Clinical and Childhood History**	**Multivariate Findings (Non-significant variables)**
McDermid et al. (2015)	USA	360 BD-I + BPD 812 BD-I 101 BD-II + BPD 327 BD-II (Community)	DSM-IV	AUDADIS-IV	AUDADIS-IV	• Lower household income (BD-I) • African-American ethnicity (BD-II)	• Younger age at depressive or manic onset • More episodes of illness • Comorbidity with other psychiatric disorders (mood, anxiety and substance use) • Adverse childhood experiences	• <u>Model one BD-I:</u> Younger age at depressive or manic onset (household income). • <u>Model two BD-I:</u> Number of depressive episodes (household income). • <u>Model three BD-II:</u> Younger age at depressive onset (ethnicity, urbanicity). • <u>Model four BD-II:</u> Number of hypomanic episodes (ethnicity, urbanicity).
Moor et al. (2012)	New Zealand	52 BD + BPD 48 BD (OP)	DSM-IV	SCID-I	SCID-II		• Self-harm • Younger age at BD onset	n/a

Study	Country	Sample	Diagnostic Criteria for BD and BPD	Diagnostic Method: BD	Diagnostic Method: BPD	Significant correlates of BPD in BD versus BD without BPD		
						Sociodemographic	**Clinical and Childhood History**	**Multivariate Findings (Non-significant variables)**
Patel et al. (2019)	USA	268,232 BD + BPD 242,379 BD (IP)	ICD-9	Clinical diagnoses	Clinical diagnoses	• Younger current age	• Suicidality • Longer length of stay per admission • More likely to receive ECT • Higher cost during hospitalisation • (Comorbid alcohol/drug abuse were reported as non-significant)	• Comorbid alcohol abuse • Comorbid drug abuse • Longer length of stay per admission • Higher cost during hospitalisation • More likely to receive ECT • (Current age, gender, race, loss of function).
Post et al. (2020)	Multiple	132 BD + BPD 260 BD (OP)	DSM-IV	SCID-I	PDQ		• More likely to be non-responsive to treatment	n/a
Söderholm et al. (2020)	Finland	14 BD + BPD 37 BD (OP)	DSM-IV	SCID-I	SCID-II		• Suicidality	n/a

Study	Country	Sample	Diagnostic Criteria for BD and BPD	Diagnostic Method: BD	Diagnostic Method: BPD	Significant correlates of BPD in BD versus BD without BPD		
						Sociodemographic	**Clinical and Childhood History**	**Multivariate Findings (Non-significant variables)**
Swann et al. (2013)	USA	40 BD + BPD 14 BD (OP and non-treatment seeking)	DSM-IV	SCID-I	SCID-II		• Greater number of manic, depressive or total episodes • Suicidality	n/a
Swartz et al. (2005)	USA	12 BD-I + BPD 58 BD-I (OP)	RDC DSM-III-R	SADS	SCID-II	• Younger current age	• Higher current depression and lower mania scores • Less chance stabilisation (four consecutive weeks low manic and depressive scores) • More atypical mood stabilizing medications	n/a
Zimmerman (2014)	USA	69 BD + BPD 149 BD (OP)	DSM-IV	SCID-I	SIDP		• Suicidality	n/a
Zeng et al. (2015)	USA	16 BD + BPD 38 BD (IP)	DSM-IV	SCID-I	SCID-II		• Suicidality	n/a

Study	Country	Sample	Diagnostic Criteria for BD and BPD	Diagnostic Method: BD	Diagnostic Method: BPD	Significant correlates of BPD in BD versus BD without BPD		
						Sociodemographic	Clinical and Childhood History	Multivariate Findings (Non-significant variables)
* = BPD sample comprises part of a larger comparison of comorbid Cluster B and bipolar disorder participants BD = bipolar disorder; BD-I = bipolar I disorder; BD-II = bipolar II disorder; BPD = borderline personality disorder AUDADIS-IV/5= Alcohol Use Disorders and Associated Disabilities Interview IV/5; DIDP-IV = Diagnostic Interview for Personality Disorders IV; DSM = Diagnostic Statistic Manual; IP = inpatient; MINI = Mini International Neuropsychiatric Index; OP = outpatient; PDE = Personality Disorders Examination; PDQ = Personality Diagnostic Questionnaire; RDC = Research Diagnostic Criteria; SADS = Schedule for Affective Disorders and Schizophrenia Criteria; SCID-I = Structured Clinical Interview for DSM; SCID-II = Structured Clinical Interview for DSM Axis II Disorders; SIDP-IV = Structured Interview for DSM-IV Personality							

4.2.5. Summary of existing literature.

Compared to those with bipolar disorder with no BPD, individuals with both diagnoses have been found to be more likely to be female, single, younger, and unemployed, and to experience suicidal ideation and behaviour, a greater number of comorbidities, a younger age at bipolar disorder onset, a greater number of episodes and greater episode severity. Existing literature also suggests a link between presence of BPD and history of childhood adversity in bipolar disorder. Taken together, these results suggest BPD in bipolar disorder appears to be associated with a greater severity of bipolar disorder illness. However, existing research has several limitations which will be addressed in the current study.

4.2.6. Limitations of the existing literature.

4.2.6.1. Limited studies examining the correlates of borderline personality disorder in bipolar disorder in multivariate models.

There are few existing studies that have examined significant correlates of BPD in bipolar disorder within a multivariate model. Of the 20 studies in **Table 4.1**, only three examined correlates in a multivariate model to predict presence of BPD. Goldberg and Garno (2009) included seven variables and found that younger age at bipolar disorder onset was the only predictor of BPD in bipolar disorder, when accounting for current age, gender, race, manic polarity of initial episode, history of childhood sexual abuse and history of any childhood abuse. However, the focus of this research was age at onset and variables included in the regression were used as controls, rather than accounting for all significant findings in univariate analysis. Both Patel et al. (2019) and McDermid et al. (2015) conducted regressions in their large-scale research. McDermid et al. (2015) used individual regression models in bipolar I and II disorder separately to control for sociodemographic factors when examining

age at manic or depressive onset and number of depressive or manic episodes in four separate models. For example, age at onset of depressive episodes was found to be significantly younger in bipolar I disorder when controlling for household income. However, they did not conduct multivariate analysis with all significant univariate results. For example, the presence of childhood adverse experiences was found to be significantly more likely where BPD was present in bipolar disorder, but this was not examined further in a multivariate model. The association between correlates and other variables found to be associated with the presence of BPD in their sample was therefore not explored. Patel et al. (2019) examined seven significant correlates of BPD in bipolar disorder, including comorbid alcohol and drug use and longer length of stays in hospital, whilst controlling for current age, gender, and race. However, the authors' knowledge of how variables were initially assessed and measured is likely to be limited as the data were collected from clinician discharge notes, furthermore the sample for Patel et al.'s (2019) study is drawn from an inpatient registry and therefore is likely to represent individuals with a greater severity of illness.

The existing research into BPD in bipolar disorder therefore lacks robust multivariate examination of the significant predictors of a diagnosis of BPD in bipolar disorder. By examining multiple significant variables in a multivariate model, the independent predictors of a BPD diagnosis in bipolar disorder can be identified. Furthermore, including multivariate models in analysis allows the inclusion of potential confounding variables. For example, Goldberg and Garno (2009) found that younger age at bipolar disorder onset was a significant predictor of BPD in bipolar disorder, even when controlling for childhood abuse. Further research in this area is needed to better understand the independent predictors associated with a BPD diagnosis in bipolar disorder.

4.2.6.2. Lack of consideration of bipolar disorder diagnostic subtypes.

Many of the studies examining the correlates of BPD in bipolar disorder do not specify diagnostic subtypes and instead use one bipolar disorder category, which does not account for the differences between bipolar I and II disorder (Karanti et al., 2019). The only existing study to have compared four groups (bipolar I disorder with and without BPD and bipolar II disorder with and without BPD) is McDermid et al. (2015), as shown in **Table 4.1** (pg. 86). Differences were found between the correlates of BPD in bipolar I and II disorder, for example where BPD was present in bipolar I disorder it was associated with a greater number of psychiatric comorbidities than in bipolar II disorder. This may suggest that some correlates of BPD are different between bipolar I disorder and bipolar II disorder. However, McDermid et al. (2015) did not examine all significant correlates in a multivariate model to identify whether the most significant independent predictors of BPD in bipolar I and II disorder differ. A large study comparing the correlates of BPD in bipolar I and bipolar II disorder in a multivariate model would be beneficial to further understanding of this complex comorbidity.

4.2.6.3. Small sample groups in comparing comorbid borderline personality disorder in bipolar disorder to bipolar disorder without borderline personality disorder.

Sample sizes vary greatly between studies on the sociodemographic and clinical correlates of BPD comorbidity in bipolar disorder, as shown in **Table 4.1** (pg. 86). This is particularly evident in the BPD with bipolar disorder comparison group used in studies. Only four studies had comorbid BPD and bipolar disorder groups of over a hundred participants (Elliott & Ragsdale, 2021; McDermid et al., 2015; Patel et al., 2019; Post et al., 2020). Sample sizes for comorbid BPD and bipolar disorder in the remaining 16 papers ranged from nine to 69 participants, with an average of only 28 participants. This may impact the results as the sample

may be less representative of the population as a whole and the smaller size may lower statistical power. For example, the comorbid bipolar disorder and BPD group in Hidalgo-Mazzei et al.'s (2015) study (as described above in **4.2.3.**) was non-significantly more likely to have a history of substance use disorder than individuals with bipolar I disorder alone, which may represent a limitation of their sample size of 47 bipolar I disorder participants and 63 comorbid BPD and bipolar I or II disorder participants. The lack of large samples in this area may reflect a potential difficulty in recruiting a comorbid BPD and bipolar disorder sample or may be impacted by studies that have focused on personality disorders in general, over and above a single personality disorder, in which BPD was included as a small subsample of the overall comorbid group. For example, in Bezerra-Filho et al. (2017) study the focus was impact of comorbid personality disorders on suicide attempts in bipolar I disorder, and whilst the sample of personality disorder in bipolar I disorder was 46, the BPD in bipolar I disorder sample was only ten participants.

4.2.7. Aims of the current study.

There is a need for further research into the sociodemographic and clinical correlates of BPD in bipolar disorder that uses a large sample of individuals with bipolar disorder, considers possible differences between bipolar I and bipolar II disorder and examines significant findings alongside each other in multivariate models. The current study was conducted to examine potential correlates of receiving a clinical diagnosis of BPD within the well-characterised bipolar disorder sample outlined in **Chapter 3.**

The specific aims were:

- To compare sociodemographic and clinical features among individuals with bipolar I or II disorder separately, by presence or absence of a clinical diagnosis of BPD or being described as borderline by a healthcare professional.
- To examine significant findings in multivariate models to determine independent significant predictors of a clinical diagnosis of BPD or being described as borderline by a healthcare professional in bipolar disorder.

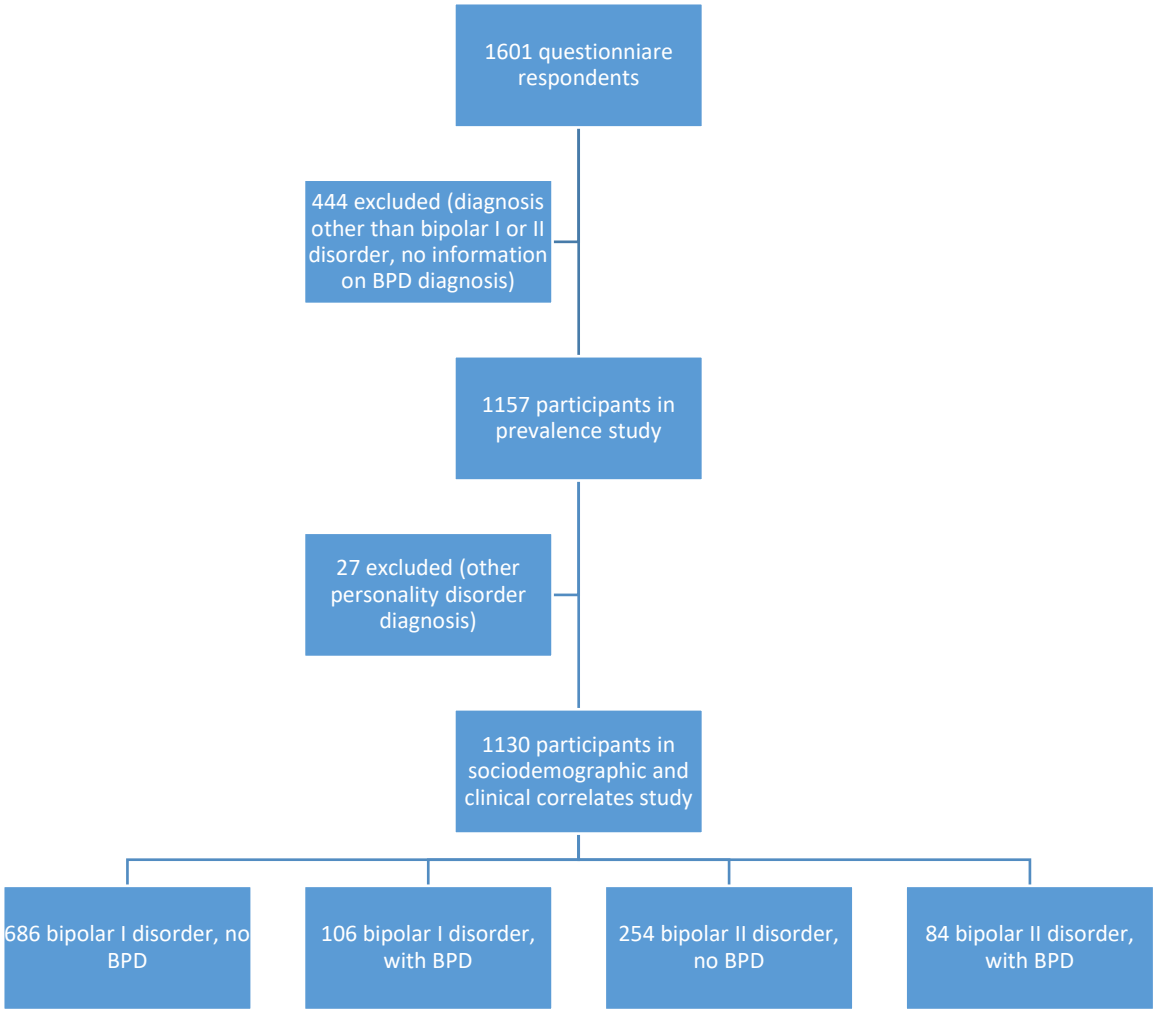
4.3. Methods.

4.3.1. Sample.

The sample for this study was drawn from the 1601 participants who responded to the BPD questionnaire mailed out as part of the BDRN's research (described further in **3.4.1**, **Appendix A**, pg. 284). Of these 1601, 1157 participants were included in the prevalence study (**Chapter 3**), with participants excluded due to a diagnosis other than bipolar I or II disorder or missing information regarding the presence or absence of BPD. A further 27 were excluded from the current study. These 27 participants were included in the bipolar disorder without BPD group in the prevalence study but excluded from the current study because, although they did not report a diagnosis of BPD, they reported a different personality disorder diagnosis. They were therefore excluded due to the potential overlap between personality disorders. The current study used the broadly-defined BPD group from **Chapter 3**, including participants who reported receiving a diagnosis of BPD or being described as borderline by a healthcare professional. The final sample for the current study consisted of 1130 participants, as shown in

Figure 4.1.: 686 participants with bipolar I disorder and no BPD, 106 participants with bipolar I disorder and BPD, 254 participants with bipolar II disorder and no BPD and 84 participants with bipolar II disorder and BPD.

Figure 4.1. *Sample size from initial response to the borderline personality disorder questionnaire to the current study.*



BPD = borderline personality disorder

BPD in this figure refers to reported clinical diagnosis of broadly-defined BPD, including receiving a diagnosis of BPD or being described as borderline by a healthcare professional.

4.3.2. Assessments.

The current study used a range of clinical and sociodemographic variables measured and rated by the BDRN research group. As described in **2.3.2.**, when joining BDRN all participants are interviewed by a trained member of the BDRN study team using the Schedules for Clinical Assessment in Neuropsychiatry (SCAN) (Wing et al., 1990), a research psychiatric assessment

tool used to determine the presence and severity of psychopathology, and psychiatric case-notes are reviewed. The variables included in the current study are summarised below. Variables were chosen based on the findings of previous research and informed by areas of interest being raised in the interviews conducted as part of the qualitative study (discussed in **Chapter 5**).

4.3.3. Demographic characteristics.

Participants' age at interview, gender, lifetime marital status (*ever married / lived as married* or *never married / lived as married*), whether the participant had achieved higher education level qualifications (defined as degree or equivalent and above) and highest occupational status (rated according to the International Standard Classifications of Occupations as *never worked / non-professional* or *professional*) were rated at the time of interview.

4.3.4. Lifetime psychiatric history.

Clinical variables regarding bipolar disorder course and presentation of illness were rated, and the following were included in the current study:

- Age at bipolar disorder illness onset. Defined as the age at which affective symptoms first caused impairment in daily life.
- Lifetime-ever number of episodes of hypo/mania and depression.
- Compulsory admission. Whether or not participants had ever been compulsorily admitted under a Section of the *Mental Health Act* (1983, 2007).

- Rapid cycling. Defined as lifetime-ever presence of four or more episodes of mood disorder in a year. Participants with less than seven years from the onset of illness and/or fewer than three episodes of mood disorder were not included in analysis as there was not enough information to determine the presence or absence of rapid cycling.
- Psychosis. Defined as lifetime presence of hallucinations and/or delusions.
- Suicidal ideation. Defined as lifetime presence of tedium vitae or suicidal ideation.
- Suicide attempt. Defined as lifetime presence of a known attempt.
- Multiple suicide attempts. Defined as lifetime presence of two or more suicide attempts.
- Anxiety disorder. Defined as the lifetime presence of any known anxiety disorder, based on participant questionnaire report of a doctor diagnosis, data collected at interview and case note review.
- Panic disorder. Defined as lifetime presence of a panic disorder, based on participant questionnaire report of a doctor diagnosis, data collected at interview and case note review.

4.3.5. Psychiatric medication use.

Lifetime use of medication was also collected during the BDRN interview and case-note review, and included whether or not the participant had ever taken antidepressants, mood stabilisers (including lithium carbonate, carbamazepine, valproic acid and lamotrigine) or antipsychotics. Participant response to lithium was rated where applicable, as lithium is the main treatment for bipolar disorder in the UK (rated as *good response*, either subjectively or

objectively through a reduction in number/severity of episodes, or *no evidence of response*; participants who had stopped lithium after a short period of time due to side effects were not included in analysis of this variable).

4.3.6. Lifetime drug and alcohol use.

Information was collected on the lifetime heaviest average weekly alcohol consumption, rated as the number of units per week at heaviest alcohol use, and whether the participant was known to have ever regularly used street drugs, including cannabis.

4.3.7. Functioning.

Functioning was also assessed at interview, with participants asked to describe over the past month whether they had experienced any problems with:

- Work or study.
- Maintaining good relationships.
- Self-care.

Participants were rated as having *no / mild difficulty* or *moderate / severe difficulty* in these three domains.

4.3.8. History of childhood abuse.

History of childhood abuse was obtained using the BDRN Childhood Life Events Questionnaire (CLEQ) (Upthegrove et al., 2015). The CLEQ was administered verbally to all participants following the SCAN interview, to allow rapport to be established. Participants

were asked whether they had experienced one or more adverse childhood events before the age of 16. Due to the sensitive nature of the topic, childhood abuse was not explicitly asked about. Instead, participants were asked, "Are there any other significant life events you experienced as a child?", giving the opportunity to disclose any additional events. Case notes were also reviewed for any reference to experiences of childhood abuse. Participants also completed the self-report Brief Life Events Questionnaire (BLEQ), adapted from Brugha et al.'s (1985) list of threatening experiences, which asks about severe life events. An open question was added to the end of the questionnaire which asked, "Do you think there is anything that has happened to you during your life which has contributed to you becoming unwell?" Answers to this question were examined for further evidence of experiencing childhood abuse.

Ratings were made for the presence/absence of any known childhood abuse and the presence/absence of childhood sexual abuse.

4.3.9. Inter-rater reliability.

Inter-rater reliability using Cohen's Kappa Coefficient was between 0.81 and 0.99 for categorical clinical variables and intra-class coefficients were between 0.91 and 0.97 for continuous clinical variables, representing very good agreement between raters.

4.3.10. Statistical analysis.

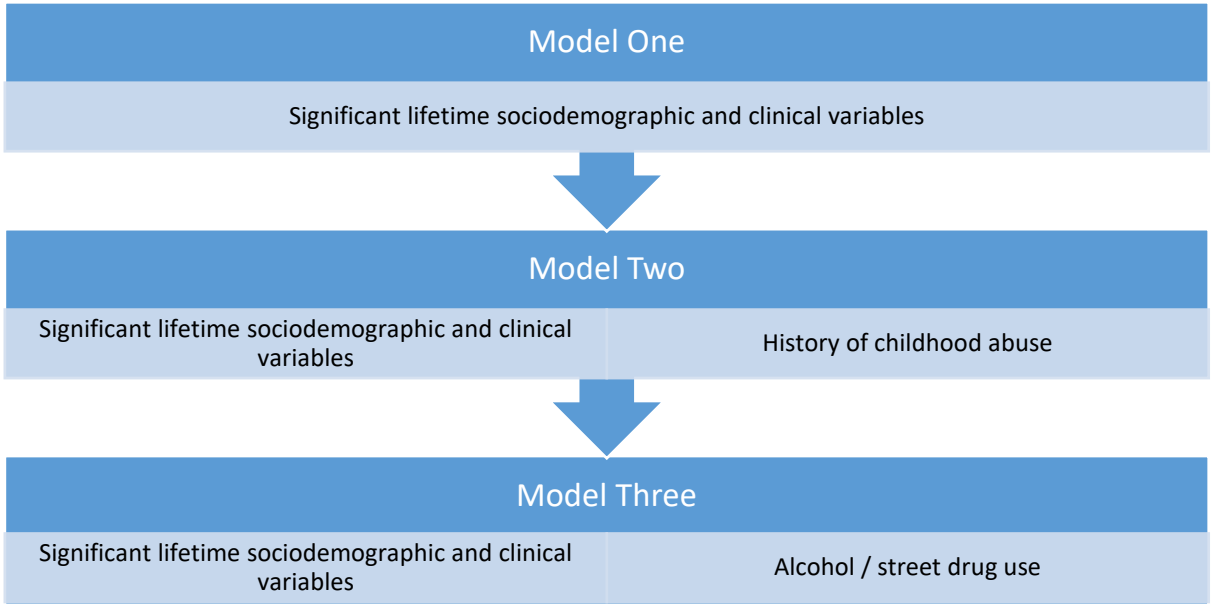
Participants with bipolar I disorder with/without BPD were compared on the above variables using SPSS v.27 (IBM Corp., 2020) using chi-squared tests for categorical variables (or Fisher's exact test where expected values were less than 5) and Mann-Whitney U tests for

continuous variables, due to the data not being normally distributed. This analysis was repeated for participants with bipolar II disorder.

Binary logistic regressions (enter method) were run with significant univariate lifetime clinical and sociodemographic variables (p <.05) to predict BPD in separate models for bipolar I disorder and then bipolar II disorder. Where multiple variables measured similar constructs, decisions were made to include one of these variables based on sample size or significance, to avoid multicollinearity.

Three regression models were run for both bipolar I and II disorder. Model One included significant lifetime clinical and sociodemographic variables from univariate results, controlling for age and gender. History of childhood abuse and alcohol and drug use were excluded from this model to allow Model One to focus on lifetime sociodemographic and clinical correlates. Separate models were run including history of childhood abuse and alcohol and drug use (Model Two and Model Three respectively). These models were run separately to ensure that neither history of childhood abuse or alcohol and drug use were masking other clinically useful findings, as both have been significantly associated with presence of BPD in the past. **Figure 4.2** summarises the three multivariate models run in this study.

***Figure 4.2**. Multivariate models planned for the analysis of significant correlates of borderline personality disorder in bipolar I and II disorder.*

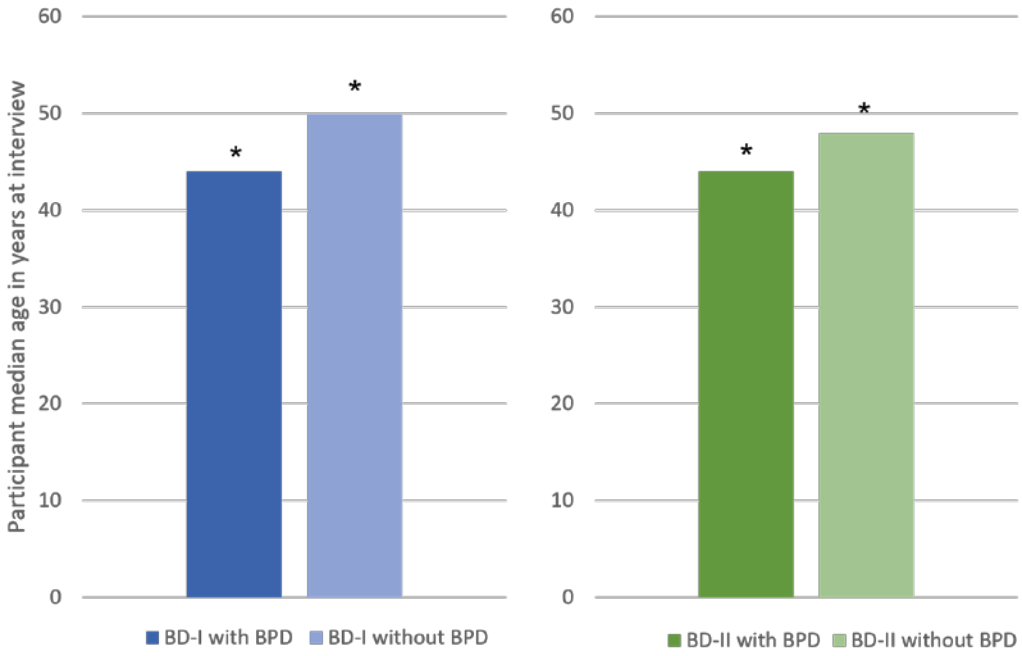


4.4. Results.

4.4.1. Sociodemographic correlates of borderline personality disorder in bipolar I and II disorder.

Table 4.2 summarises the sociodemographic characteristics of the bipolar I disorder and bipolar II disorder groups according to presence/absence of BPD. As shown in **Figure 4.3**, participants with BPD were significantly younger at interview than those without BPD in both the bipolar I disorder (median 44 years versus 50 years, p=.001) and bipolar II disorder (median 44 years versus 48 years, p=.012) groups. Gender and marital status were not significantly different between those with and without BPD in either bipolar I disorder or bipolar II disorder groups, with the majority of participants being female and having either married or lived as married.

***Figure 4.3**. Median bipolar I and II disorder participant age at interview, by presence/absence of borderline personality disorder.*



BD-I = bipolar I disorder; BD-II = bipolar II disorder; BPD = borderline personality disorder

* = difference is significant at p <.05

Table 4.2. Sociodemographic features of bipolar I disorder and bipolar II disorder groups, by presence/absence of borderline personality disorder.

	Bipolar I Disorder				Bipolar II Disorder			
	BPD (*n*=106)	No BPD (*n*=686)	Test statistic	*p*- value	BPD (*n*=84)	No BPD (*n*=254)	Test statistic	*p*- value
Age at interview (years)								
Median (IQR)	44 (15)	50 (17)	*U* = 29188,	.001**	44 (16)	48 (19)	*U* = 8707.50,	.012*
Range	18-65	20-76	*z* = -3.272		24-65	18-75	*z* = -2.526	
Gender								
Male (%)	23 (21.70)	200 (29.15)	χ^2 = 2.17	.141	18 (21.43)	77 (30.31)	χ^2 = 2.05	.153
Female (%)	83 (78.30)	486 (70.85)	OR 1.49 [95% CI .91 – 2.43]		66 (78.57)	177 (69.69)	OR 1.60 [95% CI .89 – 2.87]	
Marital status								
Married or lived as married (%)	85 (85.86)	544 (85.00)	χ^2 = .01	.943	61 (83.56)	213 (87.30)	χ^2 = .39	.534
Never married or lived as married (%)	14 (14.14)	96 (15.00)	OR .94 [95% CI .51 – 1.71]		12 (16.44)	31 (12.70)	OR 1.35 [95% CI .66 – 2.79]	
Highest education								
Higher education (%)	57 (40.00)	339 (54.08)	χ^2 = 6.00	.014*	29 (40.28)	122 (53.28)	χ^2 = 3.20	.074
No higher education (%)	38 (60.00)	287 (45.92)	OR .57 [95% CI .37 – .88]		43 (59.72)	107 (46.72)	OR .59 [95% CI .35 – 1.01]	
Highest occupation								
Professional (%)	42 (43.75)	378 (59.43)	χ^2 = 7.76	.005*	28 (37.84)	144 (61.28)	χ^2 = 11.60	.001**
Non-professional / never worked (%)	54 (56.25)	258 (40.57)	OR .53 [95% CI .34 – .82]		46 (62.16)	91 (38.72)	OR .39 [95% CI .23 – 1.71]	

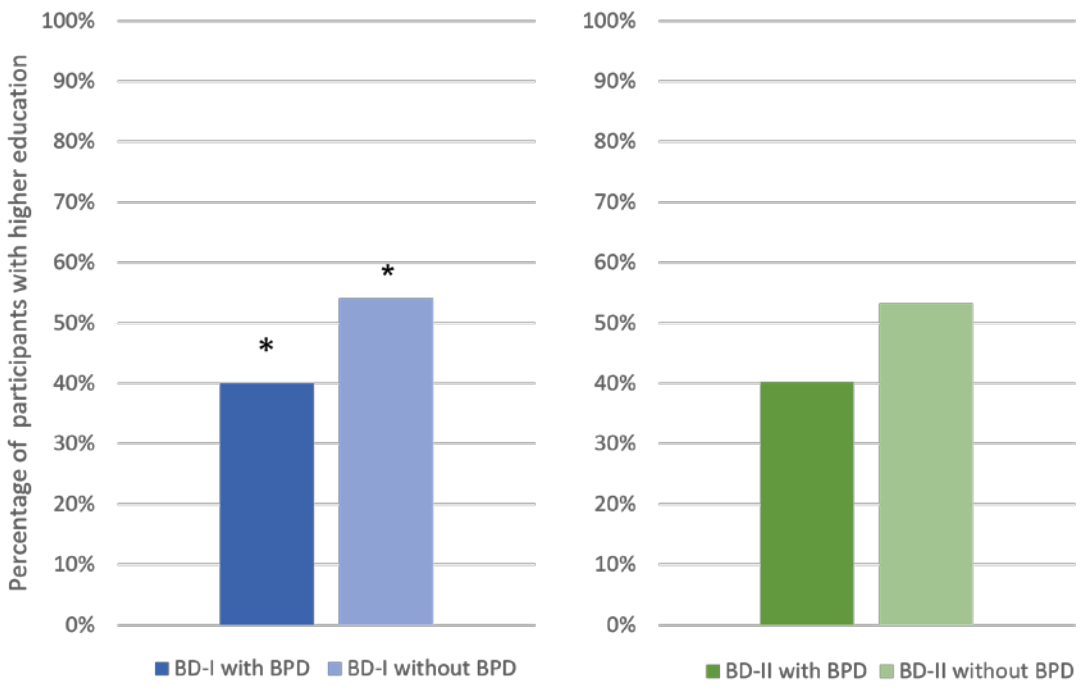
*p is significant at ≤.05; **p is significant at ≤.001

BPD = borderline personality disorder; IQR = interquartile range; OR = odds ratio; CI = confidence interval

*N*s differ due to different sample sizes per variable

Individuals with BPD were significantly less likely to have studied in higher education than those without BPD in bipolar I disorder (40.00% versus 54.08%, p=.014) but this did not reach significance in bipolar II disorder (40.28% versus 53.28%), as shown in **Figure 4.4**. Individuals with BPD were also significantly less likely to have worked in a professional career at their highest occupation than individuals without BPD in both bipolar I disorder (43.75% versus 59.43%, p=.005) and bipolar II disorder (37.84% versus 61.28%, p=.001) groups, as shown in **Figure 4.5**.

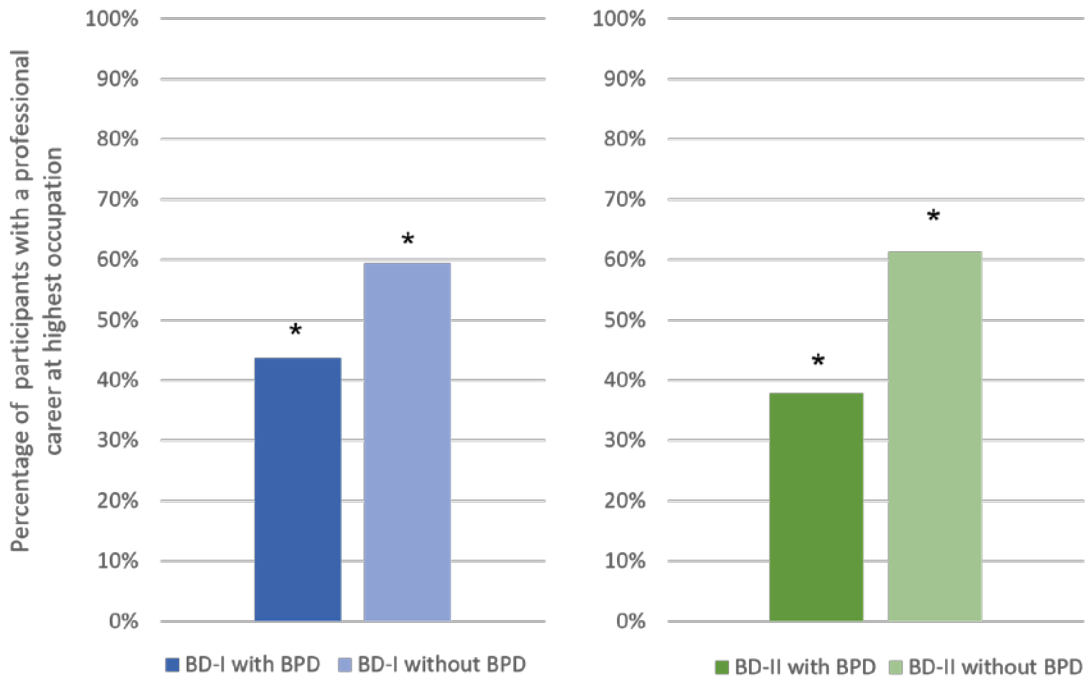
Figure 4.4. *Percentage of bipolar I and II disorder participants with higher education, by presence/absence of borderline personality disorder.*



BD-I = bipolar I disorder; BD-II = bipolar II disorder; BPD = borderline personality disorder

* = difference is significant at p <.05

Figure 4.5. *Percentage of bipolar I and II disorder participants with a professional occupation at highest occupation, by presence/absence of borderline personality disorder.*



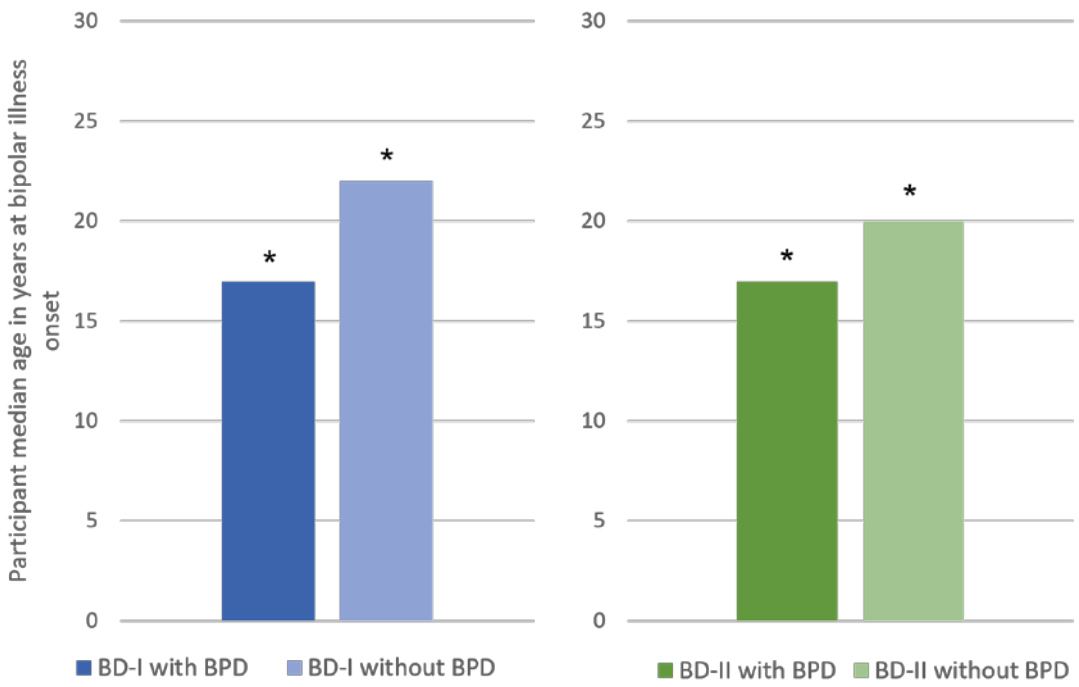
BD-I = bipolar I disorder; BD-II = bipolar II disorder; BPD = borderline personality disorder

* = difference is significant at p <.05

4.4.2. Lifetime clinical correlates of borderline personality disorder in bipolar I and II disorder.

Table 4.3 summarises lifetime clinical variables in the bipolar I disorder and bipolar II disorder groups by presence/absence of BPD. As shown in **Figure 4.6**, individuals with BPD had significantly younger age at bipolar disorder onset than individuals without BPD in both bipolar I disorder (median 17 years versus median 22 years, p<.001) and bipolar II disorder (median 17 years versus median 20 years, p=.001).

Figure 4.6. *Median age at bipolar disorder onset in bipolar I and II disorder participants, by presence/absence of borderline personality disorder.*



BD-I = bipolar I disorder; BD-II = bipolar II disorder; BPD = borderline personality disorder

* = difference is significant at p <.05

Table 4.3. *Lifetime clinical features of bipolar I disorder and bipolar II disorder groups, by presence/absence of borderline personality disorder.*

	Bipolar I Disorder				**Bipolar II Disorder**			
	BPD (*n*=106)	No BPD (*n*=686)	Test statistic	*p*- value	BPD (*n*=84)	No BPD (*n*=254)	Test statistic	*p*- value
Age at onset in years								
Median (IQR)	17 (7)	22 (12)	*U* = 19260.50,	<.001**	17 (10)	20 (14)	*U* = 7118,	.001**
Range	5-41	7-68	*z* = -6.628		5-57	7-67	*z* = -3.326	
Number of hypo/manic episodes								
Median (IQR)	8.50 (16)	5 (7)	*U* = 21603.50,	<.001**	10 (15)	6 (17)	*U* = 6226,	.012*
Range	1-250	1-80	*z* = -4.311		1-100	1-300	*z* = -2.519	
Number of depressive episodes								
Median (IQR)	12.50 (15)	6 (10)	*U* = 20186.50,	<.001**	17.5 (12)	10 (14)	*U* = 7647.50,	.135
Range	1-250	0-100	*z* = -5.618		2-201	2-200	*z* = -1.494	
Rapid cycling								
Present (%)	33 (45.83)	98 (19.72)	χ^2 = 22.75	<.001**	28 (59.57)	57 (35.40)	χ^2 = 7.82	.005*
Absent (%)	39 (54.17)	399 (80.28)	OR 3.45 [95% CI 2.06 – 5.76]		19 (40.43)	104 (64.60)	OR 2.69 [95% CI 1.38– 5.23]	
Psychosis								
Present (%)	75 (81.52)	469 (77.52)	χ^2 = .53	.466	9 (15.52)	27 (12.56)	χ^2 = .14	.710
Absent (%)	17 (18.48)	136 (22.48)	OR 1.28 [95% CI .73 – 2.24]		49 (84.48)	188 (87.44)	OR 1.28 [95% CI .57 – 2.90]	

	Bipolar I Disorder				Bipolar II Disorder			
	BPD (*n*=106)	No BPD (*n*=686)	Test statistic	*p*- value	BPD (*n*=84)	No BPD (*n*=254)	Test statistic	*p*- value
Ever admitted								
Admitted (%)	91 (88.35)	577 (87.56)	χ^2 = .01	.947	39 (46.43)	99 (40.41)	χ^2 = .700	.403
Never admitted (%)	12 (11.65)	82 (12.44)	OR 1.08 [95% CI .57 – 2.05]		45 (53.57)	146 (59.59)	OR 1.28 [95% CI .78 – 2.11]	
Ever compulsorily admitted								
Compulsorily admitted (%)	44 (44.90)	327 (50.15)	χ^2 = .74	.389	12 (14.46)	10 (4.07)	χ^2 = 9.14	.002*
Never compulsorily admitted (%)	54 (55.10)	325 (49.85)	OR .81 [95% CI .53 – 1.24]		71 (85.54)	236 (95.93)	OR 3.99 [95% CI 1.65 – 9.62]	

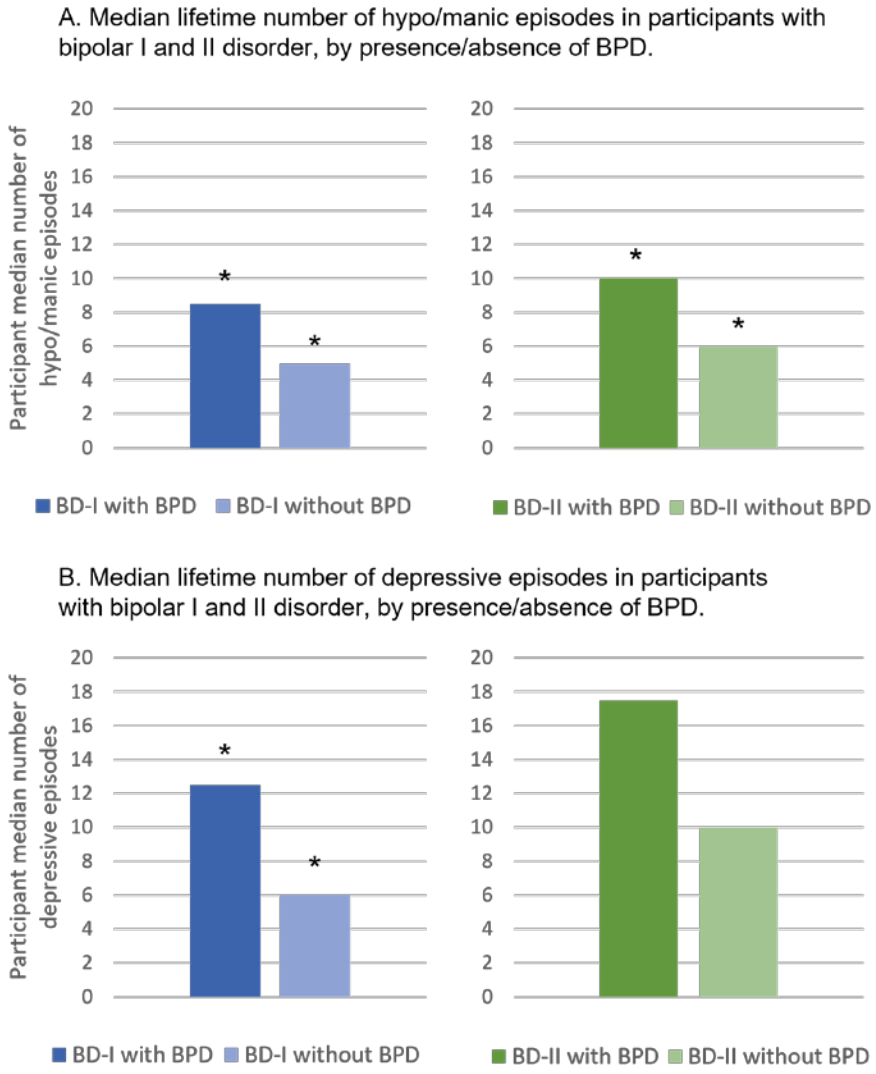
*p is significant at ≤.05; **p is significant at ≤.001

BPD = borderline personality disorder; IQR = interquartile range; OR = odds ratio; CI = confidence interval

*N*s differ due to different sample sizes per variable

Individuals with BPD experienced significantly more manic and/or hypomanic episodes than those without BPD in both bipolar I disorder (median 8.5 versus median 5, p<.001) and bipolar II disorder (median 10 versus median 6, p=.012), as shown in **Figure 4.7 A**. **Figure 4.7 B** also shows individuals with bipolar I disorder with BPD experienced a significantly higher number of depressive episodes than those without BPD (median 12.5 versus median 6, p<.001). The number of depressive episodes was higher in BPD in bipolar II disorder but this difference did not reach significance (median 17.5 versus 10).

Figure 4.7. *Median lifetime number of episodes in participants with bipolar I and II disorder, by presence/absence of borderline personality disorder.*

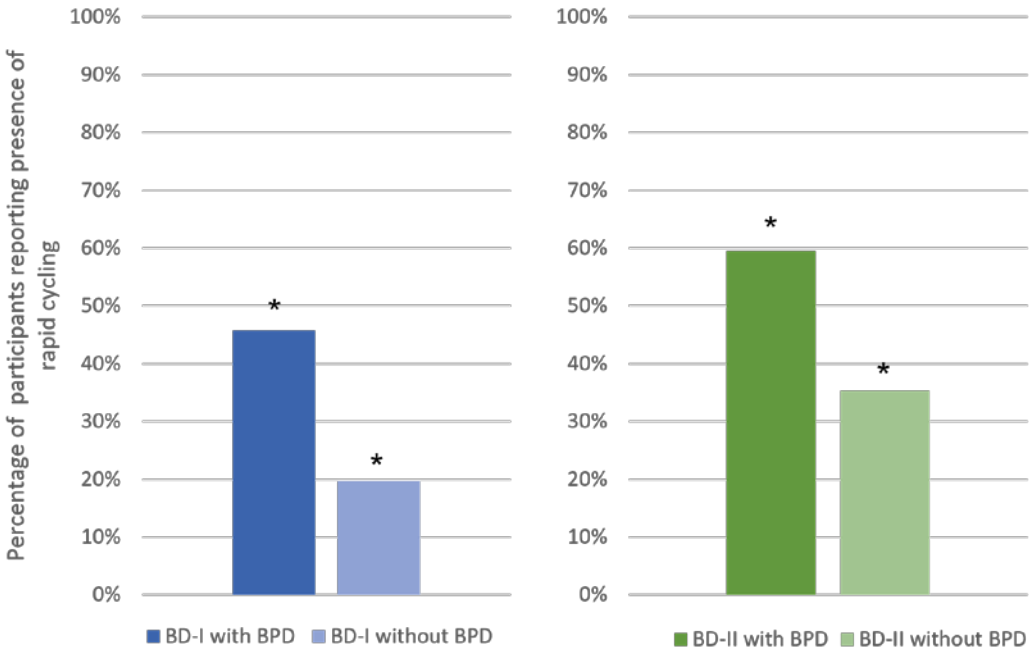


BD-I = bipolar I disorder; BD-II = bipolar II disorder; BPD = borderline personality disorder

* = difference is significant at p <.05

Individuals with BPD were significantly more likely to have experienced rapid cycling than individuals without BPD in both bipolar I disorder (45.83% versus 19.72%, p<.001) and bipolar II disorder (59.57% versus 35.40%, p=.005), as shown in **Figure 4.8**. Percentage of participants with a history of psychosis was not significantly different between those with/without BPD in bipolar I disorder or bipolar II disorder.

***Figure 4.8**. Percentage of participants in bipolar I and II disorder with rapid cycling, by presence/absence of borderline personality disorder.*



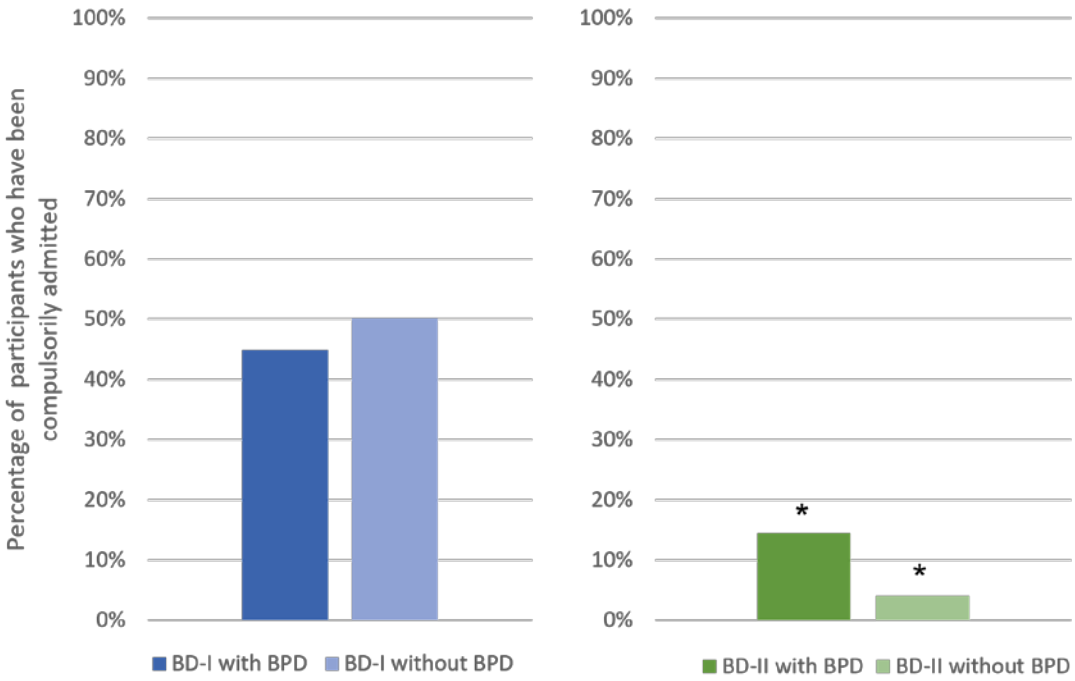
BD-I = bipolar I disorder; BD-II = bipolar II disorder; BPD = borderline personality disorder

* = difference is significant at p <.05

The proportion of individuals who had ever been admitted to psychiatric hospital was not significantly different among those with BPD compared to those without BPD in both the bipolar I disorder and bipolar II disorder groups. Whilst individuals with BPD in bipolar I disorder were not significantly more likely to have been admitted under a Section of the *Mental Health Act* (1983, 2007) than those without BPD (*p* =.389), individuals with BPD in bipolar II disorder were almost four times as likely to have been admitted under a Section of

the *Mental Health Act* (1983, 2007) than those without BPD (14.46% versus 4.07%, p=.002, OR 3.99), as shown in **Figure 4.9**.

Figure 4.9. *Percentage of participants with bipolar I and II disorder who had been compulsorily admitted, by presence/absence of borderline personality disorder.*



BD-I = bipolar I disorder; BD-II = bipolar II disorder; BPD = borderline personality disorder

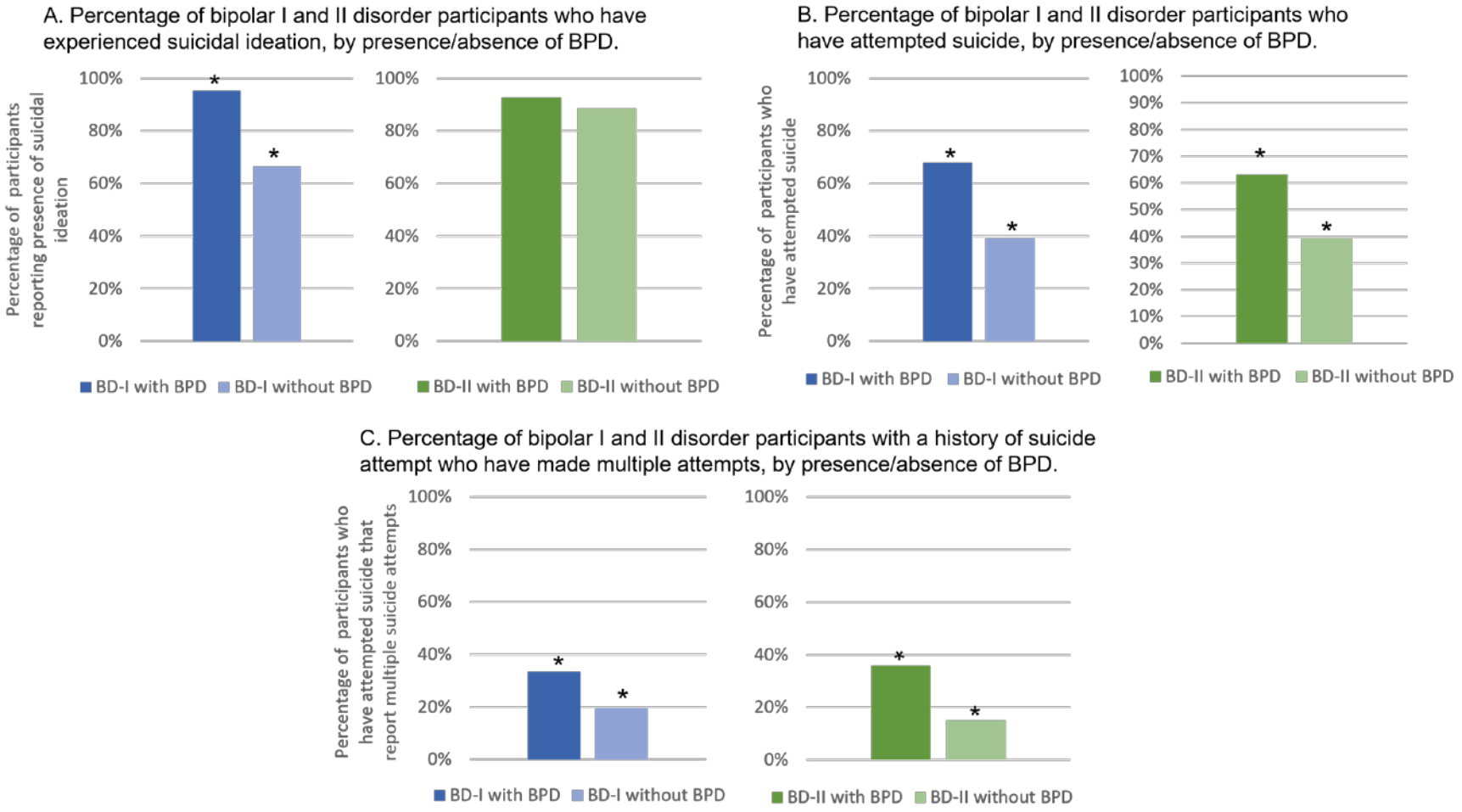
* = difference is significant at p <.05

4.4.3. Suicidal ideation and attempts in bipolar I and II disorder by presence/absence of borderline personality disorder.

As shown in **Figure 4.10 A** and **Table 4.4**, suicidal ideation was significantly more common in bipolar I disorder where BPD was present, however this did not reach significance in bipolar II disorder. Individuals with BPD were approximately three times more likely to have attempted suicide compared to those without BPD in both bipolar I disorder (67.92% versus 39.21%, p<.001, OR 3.28) and bipolar II disorder (63.09% versus 39.37%, p<.001, OR 2.63) groups, as shown in **Figure 4.10 B**. Among those who had attempted suicide, participants with

BPD were significantly more likely to have attempted suicide multiple times than those without BPD in both bipolar I disorder (33.33% versus 19.70%, p=.022) and bipolar II disorder (35.85% versus 15.00%, p=.006), as shown in **Figure 4.10 C.**

Figure 4.10. *Suicidality in bipolar I and II disorder, by presence/absence of borderline personality disorder.*



BD-I = bipolar I disorder; BD-II = bipolar II disorder; BPD = borderline personality disorder

* = difference is significant at p <.05

Table 4.4. *Suicidal ideation and behaviour in bipolar I disorder and bipolar II disorder groups, by presence/absence of borderline personality disorder.*

	Bipolar I Disorder				**Bipolar II Disorder**			
	BPD (*n*=106)	No BPD (*n*=686)	Test statistic	*p*- value	BPD (*n*=84)	No BPD (*n*=254)	Test statistic	*p*- value
Suicidal ideation								
Present (%)	101 (95.28)	545 (79.45)	χ^2 = 14.28	<.001**	78 (92.86)	225 (88.58)	χ^2 = .825	.364
Absent (%)	5 (4.72)	141 (20.55)	OR 5.23 [95% CI 2.09 – 13.07]		6 (7.14)	29 (11.42)	OR 1.68 [95% CI .67 – 4.19]	
Suicide attempt								
Present (%)	72 (67.92)	269 (39.21)	χ^2 = 29.71	<.001**	53 (63.09)	100 (39.37)	χ^2 = 13.40	<.001**
Absent (%)	34 (32.08)	417 (60.79)	OR 3.28 [95% CI 2.12 – 5.08]		31 (36.90)	154 (60.63)	OR 2.63 [95% CI 1.58 – 4.38]	
Single or multiple suicide attempts								
Single attempt (%)	48 (66.67)	216 (80.30)	χ^2 = 5.28	.022*	34 (64.15)	85 (85.00)	χ^2 = 7.55	.006*
Multiple attempts (%)	24 (33.33)	53 (19.70)	OR 2.04 [95% CI 1.15 – 3.62]		19 (35.85)	15 (15.00)	OR 3.17 [95% CI 1.44 – 6.94]	

*p is significant at ≤.05; **p is significant at ≤.001

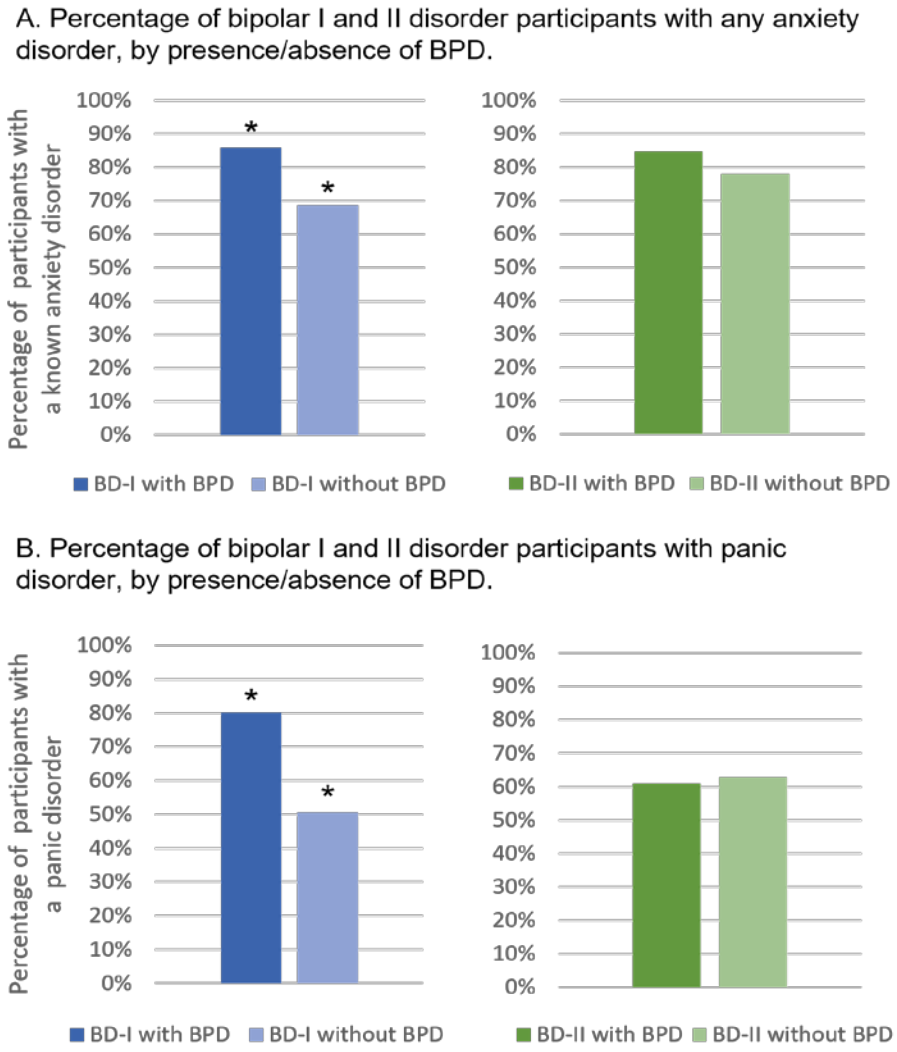
BPD = borderline personality disorder; IQR = interquartile range; OR = odds ratio; CI = confidence interval

*N*s differ due to different sample sizes per variable

4.4.4. Comorbid anxiety disorders in bipolar I and II disorder by presence/absence of borderline personality disorder.

As **Table 4.5** and **Figure 4.11** show, there was no significant difference in presence of any anxiety disorders or panic disorder between those with and without BPD in bipolar II disorder. However, in bipolar I disorder individuals with BPD were significantly more likely to have any anxiety disorder (85.85% versus 68.80%, p<.001) and significantly more likely to have panic disorder specifically (80.26% versus 50.54%, p<.001) than those without BPD.

Figure 4.11. *Percentage of bipolar I and II disorder participants with anxiety disorders, by presence/absence of borderline personality disorder.*



BD-I = bipolar I disorder; BD-II = bipolar II disorder; BPD = borderline personality disorder

* = difference is significant at p <.05

Table 4.5. *Comorbid anxiety disorders in bipolar I disorder and bipolar II disorder groups, by presence/absence of borderline personality disorder.*

	Bipolar I Disorder				**Bipolar II Disorder**			
	BPD (*n*=106)	No BPD (*n*=686)	Test statistic	*p*- value	BPD (*n*=84)	No BPD (*n*=254)	Test statistic	*p*- value
Anxiety disorder								
Present (%)	91 (85.85)	472 (68.80)	χ^2 = 12.16	<.001**	71 (84.52)	198 (77.95)	χ^2 = 1.30	.255
Absent (%)	15 (14.15)	214 (31.20)	OR 2.75 [95% CI 1.56 – 4.86]		13 (15.48)	56 (22.05)	OR 1.55 [95% CI .80 – 2.99]	
Panic disorder								
Present (%)	61 (80.26)	236 (50.54)	χ^2 = 22.13	<.001**	36 (61.02)	109 (63.01)	χ^2 = .014	.907
Absent (%)	15 (19.74)	231 (49.46)	OR 3.98 [95% CI 2.20 – 7.20]		23 (39.98)	64 (36.99)	OR .92 [95% CI .50 – 1.69]	

*p is significant at ≤.05; **p is significant at ≤.001

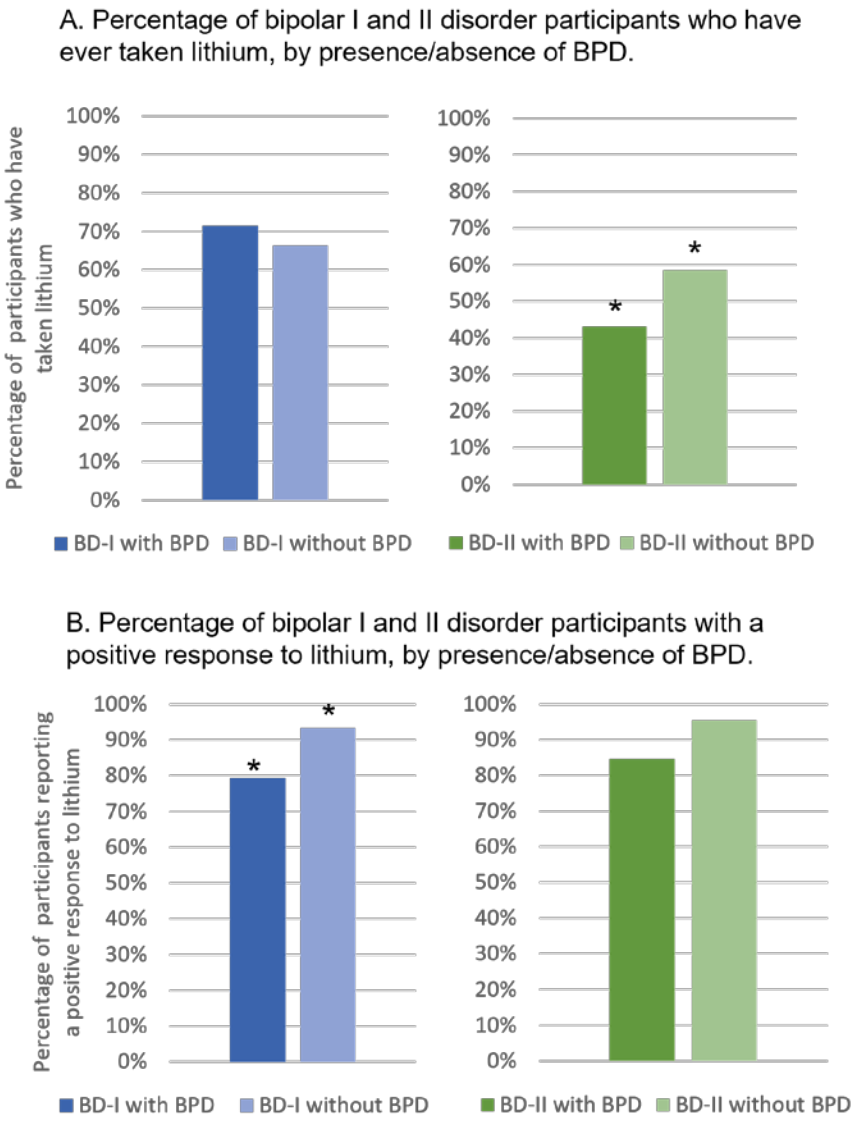
BPD = borderline personality disorder; IQR = interquartile range; OR = odds ratio; CI = confidence interval

*N*s differ due to different sample sizes per variable

4.4.5. Medication use in bipolar I and II disorder by presence/absence of borderline personality disorder.

As shown in **Table 4.6** and **Figure 4.12 A**, the proportion of participants that had taken lithium was not significantly different in bipolar I disorder with or without BPD (71.58% versus 72.30%, p=.981), however participants with BPD in bipolar II disorder were significantly less likely to have taken lithium than participants without BPD (43.06% versus 58.59%, p=.030). Fewer participants with BPD in bipolar I disorder had a positive response to lithium, compared to participants with bipolar I disorder without BPD (79.41% versus 93.29%, p=.012), as shown in **Figure 4.12 B**, although this difference was not significant in bipolar II disorder. Whether or not participants had ever taken antidepressants, mood stabilisers or antipsychotics was not significantly associated with the presence of BPD in bipolar I disorder or bipolar II disorder.

Figure 4.12. *Lithium use and response in participants with bipolar I and II disorder, by presence/absence of borderline personality disorder.*



BD-I = bipolar I disorder; BD-II = bipolar II disorder; BPD = borderline personality disorder

* = difference is significant at p <.05

Table 4.6. *Medication use in bipolar I disorder and bipolar II disorder groups, by presence/absence of borderline personality disorder.*

	Bipolar I Disorder				**Bipolar II Disorder**			
	BPD (*n*=106)	No BPD (*n*=686)	Test statistic	p- value	BPD (*n*=84)	No BPD (*n*=254)	Test statistic	p- value
Lithium								
Taken	68 (71.58)	449 (72.30)	χ^2 = .001	.981	31 (43.06)	133 (58.59)	χ^2 = 4.72	.030*
Never taken	27 (28.42)	172 (27.70)	OR .97 [95% CI .60 – 1.56]		41 (56.94)	94 (41.41)	OR .54 [95% CI .31 – 9.13]	
Response to lithium								
Positive response (%)	27 (79.41)	292 (93.29)	Fishers exact test	.012*	11 (84.62)	72 (94.74)	Fishers exact test	.210
No response (%)	7 (20.59)	21 (6.71)			2 (15.38)	4 (5.26)		
Antidepressants								
Taken (%)	86 (95.56)	455 (88.87)	χ^2 = 3.06	.080	64 (96.97)	212 (97.70)	Fishers exact test	.667
Never taken (%)	4 (4.44)	57 (11.13)	OR 2.69 [95% CI .95 – 7.62]		2 (3.03)	5 (2.30)		
Mood stabilisers								
Taken (%)	83 (94.32)	460 (88.80)	χ^2 = 1.90	.168	51 (78.46)	174 (81.31)	χ^2 = .11	.742
Never taken (%)	5 (5.68)	58 (11.20)	OR 2.09 [95% CI .82 – 5.37]		14 (21.54)	40 (18.69)	OR .84 [95% CI .42 – 1.66]	
Antipsychotics								
Taken (%)	77 (89.53)	473 (93.11)	χ^2 = .90	.343	44 (66.67)	133 (62.74)	χ^2 = .19	.665
Never taken (%)	9 (10.47)	35 (6.89)	OR .63 [95% CI .29 – 1.37]		22 (33.33)	79 (37.26)	OR 1.19 [95% CI .66 – 2.13]	

*p is significant at ≤.05; **p is significant at ≤.001

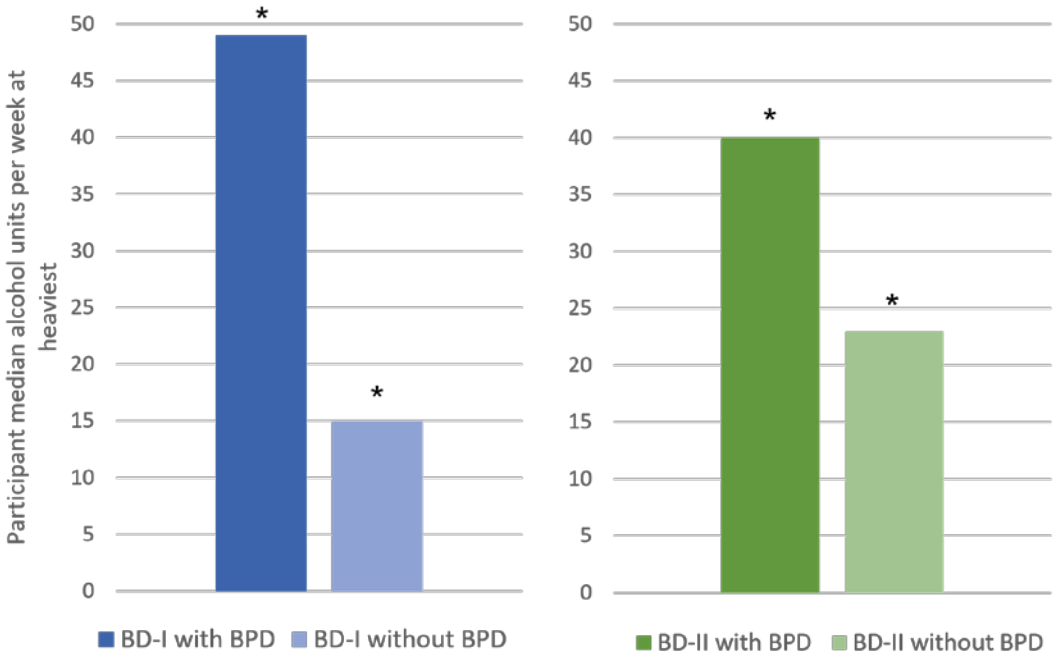
BPD = borderline personality disorder; IQR = interquartile range; OR = odds ratio; CI = confidence interval

*N*s differ due to different sample sizes per variable

4.4.6. Use of alcohol and drugs in bipolar I and II disorder by presence/absence of borderline personality disorder.

As shown in **Table 4.7** and **Figure 4.13**, participants with BPD reported significantly higher units of alcohol per week at their highest level of drinking than those without BPD in both bipolar I disorder (median 49 versus median 15 units, p<.001) and bipolar II disorder (median 40 versus median 23 units, p=.027). Participants with BPD were also significantly more likely to report ever regular street drug use than those without BPD in bipolar I disorder (30.19% versus 15.31%, p<.001), although this did not reach significance in bipolar II disorder (26.19% versus 18.90%, p=.202), as shown in **Figure 4.14**.

Figure 4.13. *Median units of alcohol per week at heaviest use in participants with bipolar I and II disorder, by presence/absence of borderline personality disorder.*



BD-I = bipolar I disorder; BD-II = bipolar II disorder; BPD = borderline personality disorder

* = difference is significant at p <.05

Table 4.7. *Alcohol and drug use in bipolar I disorder and bipolar II disorder groups, by presence/absence of borderline personality disorder.*

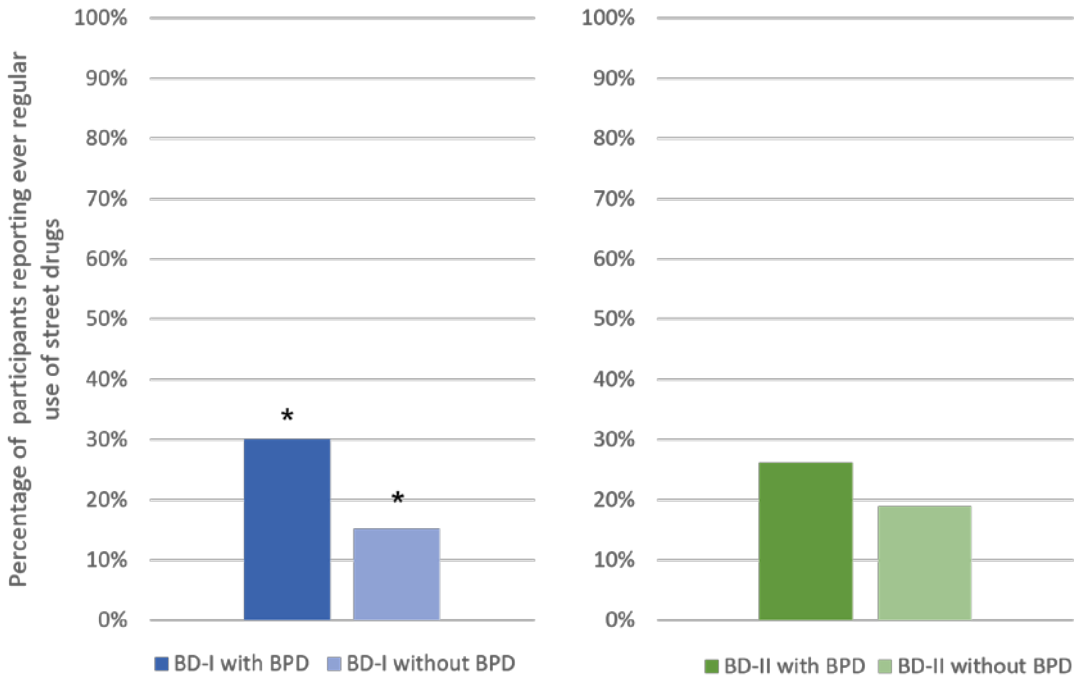
	Bipolar I disorder				**Bipolar II disorder**			
	BPD (*n*=106)	No BPD (*n*=686)	Test statistic	*p*- value	BPD (*n*=84)	No BPD (*n*=254)	Test statistic	*p*- value
Alcohol units per week at heaviest								
Median (IQR)	49 (97)	15 (40)	*U* = 20804.5,	<.001**	40 (97)	23 (51)	*U* = 6465.5,	.027*
Range	0-230	0-500	*z* = -4.491		0-250	0-388	*z* = -2.213	
Use of street drugs								
Ever regularly used (%)	32 (30.19)	105 (15.31)	χ^2 = 13.19	<.001 **	22 (26.19)	48 (18.90)	χ^2 = 1.63	.202
Never regularly used (%)	74 (69.81)	581 (84.69)	OR 2.39 [95% CI 1.51 –3.81]		62 (73.81)	206 (81.10)	OR 1.52 [95% CI .85 – 2.72]	

**p* is significant at ≤.05; ***p* is significant at ≤.001

BPD = borderline personality disorder; IQR = interquartile range; OR = odds ratio; CI = confidence interval

*N*s differ due to different sample sizes per variable

Figure 4.14. *Percentage of participants with bipolar I or II disorder who have ever regularly used street drugs, by presence/absence of borderline personality disorder.*



BD-I = bipolar I disorder; BD-II = bipolar II disorder; BPD = borderline personality disorder

* = difference is significant at p <.05

4.4.7. Functioning in bipolar I and II disorder by presence/absence of borderline personality disorder.

Participants in both bipolar I disorder and bipolar II disorder groups with BPD were more likely to report moderate or severe difficulty in functioning than those without BPD, as shown in **Table 4.8** and **Figure 4.15**. Compared to participants without BPD, participants with BPD were more likely to report moderate or severe difficulty in all three areas of functioning in the past month: the ability to work or study (p <.001 in bipolar I and II disorder), the ability to maintain good relationships (p <.001 in bipolar I and II disorder) and self-care (p <.001 in bipolar I and II disorder).

Table 4.8. *Functioning in the past month in bipolar I disorder and II disorder, by presence/absence of borderline personality disorder.*

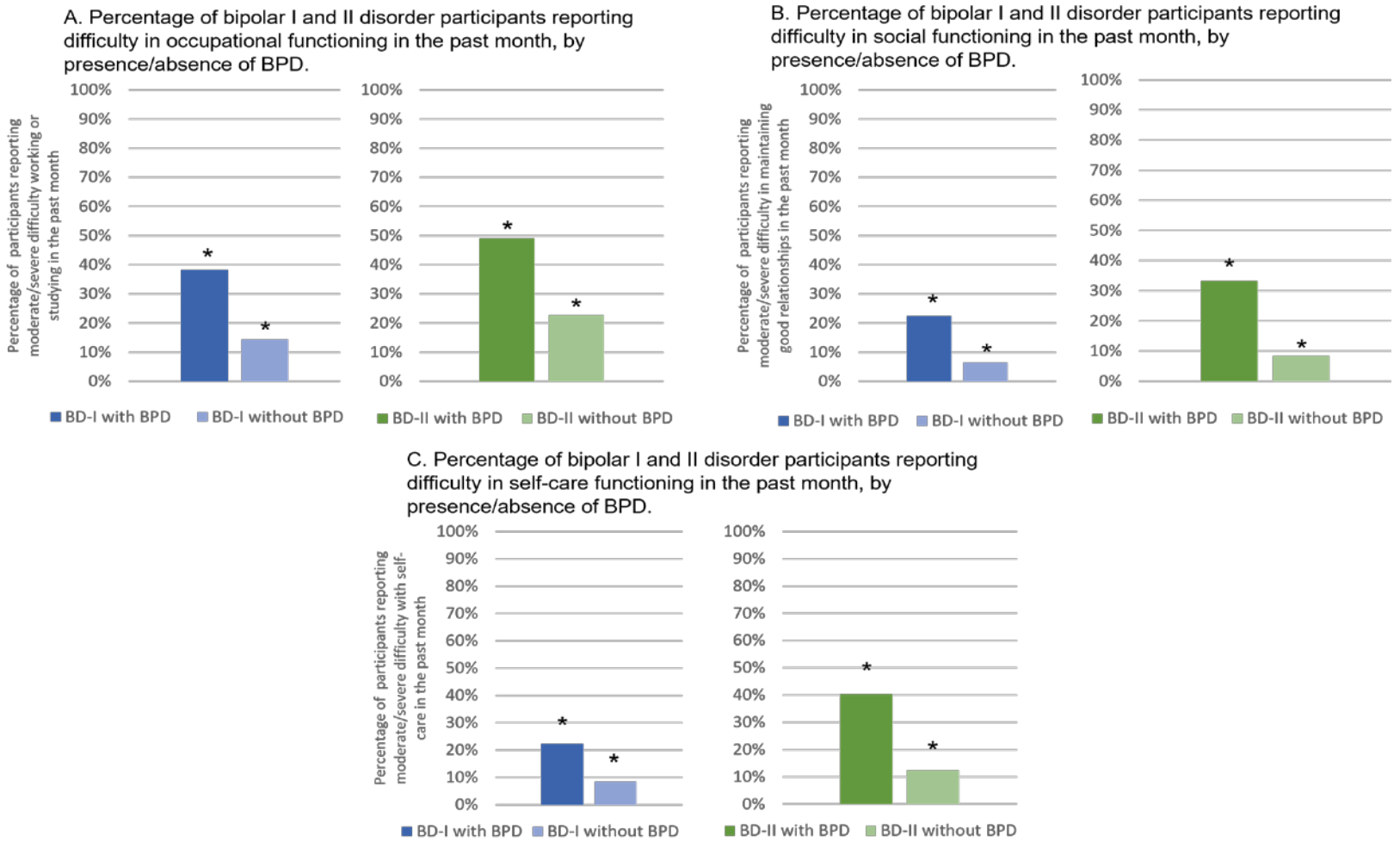
	Bipolar I Disorder				**Bipolar II Disorder**			
	BPD (*n*=106)	No BPD (*n*=686)	Test statistic	*p*- value	BPD (*n*=84)	No BPD (*n*=254)	Test statistic	*p*- value
Ability to work or study in the past month								
No difficulty / mild difficulty (%)	50 (61.73)	404 (85.59)	χ^2 = 25.19 OR 3.68 [95% CI 2.20 – 6.17]	<.001**	29 (50.88)	149 (77.20)	χ^2 = 13.62 OR 3.27 [95% CI 1.76 – 6.07]	<.001**
Moderate / severe difficulty (%)	31 (38.27)	68 (14.41)			28 (49.12)	44 (22.80)		
Maintaining good relationships in the past month								
No difficulty / mild difficulty (%)	62 (77.50)	441 (93.43)	χ^2 = 19.54 OR 4.13 [95% CI 2.18 – 7.82]	<.001**	38 (66.67)	175 (91.62)	χ^2 = 20.55 OR 5.47 [95% CI 2.58 – 11.60]	<.001**
Moderate / severe difficulty (%)	18 (22.50)	31 (6.57)			19 (33.33)	16 (8.38)		
Self-care in the past month								
No difficulty / mild difficulty (%)	62 (77.50)	430 (91.49)	χ^2 = 12.74 OR 3.12 [95% CI 1.68 – 5.78]	<.001**	34 (59.65)	170 (87.63)	χ^2 = 20.86 OR 4.79 [95% CI 2.43 – 9.46]	<.001**
Moderate / severe difficulty (%)	18 (22.50)	40 (8.51)			23 (40.35)	24 (12.37)		

*p is significant at ≤.05; **p is significant at ≤.001

BPD = borderline personality disorder; IQR = interquartile range; OR = odds ratio; CI = confidence interval

*N*s differ due to different sample sizes per variable

Figure 4.15. *Assessment of functioning in the past month in participants with bipolar I and II disorder, by presence/absence of borderline personality disorder.*



BD-I = bipolar I disorder; BD-II = bipolar II disorder; BPD = borderline personality disorder

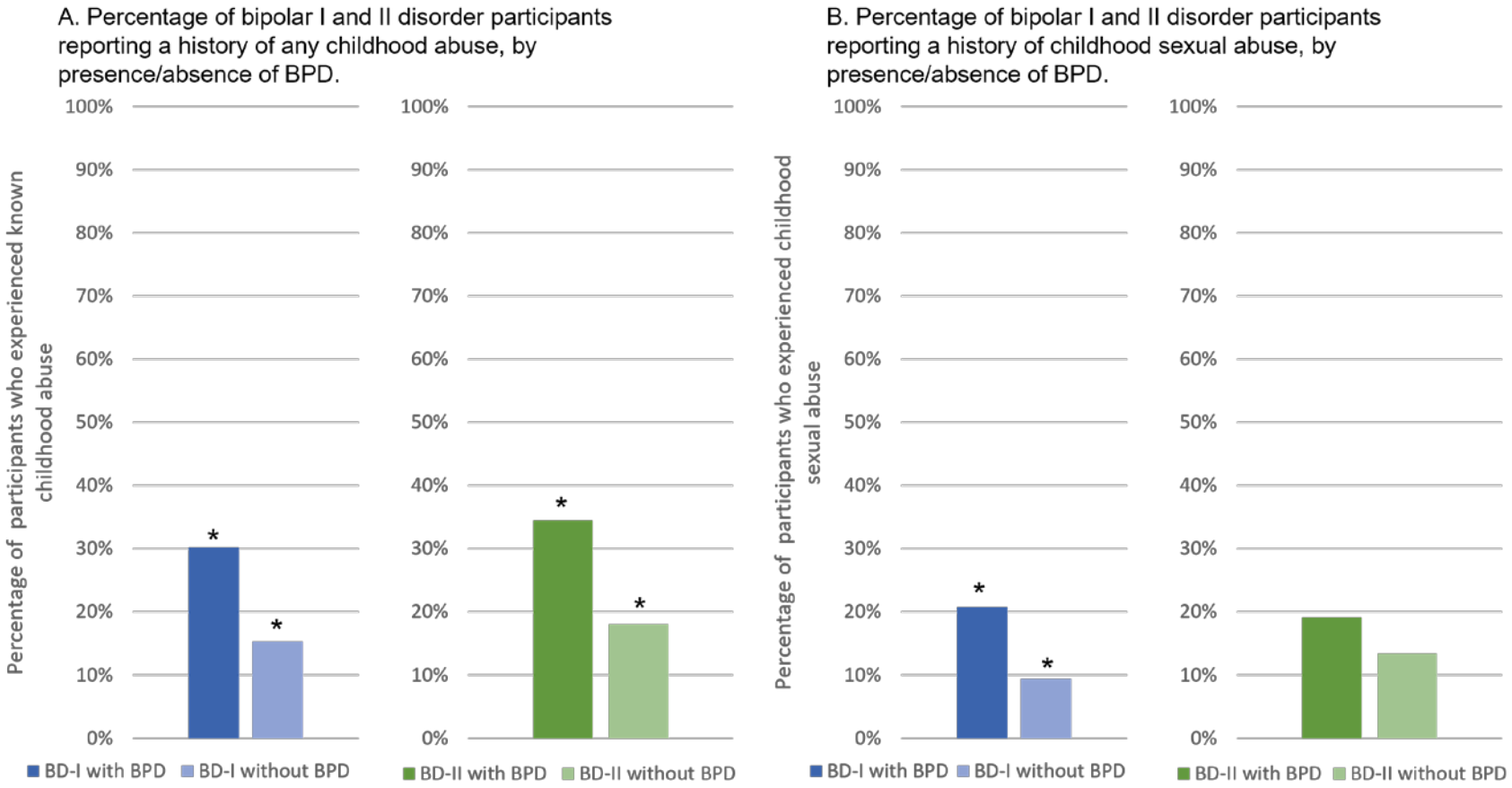
* = difference is significant at p <.05

4.4.8. History of childhood abuse in bipolar I and II disorder, by presence/absence of borderline personality disorder.

Figure 4.16 and **Table 4.9** show history of childhood abuse in participants with bipolar I disorder or bipolar II disorder by presence/absence of BPD. Individuals with BPD were significantly more likely to have experienced any form of childhood abuse than those without BPD in both bipolar I disorder (30.21% versus 15.35%, p=.001) and bipolar II disorder (34.52% versus 18.11%, p=.003), as shown in **Figure 4.16 A**.

Whilst history of childhood sexual abuse was significantly more likely in those with BPD in bipolar I disorder than those without BPD (20.83% versus 9.44%, p=.002), this was not a statistically significant difference for those with/without BPD in bipolar II disorder (19.18% versus 13.39%, p=.308), as shown in **Figure 4.16 B**.

Figure 4.16. *History of childhood abuse in bipolar I and II disorder, by presence/absence of borderline personality disorder.*



BD-I = bipolar I disorder; BD-II = bipolar II disorder; BPD = borderline personality disorder

* = difference is significant at p <.05

Table 4.9. History of childhood abuse in bipolar I disorder and bipolar II disorder subgroups, by presence/absence of borderline personality disorder.

	Bipolar I Disorder				Bipolar II Disorder			
	BPD (*n*=96)	No BPD (*n*=593)	Test statistic	*p*- value	BPD (*n*=73)	No BPD (*n*=224)	Test statistic	*p*- value
History of childhood abuse								
Yes (%)	29 (30.21)	91 (15.35)	$\chi^2 = 11.68$	.001**	29 (34.52)	46 (18.11)	$\chi^2 = 8.92$	.003*
No (%)	67 (69.79)	502 (84.65)	OR 2.39 [95% CI 1.46 – 3.90]		55 (65.48)	208 (81.89)	OR 2.38 [95% CI 1.37 – 4.14]	
History of childhood sexual abuse								
Yes (%)	20 (20.83)	56 (9.44)	$\chi^2 = 9.79$	.002*	14 (19.18)	30 (13.39)	$\chi^2 = 1.04$	.308
No (%)	76 (79.17)	537 (90.56)	OR 2.52 [95% CI 1.44 – 4.44]		59 (80.82)	194 (86.61)	OR 1.53 [95% CI .76 – 3.08]	

*p is significant at ≤.05; **p is significant at ≤.001

BPD = borderline personality disorder; OR = odds ratio; CI = confidence interval

4.5. Multivariate models of correlates of borderline personality disorder diagnosis in bipolar disorder.

Logistic regression analyses were used to determine the independent sociodemographic and clinical predictors of the presence of BPD in the bipolar I disorder and bipolar II disorder groups. Significant lifetime sociodemographic and clinical predictors were excluded if they overlapped with another construct to avoid multicollinearity; in these instances, the variable with the highest significance or greatest sample size was used (for example, highest occupation was used rather than highest education).

As stated in section **4.3.3.**, three regressions were run for both bipolar I disorder and bipolar II disorder: the first model included key lifetime sociodemographic and clinical variables, and the second and third models controlled for the presence or absence of childhood abuse and alcohol and drug use respectively.

4.5.1. Regression analysis of significant predictors of borderline personality disorder in bipolar I disorder.

4.5.1.1. Model One.

The first bipolar I disorder model contained eight variables (gender, age at interview, highest occupation, age at bipolar disorder onset, number of hypo/manic episodes, number of depressive episodes, presence/absence of suicide attempts and presence/absence of anxiety disorders). The model was statistically significant, χ^2 (8, N = 639) = 67.02, p <.001, indicating that the model was able to distinguish between presence and absence of BPD, and the model explained 19.11% (Nagelkerke R squared) of the variance. As shown in **Table 4.10**, five of the

independent variables made a unique statistically significant contribution to the model. The strongest predictors of the presence of BPD diagnosis were presence of an anxiety disorder (OR 2.65), history of suicide attempt (OR 2.10) and a non-professional career at highest occupation or never having worked (OR 1.71), whilst a greater number of depressive episodes (OR 1.02) and younger age at bipolar disorder onset (OR .95) made a small but significant contribution to the model.

Table 4.10. *Predictors of borderline personality disorder in bipolar I disorder (Model One).*

	Odds ratio	95% confidence interval	*P*
Gender (female)	.85	.46 – 1.56	.591
Age at interview	.98	.96 – 1.01	.155
Highest occupation (non-professional or never worked)	1.71	1.02 – 2.87	.042*
Age at bipolar disorder onset	.95	.91 – .98	.007*
Number of manic episodes	1.01	.98 – 1.03	.552
Number of depressive episodes	1.02	1.00 – 1.03	.046*
Suicide attempt (present)	2.10	1.21 – 3.62	.008*
Anxiety disorder (present)	2.65	1.25 – 5.60	.011*

*p is significant at ≤.05

4.5.1.2. Model Two.

When history of childhood abuse was included in the regression, the strongest predictors remained the same and the model remained significant, χ^2 (9, N = 639) = 67.11, p <.001, and explained 19.14% (Nagelkerke R squared) of the variance, with history of childhood abuse not emerging as a significant predictor, as shown in **Table 4.11**.

Table 4.11. *Predictors of borderline personality disorder in bipolar I disorder (Model Two, including history of childhood abuse).*

	Odds ratio	95% confidence interval	*P*
Gender (female)	1.17	.46 – 1.56	.622
Age at interview	.98	.96 – 1.01	.160
Highest occupation (non-professional or never worked)	1.71	1.02 – 2.87	.042*
Age at bipolar disorder onset	.95	.91 – .98	.008*
Number of manic episodes	1.01	.98 – 1.03	.566
Number of depressive episodes	1.02	1.00 – 1.03	.048*
Suicide attempt (present)	2.08	1.21 – 3.62	.009*
Anxiety disorder (present)	2.63	1.25 – 5.60	.011*
History of childhood abuse (present)	1.11	.57 – 2.14	.762

*p is significant at ≤.05

4.5.1.3. Model Three.

The third model included alcohol units per week at heaviest use and use of street drugs. The model was statistically significant, χ^2 (10, N = 597) = 69.33, p <.001, and the model explained 20.91% (Nagelkerke R squared) of the variance, representing a slight increase from the first model. As shown in **Table 4.12**, five of the independent variables made a unique statistically significant contribution to the model (highest occupation, age at bipolar disorder onset, history of suicide attempt, presence of anxiety disorder and heaviest alcohol use). The two strongest predictors of BPD remained presence of an anxiety disorder (OR 2.18) and having attempted suicide (OR 1.86), with heavier alcohol use making a small but significant contribution to the model.

***Table 4.12**. Predictors of borderline personality disorder in bipolar I disorder (Model Three, including alcohol and drug use).*

	Odds ratio	95% confidence interval	*P*
Gender (female)	.79	.42 – 1.50	.470
Age at interview	.99	.96 – 1.01	.256
Highest occupation (non-professional or never worked)	1.78	1.04 – 3.07	.037*
Age at bipolar disorder onset	.95	.91 – 1.03	.010*
Number of manic episodes	1.01	.98 – 1.03	.620
Number of depressive episodes	1.01	1.00 – 1.03	.124
Suicide attempt (present)	1.86	1.05 – 3.30	.033*
Anxiety disorder (present)	2.18	1.02 – 4.67	.045*
Alcohol units per week at heaviest	1.01	1.00 – 1.01	.043*
Regular use of street drugs (present)	1.50	.81 – 2.75	.195

**p* is significant at ≤.05

4.5.2. Regression analysis of significant predictors of borderline personality disorder in bipolar II disorder.

4.5.2.1. Model One.

The first model in bipolar II disorder contained seven independent variables (gender, age at interview, highest occupation, age at bipolar disorder onset, number of hypomanic episodes, number of depressive episodes and history of suicide attempt). Presence of anxiety disorder was not a significant correlate of BPD in bipolar II disorder in the univariate analysis and therefore was not included here. Although number of depressive episodes was not significantly associated with BPD in bipolar II disorder in the univariate analysis, it was included in this model alongside number of hypomanic episodes to account for rapid cycling. The model was statistically significant, χ^2 (7, N = 253) = 22.57, *p* =.002, and the model explained 12.88% (Nagelkerke R squared) of the variance. As shown in **Table 4.13**, one of the independent

variables made a unique statistically significant contribution to the model (highest occupation), with individuals with BPD in bipolar II disorder being over twice as likely than individuals without BPD in bipolar II disorder to have never worked or worked in a non-professional career at highest occupation.

Table 4.13. *Predictors of borderline personality disorder in bipolar II disorder (Model One).*

	Odds ratio	95% confidence interval	*p*
Gender (female)	1.17	.55 – 2.58	.691
Age at interview	.98	.95 – 1.01	.102
Highest occupation (non-professional or never worked)	2.42	1.28 – 4.57	.006*
Age at bipolar disorder onset	.98	.95 – 1.02	.310
Number of hypomanic episodes	1.00	.98 – 1.01	.772
Number of depressive episodes	1.01	.99 – 1.02	.412
Suicide attempt (present)	1.81	.95 – 3.45	.072

*p is significant at ≤.05

4.5.2.2. Model Two.

The regression was run a second time whilst controlling for history of childhood abuse. A non-professional career at highest occupation or never having worked remained the single significant predictor of BPD when including history of childhood abuse in the model, and the model as a whole remained significant , χ^2 (7, N = 253) = 25.49, p =.001, as shown in **Table 4.14**.

Table 4.14. *Predictors of borderline personality disorder in bipolar II disorder (Model Two, including history of childhood abuse).*

	Odds ratio	95% confidence interval	*P*
Gender (female)	.72	.33 – 1.60	.420
Age at interview	.97	.94 – 1.00	.073
Highest occupation (non-professional or never worked)	2.46	1.30 – 4.67	.006*
Age at bipolar disorder onset	.98	.95 – 1.02	.395
Number of hypomanic episodes	1.00	.99 – 1.01	.743
Number of depressive episodes	1.01	.99 – 1.02	.375
Suicide attempt (present)	1.71	.89 – 3.31	.108
History of childhood abuse (present)	1.89	.92 – 3.89	.084

*p is significant at ≤.05

4.5.2.3. Model Three.

The regression was run a third time including heaviest alcohol use. Regular use of street drugs was not included in the bipolar II disorder model as it was not significant in univariate analysis. The model contained eight independent variables (including alcohol use). The model was statistically significant, χ^2 (8, N = 234) = 30.41, p <.001. The model as a whole explained 18.35% (Nagelkerke R squared) of the variance, representing an increase from the first model. As shown in **Table 4.15**, whilst never having worked or working in a non-professional career at highest occupation remained the strongest predictor of BPD (OR 2.00), heavier alcohol use also independently predicted BPD in bipolar II disorder (OR 1.01).

***Table 4.15**. Predictors of borderline personality disorder in bipolar II disorder, including heaviest alcohol use.*

	Odds ratio	95% confidence interval	*p*
Gender (female)	.95	.41 – 2.16	.895
Age at interview	.98	.95 – 1.01	.173
Highest occupation (non-professional or never worked)	2.00	1.01 – 3.96	.048*
Age at bipolar disorder onset	.98	.95 – 1.02	.414
Number of hypomanic episodes	1.00	.98 – 1.01	.763
Number of depressive episodes	1.01	.99 – 1.02	.406
Suicide attempt (present)	1.75	.88 – 3.49	.109
Heaviest alcohol use	1.01	1.00 – 1.02	.006*

**p* is significant at ≤.05

4.6. Summary of key findings

This study aimed to examine the correlates of a reported clinical diagnosis of BPD in a large well-characterised sample with bipolar disorder. Key univariate findings from this study are summarised in **Figure 4.17**. In multivariate findings, the third model in both bipolar I and II disorder (shown in **Figure 4.18**), including alcohol and drug use, explained the most variance. Presence of BPD in both bipolar I and II disorder was significantly predicted by heavier alcohol use and lower occupational status, and BPD was further predicted by history of suicide attempt, presence of an anxiety disorder and a younger age at onset in bipolar I disorder.

Figure 4.17. *Summary of significant univariate correlates of borderline personality disorder (BPD) in bipolar I and II disorder.*

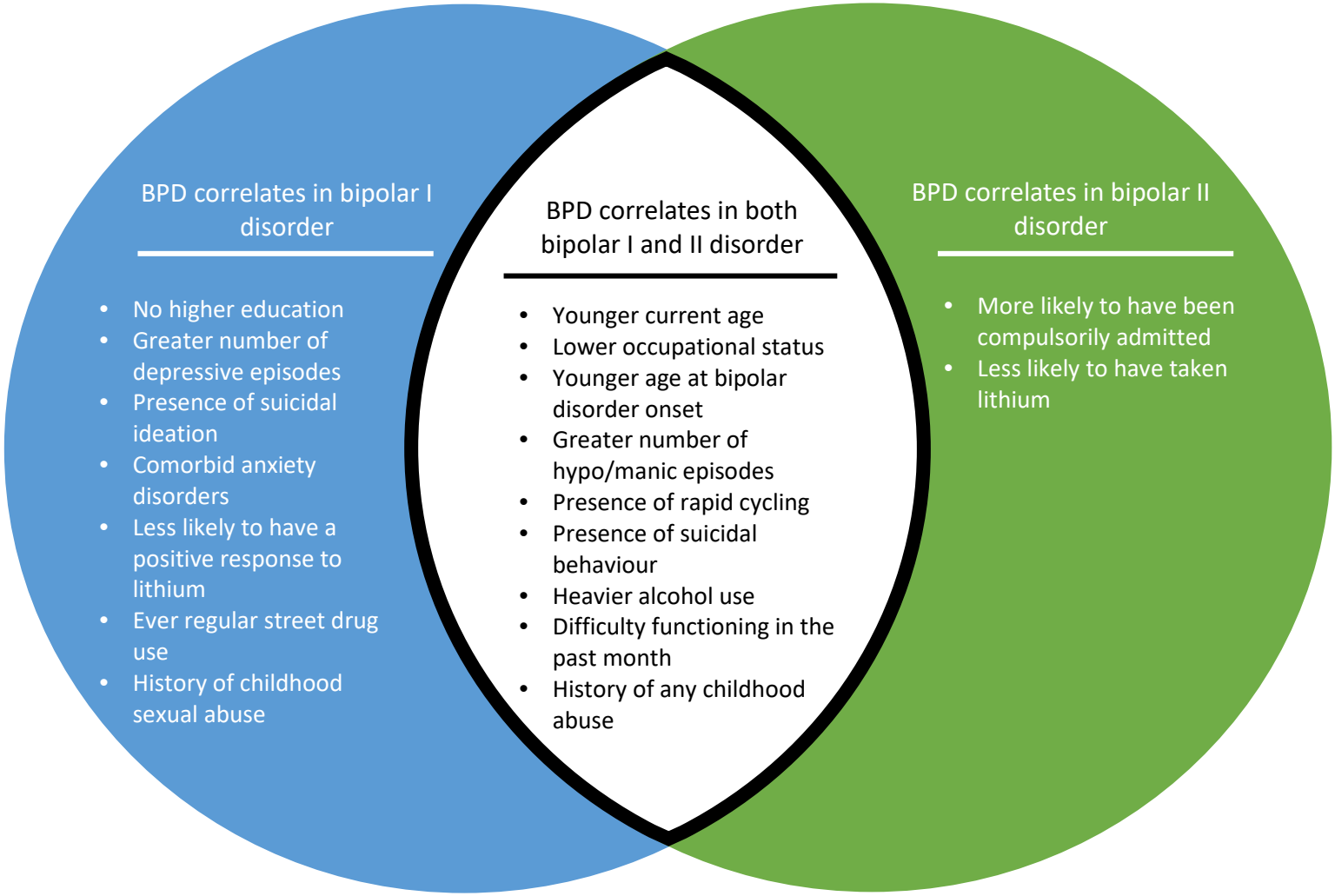
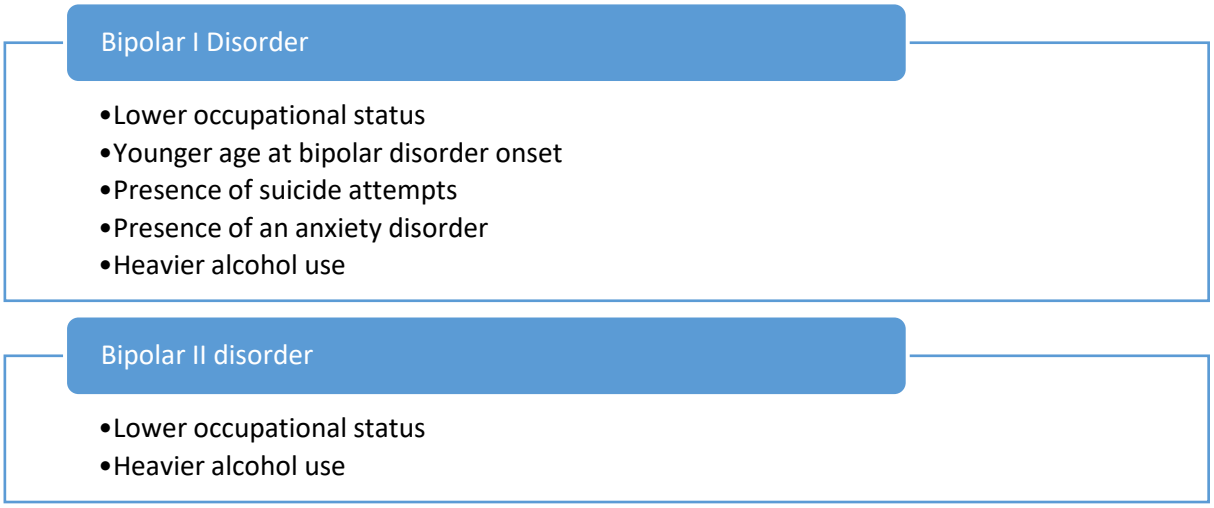


Figure 4.18. *Significant predictors of borderline personality disorder in bipolar I and II disorder.*



4.7. Discussion.

This study explored the correlates of receiving a diagnosis of BPD in bipolar I and II disorder by examining a range of well-defined sociodemographic and clinical variables within a large, well-characterised sample of individuals with bipolar disorder. Due to the large sample size, multiple regression models were able to be conducted separately in bipolar I and II disorder to examine whether the independent significant predictors of a diagnosis of BPD were different in these two subtypes of bipolar disorder, which had previously only been investigated in one USA-based study (McDermid et al., 2015).

Results suggested different patterns in the significant correlates of BPD in bipolar I disorder and bipolar II disorder. Presence of anxiety disorders was significantly associated with BPD in bipolar I disorder in both univariate and multivariate analysis, however this was not significant in bipolar II disorder. History of suicide attempts and a younger age at bipolar disorder onset were both significantly associated with BPD in bipolar I and II disorder in univariate analysis and remained significant in bipolar I disorder in multivariate analysis and

approaching significance in bipolar II disorder. In both univariate and multivariate analysis, lower occupational status and heavier alcohol use were associated with BPD in bipolar I and II disorder, and functional impairment was significantly associated with BPD in both bipolar I and II disorder. The remainder of this section will discuss these areas and the differences between correlates of BPD in bipolar I and II disorder.

4.7.1. Correlates of a diagnosis of borderline personality disorder in bipolar disorder.

4.7.1.1. Presence of an anxiety disorder.

Comorbid anxiety disorders were significantly associated with BPD in bipolar I disorder, but not bipolar II disorder. Individuals with BPD in bipolar I disorder were twice as likely to report receiving any anxiety disorder diagnosis in their life than individuals without BPD in bipolar I disorder. Overall rates of anxiety disorders increased from 69% in bipolar I disorder without BPD to 86% in bipolar I disorder with BPD. Presence of anxiety disorders was not a significant correlate of BPD in bipolar II disorder, however, with a high prevalence of anxiety disorders in bipolar II disorder regardless of presence or absence of BPD (78% in bipolar II disorder without BPD reported anxiety compared to 85% in bipolar II disorder with BPD). McDermid et al. (2015) also found that presence of BPD was associated with increased rates of anxiety disorders in bipolar disorder, although rates of anxiety disorder were overall lower than the current findings. The higher prevalence of anxiety disorders in the current study compared to McDermid et al.'s (2015) study likely reflects the differences in measures, with this study using self-reported clinical diagnosis of any anxiety disorder and McDermid et al. (2015) using a semi-structured interview administered by trained lay interviewers. Most importantly, in both studies, anxiety disorder was not found to be a significant correlate of

BPD in bipolar II disorder. This is likely explained by the high levels of anxiety disorder in bipolar II disorder in general (Karanti et al., 2019; Loftus et al., 2020). Supporting this, analysis of the current sample not stratified by BPD presence revealed a significant difference between known anxiety disorders in bipolar I and bipolar II disorder (71.09% versus 79.59%, p=.004).

The higher prevalence of anxiety disorders in bipolar I disorder where BPD is present may be explained in several ways. It may reflect evidence of the diagnostic challenges this group of individuals present: as the current study measured presence of anxiety by patient report of ever having received an anxiety disorder diagnosis, it is possible that this finding reflects levels of misdiagnosis and dynamic changes in diagnosis. Previous research has found that individuals with bipolar disorder may be misdiagnosed with anxiety disorder, although only 7% of 136 participants with a misdiagnosis were diagnosed with anxiety disorder (Shen et al., 2018). It is likely that the increased presence of anxiety disorders in the comorbid sample in the current study is evidence of the severity of illness associated with receiving both BPD and bipolar disorder diagnoses. Both bipolar disorder (Strakowski, 2014) and BPD (Lieb et al., 2004) are associated with high levels of anxiety disorders, and increased levels of anxiety in their comorbid presentation may represent an additive effect. Anxiety disorder comorbidity has been associated with poorer quality of life in bipolar I disorder even during periods of euthymia (Albert et al., 2008), suggesting a greater severity of illness where anxiety disorder is present. The association of BPD with anxiety disorder in bipolar disorder could therefore be interpreted as evidence of the severity of bipolar disorder illness associated with a BPD diagnosis.

4.7.1.2. History of suicide attempt.

A history of suicide attempt was significantly associated with BPD diagnosis in both bipolar I and II disorder in univariate analysis, however this association did not reach significance in bipolar II disorder in multivariate analysis, although the effect was in the same direction. This likely represents a limitation of the bipolar II disorder sample size, as in univariate analysis, individuals with BPD were approximately three times as likely to have attempted suicide compared to those without BPD in both bipolar I and II disorder. Over half of participants with BPD and bipolar disorder had a history of suicide attempts (68% in bipolar I disorder; 63% in bipolar II disorder) compared to just over a third of participants with bipolar disorder without BPD (39% in bipolar I and II disorder). Suicidality is one of the largest areas of research on personality disorders in bipolar disorder, and research has consistently found that where personality disorders are present, individuals with bipolar disorder are likely to experience higher levels of suicidality (Bezerra-Filho et al., 2017; Garno et al., 2005). In particular, cluster B personality disorders, including BPD, have been significantly associated with suicide attempts in bipolar disorder (Bezerra-Filho et al., 2017). Zimmerman et al. (2014) found that almost 60% of all comorbid bipolar disorder and BPD participants in their Rhode Island outpatient study had previously attempted suicide, compared to just under 30% of bipolar disorder participants without BPD. The current study had similar findings, however it expanded on Zimmerman et al.'s (2014) findings through the addition of a multivariate analysis, which showed that history of suicide attempts remained a significant correlate of BPD in bipolar I disorder even when controlling for other salient factors, such as current age, gender, and history of childhood abuse.

The higher levels of suicidality in bipolar disorder where BPD is present may be explained in several different ways. Firstly, suicidality is one of the nine diagnostic criteria for BPD in DSM-IV and DSM-5, and it may therefore be expected that individuals with comorbid

BPD in bipolar disorder represent a greater risk of suicide attempts. As it is part of the diagnostic criteria for BPD, it is likely that BPD is more often diagnosed in bipolar disorder where suicidality is present. However, suicidal ideation and attempts are also common in bipolar disorder alone (Schaffer et al., 2015) and therefore an increase in suicidality where BPD is present is still noteworthy. It is possible the higher levels of suicidality in individuals with bipolar disorder and BPD compared to bipolar disorder without BPD represent the underlying mechanisms of impulsivity and affective lability in both disorders: higher levels of impulsivity and greater reactivity of emotions have both been found to be present in BPD (Bach & Sellbom, 2016; Chapman, 2019; Krause-Utz et al., 2019; Lieb et al., 2004) and bipolar disorder (Bøen et al., 2015; Marwaha et al., 2016; Miola et al., 2022), and may be associated with suicidal behaviour (Carpiniello et al., 2011). The most likely explanation for the association between BPD diagnosis in bipolar disorder and history of suicide attempts is that BPD diagnosis is associated with a more severe bipolar disorder illness. Suicidality is a key marker of severity in bipolar disorder and has been linked to other potential markers of severe bipolar disorder illness such as comorbidities (Amuk & Patel, 2020; Rosso et al., 2020), greater number of episodes (Rosso et al., 2020) and younger age at illness onset (Schaffer et al., 2015). It is also possible that suicidality is a response to this severity and the difficulty of living with both BPD and bipolar disorder: interviews with individuals with both BPD and bipolar disorder could help to explore this area further.

4.7.1.3. Younger age at bipolar disorder onset.

A younger age at bipolar disorder onset was significantly associated with BPD in bipolar I and II disorder in univariate analysis and was significant in bipolar I disorder and non-significant but in the same direction in bipolar II disorder. The difference between age at

bipolar disorder onset with and without BPD was significant in both bipolar I and II disorder in univariate analysis, with a median age at onset of 17 years in both bipolar I and II disorder where BPD was present and a median age at onset of 22 years and 20 years in bipolar I and II disorder respectively without BPD. Earlier onset of bipolar disorder illness has been found to be associated with a greater number of comorbidities in general (Moor et al., 2012), and with BPD specifically (Benazzi, 2002; Goldberg & Garno, 2009; McDermid et al., 2015). In Italy, Benazzi (2002) found that the mean age at onset of bipolar II disorder with BPD was 15 years old, whilst the mean age at onset of bipolar II disorder without BPD was 26 years old. The association of BPD with younger age at bipolar disorder onset was not significant in bipolar II disorder in multivariate models in the current study, however as it was a significant correlate in univariate analysis and was approaching significance in the multivariate analysis this may represent a limitation of the bipolar II disorder sample size.

There are several potential explanations for the younger age at bipolar disorder onset in individuals where BPD has been diagnosed. It may be a reflection on the fact that BPD usually emerges in adolescence and the age at onset recorded for bipolar disorder may confuse a mood episode, especially a depressive mood episode, with the affective lability of BPD (Choi-Kain et al., 2020). The younger age at bipolar disorder onset may also reflect research that suggests that a greater number of psychiatric comorbidities are present in individuals with an earlier onset of bipolar disorder illness: Moor et al. (2012) found that in 100 adolescents and young adults with bipolar disorder, comorbidity with psychiatric diagnoses such as anxiety disorders or personality disorders was common, and the number of comorbid conditions increased as age at onset of bipolar disorder decreased. The highest number of comorbidities was found in participants with an early onset of bipolar disorder of before 13 years old, where over 40% of participants had more than three comorbid diagnoses, compared to 17% of participants with an age of bipolar disorder onset of 18 years or above. This may in part be

explained by the finding that longer duration of untreated illness in bipolar disorders, potentially linked to earlier age at onset, is associated with a higher rate of psychiatric comorbidity (Menculini et al., 2021). If the number of comorbid conditions increases with a younger age at bipolar disorder onset, reflecting a more complex course of illness, it may be expected that individuals with a younger age at bipolar disorder onset are more likely to have BPD. Finally, the younger age at onset associated with BPD in bipolar disorder may further represent the more severe course of bipolar illness that is present where BPD is diagnosed. Early age at bipolar disorder onset has been linked to poor outcome and greater severity of illness in bipolar disorder (Cate Carter et al., 2003; Cirone et al., 2021; Joslyn et al., 2016; Kalman et al., 2021), and diagnosis of BPD may be further evidence of this severity.

4.7.1.4. Heavier alcohol use.

Heavier alcohol use was significantly associated with BPD in both bipolar I and II disorder. Where BPD was present in bipolar I and II disorder, the median alcohol units per week at heaviest ever use were 49 and 40 respectively, compared to 15 and 23 where BPD was not present. Heaviest alcohol use also made a small but significant contribution to the multivariate models predicting BPD diagnosis in both bipolar I and II disorder. Previous research has found higher rates of diagnosis of alcohol use disorder in bipolar II disorder where BPD is present compared to where it is not (68% versus 39%) (Hidalgo-Mazzei et al., 2015). In contrast to the current study's findings, this did not reach significance in bipolar I disorder in Hidalgo-Mazzei et al.'s (2015) study, however the relationship was in the same direction. The difference may be explained by measurement differences, with Hidalgo-Mazzei et al's (2015) study only measuring alcohol use that reached clinical significance for alcohol use disorder and the current study measuring heaviest ever alcohol use through number of units consumed per

week, allowing heavier drinking which does not necessarily reach diagnostic levels to be accounted for. Furthermore, Hidalgo-Mazzei et al.'s (2015) sample size was small, particularly their bipolar I disorder without comorbid BPD group which had only 47 participants compared to 70 participants in the bipolar II disorder sample, and they only had one comorbid group which included participants with both bipolar I and II disorder. The current study has added to these findings by illustrating that heavier alcohol use is a correlate of BPD in both bipolar I and II disorder.

Heavy alcohol use in individuals with BPD in bipolar disorder may be explained in several ways. Self-damaging impulsive behaviour, including alcohol use and drug use, is one of the diagnostic criteria for BPD, and therefore it may be expected that heavier alcohol use is associated with that diagnosis (American Psychiatric Association, 2000). However, heavy alcohol use has been linked to bipolar disorder, even where there is no comorbid personality disorder. In a previous study by the BDRN overlapping with the current sample, Gordon-Smith et al. (2020) examined lifetime heaviest average weekly alcohol consumption levels in 1203 women and 673 men with bipolar I disorder and found that over half of both women (52%) and men (74%) had regularly consumed over double the current UK recommended guideline for alcohol consumption. Current UK guidance is not to drink more than 14 units a week. In the current study's sample, the median alcohol consumption at heaviest drinking for bipolar I and bipolar II disorder without BPD were both over the suggested limit (15 units and 23 units respectively.) However, participants with BPD drank on average about three times as much as the recommended limit (49 units in bipolar I disorder and 40 units in bipolar II disorder). One possible explanation is that the heavier use of alcohol again reflects a greater severity of illness experienced. Previous research in the BDRN's sample has found that heavier alcohol use is associated with potential markers of severity such as a greater number of mood episodes, history of suicide attempts and comorbidities (Gordon-Smith et al., 2020). The heavier alcohol

use in the current comorbid sample may be further evidence of the severity of bipolar disorder illness associated with a BPD diagnosis. Heavier alcohol use in this sample may also reflect the use of alternative coping mechanisms to treat symptoms. Previous research has suggested that alcohol use in vulnerable groups may represent a coping mechanism (Kaufman et al., 2019). Supporting this, there is evidence of using alcohol to self-medicate and cope with symptoms in anxiety disorders (Bolton et al., 2006), another significant predictor of BPD in the current bipolar I disorder group. It is likely that heavier alcohol use reflects a similar situation in the current sample: although this study cannot infer causality, the lower levels of functioning found in individuals with BPD and bipolar disorder and other severe illness correlates such as suicidality and anxiety disorder comorbidity may suggest that individuals with both BPD and bipolar disorder use alcohol as a coping mechanism. Qualitative interviews with individuals with bipolar disorder and BPD may help to further explore this area.

4.7.1.5. Occupational status.

In both bipolar I and II disorder, participants were twice as likely to have never worked or worked in a non-professional occupation at highest occupational status where BPD was present. Over half of participants with BPD in both bipolar I and II disorder had never worked or had a lower occupational status at highest occupation. Previous research has suggested that BPD in bipolar disorder is associated with a lower household income (McDermid et al., 2015) and unemployment (Bayes et al., 2016). McDermid et al. (2015) found within their American community sample that a higher household income was associated with significantly reduced odds of bipolar I disorder and BPD, but not bipolar II disorder and BPD. The current study did not support this, finding that participants with BPD were significantly more likely to have never worked or worked in a non-professional career at highest occupation in both bipolar I disorder

(56% with BPD and 41% without BPD) and bipolar II disorder (62% with BPD and 39% without BPD). This may be explained in a difference in measurement, as the current study measured occupational status and McDermid et al. (2015) measured household income.

The lower occupational status in bipolar disorder where BPD is present may be explained in a variety of ways. It may be evidence of the greater functional impairment evident where BPD is present in bipolar disorder (Carpiniello et al., 2011; Loftus & Jaeger, 2006). It may be representative of the younger age at bipolar disorder onset where BPD is present, as discussed above: individuals who have experienced illness longer may struggle to get into work. Studies have found that individuals with an earlier age at bipolar disorder onset have shorter periods of euthymia and poorer functioning, which may also impact employment (Cate Carter et al., 2003; Joslyn et al., 2016; Perlis et al., 2009). It may also be further evidence supporting that the BPD diagnosis may be present where there is a more severe presentation of bipolar disorder illness. Potential severity markers such as comorbid substance use disorders and an increased number of hospitalisations have been associated with unemployment in bipolar disorder in the past (Holm et al., 2021), and the association of a diagnosis of BPD with unemployment or lower occupational status may be further evidence of severe bipolar disorder illness. The current finding also emphasises that it is important that in future research occupational status is controlled for when examining clinical correlates of BPD among individuals with both bipolar I disorder and bipolar II disorder.

4.7.1.6. Functional impairment in borderline personality disorder and bipolar disorder.

Greater impairment in social, occupational and self-care functioning was associated with BPD in both bipolar I and II disorder in univariate findings, although this was not included in

regression models due to the use of a non-lifetime measurement, with the measurement rating functioning difficulties in the past month. Participants were over three times more likely to report severe or moderate difficulties in functioning in three separate domains – social, occupational and self-care – in the last month in both bipolar I and II disorder where BPD was present than in bipolar I and II disorder without BPD. This finding supports previous research which has found impaired functioning is common in bipolar disorder where a personality disorder diagnosis is present (Dunayevich et al., 2000; Fonseka et al., 2015; Lai et al., 2011; Loftus & Jaeger, 2006), and one previous, small study found that participants with both bipolar disorder and BPD (*n*=18) scored significantly lower on the Global Assessment Functioning Scale than individuals with bipolar disorder alone (*n*=57) (Lai et al., 2011). This may suggest that where a greater functioning impairment is present in bipolar disorder, clinicians are more likely to diagnose the individual with BPD as well, or it may be evidence that BPD itself is associated with difficulty in functioning. The latter explanation may be more likely, as an impairment in all three areas of functioning measured in the current study may well link to other BPD correlates, such as alcohol use, unemployment, and suicidality. Whatever the case, the current finding suggests that the subset of individuals with bipolar disorder receiving a BPD diagnosis experience a greater impairment in their everyday lives reflected in social, occupation and self-care functioning deficits. Qualitative research with individuals with bipolar disorder and BPD may help to further understanding of these results and the reasons why the two disorders are associated with greater impairment.

4.7.2. History of childhood abuse in borderline personality disorder and bipolar disorder.

A history of childhood abuse was included in the regression models as a potential confounder due to the link between BPD and adverse childhood experiences (as discussed in **1.6.2**). Interestingly this was not found to be a significant predictor of BPD in bipolar disorder in this sample, although it was approaching significance in the model for bipolar II disorder. Despite the association between BPD and history of childhood abuse established in the literature (Porter et al., 2019), the research on childhood abuse in comorbid BPD and bipolar disorder has been mixed. In the NESARC in the USA, history of childhood abuse has consistently been found to be associated with BPD in bipolar disorder (Elliott & Ragsdale, 2021; McDermid et al., 2015). Goldberg and Garno (2009) found that history of childhood abuse was significantly associated with BPD in bipolar disorder, however when they included childhood abuse as a potential confounder in a multivariate analysis examining age at bipolar disorder onset it was no longer significant, a finding supported by the current study. Research has often focused on the role of childhood abuse in the aetiology of BPD, with some researchers arguing that BPD is a form of complex PTSD (Kulkarni, 2017). Due to the association of BPD with childhood abuse, it is important to note that a history of childhood abuse was a significant correlate of a BPD diagnosis in bipolar disorder I and II in the univariate analysis, however it did not remain significant in either bipolar I or II disorder when examined alongside other significant correlates.

4.7.3. Explaining the different correlates of a diagnosis of borderline personality disorder in bipolar I and II disorder.

A key strength of the current study was the ability to compare correlates of a BPD diagnosis in bipolar I and II disorder separately. Differences between the correlates of BPD in bipolar I and II disorder may be explained by the differences between bipolar I and II disorder where BPD is not present. Presence of an anxiety disorder was significantly associated with BPD in bipolar I disorder, but not bipolar II disorder, which may be explained by the higher levels of anxiety disorder in bipolar II disorder than bipolar I disorder (Karanti et al., 2019). Similarly, history of suicide attempts and a younger age at bipolar disorder onset were both associated with BPD in bipolar I disorder in multivariate models, however this was not a significant association in bipolar II disorder. Previous research has found that bipolar II disorder is associated with higher prevalence of suicide attempts and a younger age at first signs of illness than bipolar I disorder (Karanti et al., 2019). This may explain the findings of the current study: if the diagnosis of BPD is understood as having an additive effect on clinical variables such as suicidality and comorbid disorders, the higher levels of these variables in bipolar II disorder compared to bipolar I disorder may explain the lack of significant findings in bipolar II disorder. However, history of suicide attempts and a younger age at bipolar disorder onset were significantly associated with BPD in bipolar II disorder in univariate analysis and approaching significance in multivariate analysis, suggesting a limitation of the bipolar II disorder sample size. It may also reflect a potential larger number of individuals with undiagnosed BPD within the bipolar II disorder group skewing results, as bipolar II disorder and BPD are commonly misdiagnosed as each other (Saunders et al., 2015; Zimmerman et al., 2010) and this may minimise differences between bipolar II disorder with and without a clinical diagnosis of BPD in the current sample. What this study has highlighted is the importance of

recognising comorbid BPD in both bipolar I and II disorder, as it is confers a more severe illness course in both subtypes.

4.7.4. Explaining the correlates of a diagnosis of borderline personality disorder in bipolar disorder.

The findings of the current study confirm that a diagnosis of BPD is associated with markers of severity of illness in bipolar disorder. There are several possible explanations for the correlates found for a BPD diagnosis or being described as borderline by a healthcare professional in the current bipolar disorder sample. It may be that this study has highlighted that the BPD diagnosis is given in bipolar disorder where certain diagnostic criteria are present: suicidality and alcohol use (due to impulsive self-damaging behaviour) are both listed in diagnostic criteria for BPD (American Psychiatric Association, 2000). However, both suicidality and heavy alcohol use are also found in bipolar disorder alone (Gordon-Smith et al., 2020; Schaffer et al., 2015), and it is therefore important to note that a BPD diagnosis appears to be associated with an additive effect on these risks. Supporting this, previous research within a BDRN sample overlapping with the current study examining borderline traits in bipolar disorder found similar correlates to this thesis: younger age at bipolar disorder onset, history of alcohol misuse and history of suicide attempt were significantly associated with borderline trait score when controlling for demographic confounders and current mood state (Saunders et al., 2020). The overlap between the current study's findings and the findings of Saunders et al. (2020) suggest that BPD diagnosis and borderline traits have similar correlates. What this study has shown is that a clinical BPD diagnosis is associated with severe bipolar disorder illness and coping behaviours, with features including younger age at onset, high levels of suicidality and other comorbidities as potential markers of severity. Understanding the

experiences of individuals who have received both BPD and bipolar disorder diagnoses could help to further explain the results of this analysis to better understand the comorbid diagnosis of BPD within bipolar disorder.

4.7.5. Strengths and limitations.

Strengths of the current study include the sample, the range of clinical variables used and the inclusion of multivariate analysis. The use of BDRN's large, well-characterised sample of individuals with bipolar disorder allowed the inclusion of analysis by bipolar subtype, including both bipolar I and II disorder, whilst maintaining a good sample size in each group. The use of a community sample was also a strength, as many previous studies have used treatment-seeking outpatients or inpatients: the BDRN's sample allowed this study to reach further participants, who may not actively be involved with mental health services. Within the BDRN's sample, data has been collected on a range of clinical and sociodemographic variables for each participant, and in the current study this was used to explore a variety of potential correlates of BPD in bipolar disorder within one sample. Finally, the size of the sample and range of variables analysed allowed the current study to include exploratory multivariate models, to clarify the strongest, independent correlates of BPD in bipolar disorder.

There are several limitations to the current study that must be considered. As women are more likely to take part in health research than men, the composition of the BDRN sample used for the current study is weighted towards female (72%). There is also a preponderance of those who have married or lived as married (86%), although this is a lifetime measurement with no information on relationship quality. Previous research has suggested that both gender and relationship status are associated with the presence of BPD in bipolar disorder (Baltacioglu et al., 2017; Hidalgo-Mazzei et al., 2015; Parker et al. 2016; Patel et al., 2019), and the non-

significant findings in the univariate analysis of the current study in particular may be explained by sample and measurement limitations. Examining current marital status in a more balanced gender sample of BPD and bipolar disorder, or exploring these issues in a qualitative study, may help to further elucidate the relationship between BPD and bipolar disorder with regards to gender and relationship status. The use of lifetime measurements throughout this analysis could be considered a limitation, as this research is therefore unable to draw conclusions regarding causality or temporal relationships.

The measurement of BPD in the current study may also be considered a limitation. The use of reported clinical diagnosis or being described as borderline by a healthcare professional means that the current study can only claim to show the correlates of having received a BPD diagnosis in bipolar disorder. Diagnosis for the study via a structured interview may have made the BPD diagnosis more reliable, however since many previous studies of the correlates of BPD in bipolar disorder have used research diagnoses, the current study adds to them by examining the correlates of reporting a clinical diagnosis of BPD. Participants may have chosen not to report a diagnosis of BPD due to the associated stigma (discussed in **1.6.3.** and explored further in the following qualitative study) and therefore it is possible participants who have received a BPD diagnosis may have been included in the bipolar disorder only groups. Furthermore, as there is evidence that clinicians may not always disclose a diagnosis of BPD to the individual, participants may have received the diagnosis and be unaware of it. Future research could investigate whether the current findings extend to a research diagnosis of BPD.

Due to the sensitive nature of the topic, the BDRN interview process at baseline does not ask directly about history of childhood abuse but asks about a series of childhood events before asking whether any other significant event happened in their childhood. These responses, alongside an open-text response on the Brief Life Events Questionnaire asking whether any other lifetime events may have contributed to the participant's illness, were used

to code presence or absence of childhood abuse and subtypes of childhood abuse. This may be less reliable than a direct question asking about childhood abuse, and potentially rates might be underestimated in the BDRN sample as a result. Childhood abuse has been found to be significantly associated with BPD in bipolar disorder in previous studies (Baryshnikov et al., 2017; McDermid et al., 2015) and whilst it was found to be a significant correlate in the current study it did not have a significant effect when controlled for in regression models. This supports the finding of Goldberg & Garno (2009), who examined childhood abuse as a control alongside age at onset in BPD in bipolar disorder and found childhood abuse was no longer a significant predictor when accounting for age at onset. Therefore, although the way in which childhood abuse was measured may be considered a limitation, results are consistent with previous findings.

4.8. Chapter summary.

BPD is associated with correlates of severe illness and functioning difficulties in bipolar disorder. In both bipolar I and II disorder, the presence of a BPD diagnosis was associated with lower functioning, heavier alcohol use and lower occupational status, whilst in bipolar I disorder it was further associated with an early age at bipolar disorder onset, presence of an anxiety disorder and history of suicide attempt. To further understand the results of this study and the prevalence study, the next chapter will present the first qualitative study to explore the perceptions of BPD and bipolar disorder in individuals who have received both diagnoses, and how these individuals make sense of having the comorbid diagnosis.

Chapter 5. Experiences of receiving and living with diagnoses of borderline personality disorder and bipolar disorder.

5.1. Chapter overview.

This chapter builds on the findings of the two previous chapters examining the prevalence and correlates of a BPD diagnosis in bipolar disorder by exploring the experiences of individuals who have received both diagnoses. As briefly discussed in **Chapter 1,** and further explored in this chapter, qualitative research in BPD and bipolar disorder separately has explored areas such as treatment, symptoms, and identity. However, there is no existing research exploring the experiences of individuals with both disorders qualitatively. Interviews about the comorbid diagnosis were undertaken with 15 participants who had, at some time, received both diagnoses, and thematic analysis was conducted.

5.2. Introduction.

There is no existing published research known to this researcher that explores the experiences of individuals who have received a diagnosis of both BPD and bipolar disorder. In this section, the key areas of interest in qualitative research in bipolar disorder and BPD as individual diagnoses will be examined and compared, highlighting potential similarities and differences in experience. The limited research that has explored both BPD and bipolar disorder qualitatively in the same study will be examined, before introducing the aims of the current study.

5.2.1. Experiences of treatment and recovery in bipolar disorder and borderline personality disorder individually.

There is a large body of existing qualitative research with individuals with bipolar disorder, exploring a range of topics from stigma (Michalak et al., 2011; Michalak et al., 2006; Proudfoot et al., 2009; Richard-Lepouriel et al., 2020) to the role of employment in recovery (Borg et al., 2013; Rathbun-Grubb, 2019; Tse & Yeats, 2002). Perhaps the largest area of interest in qualitative bipolar disorder research is treatment and recovery. In recent years alone, researchers have conducted qualitative research to explore the experiences of individuals with bipolar disorder in diagnosis and treatment (Cerimele et al., 2019), their expectations and evaluations of services (Vallarino et al., 2019), their experience of recovery (Durgu & Dulgerler, 2021), their views on seeking and using technical and expert-by-experience knowledge (Tse et al., 2019), their perceptions of factors involved in recovery (Warwick et al., 2019) and their views on resilience in bipolar disorder (Echezarraga et al., 2019). This focus on treatment in bipolar disorder qualitative research highlights the

importance of qualitative research within this population, and the implications this research can have. Research on individuals with bipolar disorder and comorbidities is limited and may highlight different experiences in treatment.

Although not as broad as the body of literature exploring individual experiences in bipolar disorder, there is a large amount of literature exploring experiences with BPD. Similarly to the bipolar disorder research, much of this has focused on experiences of treatment and recovery. However, a key difference is that the BPD literature has often focused on the perceived marginalisation of individuals with BPD in healthcare. Across qualitative studies in BPD, participants have spoken about feelings of a lack of understanding of their disorder in healthcare settings (Carrotte et al., 2019; Fallon, 2003; Perseius et al., 2005; Rogers & Acton, 2012) and feelings of being abandoned or dismissed by services (Carrotte et al., 2019; Perseius et al., 2005; Rogers & Acton, 2012). In one study which qualitatively analysed service calls to the Borderline Personality Disorder Resource Center in the USA (Lohman et al., 2017), one theme highlighted the poor mental health literacy around BPD, with many phone calls requesting resources and basic information about BPD, suggesting a lack of information at diagnosis that seems to be reflected in the experiences of participants in other studies (Horn et al., 2007). The negative experiences of diagnosis and treatment in BPD are therefore a common concern in the qualitative literature, however research is needed to understand if these experiences also relate to individuals who have a comorbid BPD diagnosis alongside another disorder.

5.2.2. Experiences of symptoms in bipolar disorder and borderline personality disorder individually.

The qualitative literature in both bipolar disorder and BPD has highlighted the impact of extremes of moods and emotions on individuals. There is a great deal of research on the experiences of the symptoms of bipolar disorder (Crowe et al., 2012; Fernandez et al., 2014; Inder et al., 2008, 2010; Jönsson et al., 2008; Mandla et al., 2017; Proudfoot et al., 2009). Perhaps unsurprisingly given the diagnostic criteria for the disorder and mood episodes, it has highlighted the chaotic and disruptive nature of these symptoms: in particular, participants have highlighted the extremes and intensity of emotions (Mandla et al., 2017), the feelings of loss of control from mood changes (Crowe et al., 2012; Fernandez et al., 2014), and the disruption associated with the diagnosis in their everyday life (Inder et al., 2008). Studies have also highlighted how the extremities associated with changing moods in bipolar disorder are linked to feelings of uncertainty about everyday life and the future (Jönsson et al., 2008; Proudfoot et al., 2009). Qualitative studies on the perceptions of recovery in bipolar disorder have expanded on the impact of extreme moods, as participants perceive the key elements of recovery to involve controlling and minimising this impact (Proudfoot et al., 2009; Russell & Browne, 2005; Veseth et al., 2012; Warwick et al., 2019).

Qualitative research in BPD has also highlighted the impact of symptoms and extremes of emotions, however, whilst research in bipolar disorder has found that this is associated with disruption and lack of control, in BPD participants have associated the symptoms with self-destructiveness and negative emotion. Interviews with participants with BPD have found that the emotional reactivity of the disorder is associated with self-destructive behaviour (Nehls, 1999; Sheffield et al., 1999). Participants have discussed the feeling of being on edge and the struggle to maintain a sense of normality whilst also struggling with rapid mood swings and

emotional pain (Perseius et al., 2005). Taking control of emotions and mood was raised by participants in several studies as a key element of recovery in BPD (Katsakou et al., 2012; Ng et al., 2019; Vandyk et al., 2019). The role of emotions and mood states has therefore been discussed in both BPD and bipolar disorder qualitative research, as may be expected from the symptoms of the two disorders; however, given the differences between experiences of emotions and moods between the two diagnoses, qualitative research into individuals living with both is vital to better understand the interaction of the disorders and how the symptoms are experienced by individuals with both.

5.2.3. The sense of self in bipolar disorder and borderline personality disorder individually.

Studies exploring experiences of receiving and living with the diagnosis of bipolar disorder have raised questions about the sense of self within bipolar disorder. For many participants across studies, making sense of the diagnosis of bipolar disorder appears to be intrinsically linked to their understanding of the self. Qualitative studies exploring the impact of bipolar disorder on the daily lives of individuals have examined topics such as insecurity in the self (Jönsson et al., 2008), existential questions around what the diagnosis means for identity (Proudfoot et al., 2009) and whether bipolar disorder is an intrinsic part of the self or separate (Mandla et al., 2017). The sense of self is also linked to feelings of recovery. In Echezarraga et al.'s (2019) study, for example, participants in remission from bipolar I or II disorder discussed how recovery involves a process of redefinition of the self, to regain positive mental health and move towards their goals; in Warwick et al.'s (2019) study, participants who had not experienced any significant mood episodes for a minimum of four years discussed the role of self-acceptance and awareness in recovery. These findings across

studies have highlighted the uncertainty associated with a diagnosis of bipolar disorder and the impact of receiving that diagnosis on an individual's sense of self. It is likely that this impact is exacerbated where individuals have a comorbid condition. It is interesting that an existing qualitative study exploring comorbid bipolar disorder and substance use disorder found that participants discussed issues with identity from the perspective of the difficulty in differentiating between the two disorders, or understanding where one began and the other ended (Ward, 2011). Understanding the way in which individuals make sense of a comorbid diagnosis of bipolar disorder and BPD and their day-to-day experiences with the comorbidity will help to determine whether these experiences are different than with bipolar disorder alone, and whether similar issues of the self and identity are raised.

The impact of the diagnosis of BPD on the sense of self has also been explored in the literature, suggesting a similarity with experiences of living with bipolar disorder. Although this is not as widely explored as it is in the bipolar disorder literature, there is a particular emphasis on what the diagnosis means for an individual's understanding of the self in the recovery literature in BPD. In particular, qualitative studies exploring perceptions and experiences of recovery in BPD have emphasised the intrinsic link between BPD and the self. Participants in Katsakou et al.'s (2012) study, which involved interviews with 48 secondary mental health service users in London with the diagnosis of BPD, raised the issue of separating the self from the disorder, as many could not remember what they were like before they began experiencing symptoms. Similarly, McCusker et al. (2018) conducted focus groups with 15 participants accessing specialist personality disorder services in the NHS and found that participants questioned what they were recovering to: BPD was understood as such a part of the individual that the issue of whether or not they would still be themselves without the symptoms was raised across focus groups. An online study analysing posts on Twitter from individuals with BPD highlighted similar concerns, with participants asking how they can be

accepted when their way-of-being is intrinsically shameful (Dyson & Gorvin, 2017), inherently linking their behaviour to their BPD diagnosis. What existing qualitative research has highlighted is that, in both BPD and bipolar disorder, living with the individual disorder and making sense of the diagnosis are intrinsically linked to questions about the self.

5.2.4. Existing qualitative research examining both borderline personality disorder and bipolar disorder.

To date, there have been no published qualitative studies exploring the experiences of individuals with both BPD and bipolar disorder in terms of how they feel about and make sense of both diagnoses. One UK study explored the experiences of individuals who received a BPD diagnosis after self-diagnosing with bipolar disorder (Richardson & Tracy, 2015), however these participants had not received a clinical diagnosis of bipolar disorder as the study was concerned with self- versus clinical diagnosis. Despite this, the themes developed highlighted the differences in how participants viewed the two diagnoses. In particular, participants were concerned with the role of public information on the illnesses and their experiences of receiving the diagnosis of BPD when they had self-diagnosed with bipolar disorder. BPD was associated with a higher degree of stigma than bipolar disorder, which was perceived to have been de-stigmatised by public exposure. Their views on the two disorders were also interesting in the context of previous qualitative research in both bipolar disorder and BPD: participants in Richardson and Tracy's (2015) study believed that bipolar disorder was more predictable than BPD, which was seen as more exhausting; this contrasts to the qualitative research in bipolar disorder which has highlighted the disrupting and negative impact of mood episodes that are outside of an individual's control. Qualitative research with individuals who have received a diagnosis of both disorders will help to further explore these differences in how individuals

make sense of the two disorders, particularly the potential differences suggested by the literature such as the role of sense of self and symptoms in making sense of the diagnoses. Including a qualitative study exploring the experiences of individuals with BPD and bipolar disorder is also important as part of the integrative approach of this thesis, as exploring areas of interest in qualitative interviews may help to further explain findings from the two previous quantitative studies.

5.3. Aims of the current study.

The current study aims to explore the experiences of individuals who have received a diagnosis of both BPD and bipolar disorder, as part of a pragmatic, mixed methods study to expand on the quantitative findings presented in the last two chapters and further understanding of this complex comorbidity. To do this, it will consider two research questions:

- How do individuals with diagnoses of both BPD and bipolar disorder feel about the two diagnoses?
- How do individuals with diagnoses of both BPD and bipolar disorder make sense of having received both diagnoses?

5.4. Methods.

5.4.1. Sample.

Participants for this qualitative study were drawn from the same sample as the two previous studies, 1601 respondents to a BPD questionnaire sent out to BDRN participants (**Appendix A** pg. 284, as discussed in **3.3.1.**). On this questionnaire, participants were asked if,

at any time in their lives, they had received a diagnosis of bipolar disorder or BPD from a clinician. If participants indicated that they had received a diagnosis of ***both***, they were asked to explain if having a personality disorder diagnosis had affected their treatment in an open text response box at the end of the questionnaire.

Participants who reported receiving a clinical diagnosis of both bipolar disorder and BPD, EUPD or borderline traits at any time in their lives were eligible for inclusion in the current study. As this qualitative study was concerned with views on the diagnosis, self-reported bipolar disorder was used to identify participants rather than BDRN bipolar disorder best-estimate main lifetime diagnosis. The open text response box of all 155 potential participants was examined for discussion of having both disorders and 36 potential participants were identified on the basis of their response to the open text response box (see **Figure 5.1** for examples). Variation was considered important for the study as it is the first study to explore this area in qualitative research. The researcher therefore wanted to explore as many viewpoints as possible and look for patterns and differences across those viewpoints to provide an emerging understanding of what it might mean to have both a diagnosis of BPD and bipolar disorder and identify important patterns that cut across possible differences. Of the 36 potential participants, 29 participants were prioritised into two phases of contact with the aim to recruit for variation in age, gender, employment and education status and subtype of bipolar disorder. See **Figure 5.2.** for a breakdown of sampling decisions and recruitment numbers.

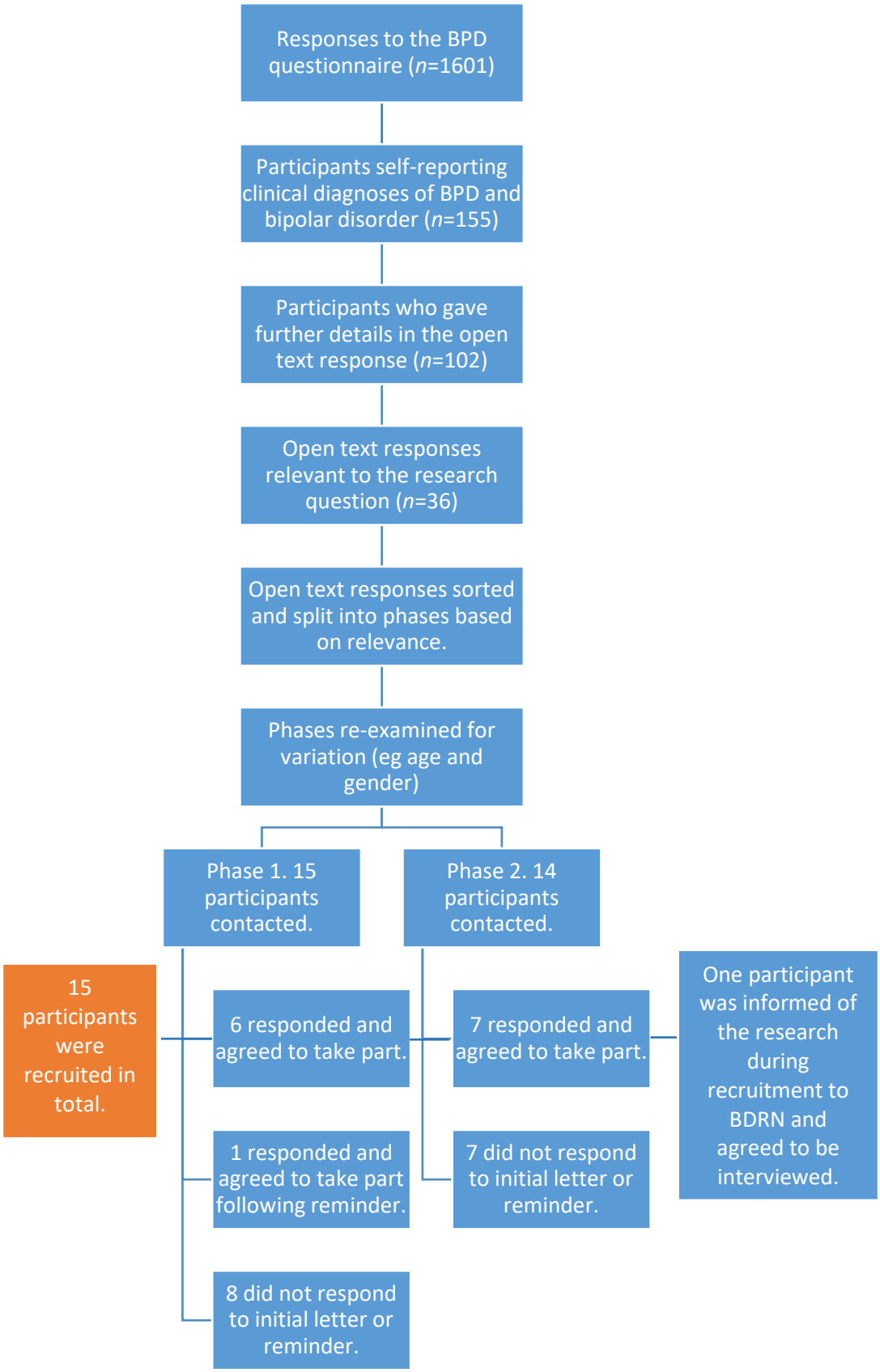
Figure 5.1. *Examples of responses to an open text response box on the helpfulness of a personality disorder diagnosis to bipolar disorder treatment.*

"It was unhelpful solely because I was given no information on either bipolar or BPD. I have had to research my conditions myself and now have a good understanding of how to live with both."
"Seems difficult to treat both together - MH team prefer to focus on one as 'primary diagnosis' whereas the people I've met and talked to seem more often to have both."

15 participants were recruited, 14 across two waves of contact and one additional participant who was made aware of the research after joining BDRN during the study. This was the number of participants aimed for at the beginning of this study, based on discussions of quality and credibility in qualitative research (Braun & Clarke, 2021; Mason, 2010). As this study used thematic analysis, the sample size was further informed by Braun and Clarke's guidance, specifically that larger samples risk failing to do justice to the complexity of the data (Braun & Clarke, 2016). Sample size was revisited during the analysis process as suggested (Braun & Clarke, 2016; Mason, 2010) and it was determined that the data from the 15 interviews conducted were complex enough to not require further interviews.

The concept of saturation was not used for this study, as Braun and Clarke argue that theoretical saturation does not fit with their version of thematic analysis, and it is better to look for the quality of the data (Braun & Clarke, 2021). There is a large amount of debate around quality in qualitative research and decisions regarding when to stop collecting data (Johnson et al., 2020; Meyrick, 2006; Rolfe, 2006). In the current study, decisions were made with an emphasis on the role of researcher reflection, in line with the reflexive approach of Braun and Clarke. Quality was examined by considering the breadth and depth of data within developed codes. This involved reflecting on the information richness of the dataset, and whether it reflected the aims and requirements of this study, as well as discussion with supervisors on the breadth of data collected. It also involved allowing time and distance from the study, and focusing on the quantitative aspect of this thesis, before returning to the research to examine whether the data were rich enough to expand and explore the results of the quantitative studies.

Figure 5.2. *Sample and recruitment for the qualitative study of borderline personality disorder (BPD) in bipolar disorder.*



Participants were contacted by letter (**Appendix B**, pg. 286) with a freepost envelope and a reply slip included, as well as the BDRN teams' email and a telephone number to contact the researcher on. A reminder letter (**Appendix C**, pg. 288) was sent two weeks later if a response had not been received. Participants who were interested in the research agreed to a call back through the reply slip, an email, or a phone call. Every participant who responded was given further information about the research and what it would entail over the phone, and all participants who responded to the letter or reminder agreed to take part. The location of the interview was agreed during these initial discussions, and they were sent an email confirming the interview date, time, and location (**Appendix D**, pg. 289).

Comparisons between those who took part in the research and the non-responders are outlined in **Table 5.1**. Demographic factors including gender, education level and mean age were considered to see whether they were associated with who chose to respond. There was a higher mean age in those who chose to respond and ultimately take part (51.37 years versus 44.53 years) but this did not reach statistical significance. Individuals who did not find the diagnosis of personality disorder helpful to their treatment were more likely to respond, with 50% of participants finding it unhelpful to their treatment compared to only 26.7% of non-responders. Although this difference was not statistically significant, possibly due to the small sample size, it suggests a trend towards individuals being more willing to participate if they have had negative experiences. This may represent seeking empowerment through involvement in research or therapeutic interest in the research, which a previous study has suggested may influence the decision to participate in research (Clark, 2010).

Table 5.1. *Comparison of participants and non-responders.*

	Participants (*n*=15)	**Non-Responders (*n*=15)**
Gender	4 men, 11 women	2 men, 13 women
Bipolar disorder diagnosis reported by participant	8 BDI, 5 BDII, 1 schizoaffective bipolar type	7 BDI, 7 BDII, 1 reported both bipolar disorder subtypes
BPD diagnosis reported by participant	6 BPD, 2 EUPD, 7 reported both	7 BPD, 5 EUPD, 3 reported both
Personality disorder seen as helpful or unhelpful to treatment	4 helpful, 7 unhelpful, 3 unsure	8 helpful, 4 unhelpful, 3 unsure
Education Level	6 no higher education, 5 higher education, 3 unknown	9 no higher education, 2 higher education, 4 unknown
Mean age at contact (years)	51.73	44.53

BPD = borderline personality disorder; EUPD = emotionally unstable personality disorder.

N's may differ due to unknown variables.

5.4.2. Topic guide.

A topic guide (**Appendix E**, pg. 290) was created to guide the interviews. The original topic guide included questions informed by existing research findings in bipolar disorder and BPD individually. The responses to the open-ended question on the BPD questionnaire about the impact of a personality disorder diagnosis on treatment for bipolar disorder also informed the topic guide. Before interviews began, the topic guide was tested through pilot interviews and developed further through discussion with a BDRN participant with both bipolar disorder

and BPD. This service user involvement helped to ensure that the topic guide was addressing issues of interest to individuals affected by both diagnoses.

The topic guide developed as the interviews continued. As the qualitative study was conducted alongside two quantitative studies, the topic guide also reflected areas of interest raised by the quantitative results as the studies progressed. For example, questions about whether or not participants had been hospitalised at any time were raised by the findings of the analysis of correlates of BPD in bipolar disorder. Furthermore, as the interviews were participant-led, the interviews often deviated from the guide and most of the questions were answered out of order, to follow the participant's own direction of thought rather than imposing a schedule. This allowed new areas of interest to be explored. As the interviews progressed, these new areas were added to the topic guide to help prompt conversations about subjects mentioned by previous participants (see **Appendix F**, pg. 291, for the final topic guide, including questions developed from the quantitative studies' results and questions reflecting previous interviews). For example, as the interviews progressed a question about whether individuals felt that others recognised their symptoms was added, as it was a topic raised by previous participants. This iterative way of viewing the topic guide as developing throughout the interviews allowed areas raised as important by previous participants to be explored in further detail, to see whether these areas were important across participants or not. In this way, the voice of the participants helped to guide future interviews, and areas that were important to participants were considered.

5.4.3. Procedure.

Participants were interviewed in their own homes across the country, so that the interview took place somewhere that was private and familiar to the participant, although one

participant chose to be interviewed in a private room at the University of Worcester instead. Prior to each interview, the purpose of the research was reiterated, and the participants were told that they could stop the interview at any time.

During the interview, the topic guide was visible but only referred to occasionally. No notes were taken during the interview, as it was felt that this would be off-putting for the participant. Instead, interviews were audio-recorded, and notes were written immediately after the interview to ensure that any impressions or thoughts from the interview were documented.

Prior to conducting the interviews, contingency plans were made for possible problems, including other people being present, the participant becoming upset and problems with the recording environment. For example, if a participant became visibly upset the interviewer would ask if they wanted to stop recording for a minute and if they were happy to continue. This only happened once, and the participant declined the offer to stop recording. Interviews lasted between 24 minutes and 83 minutes, with a mean of 51 minutes.

5.4.4. Ethics.

Ethics approval for this qualitative study with BDRN participants was approved by the HRA REC through submission of a substantial amendment to the existing BDRN ethical approval (MREC 97/7/01, amendment SA10).

A risk assessment was carried out over the phone when the interview was first arranged. One interview was rearranged due to a participant being hospitalised for physical illness, but all other interviews were conducted as planned. In each interview, the participant confirmed they were happy for the interview to be recorded for transcription purposes. The participant was told that any quotes used would be anonymous. The interviewer was aware of available

sources of help and advice to signpost participants to if necessary. All participants were informed that they could withdraw from the interview at any time and that if they wanted to withdraw their data at a later date, they had a month following the interview to do so.

5.4.5. Analysis.

Thematic analysis was used on the qualitative data generated from the interviews. Thematic analysis is a method to systematically identify, organise and offer insight into patterns of meaning across a data set (Braun & Clarke, 2006, 2012, 2014, 2022; Vaismoradi et al., 2016). The current study used Braun and Clarke's reflexive thematic analysis (Braun & Clarke, 2006, 2012, 2019, 2022). This offers guidance on analysis that values a subjective researcher and the practice of reflexivity throughout the qualitative research process. Braun and Clarke's approach to thematic analysis was used for this study as the method is considered theoretically flexible. As this thesis adopts a pragmatic approach to research, it was important to use a method of qualitative analysis that embraced flexibility, whilst also stressing the importance of subjectivity (reflecting the importance of the inner world of human experience in pragmatism) and meeting the needs of the research questions (an important element in pragmatism). The research questions of the current study are concerned with the perceptions and meaning-making of individuals, and as such an experiential approach to thematic analysis was adopted.

Reflexive thematic analysis also stresses the role of the researcher in the research and the understanding that knowledge comes from an existing position (Braun & Clarke, 2022), and in the current study this was understood not only as acknowledging the position of the researcher, but also as an awareness that the qualitative study was informed by the quantitative research being conducted alongside it and was interpreted as such. Reflexive

thematic analysis in particular was used because it was important to the researcher that the richness of the qualitative data was embraced and being reflective throughout the process helped the researcher to ensure this richness was not lost. This was considered to be important as the qualitative research was being conducted alongside quantitative research. Keeping a reflective journal throughout the qualitative research study also enabled the researcher to explore their own values and how these shaped the research, and to examine how the methods and design adopted impacted the research. Examples from this reflective journal are included in **Appendix G** (pg. 292).

Six key steps of analysis were followed and revisited iteratively. Thematic analysis is an iterative process and the researcher cycled through the analysis several times as their understanding of the data and the area of research developed. The following stages were used as a guide, but actual analysis moved back and forth between the stages as the research developed.

5.4.5.1. Step one: Familiarisation.

This first stage of thematic analysis involved transcribing, listening to the interviews, and reading and rereading the transcripts in order to become familiar with the entirety of the dataset. Each interview was transcribed verbatim, including pauses, emphasis, false starts, and interviewer interjections, in order to keep the transcripts as close to the audio as possible for analysis. Once the interview was transcribed, the familiarisation step was continued through freewriting whilst listening to the audio. Each audio was listened to without pause whilst typing thoughts and notes. After the freewriting exercise, notes were made in the transcript margins on areas of interest, possible codes, and comments on the interview. **Appendix H** (pg. 294) contains examples of these stages of familiarisation.

5.4.5.2. Step two: Systematic data coding.

Following reading and re-reading, the transcripts were transferred into NVivo (QSR International Pty Ltd., 2018), data management software that can be used to categorise and classify data. The freewriting exercises were also added to NVivo and were referred to during initial coding, which involved going through each transcript individually and identifying and labelling any features of the data that were potentially relevant to the research question. Codes were kept short and simple, as advised by Braun and Clarke, and were both descriptive (for example, "history of trauma") and interpretative ("BPD is a personal fault, not an illness") at this stage. NVivo was used to help organise any thoughts and keep track of codes. As thematic analysis is an iterative process, coding began during data collection and helped inform later interviews, and later coding was done on printed transcripts to engage with the data in a different way.

5.4.5.3. Step three: Generating initial themes from coded and collated data.

To develop possible themes from the codes, index cards were created to give a visual overview of the dataset (**Appendix I**, pg. 295). These index cards were used to sort the codes into similar ideas and areas which led to subthemes and themes. These initial themes and subthemes were given rough names as an idea of what they explored. Throughout the analytic process, several different iterations of themes were developed to best fit the data (see **Appendix J**, pg. 296, for an example of an earlier iteration) and the generation of themes involved constant back and forth between the codes and familiarisation notes.

5.4.5.4. Step four: Developing and reviewing themes.

Themes were reviewed through a process of constant comparison, which involved reviewing developing themes in relation to the coded data and the original data set, to ensure the themes represented the data well. This was done through discussion with supervisors, use of the reflective journal and reading and rereading the dataset with the themes in mind. Themes were refined by moving codes that did not fit, developing new themes which better represented the coded data and merging themes that were found to be too similar or in some cases too specific. During this process, Braun and Clarke's questions for reviewing themes were used as a guide (Braun & Clarke, 2022, p. 98):

- Is this pattern a viable theme, with an identifiable central organising concept, as well as different manifestations of that idea?
- Can boundaries of this theme be identified?
- Are there enough meaningful data to evidence this theme?
- Are the data contained within each theme too diverse and wide-ranging?
- Does this theme convey something important?

Reflection on these questions helped to develop the themes. For example, the researcher abandoned an earlier theme named "Lack of stability" after reflection on the boundaries of that theme, and the decision that the data within that theme were too diverse and wide-ranging. This theme was reconceptualised as a code which informed several later themes. When this process was complete, the entire dataset was reread with this framework of themes in mind to ensure that the themes fit the dataset: this was determined by reflecting on the contents of each transcript with the themes in mind.

5.4.5.5. Step five: Refining, defining, and naming themes.

This stage involved naming the themes in a way that was unique and specific to each theme and defining them in a way that summed them up with a singular focus and a clear link to the research questions. For each theme and subtheme narratives were created that explained what the theme explored in relation to the research questions. Reflection was used throughout this stage, and in practice defining and naming themes involved an iterative process with the previous step of theme development; often, it was whilst defining and naming themes that it would become clear a theme's scope was too large or too narrow, or that the theme was not capturing the element of the data the researcher intended (**Appendix G**, pg. 292, shows an example of this reflective process).

5.4.5.6. Step six: Writing the report.

The final stage happened throughout the process, particularly the fifth phase, and involved the writing up of the thematic analysis. Analysis involved thinking about what participants said and how it was said, using not just the codes and themes developed but also the audio of the initial interviews and the reflective journal entries from these interviews to help explore the data. The researcher discussed themes and quotes with their supervisors, and interpretation was developed through these discussions. Data extracts were chosen to illustrate the themes, informed by Braun and Clarke's (2022) advice that data extracts should be vivid, clear, and concise examples to illustrate analytic claims. The extent to which the data extracts used achieved this aim was reflected on throughout and discussed at supervision. Several written versions of the analysis were completed, and during the write-up themes were often revisited and reformed to represent the growing ideas of the researcher.

5.5. Results.

5.5.1. Information about the participants.

Table 5.2 and **Table 5.3** give an overview of the demographic information and current employment and relationship status of the 15 interview participants.

Table 5.2. *Demographic information about the interview participants.*

Participant pseudonym	Gender	Age at interview in years	Higher education	Current employment status	Current relationship status
Chloe	Female	54	No higher education	Unemployed	In a relationship
Sarah	Female	35	Higher education	Employed	Single
Alice	Female	40	Higher education	Employed	Single
Lucy	Female	62	Higher education	Unemployed	Single
Hailey	Female	55	No higher education	Unemployed	Single
William	Male	71	Higher education	Retired	Married
Rachel	Female	47	Unknown	Unemployed	In a relationship
James	Male	59	Higher education	Unemployed	Married
Nicole	Female	47	No higher education	Unemployed	In a relationship
Mary	Female	46	No higher education	Unemployed	Single
Joanna	Female	49	No higher education	Unemployed	Single
Arthur	Male	64	Unknown	Unemployed	Married
Kate	Female	61	No higher education	Unemployed	Single
Jessica	Female	32	Unknown	Unemployed	In a relationship

Participant pseudonym	Gender	Age at interview in years	Higher education	Current employment status	Current relationship status
Oliver	Male	57	Higher education	Unemployed	Single

Table 5.3. *Contextual material about the interview participants.*

Participant Pseudonym	Brief Summary
Chloe	Chloe is a 54 year-old woman who was diagnosed with BPD as a teenager and received a diagnosis of bipolar disorder much later. She has never been employed due to her mental ill health. Chloe associates a great deal of stigma with the term BPD and does not believe that she has the disorder, believing her past behaviour which led to the diagnosis was evidence of untreated bipolar disorder. She continues to be treated for both BPD and bipolar disorder.
Sarah	Sarah is a 35-year-old woman who was diagnosed with bipolar disorder with borderline traits as a young adult at medical school. She is currently working in medicine. Although she understands why BPD may have been mentioned by her doctors during a time of extreme stress in her life, she believes that bipolar disorder is the correct diagnosis and says her current psychiatrist also does not believe she has BPD.
Alice	Alice is a 40-year-old woman who was diagnosed with BPD approximately ten years ago, although she does not remember being told about the diagnosis at the time. She works as a project manager at a university. Due to strongly disagreeing with the BPD diagnosis, Alice asked for two second opinions, both of which diagnosed her with a mood disorder, before going through the ombudsman due to her perceived difficulty in dealing with her NHS trust after the diagnosis of BPD. She currently has a diagnosis of bipolar disorder and following intervention of the ombudsman BPD has been removed as a diagnosis.
Lucy	Lucy is a 62-year-old woman who was diagnosed with bipolar disorder when she was about 30 years old. She had a varied career before retiring on mental ill health grounds ten years ago. She does not remember exactly when BPD was diagnosed, but believes it may have been when she was hospitalised as a university student, before the bipolar disorder diagnosis. She is unhappy with the BPD diagnosis, although she has related to it more since the diagnosis was changed to EUPD.
Hailey	Hailey is a 55-year-old woman who was diagnosed with bipolar disorder and later BPD due to her psychiatrist's concerns about her emotional reactions. Hailey was a social worker with experience in mental health, but has now retired due to her mental illness. Although she believes BPD is a negative label, she relates to the diagnostic criteria and accepts the diagnosis.

Participant Pseudonym	Brief Summary
William	William is a 71-year-old man who was diagnosed with bipolar disorder about six years ago, and was more recently diagnosed with BPD. He retired on mental ill health grounds after a career as a veterinary surgeon. William agrees with the BPD diagnosis as he believes it explains his more rapid mood swings better than bipolar disorder.
Rachel	Rachel is a 47-year-old woman who was diagnosed with bipolar disorder approximately twenty years ago, when her children were very young. She currently works a couple of hours once every eight weeks in office work, and is frustrated at her inability to do more work than this due to her mental ill health. She is uncertain when she was diagnosed with BPD, but says that her GP believes the bipolar disorder is more prominent.
James	James is a 59-year-old man who was diagnosed with EUPD and then bipolar disorder approximately ten years ago, following intervention from mental health services due to neighbours' concern for his wellbeing. He hasn't worked since the bipolar disorder diagnosis. He is currently in treatment for both bipolar disorder and EUPD.
Nicole	Nicole is a 47-year-old woman who was diagnosed with BPD after being admitted to hospital following the birth of her son, and later diagnosed with bipolar disorder after the birth of her daughter. She was training to be a nurse, but felt she had to stop due to her illness and now considers herself unemployable. She views personality disorder traits as something she only tends to experience during a mood disorder episode, and is currently struggling with changes in treatment following the removal of bipolar disorder as her diagnosis, leaving her with a diagnosis of BPD.
Mary	Mary is a 46-year-old woman who was diagnosed with BPD and was diagnosed with bipolar disorder through a second opinion she sought from a professor of psychiatry, something she believes her community mental team has not taken on board. She left two of her past jobs due to the anxiety of working with a mental illness. She attaches a great deal of stigma to BPD and does not associate with the diagnosis, preferring to use the bipolar disorder diagnosis given to her outside of her own mental health team.
Joanna	Joanna is a 49-year-old woman who reports she has been given both BPD and bipolar disorder diagnoses, but is uncertain when either of them came into play. She has been unemployed for many years due to her mental ill health. She disagrees with the BPD diagnosis and in the past has refused medication due to the diagnosis, resulting in hospitalisation.
Arthur	Arthur is a 64-year-old man who was diagnosed with BPD and then had bipolar disorder added as a diagnosis when he and his psychiatrist decided that BPD alone did not explain his manic episodes. He was in the RAF before working with a telecommunication company for many years, where he spoke publicly about his mental ill health. He uses what he learned in psychotherapy to better understand the interaction of his diagnoses, and prefers to think of the two diagnoses as his head 'diabetes'.

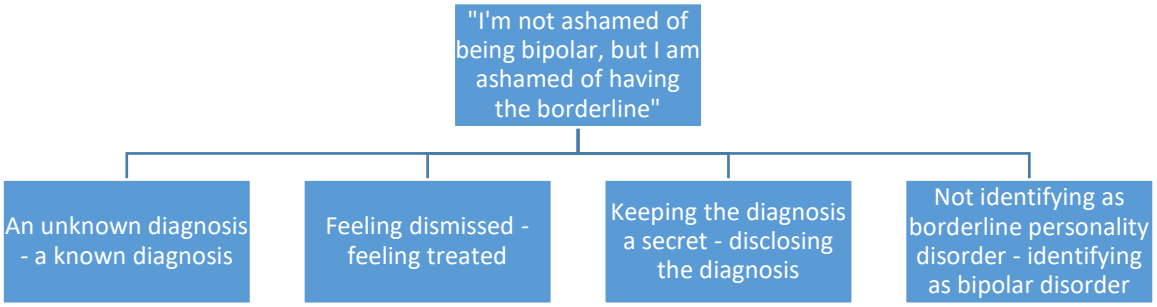
Participant Pseudonym	Brief Summary
Kate	Kate is a 61-year-old woman who was diagnosed with bipolar disorder approximately fifteen years ago, and had BPD added as a diagnosis during follow-up for bipolar disorder. She was a social worker and is currently unemployed due to her mental ill-health. Although she believes bipolar disorder is an easier diagnosis to accept than BPD or EUPD, she relates to both diagnoses and thinks of them less as illnesses and more as challenges of who she is.
Jessica	Jessica is a 32-year-old woman who was diagnosed with bipolar disorder following postnatal depression and was diagnosed with BPD later whilst an inpatient. She was training to be a paramedic but had to stop due to mental illness and is hoping to return to college soon. She accepts the bipolar disorder diagnosis, but she disagrees with the BPD diagnosis. As someone who has suffered trauma, she would prefer complex PTSD as an explanation for her experiences.
Oliver	Oliver is a 57-year-old man who was diagnosed with bipolar disorder at 19 years old. He later had his diagnosis changed to BPD, before the diagnosis became bipolar disorder with borderline traits. He was a librarian and is currently unemployed due to mental ill health, focusing instead on volunteer work and his writing. Although he does not like the term BPD, he does recognise symptoms of the personality disorder and has recently been educated on attachment theory, which he associates with BPD and its symptoms.

BPD = borderline personality disorder; EUPD = emotionally unstable personality disorder; PTSD = post-traumatic stress disorder.

5.5.2. "I'm not ashamed of being bipolar, but I am ashamed of having the borderline."

One theme and four subthemes were developed from the analysis. The theme was created to explore participants' views on having both BPD and bipolar disorder diagnoses through the distinction between participants who were ashamed of the BPD diagnosis and preferred the bipolar disorder diagnosis alone and those who accepted the BPD diagnosis as a part of their identity alongside bipolar disorder. The theme and the subthemes are summarised in **Figure 5.3**.

Figure 5.3. *Themes developed exploring the experiences of individuals diagnosed with both bipolar disorder and borderline personality disorder.*



5.5.2.1. An unknown diagnosis – a known diagnosis.

The role of previous knowledge of the diagnosis was important in how participants felt about receiving diagnoses of BPD and bipolar disorder. Participants made links between their own personal knowledge and their sense-making of their diagnosis, as illustrated by James:

> *"[Bipolar] made more sense to me because I knew more about bipolar than emotionally unstable disorder or whatever it is. A lot of people was starting to come out […] in the last ten years or so, people have started to come out about their depression, and bipolar's had a bit of focus upon it." (James).*

Greater personal knowledge of bipolar disorder made it easier for participants to accept that diagnosis into their identity. James, for example, contrasted a lack of knowledge around BPD *"or whatever it is"* to his existing knowledge of bipolar disorder, which he perceived as having had more attention in recent years. As a result of this, he related more to the latter diagnosis. Other participants reflected on the greater public knowledge of bipolar disorder

over BPD, as well as their own personal knowledge of the two disorders. Rachel contrasted the differences in awareness of the two diagnoses:

> *"It's quite difficult, because nobody talks about EUPD or borderline, because it's not a particularly, like, up-and-coming diagnosis. You know, lots of people know about bipolar now, but not many people know about personality disorders anyway, and I only really discovered that I'd got that diagnosis when somebody else said they'd got it and I went, 'Oh, I know that.'" (Rachel).*

For Rachel, the unknown element of BPD linked to diagnostic clarity, in that the label alone was not enough for her to understand the diagnosis and it was not until she met others with BPD that she began to understand what it meant. This contrasted to her experiences with bipolar disorder, where she implied that people were more open as it was an "*up-and-coming diagnosis*" versus the less understood BPD. As illustrated by James, this in turn can make it easier for people to accept a diagnosis of bipolar disorder into their identity.

Several participants linked a perceived public dislike of the BPD diagnosis to the lack of understanding for it. Sarah, for example, discussed an overall generalisation associated with the term "*personality disorder*":

> *"I think it would be okay if it that meant that, if people really understood personality disorders, but I think so often it's kind of generalised to just, kind of, people being difficult to treat, difficult to handle or awkward, you know, kind of bit histrionic, that kind of thing." (Sarah).*

In Sarah's view, the diagnosis of personality disorder was stereotyped to the detriment of individuals with the diagnosis. Sarah in particular was aware of the impact of this label as

someone who had both received it herself and worked in a psychiatric setting. She highlighted the potential impact of being diagnosed with a misunderstood label and the risk of being *"generalised"*. For participants not directly involved in psychiatry, there was a similar sense of personality disorders being less understood than bipolar disorder:

> *"I think I would rather have bipolar disorder, because it's more understood, and people don't really get treated like crap but they do with PD." (Mary).*

BPD was often framed as the less desirable of the two diagnoses because of the greater knowledge around bipolar disorder and the stigma associated with BPD. Mary, for example, emphasised her preference for the bipolar disorder diagnosis. The impact of receiving the BPD diagnosis was, in her view, a change in how others treated her, particularly healthcare professionals. Mary linked this difference to a greater public knowledge of bipolar disorder, suggesting the negative impact of being diagnosed with a misunderstood disorder such as BPD. Whilst most participants seemed to view the greater awareness of bipolar disorder as a positive thing, Jessica reflected on a difficulty of bipolar disorder's increased public profile:

> *"I think some people don't understand [bipolar]. Bipolar's quite a fashionable diagnosis, so they expect you to be all singing and dancing and fun and – you know, people have heard of bipolar. They don't truly know what it means but they've heard of it. Whereas that's not the case when you're predominantly a depressive bipolar, so I have a lot of down time, rather than up singing, being the life and soul at the party, so yeah, that's been hard." (Jessica).*

For Jessica, although the diagnosis of bipolar disorder was more well-known, it was still greatly misunderstood, with others expecting the "*fun*" associated with mania rather than the

downs associated with a *"depressive bipolar".* This quote, and others, highlighted the role of others' expectations in participants' own experiences of living with BPD and bipolar disorder.

The BPD diagnosis was seen as publicly far more stigmatised, and therefore participants were less likely to accept it as a diagnosis than bipolar disorder. Kate talked about her reaction to being diagnosed with BPD in the context of the rising profile of bipolar disorder and the "*time of Stephen Fry*":

> *"When I was being followed up for the bipolar, they said, 'We think you've got, you know, [BPD]' […] and I was so angry. I was really, really angry. And I just – I think it's 'cos I thought there was a lot of stigma around it, in a way that there wasn't about bipolar. You know, it was fifteen years ago, it was a bit hip, it was a bit – before Stephen Fry or around the time of Stephen Fry." (Kate).*

Kate directly compared the stigma between the two disorders, suggesting that as well as being less known what is known about BPD tends to be stigmatised, whilst bipolar disorder is more well-known and even *"a bit hip*". Her anger at the BPD diagnosis reflected the impact of receiving a diagnosis that was viewed as stigmatised, and the immediate negative reaction to that diagnosis as a result. This was contrasted to the impact of receiving a bipolar disorder diagnosis, which was seen as more widely accepted and even fashionable. Oliver described BPD as the "*borderline beast"*, and when asked how he felt about the diagnosis he said:

> *"I didn't like it. That's a <u>horrible</u> thing, I thought, 'My goodness it sounds like,' I don't know whether you know that old Alfred Hitchcock film, 'Psycho?' It just felt like him. You know, it sounds – it's a horrible – it's a horrible title, you know. I didn't really understand it and that till I looked, I think there's ten main symptoms, aren't there?" (Oliver).*

For Oliver, looking beyond the diagnosis name was important in coming to terms with the diagnosis. However, his initial response to the diagnosis was one of negativity, associated with the label *"borderline personality disorder".* The impact of the term itself on Oliver's perception was illustrated through his association of BPD with a fictional villain, and even though he went on to associate with the diagnosis he struggled over his words in explaining how *"horrible"* the title is, suggesting the difficulty he had reconciling himself with a label he viewed as so negative. Oliver's views reflected the stigma towards personality disorders that was described in several interviews, with negative stereotypes pervasive. Chloe, for example, associated borderline personality disorder with the serial killer "*Ian Brady*", and Lucy said:

> *"You tend to think of criminals and things having borderline personality disorder and, you know, people who live in squats and take drugs and fight." (Lucy).*

The way in which participants described BPD, compared to bipolar disorder, suggested some of the impact of living with the label. Whilst linking bipolar disorder to *"Stephen Fry"* and *"celebrities"*, BPD was often considered in terms of stereotypes and negative imagery, suggesting the negative impact the diagnosis had on individuals. Lucy, for example, evidenced the impact of the BPD diagnosis on her sense of self and the struggle to consolidate her view of herself and the negative connotations she held of the diagnosis, linking BPD to negative imagery and *"criminals"*.

Other participants expressed a more clinical view on the two diagnoses. William, for example, was asked to describe what bipolar disorder meant to him, and responded:

> *"I understood it to be a mental problem, as it were, a psychiatric problem, I don't know whether I'm using quite the right word by using psychiatric, I probably should say psychological, and I sort of understood that it was a*

problem basically, and that it – that there ways of ameliorating the problem, so it wasn't so severe." (William).

This is similar to other participants' descriptions of bipolar disorder, where it is seen as a medical problem which can be treated to reduce symptoms. However, when asked what BPD meant to him William responded with a view which could be interpreted as being informed by his experiences with psychoeducation:

"From what I understand, it's somebody who really is not in some ways in control of their emotions […] the really great changes in emotional behaviour and emotional thinking as indicated by the sort of conditions I've had, the condition I've got. So that was the way I understood it. And it was more a sort of disorder associated with yourself rather than bipolar disease." (William).

William was calm and steady throughout describing both disorders, with none of the emotionality shown by other participants whilst talking about BPD in particular. William's approach was reflective of increased knowledge of the two disorders and more in keeping with a clinical model, perhaps reflecting the psychoeducation William had received as part of his treatment.

5.5.2.2. Feeling dismissed – feeling treated.

BPD was perceived by participants as being associated with dismissal and, in the case of a few participants, denial of care, whilst bipolar disorder was perceived as being associated with help and treatment. Alice was diagnosed with BPD before having the diagnosis removed

and replaced with bipolar disorder following an appeal to the NHS ombudsman. When asked what her treatment was like before the bipolar disorder diagnosis, she said:

> *"The best analogy and the shortest analogy is probably like every time I phoned up or if I went to an appointment and described the stress and how I felt it would be, 'Have a bath and a cup of tea,' and that's all I ever heard. 'Have a bath and a cup of tea, bath and a cup of tea.' If the community mental health team referred me to crisis team they'd just say, 'Have a bath and a cup of tea.' I never got to see the doctor in the crisis team they just – literally just get fobbed off the whole time. Just terrible. Terrible." (Alice).*

Alice stumbled over her words when talking about her experiences with BPD treatment and seemed visibly frustrated by her experiences. She was emphatic that the treatment was "*terrible"* and would later say she no longer trusted services, relating this to the treatment she received when diagnosed with BPD alone. When asked about treatment she received after being diagnosed with bipolar disorder, Alice said:

> *"They put me on, it was like a psychoeducational kind of therapy […] and that was like a ten week sort of classroom-based thing, and then at the end of it you saw a clinician for about four or six weeks to help you put together like an individual plan about what your early warning signs are […] and the different things that you can do yourself to try and kind of limit […] your mood from going too high or going too low, so that was quite useful." (Alice).*

The difference between Alice's experiences in the upper quote for BPD and her experiences in the second quote for bipolar disorder highlight her perception of the gap

between care for BPD and bipolar disorder, with the bipolar disorder diagnosis associated with treatment that was "*useful*" and the BPD diagnosis associated with "*terrible*" treatment.

Jessica also suggested that a BPD diagnosis was associated with dismissal by healthcare professionals:

> *"They say that we have to manage our own emotions, yet trying to get the right help to manage your emotions is like asking for gold. I am lucky, I have done DBT, but then you need to do more of it, you can't do one round and then never need to do it again. So yeah, I dunno. They're just scared of us I think (laughter)." (Jessica).*

Jessica went as far as to suggest that healthcare professionals were "*scared*" of individuals with BPD, because they did not know what to do with them. In contrast, she described receiving medication "*pretty much*" immediately after receiving the bipolar disorder diagnosis, suggesting a far easier process to get the help she felt she needed when diagnosed bipolar disorder. Both Alice and Jessica suggest the impact of receiving a bipolar disorder diagnosis was receiving treatment that they felt worked, something that both participants felt was lacking when they were diagnosed with BPD alone.

Other participants linked bipolar disorder to receiving more treatment due to professional lack of knowledge of BPD. Rachel, for example, was asked whether any healthcare professionals have talked to her about the BPD diagnosis:

> *"No. I don't think they know. I don't think they know, and because they don't know they don't talk about it, but they'd rather you had that then have bipolar because it's less intervention that you'll get. Oh, did I just say that? (Laughter)." (Rachel).*

Rachel also linked bipolar disorder to more treatment, but put a more negative spin on it: she perceived BPD as the more favourable diagnosis for healthcare professionals to give because it received less care than bipolar disorder. For Rachel, healthcare professionals "*don't know*" enough about BPD to confidently talk about it with patients and treat it, and instead dismiss individuals with the disorder, or give them "*less intervention*".

Mary, who was diagnosed with bipolar disorder as a second opinion and has BPD as her primary diagnosis, also felt that she was being *"fobbed"* off by services due to her BPD diagnosis:

> *"I want to know what's on my case notes. I was quite intrigued to see what they've written, you know, that must be so horrible that I can't get an appointment with any doctor at all. That's the only trouble, I think they <u>see</u> a diagnosis of PD and they go, 'Oh no, not that person.' I don't understand why people get treated like rubbish. At the end of the day, it's still ill mental health." (Mary).*

Rather than feeling she was being dismissed, Mary felt that she was being actively denied care because of her BPD diagnosis. In the end, the impact of the BPD diagnosis for Mary had been a breakdown in trust between herself and services. Chloe, similarly, had negative experiences before receiving a bipolar disorder diagnosis, when she was only diagnosed with BPD. She described how she attempted to get the help she needed through overdosing:

> *"They may as well have booked me an ambulance every few months after I'd taken tablets, but it wasn't a <u>sincere</u> death wish. I found it was more like a bit of attention seeking, because, 'I'm not feeling right, please help me.' But they were saying they couldn't help me 'cos all I was was personality*

disorder, and then it was like, 'Oh don't touch her, she's just personality disorder,' and because then it wasn't recognised really as an illness you was sort of treated differently. You weren't treated with the respect of being a patient, you were treated more as a naughty school girl, you know." (Chloe).

For Chloe, overdosing was a pathway to try and receive the help she felt that she was being denied. Similar to Mary, she felt that during her years of being diagnosed only BPD she was not receiving the care she needed: for Mary, this was evident through the belief that she could not get an appointment with any doctor and, for Chloe, it was the belief that healthcare professionals would not help her because her disorder was not an illness. Later in her interview, Chloe described her interactions with healthcare professionals about BPD being one of *"contempt"*, and when asked to describe what she meant by *"contempt"* she struggled:

"The way they speak to you it's – difficult to put into words as such, but it's contempt, it's like they disbelieving that you – you try – you're screaming out to them and they just treat you with – there's no respect there, no discussion. If you put it down to bipolar you get treated, if you put it down to borderline personality disorder then you can rot." (Chloe).

After struggling to get the words out and explain what she meant by *"contempt*" Chloe was much more adamant with her final statement, showing the strength of her belief that BPD is linked to dismissal and bipolar disorder linked to care. This was further highlighted when she described how she perceived treatment following her bipolar disorder diagnosis:

"After I was diagnosed bipolar, it was like everybody's sort of light turned on, and after six months of medication for the bipolar I can honestly turn around and say that I was a totally different person." (Chloe).

Chloe was much more composed and confident when talking about her bipolar disorder treatment. To Chloe, the diagnosis of bipolar disorder led to her receiving the help she felt she had been denied when diagnosed with BPD. The impact of the two diagnoses in terms of the care received were contrasted throughout Chloe's interview: she felt that a BPD diagnosis led to being dismissed and untreated, leading Chloe to take drastic action to receive the care she needed, whilst a bipolar disorder diagnosis was perceived as leading to treatment.

Negative experiences with BPD were often reported by participants who perceived themselves as not being included in their own diagnostic and treatment decisions. For some participants, the diagnosis of BPD was seen to be a secret that was withheld from them by healthcare professionals. Alice, for example, described how she was not told about her BPD diagnosis:

> *"I hadn't been told and it had been there for a while, and I think the way I actually found out […] I'd gone into an appointment and somebody had opened up a PDF of a letter that had been sent to my GP. All the letters to my GP that they were sending weren't copied to me, they are now, but this particular psychiatrist didn't copy any correspondence to me. I was completely cut out of the loop of all the kind of information that was going to my GP." (Alice).*

Alice was quite animated when discussing how she discovered she had been diagnosed BPD, and her frustration at the situation was visible. To her, the BPD diagnosis was linked to a time when she was "*completely cut out"* of her own care, and the secrecy she perceived healthcare professionals to have around the BPD diagnosis may relate to the sense of shame she associates with that diagnosis. Other participants had similar experiences of feeling

disconnected from their treatment, with Jessica describing when bipolar disorder was removed as a diagnosis and she was left with a diagnosis of BPD only:

> *"They've pretty much taken away the bipolar disorder as of my last appointment, which I don't agree with. My care coordinator isn't overly keen either, 'cos we see the highs and the lows. My psychiatrist doesn't. I don't go to the psychiatrist when I'm high, I stay at home and enjoy it. […] I wasn't impressed, because I track my mood and I see my mood swings. [Pause]. But then, you know, what can I say? It's up to them, isn't it?" (Jessica).*

In her last question, Jessica expressed a helplessness in her own treatment. Both Alice and Jessica seemed frustrated by their lack of involvement in decisions about their healthcare, and both perceived negative experiences with healthcare professionals associated with the BPD diagnosis. The impact of receiving both diagnoses, for participants such as Jessica and Alice, was a sense of one leading to treatment and the other leading to helplessness and dismissal. This contrasts with participants who described working in partnership with healthcare professionals. In these cases, often the participant was far more positive about BPD as a diagnosis and seemed more positive about the treatment they had received for both diagnoses. Hailey described the experience of receiving the BPD diagnosis in addition to bipolar disorder:

> *"[The psychiatrist] said to me that she was quite concerned about the emotional experiences that I was having and stuff. […] She was wanting to refer us to have an assessment with the psychotherapy, you know, if I was happy to do that, and that was the point at which she was kind of introducing that little element of it, and I think after that she put 'bipolar*

> *disorder query borderline personality disorder' and eventually the question marks disappeared (laughter)." (Hailey).*

One line in particular contrasts to the experiences of Alice and Jessica: Hailey described being referred to psychotherapy "*if she was happy to do that"*. This suggests an active involvement in decisions about her own care, something that participants such as Alice and Jessica felt that they were missing. Although Hailey was aware from her time as a social worker of BPD's reputation as a "*diagnosis of exclusion"* she herself never seemed to feel this, with her descriptions of healthcare and treatment often talking about her symptoms holistically rather than one particular diagnosis. Arthur had similar experiences, and described an open discussion to reach the diagnosis with his psychiatrist:

> *"So we worked out between us and we did the research and talked about it and that's when the borderline personality came up, then at that point we kind of said, 'Well, there's a few bits missing here that we don't understand,' so we didn't stop there, we carried on talking and then bipolarity came into it as an option." (Arthur).*

Both Arthur and Hailey described working in partnership with their healthcare professionals, and both reflected more positively on their experiences with their healthcare, particularly in regard to BPD, than participants such as Alice, Chloe and Jessica, who described feeling dismissed and discriminated against due to the BPD diagnosis.

5.5.2.3. Keeping the diagnosis a secret – disclosing the diagnosis.

Three key disclosure practices emerged from the interviews: disclosing bipolar disorder, but not BPD; disclosing neither diagnosis; and disclosing both disorders. None of the participants interviewed chose to disclose BPD and not bipolar disorder.

Some participants chose to actively disclose bipolar disorder as a diagnosis over BPD. Joanna, for example, was asked whether she told friends and family about the bipolar disorder diagnosis:

> *"Yes. And they agree with it." (Joanna).*

She was asked if she had ever talked to them about BPD and simply responded: "*No*." Later, Joanna would describe how her family had been more positive about her mental health since she received a "*proper*" diagnosis, suggesting she did not view BPD as a *"proper"* illness. Joanna was quite emphatic in saying that she did not disclose BPD. Other participants similarly chose to disclose bipolar disorder, with Chloe saying:

> *"People noticed the change in me and I told a lot of people then that I was bipolar. […] It sounds ridiculous but it's like, if you're ill it's like, 'Oh, love her she's got bipolar,' but if they think you're pulling a fast one or think you're not ill enough, it's always been, 'Oh she's got borderline.' So, I know it sounds nasty, but I was quite <u>pleased</u> in a sense to tell people I had a reason for my behaviour, that it wasn't just nonsense and I was getting treated." (Chloe).*

Chloe seemed ashamed that she was pleased to be able to tell people about the bipolar disorder diagnosis. However, she felt that telling people she had bipolar disorder gave a reason for her behaviour and, more importantly, that it was not just "*nonsense*". Chloe had negative

experiences of only being diagnosed BPD, including feeling that she was not receiving the care she needed, and the diagnosis of bipolar disorder, for her, was associated with a form of validation and the treatment she needed, and was perceived to represent a legitimate *"reason"* for her behaviour. Many of the participants discussed shame in association with BPD. Lucy, for example, described a sense of shame associated with the BPD diagnosis that led to a reluctance to disclose it:

> *"I kept [the BPD] very secret, because – partly because I don't agree with it and partly because it's – I don't – you can hardly be, well, proud of it isn't quite the right word, but you can hardly be, 'Oh wow, you know, they found my problem, it's a borderline personality disorder.' Yeah, it just really grates." (Lucy).*

Lucy stumbled over her words a few times when discussing disclosing BPD and seemed eager to make it clear the diagnosis was not something she associated with, let alone disclosed. Her opinion on BPD reflected the impact of living with what she considered a negative label, and the difficulty she had discussing that label with others. Whilst she also did not disclose bipolar disorder on a wide basis, her reasons for keeping the diagnosis close were more to do with other people, rather than her own shame. When discussing the diagnosis of bipolar disorder, she said:

> *"I suppose [I've told] one or two close friends [about the bipolar disorder], but family – they've never acknowledged my illness, they've never visited me in hospital, they've never talked about it, and I think that's just their way of coping. Close friends, yeah, have known [about bipolar disorder] and have been supportive." (Lucy).*

Whilst Lucy highlighted her own shame and disagreement with the BPD diagnosis as a reason not to disclose it, her reason for only sharing the bipolar disorder diagnosis with "*close friends*" instead links her to family's own issues with discussing mental health. She was far more composed when talking about the prospect of disclosing bipolar disorder, emphasising that she was far more comfortable with this than disclosing BPD.

Another key reason for talking about bipolar disorder more than BPD links back to the idea of BPD being a less well-known disorder. Rachel said:

> *"I haven't really spoken to [my partner] about the borderline, 'cos I'm a bit confused myself, and I feel a lot <u>stronger</u> with what's happening from a bipolar point of view." (Rachel).*

Her choice to discuss BPD therefore does not seem to be linked to shame, as it is in Joanna, Chloe and Lucy's cases, but was associated with a lack of knowledge. Because Rachel felt more confident in understanding her bipolar disorder, she was more likely to discuss it with her partner than BPD. As well as suggesting a lack of wider knowledge about BPD, evidenced also by the stereotypes held by several of the participants, this also suggests a lack of education around the diagnosis when it is received which may impact how an individual feels about the diagnosis and whether they relate to it.

Despite evidence of BPD being seen as the more difficult or less desirable diagnosis to disclose due to fear of stigma, participants also expressed awareness of the stigma associated with disclosing bipolar disorder. Nicole, for example, discussed the consequences of disclosing bipolar disorder in the workplace:

> *"I had to give up nursing, because basically I was diagnosed with bipolar. I'd had a couple of instances where I had to have a break in my studies, […] and*

> *I went to occupational health to get clearance to restart in the new cohort, and she said, 'Why do you think it's best for you to come back to nursing?', and I said, 'This is what I've always wanted to do.' […] And she said, 'But how can we be sure that you're not going to attack a patient, or you're not going to attack other members of staff or visitors. […] Because of the fact you have a diagnosis of bipolar we have to be very careful with that.' […] How can you do a job like that without people trusting you?" (Nicole).*

Whilst other participants feared stigma from disclosing BPD, Nicole described an experience of stigma related to disclosing her bipolar disorder in the workplace. The impact of a diagnosis of BPD was often discussed in terms of experienced stigma within healthcare leading to a fear of potential stigma in other areas, however Nicole highlighted the impact of disclosing bipolar disorder on experienced stigma in a healthcare occupational setting. Both the fear of stigma and experience of it seemed to have been damaging for participants and were highlighted as a key impact of having the comorbid diagnosis. Nicole was quite upset talking about having to give up nursing. She had hoped to pursue nursing as a career, but felt that after disclosing her diagnosis she had no choice but to leave that profession. Other participants highlighted that it could be just as difficult to disclose bipolar disorder as BPD:

> *"I know I've got [bipolar disorder], and I'm not afraid to talk about it, but I am aware that it makes other people uncomfortable, and when we first got together and became engaged [my wife] felt it necessary to tell her family that I had bipolar, but she could never find the right time. […] It was only when I had a breakdown and ended up in the [Psychiatric Intensive Care] ward that her father actually saw what the worst of it could be, you know.*

So yeah, I don't tell people I'm bipolar now, I don't tell people anything." (James).

James did not disclose his diagnosis because he was aware that it made other people uncomfortable to discuss it, although he also highlighted a problem that a few participants reported: having the decision to disclose an illness taken away from you due to becoming unwell enough to need intervention or hospitalisation.

Where participants seemed happy to disclose both diagnoses equally, they often engaged in judicious disclosure. Kate, for example, tended to disclose her diagnoses to individuals with ill mental health:

"I talk to other people I know with bipolar if I think it's pertinent, but, you know, I don't talk about my bipolar diagnosis that much, and I don't talk about the borderline personality diagnosis that much, unless I'm with somebody with a mental illness who's struggling or whatever, whatever, and then I'll say, 'Well, have you thought of this?'" (Kate).

For Kate, she was happy to disclose her diagnoses only to people in similar situations, perhaps because the feared judgement or stigma would be less in others with similar experiences. Participants who disclosed both BPD and bipolar disorder to the wider community were a minority. Arthur discussed how he used to lecture on mental health for his company in a lecture hall of "*two thousand people".* He explained why he was determined to be open with his mental health:

"I've always felt that it helps people to understand me. I can't sit there and go, 'Well, I'm grumpy because you shouted at me for doing this, that and the other,' if you don't know what you're up against. What's the point of

that? You know, that's just me making myself even iller, having expectations of you based on nothing, whereas if I tell you then my expectations of you are realistic. Then I can get upset with you when you get it wrong." (Arthur).

Arthur highlighted one of the impacts of having the comorbid diagnosis in that he felt it was evident enough to people in his everyday interactions that he needed them to know. However, whilst others feared potential or experienced stigma, Arthur seemed more open about disclosing both diagnoses: in his eyes, because he was aware of the impact of his disorders on interactions with others it was unfair to expect others to understand without giving them all the facts.

5.5.2.4. Not identifying as borderline personality disorder – identifying as bipolar disorder.

Participants described ways in which their identity was informed by the overlap between their perception of the illness and their own experiences. For some participants, there were clear links between their experiences and symptoms and the diagnoses. For example, throughout his interview Arthur described previous behaviour which he clearly attributed to bipolar disorder and BPD:

"The mania's never really got dangerously manic […] I think the worse thing I did was try and borrow a train, but, you know, just couldn't wait to get to Birmingham so I went on the station and climbed in driver's cab and tried to start a train up. I wasn't, you know, I just wanted to get to Birmingham. It didn't really matter I was driving, somebody had to drive." (Arthur).

> *"I was, you know, having affairs left, right and centre, 'cos you just don't have any moral compass and, you know, the nine things you can go through [with BPD], I was going through most of them, drinking and taking drugs, but the wrong kind of drugs." (Arthur).*

Arthur accepted both BPD and bipolar disorder as a part of his illness and understood his symptoms and experiences in terms of those diagnoses, perhaps because his understanding of the disorders matched his previous experiences and symptoms, although it is interesting that the BPD symptoms were framed as a discussion of morality whist the bipolar disorder symptoms were considered more in terms of potential danger. This may relate to limited knowledge of BPD as an illness, or it could reflect the shame participants often expressed around BPD. Oliver explained a similar process of matching the perception of the diagnosis to his prior behaviour:

> *"I didn't really understand [BPD] and that 'till I looked. I think there's ten main symptoms, aren't there, nine or ten, the one I haven't got is self-harm, I've never self-harmed. I've wanted to, I suppose. I suppose […] the thought about walking into the water, I suppose that come under it? […] And I suppose the alcoholism could have been classed as self-harm as well." (Oliver).*

For Oliver, this exercise helped him to accept BPD as an additional diagnosis to the bipolar disorder, as he came to associate his experiences with the diagnosis. However, other participants made it clear that whilst they associated their experiences and symptoms with bipolar disorder, they did not reach the same conclusion with BPD. Alice, for example, described her experiences of looking into both bipolar disorder and BPD and comparing the perception she developed of the disorders to her own experiences:

> *"Pulled off a couple of review papers on cyclothymia like on Web of Science or, or whatever, you know, just started reading through them and thinking, 'Oh my god, yes, yes.' Whereas before, […] when I googled emotionally unstable personality disorder, I was reading all this stuff [and] literally the only thing that I could relate to would have been like the moods, and I wouldn't […] say my moods fluctuate from hour to hour or day to day, I would say my moods fluctuate from kind of week to week, perhaps month to month, definitely season to season, but not as quickly as that." (Alice).*

Alice clearly did not relate her prior experience to what she perceived to be the key elements of BPD from her reading, however she related strongly to the description of cyclothymia (which would later lead to a diagnosis of bipolar disorder). She was emphatic when describing her feeling of relating to cyclothymia when she read up on it, but also in showing that she did not relate to BPD in any way. Mary was similar in that she denied the BPD diagnosis. Interestingly, she compared her own behaviour to behaviour which may be associated with BPD, but dismissed it as not being related to the BPD diagnosis:

> *"I did use to cut myself when my mum passed away. It was because I felt numb, nothing to do with PD in my eyes or my dad's eyes. I haven't done that in – I just was going through a bad patch. […] You know, I've been an alcoholic, but I've asked for help and I've stopped that, then they were trying to put that down to PD." (Mary).*

As far as Mary was concerned, behaviour that may have been described as being symptoms of BPD was not related to this diagnosis, showing a clear distinction between her perception of the BPD illness, her own experiences and what she perceived the opinions of health professionals to be. Nicole similarly described perceived BPD patterns of behaviour, but

also suggested that they were not evidence of a personality disorder. Nicole raised the point that she only tended to experience the symptoms associated with BPD when "*unwell"* during a mood episode:

> *"I don't disagree with the fact that I have a personality disorder, I think maybe I have, but even my psychiatrist has said, he's actually said to me that you don't see my personality disorder unless I'm unwell. In everyday life, he said the traits go, and I never even self-harm when I'm fine. […] I haven't self-harmed now for just over a year, because I've been okay, I've been stable." (Nicole).*

Nicole linked her BPD symptoms to the episodic nature of mood episodes. Despite claiming that she did not "*disagree*" with the personality disorder diagnosis, she felt that her personality disorder was only evident during a bipolar mood episode. It may be that the issues with identifying with BPD related to individuals' views on the label. Participants struggled with the label of BPD compared to the label of bipolar disorder. Whilst bipolar disorder was accepted as a mental illness, participants' lack of knowledge about BPD tended to mean that the only clue they had to what the diagnosis meant was the name. The problem with this was summarised well by Sarah:

> *"Personality disorder in itself is quite a strong term, because you are saying that something very intrinsic to somebody is disordered." (Sarah).*

Receiving both BPD and bipolar disorder diagnoses, participants often associated the bipolar disorder diagnosis with their past behaviours whilst expressing a greater impact of the BPD diagnosis on their sense of self. This often came down to the language used in the diagnosis itself, with participants struggling to understand the term *"personality disorder"* in

view of their own beliefs about their personality. Mary, for example, reflected on her reaction to receiving the diagnosis:

> *"He says, 'Oh, I'm pretty sure that you've got a borderline personality disorder,' which I knew nothing about, at the time he didn't really explain nothing much, and I was like really shocked, cos I thought well – I thought I had a nice personality, why is it disordered?" (Mary).*

This was something Mary reflected on frequently throughout the interview, preferring the diagnosis of bipolar disorder over BPD because she felt BPD suggested something was wrong with her personality. The impact of receiving both diagnoses was a struggle to marry the idea of BPD to her own perception of herself, whilst advocating for bipolar disorder to be her main diagnosis. It could be that because Mary had previously heard of bipolar disorder, she was more willing to accept this diagnosis than one that she had never heard of, and that she believed held negative connotations. Jessica had a similar view of the diagnosis:

> *"I was sexually abused as a child. I've had parental issues with my mum, and my dad for that matter. My second daughter's actually here through rape. […] I don't think it's fair to say to somebody who's had trauma that your personality is flawed, because that's essentially what borderline personality – that's what, you know – personality disorder, you're saying you've got a disordered personality, but it's because of what someone else has done, as oppose – you know, you weren't born like that." (Jessica).*

Jessica was quite distressed whilst trying to argue that BPD was not a fair diagnosis to people with trauma, coming to the conclusion that complex PTSD was a more fitting diagnosis. Similar to other participants, her perceived lack of knowledge about BPD and what it means

led her to believe that the diagnosis means her *"personality is flawed"*. However, when asked about how she felt about the bipolar disorder diagnosis, Jessica said:

> *"It was good to have an answer, 'cos I'd been unwell for many, many years." (Jessica).*

Whilst Jessica had framed BPD as something being wrong with her personality, she was more accepting of the bipolar disorder diagnosis, perhaps due to a greater existing knowledge of the diagnosis. The impact of the two diagnoses on Jessica's life were, she felt, quite different. The impact of the bipolar disorder diagnosis was a sense of relief and feeling like she had an answer, suggesting acceptance; the impact of the BPD diagnosis was the perception that her past trauma was being dismissed and that she was at fault for her experiences. Jessica and Mary both expressed the distress of receiving a diagnosis that impacted their perception of themselves in such a significant way, linking the BPD diagnosis to questions about their own personality, identity, and blame.

Even where participants seemed to accept both disorders and talked positively about treatment for both, there seemed an underlying bias towards identifying as '*bipolar*' rather than '*borderline*'. Both Kate and James, for example, discussed seeing their disorders as one illness:

> *"I don't see them as separate illnesses any longer, I just see them as challenges and symptoms really of who I am." (Kate).*

> *"I think of them as kind of one thing." (James).*

However, during their interviews they both described themselves as "*bipolar"*, suggesting that they identify themselves and understand their illness from a bipolar disorder viewpoint. Despite receiving a comorbid diagnosis and both appearing to accept bipolar

disorder and BPD into their illness identities, both Kate and James seemed to implicitly prefer the diagnosis of bipolar disorder. Kate, for example, discussed disclosing her illness to her family members:

> *"I sent them both booklets about bipolar and said, 'You might want to have a read of it.'" (Kate).*

Despite accepting both diagnoses, Kate appeared to favour bipolar disorder and chose to inform her family about that diagnosis; at no time did she discuss a similar process of educating family about BPD. James also viewed both diagnoses as one thing, but went on to say:

> "*I <u>see</u> myself and <u>relate</u> to myself in terms of being bipolar, you know I'm bipolar, you know I've got an emotional problem." (James).*

Both Kate and James seemed to view bipolar disorder as the key part of their diagnosis, with James elucidating that he has an "*emotional problem".* This may suggest that even where individuals seemed to accept both disorders, it is easier to accept and identify as bipolar disorder, possibly representing that bipolar disorder is more widely known and that the stigma perceived to exist around BPD makes it more difficult to accept and identify with that diagnosis. Sarah described a similar approach to her disorders:

> *"I think I'm <u>much</u> happier with the idea that bipolar is the illness, as it were, and there are features from like my family interactions and background and things that make that <u>less</u> stable, without putting a diagnosis on it, you know what I mean? You know, I don't have the <u>core</u> features in my mind of a personality disorder, and I don't have the core background, but there are things that I suppose make me more unstable, that are not just the bipolar, I*

suppose. And put like that I feel a lot happier about it, because you're not trying to treat something that's sort of part of you." (Sarah).

Sarah highlighted a key area that people seemed to struggle with in identifying with BPD as well as bipolar disorder: seeing BPD as "*a part of you.*" For many participants, the impact of the BPD diagnosis was the sense of there being a flaw in their personality, something which made it difficult for them to consolidate this diagnosis with their view of themselves. For Sarah, and others, it made more sense to think of bipolar disorder as the diagnosis, and to think of BPD as an additional layer to that, whether it was an "*unstable*" element as in Sarah's example or the "*emotional problem"* discussed by James. The majority of participants either struggled to accept the BPD diagnosis and found it far more acceptable to have bipolar disorder or seemed to accept both disorders but favour the bipolar disorder diagnosis in discussion. This was also evident in participants discussing what it means to have both disorders together:

"I think <u>that</u> is what the borderline does to the ups and downs of my bipolar, that's where they meet, is that when I'm on a down it might be, I don't know, four days out of the week, but then suddenly I'm high. I might be all right for a day and then suddenly I'm high." (Rachel).

"I always feel that bipolarity is <u>king</u>. It deals with where I'm coming from, I'm either up or I'm down. […] So if I say that deals with where I'm coming <u>from</u>, the sort of the more rapid cycling you get with borderline personality, you know the ups and the downs and the changes, that is affected by whether I'm coming from an up to a down that way or whether I'm coming from a down to an up that way. See what I mean? So you've got the basic standard bipolarity then the other one comes off it, so it's where you start

> *from. So if you're depressed here and you get depressed with that, you don't notice it, but if you get depressed here and you start having a – my hyper days, as we call them – you do notice it more rapidly cos you're there to there (bangs table) back to there. […] So that's how they interact in my mind is bipolarity is king." (Arthur).*

Both Arthur and Rachel understood BPD in terms of how it was perceived to impact their bipolar disorder. The way in which they chose to understand having received two diagnoses was to make sense of what the BPD diagnosis meant for their bipolar disorder symptoms, by focusing on bipolar disorder as the primary illness and BPD as a different set of behaviours and experiences that impact the bipolar disorder. The impact of having the two disorders was expressed and understood in terms of the impact on the mood episodes associated with bipolar disorder, particularly the rapidity of these mood episodes. As Arthur stressed, *"bipolarity is king"*, and this was something that seemed to be evident throughout the interviews. Hailey, who identified with both disorders, discussed the difficulty of differentiating between the two:

> "*I think I do separate it, that sort of like the mood stuff's to do with the bipolar and the emotional stuff's to do with the borderline, although they've got very similar symptoms. […] I know some of the borderline stuff will impact on my mood stuff, so there's a certain point which you can't actually differentiate, but I think in my head I probably split it." (Hailey).*

For Hailey, the way to understand the two disorders was to differentiate the way in which they both impacted her day-to-day life, however at a certain point this was no longer possible. Again, Hailey drew attention to how her BPD was seen to impact on her bipolar disorder symptoms ("*mood stuff"*). Despite receiving a comorbid diagnosis, most participants

either related to the bipolar disorder diagnosis more than the BPD diagnosis or made sense of the BPD diagnosis by how it impacted on their bipolar disorder. Whether this was because they could not accept BPD, as was the case for Chloe, Lucy, or Alice, or whether they seemed to subconsciously identify with bipolar disorder over BPD in discussions, such as James and Kate, it seemed that for many participants when understanding the two diagnoses bipolar disorder was the key.

William, in fact, was unique in that he was the only interviewee who felt that he fitted more into the BPD diagnosis than bipolar disorder.

> *"I think I fit more into the borderline personality disorder. I feel that I do. […] I realise in some ways that it's a more unpleasant problem to have, but at the same time I felt more that I fitted into it, and I was quite […] pleased to have a diagnosis rather than [bipolar disorder], which I didn't quite feel that I fitted into. I think the problem has been my rapid mood swings, more than anything they've been something which has really manifested as a major factor or major feature of my problem." (William).*

For William, then, bipolar disorder was no longer the focus. Instead, he found that BPD seemed a more fitting diagnosis due to the rapidity of his mood swings. Whilst he was still being treated for both disorders, throughout his interview William seemed to relate to BPD to a greater degree than bipolar disorder. What was interesting was that William acknowledged that BPD was, in some ways *"a more unpleasant problem to have"*: this seemed to resonate with other participants who struggled with the notion of BPD as a diagnosis, choosing to reject it as a part of their identity or focus on bipolar disorder and treat BPD as an aside. For William, the difficulties associated with identifying as BPD were superseded by the need to find a diagnosis that fit.

5.6. Discussion.

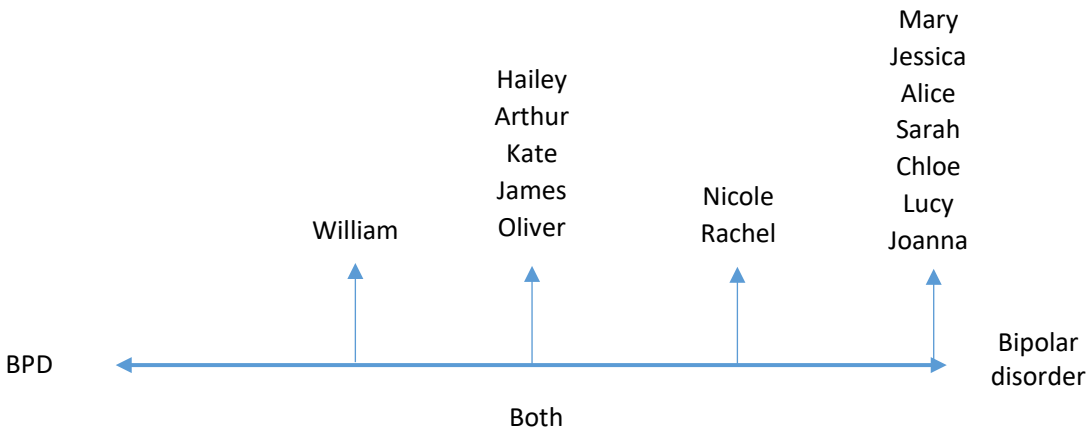
This study is, to the best of the researcher's knowledge, the first qualitative study undertaken with individuals who reported a clinical diagnosis of both BPD and bipolar disorder. The study aimed to explore how individuals who have been diagnosed with both feel about the two disorders and how they make sense of the two diagnoses, and to help expand on the quantitative aspect of this thesis. A key finding was that participants in this study differed in the extent to which they accepted both diagnoses, due to differences in the degree to which they related to each disorder. This discussion will consider potential reasons for this, as well as exploring the perceived differences in awareness and stigma between the two disorders to better understand how participants make sense of the comorbid diagnosis.

5.6.1. Accepting the comorbid diagnosis.

Participants expressed differences in the degree to which they accepted bipolar disorder and BPD as diagnoses, as shown in **Figure 5.4.** Previous research has highlighted the stages of accepting a diagnosis, with a qualitative study in bipolar disorder analysing 49 therapy sessions finding that participants identified stages of making sense of the symptoms, which included using the diagnosis to make sense of their previous experiences and validating the diagnosis by looking for further information on it and comparing it to their experiences (Inder et al., 2010). Participants in the current study described going through a similar process. Where the experiences of the current participants differed, however, was in receiving two diagnoses, and participants expressed struggles in following this process with both disorders. Several participants related to the bipolar disorder diagnosis, but not to the BPD diagnosis: at the validation stage, they found that their experiences did not fit the information they found on

the BPD diagnosis. However, even in participants who accepted both BPD and bipolar disorder as diagnoses it seemed that bipolar disorder was the easier diagnosis to relate to. James, for example, accepted both disorders but described himself as "*bipolar*", and Arthur considered BPD in terms of how it impacted his bipolar disorder mood episodes. William represented the greatest outlier, as he related to BPD more than bipolar disorder. Based on their reflections on the interview with William, the researcher believed this to reflect William's greater understanding of both disorders from his one-to-one discussions with a psychiatric nurse, and he was able to relate his past experiences to a BPD diagnosis more than a bipolar disorder diagnosis due to the rapidity of his shifts in mood.

Figure 5.4. *Continuum illustrating the degree to which participants appeared to accept the diagnoses of borderline personality disorder (BPD) and bipolar disorder.*



Other participants understood these rapid changes in terms of the impact of BPD on their bipolar disorder diagnosis. Arthur and Hailey, for example, both highlighted the impact they perceived BPD to have on bipolar disorder: namely, that mood episodes were more rapid and extreme due to their BPD symptoms. Participants found ways to make sense of the impact of the two disorders. Hailey distinguished between moods and emotions, attributing the former to bipolar disorder and the latter to BPD. Mood and emotions have been distinguished

in the literature, with moods associated with no distinct cause and a longer duration and emotions associated with greater reactivity and intensity (Beedie et al., 2005). The existing qualitative literature examined in the introduction of this chapter highlighted the uncertainty associated with the extremes of bipolar disorder mood episodes (Crowe et al., 2012; Fernandez et al., 2014; Inder et al., 2008, 2010; Jönsson et al., 2008; Mandla et al., 2017; Proudfoot et al., 2009). In the current study, participants who accepted both BPD and bipolar disorder diagnoses discussed how BPD was seen to increase this uncertainty through even more unpredictable and rapid mood changes. Participant attempts to understand the two disorders highlights the complexity of this comorbid diagnosis, as even where both disorders were accepted participants highlighted the difficulty in making sense of how the two interact. Where participants struggled to make sense of this interaction, they sometimes drew conclusions on the validity of the BPD diagnosis: Nicole, for example, believed that the BPD symptoms only showed during mood episodes, potentially representing an element of her bipolar disorder rather than a distinct diagnosis.

Accepting the diagnosis has been highlighted in previous qualitative research as an important part of recovery in bipolar disorder (Delmas et al., 2011; Hormazábal-Salgado & Poblete-Troncoso, 2020; Warwick et al., 2019) and acceptance and engagement with treatment in BPD has been posited as an essential element of recovery (Katsakou et al., 2012; Katsakou & Pistrang, 2018). The finding of the current study that participants with both disorders often do not accept both bipolar disorder and BPD diagnoses is therefore concerning as participants who rejected BPD discussed not engaging with treatment for the disorder. The difficulty participants in the current study had in accepting both diagnoses likely relates to the differing awareness of the two disorders, the stigma associated with the disorders and their experiences with healthcare professionals.

5.6.2. Awareness of borderline personality disorder and bipolar disorder.

Participants in this study drew attention to the levels of awareness around both disorders and highlighted a lack of public, personal and clinical awareness about BPD. Previous qualitative research with eight participants in the UK who had self-diagnosed with bipolar disorder before subsequently receiving a clinical diagnosis of BPD found that participants perceived the public knowledge of bipolar disorder and BPD to be different (Richardson & Tracy, 2015). In Richardson and Tracy's (2015) study, participants all had more knowledge of bipolar disorder, mainly due to media exposure, and most had never heard of BPD before being diagnosed and believed the public to be ignorant of the disorder. The current study found similar within participants who have received a clinical diagnosis of both disorders. Participants discussed previous awareness of bipolar disorder which made it easier to relate to that diagnosis than BPD, which many of them had never heard of or associated with negative imagery. It has been argued that public awareness of bipolar disorder is much higher than public awareness of BPD, due to greater advocacy and celebrity disclosure (Zimmerman, 2016), and the current study concurred with this. Participants linked bipolar disorder to public figures such as Stephen Fry, going so far to suggest it was *"hip*", whilst BPD was either unknown before diagnosis or associated with criminals and fictional villains. Whilst previous research has found that measures of negative stereotypes towards people with bipolar disorder in 594 individuals reduced significantly after viewing a celebrity discuss her battle with bipolar disorder (Wong et al., 2017), other qualitative research with individuals with bipolar disorder has found that the increased public awareness of the diagnosis has a negative impact, as it has led to the general public making generalisations about bipolar disorder based on limited knowledge (Favre et al., 2022). However, in the current study participants were more concerned about the lack of knowledge of BPD than the possibility of bipolar disorder being misunderstood. Wider knowledge of BPD is often limited (Zimmerman, 2016) or comes from

negative stereotypes of the disorder, with one UK-based study finding that newspapers reporting on personality disorders use violent and negative imagery (Bowen, 2019). This was reflected in the current study, as participants had either never heard of BPD prior to their diagnosis or had negative perceptions of the disorder. Even where participants accepted both disorders, this negativity was evident: Oliver, for example, accepted both BPD and bipolar disorder as diagnoses, but referred to BPD as the "*beast*" and, although Kate later came to accept both diagnoses, she discussed her initial anger at the BPD diagnosis, which she did not experience after the bipolar disorder diagnosis. This potentially links to the previous section on accepting both disorders: participants were more likely to accept the disorder that they had heard of previously.

A difference in awareness between bipolar disorder and BPD was also perceived by participants to exist in the healthcare context, as participants felt that clinicians were lacking in knowledge of BPD. Previous research has highlighted a gap in BPD awareness in healthcare settings (James & Cowman, 2007; Lamont & Dickens, 2021; Nithianandan et al., 2021). This was evident in the current study. Rachel, for example, believed that healthcare professionals did not talk to her about her BPD diagnosis because "*they don't know*, *and because they don't know they don't talk about it"*, and Jessica perceived healthcare professionals to be "*scared of*" individuals with a BPD diagnosis because of this lack of knowledge. On the other hand, participants considered bipolar disorder to be far more understood by clinicians, and expressed a perceived greater confidence in healthcare professionals when treating bipolar disorder: several participants discussed a quick and effective treatment plan after the diagnosis of bipolar disorder was received, with participants including Chloe and Alice stressing the positive and confident intervention. There is a large body of research around treating bipolar disorder. A search for literature examining bipolar disorder with the keywords "treatment" or "intervention" or "management" returned almost 3000 results; the same

search conducted with BPD returned under 900. Whilst there are clear guidelines for treating both bipolar disorder (NICE: National Institute for Health and Care Excellence, 2014) and BPD (NICE: National Institute for Health and Care Excellence, 2009), healthcare professionals have expressed a lack of knowledge in BPD care. In one study of 157 psychiatric nurses, it was found that 62% agreed that there was a lack of training or expertise in BPD, and 30% believed that individuals with BPD were not mentally ill (James & Cowman, 2007). This highlights the lack of knowledge in healthcare settings around BPD, something which participants in the current study drew attention to and contrasted to the knowledge of bipolar disorder.

Linked to this lack of knowledge, previous research has also found that uncertainty around the diagnosis of BPD can lead to clinicians choosing not to disclose it. A survey of 134 psychiatrists in the USA found that 57% indicated they had, at some time, chosen not to disclose the diagnosis of BPD to a patient, and 60% of psychiatrists who did not disclose the diagnosis chose not to due to uncertainty (Sisti et al., 2016). The current study reflects these results, with participants reporting not having their BPD diagnosis disclosed to them. Alice, for example, discussed finding out she had received a diagnosis of BPD when she saw a letter that had been sent to her GP on an unattended computer screen. In a synthesis of qualitative studies, Lester et al. (2020) found that at least six participants across five studies were unaware of their diagnosis of BPD until being recruited into the initial studies, and participants in two of the studies reported discovering their diagnosis by accident. Similarly, a recent study in France found that 37% of 202 individuals presenting to a psychiatric emergency department were not aware of their BPD diagnosis prior to short-term hospitalisation (Artioli et al., 2022). In Sisti et al.'s (2016) study, uncertainty was the most common reason not to disclose a diagnosis of BPD. Diagnostic uncertainty is normal in clinical practice and often bipolar disorder is misdiagnosed (Ruggero et al., 2010; Shen et al., 2018), however none of the current participants discussed having their bipolar disorder diagnosis withheld from them. It is likely,

then, that the lack of disclosure of BPD either represents a knowledge gap, in that clinicians are not confident in managing and treating BPD, or it may be evidence of the stigma against BPD.

5.6.3. Differences in stigma between borderline personality disorder and bipolar disorder.

A key finding from the current study was that participants perceived BPD to be more stigmatised than bipolar disorder. Stigma is a negative social attitude attached to an element of an individual that may be viewed as different. Participants perceived BPD to be far more stigmatised than bipolar disorder, both by themselves and the wider public, and this impacted whether they accepted the diagnosis. Even participants who accepted the BPD diagnosis were aware of the stigma associated with the disorder: William, for example, described BPD as a "*more unpleasant problem to have"* than bipolar disorder, and Kate said, "*there was a lot of stigma around [BPD], in a way that there wasn't about bipolar*". Whilst participants such as William and Kate accepted BPD as a part of their diagnosis, others denied the presence of BPD, and it is likely that their perceptions of the stigma around the disorder explain this denial. This was evident in the stigma personally held by some participants towards BPD. Mary, for example, said, "*I thought I had a nice personality*", expressing the negative view of personality disorders as representing something wrong with the individual. Levels of self-stigma have previously been found to be high among individuals with BPD (Grambal et al., 2016), and one study found that low self-esteem in individuals with BPD or social phobia was linked to self-stigma as measured by perceived legitimacy of discrimination against the individual (Rüsch et al., 2006). Recently, a Finnish study with eight outpatients with BPD recorded 40 weekly psychoeducational group sessions and found that participants were aware of the negative

stereotypes attached to BPD and applied these labels of themselves, creating feelings of worthlessness and shame (Koivisto et al., 2022). In the current study, participants expressed fears of experiencing stigma due to their awareness of these negative stereotypes. Several participants discussed disclosing bipolar disorder but not BPD, and participants such as Chloe and Lucy linked this practice to the stigma around BPD. Anticipated stigma, or the degree to which individuals expect that others will stigmatise them, has been linked to negative effects on psychological and health wellbeing in individuals with concealable stigmatised identities, such as mental illness (Quinn & Chaudoir, 2009). Previous research has highlighted experiences of self-stigma in bipolar disorder (Brohan et al., 2011; Heydari et al., 2020; Richard-Lepouriel et al., 2020). However, participants in the current study often expressed anticipated and experienced stigma for BPD which they did not express for bipolar disorder. For example, in the above discussion about disclosure, both Chloe and Lucy describe disclosing bipolar disorder, and in particular Chloe discussed choosing to disclose bipolar disorder over BPD due to concern about the stigma associated with the latter.

Stigma was also evident in participants' perceptions of their experiences with healthcare professionals, which further impacted the degree to which they associated with the two diagnoses. Participants who related to bipolar disorder but not BPD often expressed more negative interactions with healthcare professionals around the BPD diagnosis. Chloe, for example, discussed the idea of "*contempt*" in her interactions with healthcare professionals when she was diagnosed with BPD alone, and Mary highlighted the difficulty in getting an appointment with "*any doctor"*, which she perceived to be due to the BPD diagnosis. Previous research has highlighted perceived negative interactions between healthcare professionals and individuals with BPD (Carrotte et al., 2019; Nehls, 1999; Ng et al., 2017). An Australian study exploring treatment in BPD found that many of the participants felt there was a lack of communication and understanding from healthcare professionals (Carrotte et al., 2019).

Studies have suggested that healthcare professionals can hold a subconscious stigma towards BPD as a diagnosis. In 1988, Lewis and Appleby published a paper naming individuals with personality disorders 'the patients psychiatrists dislike' (Lewis & Appleby, 1988), in which psychiatrists who read a case history after being told the individual had a personality disorder were more likely to express negative attitudes about the patient than participants who read the same case history with no previous diagnosis in mind. More recent research has suggested that this stigma around BPD still remains in clinical practice (Bodner et al., 2015; Chrysovalantis & Stelios, 2022; Dickens et al., 2022; Lam et al., 2016; Markham, 2003). For example, one study found that mental health professionals explicitly given the BPD diagnostic label whilst watching a video of a patient reported fewer reasons to be optimistic about that patient than other mental health professionals who had not been given the label (Lam et al., 2016), and a UK study found that psychiatric nursing staff were pessimistic about patients with BPD and were more negative about their experiences of working with this group than they were with patients with schizophrenia (Markham, 2003). Researchers have attempted to explain this pattern of stigma, arguing for a self-fulfilling prophecy in BPD where preconceptions about patients with BPD influence the behaviour of healthcare professionals with these patients, which in turn influences the behaviour of individuals with BPD in healthcare settings (Aviram et al., 2006). Negative interactions with individuals with bipolar disorder and the healthcare system have also been highlighted in previous qualitative research, with Inder et al. (2010) finding that many of their 15 participants experienced unhelpful contact with healthcare professionals, with participants feeling that healthcare professionals were uninterested in them as individuals or viewing their clinicians as untrustworthy. However, in the current study participants with comorbid BPD in bipolar disorder often expressed more positive experiences where bipolar disorder was concerned in interactions with healthcare professionals: Chloe, for example, felt that bipolar disorder led to being treated as a patient, whilst BPD led to being

treated with contempt. This perceived lack of understanding and negativity towards BPD in a healthcare context further alienated several participants from the disorder, leading to a rejection of the diagnosis. For several participants, this is turn led to further disagreement with healthcare professionals about the focus of their treatment. This may be evidence of the self-fulfilling prophecy discussed by Aviram et al. (2006). Participants who perceived healthcare professionals to view BPD negatively also discussed BPD negatively themselves and seemed less likely to engage with treatment for the disorder as a result.

5.6.4. Positive healthcare experiences in comorbid borderline personality disorder and bipolar disorder.

Participants who discussed more positive experiences with healthcare professionals often were more positive about the two disorders in general. Working in partnership with healthcare professionals has been suggested to help individuals identify with an illness (Hackmann et al., 2019), and shared decision making has been linked to increased patient satisfaction and treatment engagement (Duncan et al., 2010; Thomas et al., 2021). Previous qualitative research has found that building trust and a positive relationship with healthcare professionals is important to treatment in both BPD (Langley & Klopper, 2005; Perseius et al., 2005; Romeu-Labayen et al., 2020) and bipolar disorder (Keeffe et al., 2019; Vallarino et al., 2019; Warwick et al., 2019). What the current study adds to these findings is the importance of this relationship in helping individuals with comorbid BPD and bipolar disorder to accept both diagnoses. Participants in this study who accepted both BPD and bipolar disorder as diagnoses all gave examples of engagement with their diagnosis and treatment, with descriptions of working in partnership and shared decision making with their clinicians. For example, Arthur and Hailey felt involved in the diagnostic process and that time was taken to make both bipolar

disorder and BPD diagnoses, and both identified with a comorbid diagnosis of bipolar disorder and BPD. Previous qualitative research with individuals with mental illness has highlighted that individuals who feel involved in the process of diagnosis have a better comprehension of their illness and feel more positive as a whole, whilst those who feel uninvolved in their diagnosis feel puzzled and anxious (Pereira et al., 2022). As participants who did not identify with BPD but identified with bipolar disorder tended to describe less engagement with their diagnosis and treatment for both BPD and bipolar disorder, an open and honest discourse and keeping individuals informed throughout diagnosis and treatment may be important in a comorbid BPD and bipolar disorder population in order for individuals to accept both disorders. Participants who accepted both BPD and bipolar disorder were more positive about their treatment and recovery, whilst participants who rejected the BPD diagnosis expressed greater difficulty in engaging with treatment. This is a complex area in this population, as participants who described negative experiences with healthcare professionals often associated a BPD diagnosis with dismissal and lack of treatment; accepting both diagnoses is also linked to participant perception of healthcare stigma against BPD. Addressing this perceived negative view of BPD in the healthcare profession and using a more open, discursive approach to diagnosis in comorbid BPD and bipolar disorder is likely to be important in treating this comorbidity.

5.7. Strengths and limitations.

This is the first study known to this researcher that explores the experiences of individuals who have been clinically diagnosed with both BPD and bipolar disorder, presenting an opportunity to better understand the comorbidity from the viewpoint of those affected. The strengths of this study include the role of a single researcher in conducting, transcribing,

and analysing all interviews, allowing full immersion into the data. A personal reflective diary was also kept throughout the interview process to help the researcher consider how their own values impacted their interviews and analysis, and reflection was continued throughout the process. By developing the topic guide through the interviews, the researcher ensured that areas of interest from interviews that had already been completed were explored further. This iterative approach helped to ensure the data collected explored the topics that were initially of interest to the researcher, but also the topics raised by participants.

The limitations of this study lie in the judgement of the quality of data and recruitment decisions. There are many different ways to assess quality and rigor in qualitative research, and a large amount of debate on the best approach (Johnson et al., 2020; Meyrick, 2006; Palinkas, 2014; Rolfe, 2006). In the current study, quality of data was judged through discussion with supervisors, reflection and constant reading and rereading of the transcripts. However, during later analysis following conclusion of the interviews, further areas of interest were revealed that may have been useful to explore in interview. In particular, the researcher noted that participants were likely to describe their experiences in terms of symptoms rather than a specific disorder, and it may have been helpful to elucidate which disorder participants attributed these symptoms to in order to further understand the impact of the comorbidity and the different perceptions participants held of bipolar disorder and BPD.

Although purposeful sampling was used to recruit for variation in this study, individuals who responded to recruitment and agreed to take part were more likely to have had negative experiences with BPD than non-responders. Participants were recruited for variation, with a split between those who reported finding a personality disorder diagnosis helpful or unhelpful to their treatment, however examining the responders versus non-responders showed that individuals with negative experiences were more likely to participate. It may be that by focusing on this aspect those recruited to this study do not represent the views of the wider

population on the diagnosis of BPD in bipolar disorder. Although this may mean more negative views are represented, it also allowed this study to explore the reasons for this negativity in greater detail, which may have repercussions for the diagnosis of this comorbidity.

5.8. Chapter summary.

This chapter detailed a qualitative study exploring the diagnosis of BPD in bipolar disorder. In total, 15 participants were interviewed about their experience of receiving a diagnosis of both disorders, and the main theme developed through thematic analysis was *"I'm not ashamed of being bipolar, but I am ashamed of having the borderline."* Some participants expressed a dislike of the BPD diagnosis stemming from a lack of previous knowledge about the diagnosis, fear of expected stigma and perceived experiences of stigma in healthcare settings. The diagnosis of bipolar disorder was often seen to be preferable, and even where the two diagnoses were both accepted participants still favoured the label of bipolar disorder over BPD. This preference for bipolar disorder likely represents the perceived stigma of BPD and the experiences of stigma reported by participants, whilst the greater public profile of bipolar disorder and perceived increased understanding for the illness made it easier for participants to accept that as a part of their identities. The following chapter will consider the results of this qualitative study alongside the previous quantitative studies of the prevalence and correlates of BPD in bipolar disorder, in order to integrate the three studies and explore what their results mean as a whole.

Chapter 6. Discussion and conclusions.

6.1. Chapter overview.

This chapter will integrate and discuss the key findings from across the three studies of this thesis. The integration process highlighted two key areas that are discussed in detail in this chapter: the confusion of receiving a comorbid BPD and bipolar disorder diagnosis, and the perceived helpfulness of the BPD diagnosis for treatment of individuals with bipolar disorder. This chapter will also conclude the findings of this research and examine strengths and limitations, implications, and suggestions for further research.

6.2. Key findings.

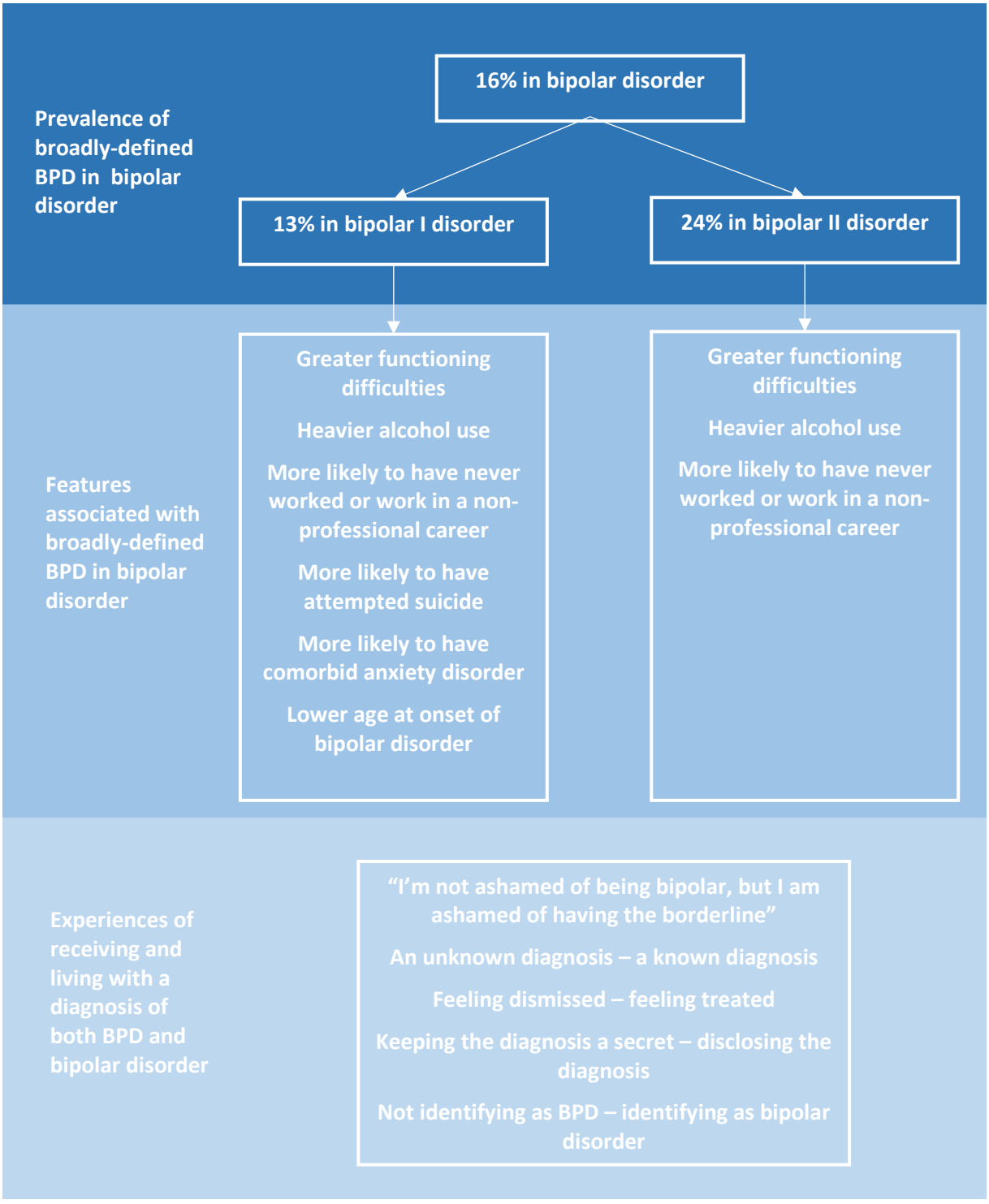
Figure 6.1 summarises the key findings of this thesis. One in eight participants with bipolar disorder reported receiving a clinical diagnosis of BPD at some time in their lives, and one in six participants reported either a clinical diagnosis of BPD or being described as borderline by a healthcare professional. A diagnosis of BPD was twice as common in bipolar II disorder than bipolar I disorder. BPD was more prevalent than diagnoses of emotionally unstable personality disorder (EUPD), although almost one in five participants had been told they had both diagnoses. Bipolar disorder was diagnosed first in the majority of participants, and a change in diagnosis from BPD to bipolar disorder or vice versa affected an estimated one in six individuals who had received both diagnoses. Almost half of participants reported finding a personality disorder diagnosis unhelpful to their bipolar disorder treatment, whilst just under a third believed a personality disorder diagnosis was helpful.

Participants with BPD in bipolar disorder were significantly more likely to have experienced recent difficulties in self-care, social and occupational functioning, and BPD was associated with heavier alcohol use and lower occupational status in both bipolar I and II disorder, as well as history of suicide attempt, presence of an anxiety disorder and a younger age at bipolar disorder onset in bipolar I disorder. History of childhood abuse was significantly associated with BPD in both bipolar I and II disorder in univariate analysis, however this was no longer significant when controlling for other significant clinical correlates, such as history of suicide attempt and younger age at onset of bipolar disorder.

The qualitative study found that there are those who accepted both disorders and those who accepted only bipolar disorder. Participants who felt that BPD was a stigmatising label actively rejected the diagnosis. In cases where participants accepted both disorders, positive

experiences with healthcare professionals were described, whilst in individuals who only accepted bipolar disorder often experiences were more negative, especially concerning BPD.

Figure 6.1. *Summary of key thesis findings.*



BPD = borderline personality disorder. Broadly-defined BPD includes clinical diagnosis of BPD or being described as borderline by a healthcare professional.

6.3. Integration of studies.

As part of the mixed methods approach to this thesis, the three studies were considered as a whole to develop understanding of BPD in bipolar disorder. Two key areas developed during integration: the confusion of BPD in bipolar disorder, and the perceived helpfulness of BPD diagnosis in bipolar disorder.

6.3.1. Confusion of borderline personality disorder in bipolar disorder.

The results of the prevalence study presented in **Chapter 3** and the qualitative study presented in **Chapter 5** highlight the challenges for individuals who have received a diagnosis of BPD and bipolar disorder, associated with making sense of the comorbidity. In the qualitative study, participants discussed the difficulty in identifying with both disorders and the confusion of receiving two diagnoses. When considered alongside evidence from **Chapter 3** that about one in six participants had experienced a change in diagnosis from bipolar disorder to BPD or vice versa and one in fifteen had experienced a change in both directions at some time in their lives, this highlights the challenge of receiving two diagnoses for the individuals affected. Taken together, the results of this thesis highlight the confusion of receiving and making sense of multiple diagnoses, especially when those diagnoses are subject to change.

The current findings highlight the dynamic nature of diagnosis in mental health. Research has highlighted the difficulty and confusion associated with changes in diagnosis. A review of 78 papers on diagnostic practice in mental health highlighted that changes in diagnosis caused distress for patients (Perkins et al., 2018). Qualitative analysis of interviews with 45 participants with severe mental illness found that a change in diagnosis required greater support and explanation in order to help individuals adjust (Milton & Mullan, 2015). In

particular, Milton and Mullan's (2015) participants expressed the need for early communication that diagnostic change can arise, and the need for clinicians to acknowledge the changing nature of diagnosis. In this thesis, one in 15 participants reporting both BPD and bipolar disorder diagnoses had experienced a change in diagnosis in both directions: from BPD to bipolar disorder and vice versa. In the qualitative study, participants expressed the confusion associated with this changing diagnosis: Jessica, for example, discussed the helplessness associated with being told her diagnosis had changed from bipolar disorder to BPD in the theme *feeling dismissed – feeling treated*. Other participants in the current research who had experienced a more open discussion with clinicians around diagnosis, as advocated for by the participants of Milton and Mullen's (2015) study, were less confused about the changes in diagnosis and more accepting of both diagnoses. For example, Arthur described discussion with his doctor leading to the BPD diagnosis, and the realisation this did not fully explain his experiences leading to the diagnosis of bipolar disorder being added.

This thesis has also highlighted the confusion for individuals with a comorbid BPD and bipolar disorder diagnosis associated with the BPD diagnosis itself. In the first study presented in this thesis in **Chapter 3** where participants responded to a survey on BPD in bipolar disorder, the results highlighted the complexity of the BPD diagnosis, with the majority of participants reporting receiving a diagnosis of BPD, but a small minority receiving a diagnosis of both EUPD and BPD, and additional participants only reporting being described as borderline; in the qualitative study presented in **Chapter 5**, participants discussed a lack of knowledge around BPD compared to bipolar disorder and highlighted difficulties with identifying with BPD which were not evident in identifying with bipolar disorder. These results highlight the complexity associated with the actual diagnosis of BPD within a bipolar disorder sample. The role of labels in mental health research and the impact of diagnoses on individuals affected is well-researched, and this is particularly true in BPD. Researchers have argued that the operational

construct of BPD is limited, and that the competing concepts of BPD can result in diagnostic confusion (Akiskal, 2004; Tyrer, 2020). Tyrer (2020) argued that it is useful to avoid the diagnosis of BPD, as it defies proper classification; Akiskal (2004) concluded that BPD as a construct will eventually self-destruct itself. The different concepts of BPD may be reflected in the use of different terms: BPD, EUPD and, more recently, the use of a 'borderline' descriptor in the dimensional model of personality disorders in ICD-11. Whilst there is no known published research exploring the role of these different terms for individuals affected, the confusion of multiple terms has been explored before. Participants in previous comorbidity research have discussed the frustration in interpreting terms such as 'comorbidity' or 'dual diagnosis' when little information had been given to them, as well as expressing the fear of stigma associated with these terms (Holt & Treloar, 2008). Previous research in mental health diagnoses has also highlighted the confusion associated with receiving a diagnosis without clear information (Pereira & Skovdal, 2022). This lack of information was reflected in the current research as many of the qualitative participants expressed little knowledge of what the BPD diagnosis means and confusion over the different terms used to define BPD, which is particularly important as the prevalence results suggest that, although BPD is the most common diagnosis, participants also received diagnoses of EUPD, and many participants were told they had 'borderline' features with no formal diagnosis. The level of confusion associated with diagnoses has led to participants in several studies questioning the value of receiving a mental health diagnosis (Milton & Mullan, 2015; Pereira & Skovdal, 2022), and this is reflected in the current finding that more participants found a personality disorder diagnosis unhelpful than helpful for treatment. It could be argued this is particularly valid in comorbid mental health disorders, where multiple diagnoses may complicate treatment and confuse individuals affected.

This thesis also adds to previous research which has highlighted the confusion associated with having two or more diagnoses at the same time. One of the key findings in the current qualitative study was the difficulty in relating to both disorders: in the theme *not identifying as borderline personality disorder – identifying as bipolar disorder*, participants discussed ways in which they did and did not relate to the two diagnoses, with some participants viewing both diagnoses as one illness to manage, others viewing them as distinct entities and, finally, some participants only relating to one diagnosis. Previous research has highlighted a similar confusion for participants with comorbidities in making sense of multiple diagnoses. In a qualitative systematic review of articles exploring cancer and comorbid illness experiences, Cavers et al. (2019) emphasised the importance of maintaining a sense of control and one's existing personal identity. This study is particularly interesting as it highlighted differences in whether or not participants viewed multiple conditions as one or whether they distinguished between them and prioritised a single diagnosis. A similar distinction was found in the current qualitative study. Kate and James highlighted that they viewed bipolar disorder and BPD as one illness to manage; others chose to reject the BPD diagnosis and prioritise the bipolar disorder diagnosis. Another way in which participants in this thesis made sense of the comorbidity was by attempting to differentiate between the symptoms of the two disorders, a process evidenced by participants such as Hailey and Arthur. Previous research has also highlighted how individuals find specific connections and comparisons among health conditions and compare the symptoms and conditions caused by each (Cheng et al., 2019), and this process more closely resembles the way in which Arthur and Hailey both attempted to make sense of how the two disorders interact. Arthur, for example, stressed that he felt bipolar disorder decided where he was coming from, and the emotions of BPD reacted with that; similarly, Hailey understood the two disorders by equating bipolar disorder with moods and BPD with emotions. However, this process of comparison between disorders highlighted

by Cheng et al. (2019) was made more difficult for participants in the current study by the overlap of symptoms. The results of the study presented in **Chapter 4** highlight that many of the correlates of BPD in bipolar disorder are associated with potential symptoms of the two disorders: use of drugs and alcohol, suicidality, and functioning difficulties, for example. BPD appears to have an additive effect on these symptoms in bipolar disorder, however for participants in the qualitative study it was difficult to understand which experiences related to which disorder, highlighting the confusion of this comorbidity.

The findings of this thesis differ from other studies examining the potential confusion of a comorbid diagnosis in several ways. Previous research into comorbidities has highlighted the pragmatic concerns of having multiple disorders, such as the difficulty of managing different appointments (Whitson et al., 2011), the physical restrictions associated with multiple physical illnesses (Cheng et al., 2019) or the need to juggle and manage treatment for the comorbidities (Chayama et al., 2021). However, in the current research the challenges associated with having multiple disorders focused on less pragmatic concerns. Participants in the qualitative study were more likely to discuss the confusion of identity and fear of stigma in a comorbid BPD and bipolar disorder diagnosis than to discuss practical implications of the comorbidity on their lives, although this does not mean they did not have these concerns. For example, although participants in the qualitative study discussed concerns over receiving treatment, these were linked to the fear of stigma for BPD and the belief that they were experiencing dismissal from services due to that diagnosis, rather than the practical considerations of juggling two conditions. Whilst practical concerns could be inferred from the findings of the two quantitative studies – for example, changes in diagnosis or the severity of symptoms experienced – the greater concern raised in qualitative interviews was questions of stigma and identity, emphasising the importance of this area in comorbid BPD and bipolar disorder.

6.3.2. Perceived helpfulness of a borderline personality disorder diagnosis in bipolar disorder.

In the prevalence study in **Chapter 3**, 45% of participants expressed that receiving a personality disorder diagnosis had been unhelpful to their bipolar disorder treatment, whilst 27% reported it to have been helpful. In **Chapter 5**, the qualitative study built on these findings by exploring with participants possible reasons why BPD was seen as unhelpful: participants particularly raised the issue of stigma in healthcare, and the perception of dismissal in care due to the BPD diagnosis.

The stigma associated with BPD in healthcare is a key topic in the literature and leads to difficulty in treating BPD, as discussed in **Chapter 5**. However, there is evidence from the literature that comorbidities in general are difficult to treat: having a comorbidity can be related to delays in interventions (Whitson et al., 2011) or the potential for a negative impact on one condition through treatment of another (Morris et al., 2011). One of the key potential reasons raised for difficulty in treating comorbidities is the lack of understanding of comorbid conditions (Adamson et al., 2020; Chayama et al., 2021; Janke et al., 2016; Morris et al., 2011). It is possible that the participants in this thesis associated the difficulty in accessing care with the BPD diagnosis, when it may have been reflecting the difficulty of treating comorbidities in general. The prevalence results found that almost half of participants who had received a BPD diagnosis did not find it helpful to their bipolar disorder treatment, and participants in the qualitative study discussed the difficulty in accessing appropriate care with a BPD diagnosis. This is particularly important as the study presented in **Chapter 4** found that BPD is associated with a worse course of bipolar disorder. For example, the finding that BPD diagnosis is associated with suicide attempts highlights the importance of treatment in this population. Furthermore, the qualitative study findings suggest that some of the correlates of BPD found in

Chapter 4 may be linked to perceived lack of appropriate treatment, with Chloe discussing how she used to overdose to receive the care she felt she was not being given when she was only diagnosed with BPD.

It is possible that rather than reflecting limitations of the BPD diagnosis alone, the negativity towards the contribution of a BPD diagnosis to treatment may also reflect the difficulty in accessing treatment for comorbidities. Previous research into treatment in comorbidities has highlighted the need for a more 'whole person approach'. Qualitative comorbidity research has emphasised feelings of frustration at the limited support in managing and understanding comorbidities (Janke et al., 2016) and feelings of being let down by existing services (Adamson et al., 2020). Participants across studies seem to highlight the lack of a holistic approach to their comorbidity and a lack of understanding across disorders (Chayama et al., 2021; Janke et al., 2016; Morris et al., 2011). In interviews with 21 participants with chronic multimorbidity, Morris et al. (2011) also highlighted the conflict with healthcare professionals where their illness management priorities were seen to conflict with the participants, something that was reflected in the qualitative study of the current research, where participants such as Mary or Chloe expressed anger at a focus on BPD when they had prioritised bipolar disorder. These treatment difficulties may also be reflected in the study presented in **Chapter 4**; although temporal conclusions cannot be drawn from the lifetime measures used, a potential explanation for heavier alcohol use as a correlate of BPD is the adopting of alternative coping mechanisms due to perceived failure of treatment, as previous research has highlighted the use of alcohol as a coping mechanism in BPD (Kaufman et al., 2019).

Almost one in three participants (27%) in the prevalence study in **Chapter 3** reported that a personality disorder diagnosis was helpful to their bipolar disorder treatment. Potential reasons for this were explored in the qualitative study in **Chapter 5**. Participants who identified

with both BPD and bipolar disorder tended to perceive their experiences with healthcare professionals as more positive. These participants discussed a positive, open relationship with their healthcare professionals and evidenced a greater knowledge of both disorders. The importance of a whole-person approach to treatment in comorbidities has already been stressed. Research has emphasised the need for an integrative approach to diagnosis and treatment in comorbid conditions (Cavers et al., 2019; Chayama et al., 2021). This was evident in the qualitative study in **Chapter 5**: participants who described a more open and discursive diagnostic process and relationship with their healthcare provider had more positive views on the comorbid diagnosis, perhaps reflecting the third of individuals with both BPD and bipolar disorder who found a BPD diagnosis helpful to their treatment. When comparing the responses of qualitative participants to the BPD questionnaire, seven of the 14 participants with data available reported a personality disorder diagnosis as unhelpful to their treatment, and all seven of these participants rejected the BPD diagnosis to a certain degree and discussed negative treatment experiences. On the other hand, the four participants who reported a personality disorder diagnosis as helpful to their treatment accepted the BPD diagnosis and discussed positive experiences with healthcare professionals, with all four discussing time being taken to make a diagnosis, experiences of psychoeducation and open and collaborative discussions about treatment. Previous comorbidity research has highlighted the need for positivity and acceptance (Cheng et al., 2019; Clarke & Bennett, 2013), something which was reflected in participants who identified with both disorders in the current research. This suggests rather than not disclosing the diagnosis or choosing not to diagnose BPD, it would be more beneficial to encourage open and collaborative diagnosis and treatment in this comorbidity. This will help individuals affected by comorbid BPD and bipolar disorder, as if they have not been told they have BPD this prevents them from discussing the diagnosis and

learning more about the disorder. Since the current qualitative research has highlighted the impact of lack of knowledge about BPD in bipolar disorder, this discussion is vital.

6.4. Implications.

There are several implications to the findings of this thesis. One of the key areas raised by participants in the qualitative study was personal and perceived professional lack of knowledge of BPD in bipolar disorder, which was further highlighted by the use of different terms to diagnose BPD found in the prevalence study. This is an important gap, as the prevalence study suggests that one in six individuals with bipolar disorder will be diagnosed with BPD at some time in their lives, and it is possible the actual number will be higher as this was a self-reported clinical diagnosis, and research suggests that clinicians sometimes will choose not to disclose a BPD diagnosis to an individual (Sisti et al., 2016). As this is a prevalent concern, greater clarity around the BPD diagnosis is needed in bipolar disorder. Individuals with bipolar disorder need to be aware of this potential comorbidity and the symptoms of BPD. This could be achieved through educating individuals with bipolar disorder through charities, such as Bipolar UK, and talking about BPD at bipolar disorder support groups.

This thesis also has implications for how clinicians explain a diagnosis of BPD in the context of bipolar disorder to individuals, whether this represents a change in diagnosis or an additional diagnosis. One of the main areas raised by participants in the qualitative study was the difficulty relating to BPD alongside a diagnosis of bipolar disorder, as well as the perception of dismissal from services due to the BPD diagnosis. An open, collaborative approach to diagnosis and treatment was seen as a positive by participants who experienced it, allowing them to identify with both disorders. Working with individuals in clinical settings to come to a

comorbid BPD and bipolar disorder diagnosis is therefore vital. Disclosure of the diagnosis and an open discussion around treatment decisions will help individuals feel included in their own care and relate to the disorders.

Finally, this thesis has implications for awareness on the course of bipolar disorder where BPD has been diagnosed. The studies examining the correlates of BPD in bipolar disorder and the experiences of individuals who have received both diagnoses have highlighted the severity of bipolar disorder associated with the diagnosis of BPD. Greater awareness around this relationship, and educating clinicians on the correlates of BPD in bipolar disorder, could help to identify this subgroup of individuals with bipolar disorder to ensure they are receiving prompt and appropriate treatment.

6.5. Strengths and limitations.

Strengths and limitations of each individual study have been discussed in the respective chapters, however the strengths and limitations of this thesis as a whole will now be considered. A key strength of this thesis was the use of a large, well-characterised sample of individuals with bipolar disorder across three studies. Past research in this area has been limited to small samples, or use of either registry samples or community samples with limited contextual knowledge on participants. This thesis used the BDRN's participants, which allowed analysis to be carried out in a large sample with vast and varied data, including a large number of sociodemographic variables and clinical variables including comorbid diagnoses, medications taken and history of suicidality. Conducting a mixed methods study allowed the correlates and prevalence results to be further explored within a qualitative methodology, enabling potential explanations to be examined.

A second key strength in both the prevalence and correlates analysis was the consideration of bipolar disorder subtypes. Including bipolar I and II disorder was vital in both studies to add to existing findings in this area in one large sample. The use of a reported clinical diagnosis of BPD and the addition of EUPD and being described as borderline by a healthcare professional helped to capture clinical practice in diagnosing BPD in the UK and accounted for the different ways of diagnosing BPD in practice. In particular, previous studies using clinical diagnosis of BPD have not accounted for the use of a 'borderline' descriptor.

Limitations of this thesis include the sample of the qualitative study and the use of lifetime-ever measurements in both quantitative studies. An overall limitation of the BDRN sample used in this thesis was the lack of diversity. Due to the genetic focus of some of BDRN's research, participants are mostly white British. In particular, the use of BDRN participants in the qualitative study introduces potential bias as individuals were only approached if they were already participating in research. Future qualitative interviews conducted with a more representative sample of the UK population would be helpful to build on the current findings.

Furthermore, the data used in the two quantitative studies relied on lifetime-ever measurements, which could not account for causation. For example, it was not clear from the prevalence study when participants had received both diagnoses, which would have helped to further clarify the relationship between the two in clinical practice. In the analysis of correlates of BPD in bipolar disorder, the findings can only be understood as being associated with a BPD diagnosis, and no conclusions surrounding causation can be made. This thesis is therefore unable to determine whether BPD in bipolar disorder causes certain symptoms or features, or whether the presence of certain features in bipolar disorder is more likely to lead to a diagnosis of BPD.

6.6. Further research.

Future research should continue to clarify the relationship and comorbidity between bipolar disorder and BPD. Prospective, longitudinal research examining the correlates and diagnosis of BPD in bipolar disorder may help to further explain the comorbidity, as it will allow conclusions to be drawn on causality and the temporal relationship between the two disorders and the correlates of BPD. Conducting longitudinal, prospective research with a comorbid BPD and bipolar disorder group will, for example, help to clarify whether heavier alcohol use comes before or after the BPD diagnosis, or whether or not suicide attempts are likely to lead to the BPD diagnosis or come after receiving that diagnosis. Being able to explore temporal relationships in this way will help to clarify the relationship between BPD and bipolar disorder and the impact of receiving a BPD diagnosis in this population, as well as further understand the impact of the disorder itself on individuals with bipolar disorder.

Due to the limitations of BDRN's sample, future research may also consider the role ethnicity might play in the prevalence of diagnosis of BPD in bipolar I and bipolar II disorder. Future prevalence studies should also consider investigating BPD in a large UK sample of individuals with bipolar disorder using a different measure of BPD prevalence, such as number of BPD traits present or a research diagnostic criteria diagnosis of BPD.

Interviews with healthcare professionals around their experiences of treating and diagnosing comorbid BPD in bipolar disorder would be helpful to further understand treatment needs and current practice in this area. A larger qualitative study with a more representative sample of individuals with comorbid BPD in bipolar disorder would also be beneficial, to help further understand the way in which individuals who have been diagnosed with both disorders make sense of the comorbidity. In particular, future research should explore the experiences

of identity in comorbid BPD and bipolar disorder, to build on the current findings in a larger sample of individuals who are more representative of the UK as a whole.

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Appendices

Appendix A. Bipolar Disorder Research Network (BDRN) borderline personality disorder questionnaire.

1. Has a doctor or other health professional ever told you that you have bipolar disorder?

☐ YES ☐ NO ☐ UNSURE

IF YES: did they ever say it was any of the following (please cross all boxes all that apply):

- ☐ Bipolar I disorder / bipolar type 1
- ☐ Bipolar II disorder / bipolar type 2
- ☐ Bipolar not otherwise specified (NOS)
- ☐ Schizoaffective disorder
- ☐ Schizoaffective disorder bipolar type
- ☐ Cyclothymia

2. Has a doctor or other health professional ever told you that you have borderline personality disorder or emotionally unstable personality disorder?

☐ YES ☐ NO ☐ UNSURE

IF YES: did they ever say it was (please cross all boxes all that apply):

- ☐ Borderline personality disorder
- ☐ Emotionally unstable personality disorder

IF NO or UNSURE: Has a doctor or other health professional ever used the word 'borderline' about you, or said that you have borderline traits or borderline features?

☐ YES ☐ NO ☐ UNSURE

3. **IF YES to both question 1 and question 2 please answer question 3, if not please skip straight to question 4:**

a) Which were you told you had first out of bipolar disorder and borderline personality disorder (or emotionally unstable personality disorder)? (Please cross one box)

☐ Bipolar disorder first

☐ Borderline personality disorder (or emotionally unstable personality disorder) first

☐ Not sure

b) Were you ever told you had bipolar disorder and borderline personality disorder (or emotionally unstable personality disorder) at the same time?

☐ YES ☐ NO ☐ UNSURE

c) Were you ever told that you had changed from having bipolar disorder to borderline personality disorder (or emotionally unstable personality disorder)?

☐ YES ☐ NO ☐ UNSURE

d) Were you ever told that you had changed from having borderline personality disorder (or emotionally unstable personality disorder) to bipolar disorder?

☐ YES ☐ NO ☐ UNSURE

4. Has a doctor or other health professional ever told you that you have any other sort of personality disorder (for example, dissocial personality disorder, antisocial personality disorder, histrionic personality disorder, or just 'personality disorder')?

☐ YES ☐ NO ☐ UNSURE

IF YES: please specify if you can

5. **IF YES to either Q2 or Q4:**

Did you feel that being told you had a personality disorder was helpful to your treatment? (Please cross one box)

☐ Helpful to my treatment

☐ Unhelpful to my treatment

☐ Did not affect my treatment either way

☐ Not sure

Please provide further detail about your answer if you can:

Appendix B. Participant recruitment letter and reply slip for the qualitative study.

Dear [Participant],

My name is Emma Tickle and I am a member of BDRN currently undertaking my PhD. Thank you for your ongoing support of our research and completing the questionnaire pack we sent out with our research newsletter last year. You may remember that one of the questionnaires you completed was about other diagnoses you may have been given in the past and whether these had been helpful to your treatment in any way.

I am writing to ask if you would be willing to participate in a research interview about your experiences of having other diagnoses. If you are willing, the interview will be arranged for a time and place that is convenient for you and will likely take up to around an hour.

If you are willing to receive more information about taking part, I would be delighted to hear from you. Please contact me on 01905 542880 (this is our BDRN phone number so please ask for Emma - if there is no answer please leave a message and I will telephone you back very soon) or email me at moodresearch@worc.ac.uk with your telephone number and the best days/times that I can contact you. Alternatively, you can complete the enclosed reply slip and return this using the freepost envelope.

Thank you again for your ongoing support of BDRN research and I look forward to hopefully hearing from you soon.

Kind regards,

Emma Tickle

BDRN PhD Researcher

University of Worcester

Email: moodresearch@worc.ac.uk

Phone: 01905 54 2880

Reply Slip

Please complete this reply slip if you would like to receive further information about the study from Emma

Name: _____

Address: _____

_____

_____

Post code: _____

Phone number: _____

Email: _____

Best day and time to call:

_____

Please return this form to us in the pre-paid envelope provided.

Appendix C. Participant reminder letter for the qualitative study.

Dear [Participant],

You may remember receiving a letter recently about interviews I am conducting regarding the questionnaire pack sent out last year, particularly in relation to other diagnoses you may have received in the past. I am just writing to let you know that it is not too late to take part and I would be delighted to hear from you if you are willing to receive more information about the interviews.

If you would like to know more, please contact me on 01905 542880 (this is our BDRN phone number so please ask for Emma – if there is no answer please leave a message and I will phone you back) or email me at moodresearch@worc.ac.uk. Alternatively, you can complete the enclosed reply slip and return this using the freepost envelope.

Thank you again for your ongoing support of BDRN research and I look forward to hopefully hearing from you soon.

Kind regards,

Emma Tickle
BDRN PhD Researcher
University of Worcester

Email: moodresearch@worc.ac.uk
Phone: 01905 54 2880

Appendix D. Confirmation email for qualitative participants.

Dear _____,

Thank you once again for kindly agreeing to take part in a research interview. I am writing to confirm that I will be coming to visit you at home on **DATE** at **TIME**.

Please do not hesitate to contact me if you have any queries, or would like to change the time or date of my visit. My contact number is 01905 54 2880.

I look forward to meeting you then.

Kind Regards,

Emma TIckle

BDRN PhD Researcher

University of Worcester

Email: moodresearch@worc.ac.uk

Phone: 01905 54 2880

Appendix E. Initial topic guide for semi-structured interviews.

Introduction

I understand from your response to the questionnaire on personality disorders that at some point you've been told you've been diagnosed with borderline/emotionally unstable personality disorder and bipolar disorder. That's great, thanks, just to reiterate I'm interested in how having both diagnoses affects you in your everyday life.

You indicated on the questionnaire you were diagnosed with bipolar disorder / borderline personality disorder first, could you tell me a bit about when you were first diagnosed?

- How and when were you diagnosed?
    - How did you feel?
- Given information about the diagnosis?
- Did you tell friends/family? How did they react?

Repeat with second diagnosis.

You indicated that you've found a personality disorder diagnosis helpful/unhelpful. Can you tell me a bit more about why?

- Impact of the personality disorder diagnosis on treatment for bipolar disorder?
    - Has the diagnosis impacted interactions with healthcare professionals?

Do you feel your symptoms have impacted your day to day life?; Did receiving a diagnosis impact this is in anyway, good way or bad way?

- Your relationships with others?
- Your employment?

Close

I think that brings us to the end of my questions. Is there anything I haven't asked that you think is important, or anything you're surprised I didn't ask about?

Thank you so much again for agreeing to take part in this interview.

Appendix F. Final topic guide for semi-structured interviews.

Introduction

I understand from your response to the questionnaire on personality disorders that at some point you've received a diagnosis of borderline/emotionally unstable personality disorder and bipolar disorder. That's great, thanks, just to reiterate I'm interested in how having both diagnoses affects you in your everyday life.

You indicated on the questionnaire you were diagnosed with bipolar disorder/borderline personality disorder first, could you tell me a bit about when you were first diagnosed?

- How and when were you diagnosed?
    - How did you feel?
    - Ever heard of it before the diagnosis? If so where?
    - Given information about the diagnosis?
- Did you tell friends/family? How did they react?
- What do you understand a diagnosis of _____ to mean? / what does it mean to you?
- Ever diagnosed with any other personality disorder?
- Do you recognise symptoms in past behaviour before diagnosis?

Repeat with second diagnosis.

You indicated that you've found a personality disorder diagnosis helpful/unhelpful to your treatment. Can you tell me a bit more about why?

- Impact of the personality disorder diagnosis on treatment for bipolar disorder?
    - Has the diagnosis impacted interactions with healthcare professionals?
    - Mental health and non-specialist
- Ever admitted to hospital?
    - Physical/mental healthcare?

Do you feel your symptoms have impacted your day to day life?; Did receiving a diagnosis impact this is in anyway, good way or bad way?

- Your relationships with others?
    - Do others recognise your symptoms?
- Your employment?
    - Voluntary work?

Prompts

Alcohol use?

Self-harm?

Close

I think that brings us to the end of my questions. Is there anything I haven't asked that you think is important, or anything you're surprised I didn't ask about?

Thank you so much again for agreeing to take part in this interview.

Appendix G. Extracts from the researcher's reflective journal.

Extract One. Reflecting on the first interview conducted.

I've just completed my first interview with a participant. I think the interview went well, although I am feeling drained now. I knew that the interviews would be sensitive, but there is a difference between knowing and experiencing this. I think some of my own experiences with mental health services may have influenced my emotions during the interview, and perhaps made me a little less likely to probe as I was worried about projecting my own experiences into the questions I asked. In future interviews, I need to be more confident in my follow-up questions and less nervous about asking for clarification. I think this is something I can definitely work on in my next interview. Still, I think there's some really interesting data coming out of this.

Extract Two. Reflecting on the process of initial coding.

I am struggling with the coding. This is a very different experience from my undergraduate dissertation coding, I think because the content of the interviews is more intense and contains far more personal and sensitive information. I'm very aware that these are people who gave up their time to tell me about some quite distressing experiences and I need to do them justice with my analysis. Rereading all the transcripts was an emotional experience, but I have to be careful about not letting these emotions guide the coding. At the moment, the difference in how my participants talk about borderline and bipolar is really jumping out at me. The negativity towards borderline is obvious and it's hard not to let that cloud the other elements of these interviews. I am constantly worried I am doing this wrong.

Extract Three. Reflecting on the fit of themes.

I'm very anxious today. Something about my themes isn't working, and it's hard for me to determine what. I worry that I may never work this out. I know there's no right answer, but it's frustrating that I can't get my head around these themes. I think at the moment they're too descriptive, more like codes, and that there's not enough substance to them. "I was just an outsider everywhere" is too wide and "my life is just so much better than it was through treatment" isn't wide enough and is a bit of a catch-all for treatment experiences. I'm not happy with "I doubt my consistency in who I am" as I feel I just really like that quote but it doesn't necessarily reflect my data as a theme. I think the only theme I'm happy with is "I'm not ashamed of being bipolar, but I am ashamed of having the borderline". I think there's a lot more to unpick there and I need to focus on that for a little while. It's possible there's something to consider in how this theme relates to the others, interpreting it through this lens might actually help make my other themes less descriptive.

Appendix H. Example of familiarisation during thematic analysis.

Transcription:

can you expand on that what was it about it that- that made you feel maybe not so positive as the bipolar disorder?

it was just (pause) all this trauma has happened to me which is why there's this diagnosis that exists – all this trauma had happened yet I have the personality flaw (int: mhm) and it just didn't seem – didn't seem right didn't seem fair erm for me PTSD seemed to be far more (int: yeah) relevant than BPD erm – there's also a lot – as I you know go on with my journey – there's a lot of stigma even within mental health (int: mhm) of borderline personality disorder you know

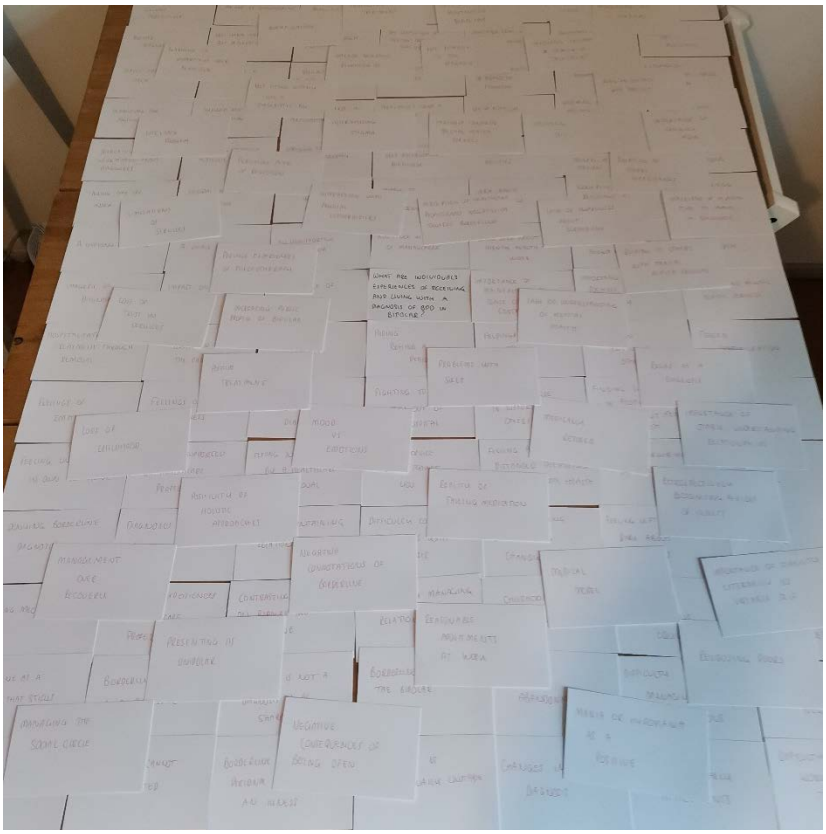
Freewriting Exercise

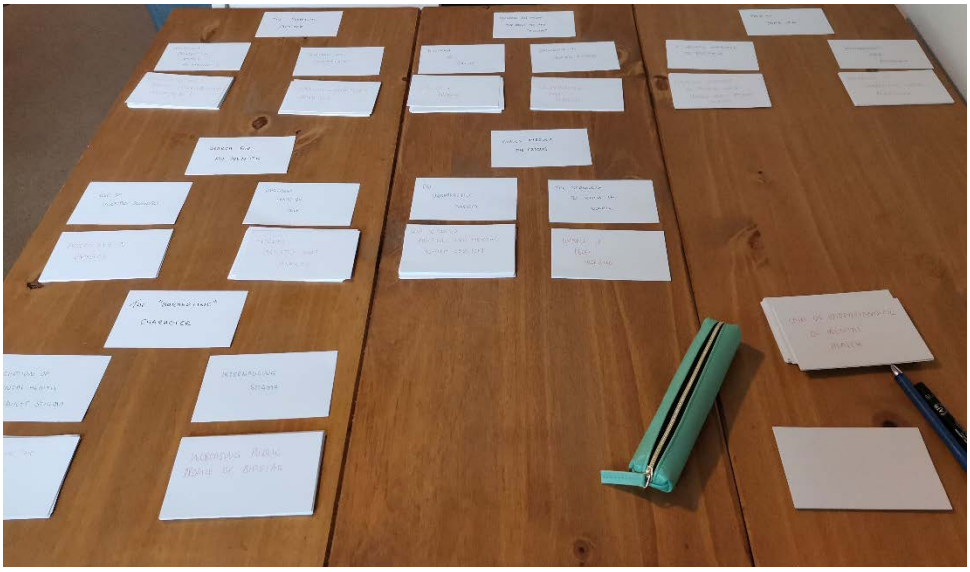
Reaction to borderline very different to reaction for bipolar, another example of different conception of two. Associates trauma that's happened to her as reason for personality disorder diagnosis. Idea of PD being a personal flaw, something wrong with you. Doesn't think it's fair → PTSD far more relevant in her eyes. Notes stigma towards BPD from mental health services, suggests psychiatrists don't know what to do with BPD patients → again idea of BPD being a difficult diagnosis to treat

Initial Notes

it was just (pause) all this trauma has happened to me which is why there's this diagnosis that exists – all this trauma had happened yet I have the personality flaw (int: mhm) and it just didn't seem – didn't seem right didn't seem fair erm for me PTSD seemed to be far more (int: yeah) relevant than BPD	*history of trauma* *feels diagnosis of BPD blames her for the trauma* *sense of shame; personality flaw - problem with the term PD?*

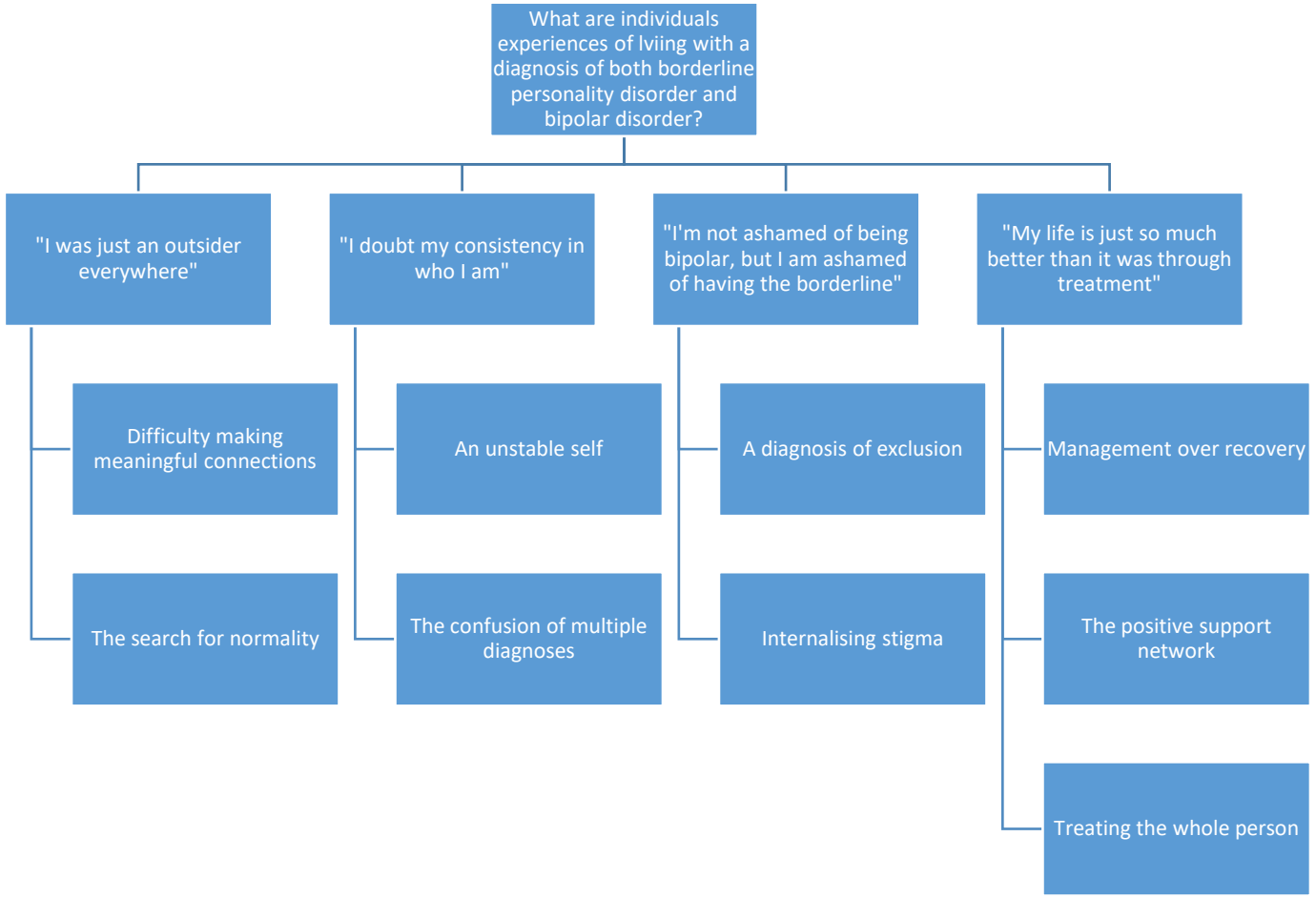
Appendix I. Example of index cards being used to develop codes into themes.





Appendix J. Example of an earlier version of themes.

An example of earlier themes developed through the thematic analysis. On reflection, the researcher felt that these themes were too descriptive and did not successfully fit the data.



“Bipolar, you get treated. Borderline, you can rot”: Experiences reported by people living with bipolar disorder and borderline personality disorder.

Submission to Images of Research, University of Worcester, 2022

My research suggests one in six people with bipolar disorder will also receive a diagnosis of borderline personality disorder. Those affected are likely to experience negative outcomes, such as heavier alcohol use and suicidality. This image is an attempt to illustrate one of the most striking quotes from my interviews with people with both disorders. Across interviews, people believed that borderline personality disorder was associated with a higher degree of stigma in healthcare settings than bipolar disorder. I hope that increasing understanding of this diagnosis in bipolar disorder will lead to better outcomes for this group.