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Differences Between Introverts and Extraverts with Bipolar Disorder

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Abstract

People living with bipolar disorder have vastly different presentations and experiences despite sharing a common diagnosis. While some research has explored the role of temperament in these different presentations (Azorin, Adida, & Belzeaux, 2015; Graham, Parker, Breakspear, & Mitchell, 2015; Iasevoli et al., 2013), little is currently known about whether individuals' levels of introversion or extraversion are related to the symptoms they experience or their general way of understanding their experiences with bipolar disorder. For this study, participants were asked to complete an online survey that measured their level of extraversion, their symptoms of mania, and background information concerning their diagnosis and treatment history. Participants were also asked to complete an open-ended questionnaire about their subjective experiences with bipolar disorder. This study used a qualitative design. Qualitative data collected from three responses were analyzed using Interpretive Phenomenological Analysis (IPA) in order to gain a better understanding of how introverted and extraverted individuals with bipolar disorder make sense of their experiences. Several major clusters of themes were identified from the participants' descriptions of their experiences: (a) common symptoms, (b) atypical experiences, (c) initial awareness of manic episode, (d) negative effects of symptoms, (e) positive experiences of symptoms, (f) seeking support, (g) most and least helpful coping mechanisms, and (h) effect on identity. While several of their experiences overlapped, some differences were noted in how participants of varying levels of extraversion described their experiences within each theme.

Keywords: introversion, extraversion, bipolar disorder

Differences Between Introverts and Extraverts with Bipolar Disorder

This dissertation explored the differences between the subjective experiences of introverts and extraverts with bipolar disorder. Researchers often focus on the ways in which people with a particular diagnosis are similar; they look for the symptoms, behaviors, risk factors, and experiences that the clients have in common. However, although presentations can vary greatly within a diagnostic category, it is much less common that we study the ways in which people with a particular diagnosis might differ. Better understanding the range of symptom expression can provide invaluable information about clients and can better inform the process of diagnosis. Specifically, psychologists do not yet know whether introverts with bipolar disorder may have a different presentation or experience their symptoms differently compared to extraverts with the same diagnosis. Bipolar disorder can be understood in a more nuanced way by examining the differences between introverts' and extraverts' experiences of their symptoms of bipolar disorder.

Significance of the Knowledge Gap to the Field

Bipolar Disorder and Possible Misdiagnosis of Introverts

Manic episodes in bipolar disorder are defined by specific criteria in the DSM-5, including inflated self-esteem, decreased need for sleep, pressured speech, distractibility, and increased goal-directed activity (American Psychiatric Association, 2013). However, the DSM-5 does not describe the individual differences that might affect the presentation of manic symptoms. Research has found relationships between some aspects of temperament and bipolar symptoms (Azorin et al., 2015; Graham et al., 2015; Iasevoli et al., 2013); however, little is known about any differences that might exist between introverts and extraverts regarding how they present during manic episodes. If introverts' experiences with and presentations of mania

does not match the DSM's definition, or even clinicians' understanding of mania, then introverts risk being under-diagnosed or misdiagnosed, and, subsequently, receiving inadequate or even damaging treatment.

The accuracy of the DSM criteria for bipolar disorder has been explored over time, and many revisions have been made. Examples of revisions include removing the category "Not Otherwise Specified," emphasizing changes in energy and activity level in addition to mood changes as a symptom of mania, adding specifiers such as "with anxious distress," and replacing "mixed episode" with a specifier of "with mixed features" (Regier, Kuhl, & Kupfer, 2013). Despite the numerous changes that have been made, the criteria are still applied in a broad manner to all clients, with no mention of the individual differences among clients. If introverts and extraverts were found to differ in their presentation of symptoms, then it might be deemed appropriate to expand the diagnostic criteria to be more inclusive of a variety of presentations. For example, the diagnostic criteria might be altered to specify that introverts are less likely to exhibit extreme talkativeness during a manic episode, or perhaps they might be more talkative compared to their usual state but could still appear to have an average level of talkativeness compared to the general public. Making this distinction could help clinicians be more diligent about what symptoms to look for and better understand how clients with the same diagnosis might present within a greater symptom range.

The diagnostic process is still an imperfect science, especially in the field of psychology where diagnoses are largely based on clinical judgment and lists of behavioral symptoms. Other diagnostic methods, such as neuroimaging techniques and genetic testing, are still in the early stages, so it is crucial that the diagnostic systems that are broadly used are as reliable as possible (Vieta & Phillips, 2007). While misdiagnosis is common among many types of mental illness,

bipolar disorder is especially prone to initial misdiagnosis (Bowden, 2001). The impact on clients can be devastating. There are many possible factors contributing to this problem, but much of the research to date has focused on how bipolar disorder is often initially misdiagnosed as unipolar depression (e.g., Bowden, 2001; Matza, Rajagopalan, Thompson, & de Lissovoy, 2005). This type of misdiagnosis is quite understandable in cases where clients initially present with a depressive episode; bipolar disorder cannot be diagnosed until the client has experienced at least one manic or hypomanic episode (American Psychiatric Association, 2013). However, many other factors impeding accurate diagnosis still remain. Personality differences, specifically differences in level of introversion, might be one factor that contributes to a misidentification of manic symptoms.

Researchers have suggested several ways of addressing this specific issue of clients with bipolar disorder being misdiagnosed with unipolar depression. For example, one study found that these particular clients tended to present with a higher rate of certain comorbidities compared to those who did have unipolar depression; the former group had a higher rate of comorbid diagnoses of personality disorders, alcohol abuse, and psychotic disorders. It was suggested that patients who present with this pattern of comorbid diagnoses undergo further screening for bipolar disorder in order to prevent misdiagnosis of depression (Matza et al., 2005). Another researcher suggested that misdiagnosis of bipolar disorder could be reduced through several strategies, such as awareness that patients might experience hypomanic symptoms but not meet the four-day duration for hypomania as stated in the DSM, and that patients might underreport manic or hypomanic symptoms, especially if they see hypomanic symptoms as being within a normal mood range for them (Bowden, 2001). Bowden focused on general patterns seen in patients with bipolar disorder; however, these findings raise the question of whether introverts or

extraverts might be more prone to underreport manic or hypomanic symptoms or view those symptoms as within a “normal” range.

Importance for Clinicians and for Clients with Bipolar Disorder

Clients may be impacted in several ways if clinicians gain a more nuanced understanding of how symptoms might look different for different clients. Clients with bipolar disorder who have been misdiagnosed or are at high risk of being misdiagnosed could greatly benefit from knowledge that could help them receive an accurate diagnosis and improve their overall understanding of their experiences. Being able to come to a clearer understanding of their symptoms more quickly can help prevent worsening of their condition and can increase effectiveness of treatments (Bowden, 2001). In addition, clients with bipolar disorder who have a higher level of introversion and present less flamboyantly might feel that they are more visible and more accurately represented within the field of clinical psychology.

Further, clinicians who interact with clients who have mood disorders could benefit from expanding their knowledge of how personality differences might affect clients’ presentations of symptoms. This more textured understanding of personality factors might help clinicians tailor treatment to better suit their clients’ individual needs (Scarr, 1992). If a clinician determines that a client suspected of having bipolar disorder is higher in introversion, the clinician can be more conscientious about looking for symptoms or behaviors associated with introversion. For example, if excessive talkativeness, a symptom of mania, were less common among introverts compared to extraverts, then the clinician should be diligent not to dismiss the likelihood of mania if an introverted client is not overly talkative.

Conceptual Framework

The conceptual framework for this study draws from two sources: (a) the study of social constructionism, and (b) personality theory exploring introversion and extraversion.

Social Constructionism

Social constructionism views knowledge as being based in social relationships. Individuals' knowledge about the world is both a product and creation of social contexts, and this process is influenced by culture and history (Peterson & Peterson, 1997). The way people understand the world depends on how they approach it, and how they approach it depends on social relationships. Outside of specific contexts, certain words and concepts have no meaning. Constructions then gain their significance through their use in social situations. Social constructionism assumes that there is no absolute truth, so the way in which people understand the world is not determined by what is there (Gergen, 2009).

Gergen (1985) explained that common understandings and categories that people generally accept cannot be assumed to be legitimate simply based on observation. For example, he describes how one cannot make assumptions about the reality of psychological disorders based only on what one observes, and he emphasizes that emotions only acquire meaning through the social context. In other words, when people come to an understanding about the world, that understanding happens through a process of engaging in relationships with others. It is not necessarily the empirical validity of a particular understanding that enables it to prevail, but rather it is social processes, and their emotional valence that allow it to survive (Gergen, 1985).

Using a social constructionist lens, it can be understood that the current depiction of mania, which is generally based on DSM-5 criteria, is not necessarily the "truth." There is no

ultimate truth that a specific set of symptoms exists which forms a manic episode; rather, people have constructed an understanding of what mania looks like, and this process of construction occurs through people's relationships with each other. This process is informed by the kinds of questions explored by research studies that may underpin our current understanding of what mania looks like. Notably, however, interpretations of manic symptoms also differ by culture; for example, one study found that psychiatrists from the United States, United Kingdom, and India gave different ratings of mania using the Young Mania Rating Scale after watching interviews of the same patients (Mackin, Targum, Kalali, Rom, & Young, 2006).

Some researchers have constructed an understanding that aspects of a person's temperament and other personality traits are related to symptoms of mania or depression (e.g., Akiskal et al., 2006; Azorin et al., 2015; Lozano & Johnson, 2001). However, this knowledge of specific nuances in symptoms has not yet become part of the overall social construction of bipolar symptoms. Furthermore, patients also play a role in the construction of the concept of bipolar disorder, but their voices are not often heard in the field of psychology nor given as much weight in the process. Introverts and extraverts may have different constructions of what the world looks like to them, yet these differences are not considered when applying the broad definition of mania to them. Including introverts' experiences in the construction of bipolar disorder could create a fuller and more accurate understanding of the disorder.

Social constructionism has been used in the past to engage clients' perspectives in both framing and treating bipolar disorder. For example, narrative therapy, which relies on a social constructionist framework, has been used to conceptualize and treat clients with bipolar disorder. This type of therapy assumes that there is no single truth, and it enables clients to create new meanings for their experiences and to retell their stories in order to overcome experiences of

oppression. One client with bipolar disorder was described as experiencing confusion when she was manic because she felt great while others were telling her she was ill. From a social constructionist lens, this client experienced a different reality than others did in regard to her mania because they had different constructions of what it meant to experience mania. The client's treatment involved helping her discuss what it meant to her to be manic and to help her reclaim her voice and re-story her experience (Ngazimbi, Lambie, & Shillingford, 2008).

Some of the current research has also used qualitative methodologies in order to explore the ways in which people with bipolar disorder understand and make meaning of their experiences. For example, Freedberg (2011) interviewed adults with bipolar disorder to understand how they used cognitive, affective, and spiritual strategies in order to cope with their experiences. The themes that emerged in the research were: (a) diagnosis brings understanding as well as change, (b) finding effective treatment is an unending process, (c) bipolar disorder is seen as a "third partner" in relationships, and (d) self-care is as important as formal treatment. This qualitative study was intended to help mental health providers better understand clients' perspectives and potentially incorporate the clients' coping strategies in treatment.

The social constructionist frame also encompasses social justice issues that have direct bearing on the significance of the proposed study. Specifically, society's current construction of introversion affects how introverts are treated. Biases exist in this society that favor extraverted qualities over introverted qualities. The issue is not that extraversion is truly "better" than introversion, but rather that people have constructed an understanding in which it appears more favorable and is treated as more advantageous in many contexts. For example, introversion is often misunderstood in school settings; teachers and parents tend to encourage outgoing behaviors while holding negative stereotypes about introverted qualities (Henjum, 1982). Even

the current research in the field of psychology demonstrates this bias through its assumptions that introverts are not as happy as extraverts and its focus on introverts' negative qualities and behaviors (Lischetzke & Eid, 2006; Lucas, Le, & Dyrenforth, 2008). Including introverts' experiences in the construction of diagnostic criteria could enable introverts to challenge stereotypes about them and help them achieve more equity in society, including gaining better access to appropriate treatment.

Introversion/Extraversion

Introversion and extraversion are two ends of a spectrum of behaviors. There are several different definitions of introversion that have been used in research. Carl Jung described introverts as individuals who direct activity and attention inward toward themselves, as compared to extraverts who direct attention outward toward the external world. (Jung, as cited in Downey, 1924). The NEO Personality Inventory, which measures several domains of personality including extraversion, uses a similar definition of extraversion. It describes extraversion as the amount and intensity of energy that an individual directs outward into the social world. Several facets comprise this domain: (a) warmth, (b) gregariousness, (c) assertiveness, (d) activity, (e) excitement seeking, and (f) positive emotions (Costa & McCrae, n.d.).

Introversion should be differentiated from the term "shyness," which many people mistakenly use as a synonym for introversion. While introversion is often associated with shyness, one does not automatically imply the other; not all introverts act shyly, and not all shy individuals are introverted. Shyness is considered a primary factor as a personality trait, while introversion is considered a higher order factor which can, but does not necessarily, encompass shyness. Shyness is also related to sociability and self-esteem, while introversion is not necessarily related to these factors (Briggs, 1988).

The personality traits of introversion and extraversion are also thought to fulfill a particular purpose in individuals' lives; they can be present with greater or lesser intensity depending on the situation. For example, it has been suggested that extraversion manifests in daily behaviors in order for the individual to pursue particular goals, and that different goals predict the differences in level of extraversion seen between individuals. For instance, people pursuing the goal of having fun might accomplish this by increasing their level of certain components of extraversion, such as increasing spontaneity. In contrast, people might meet a goal of working independently on a creative project by increasing aspects of introversion so they will have optimal focus on the task and avoid distractions from other people. It's possible that people have the ability to behave in a more introverted or extraverted manner depending on their situation and goals. In this way, introversion and extraversion might function as both personality traits and motivational functions (McCabe & Fleeson, 2012).

The personality factors of introversion and extraversion fall under the category of temperament. Temperament can be defined as, "individual characteristics that are assumed to have a biological basis and that determine the individual's affective, attentional and motor responses in various situations" (Rothbart, 1991, p. 4). Temperament is comprised of three broad dimensions, including extraversion. In addition to extraversion, the other dimensions of temperament include negative affectivity, which is related to negative emotions including fear, anger, and sadness; and effortful control, which is related to inhibition and focus, and leads to the development of self-regulation (Rothbart, 1991).

It is important to differentiate among distinct qualities of temperament, some of which have already been studied in relation to mania. In particular, affective temperaments including hyperthymic, depressive, anxious, irritable, and cyclothymic temperaments have been studied in

relation to mood disorders (Iasevoli et al., 2013). In a similar vein, Azorin et al. (2015) also examined several factors that included the affective temperaments of hyperthymic and cyclothymic temperaments in relation to subjects' predominant bipolar symptoms. These particular temperaments are focused on an individual's patterns of emotional and mood reactions, which could be more or less energetic or prone to cycling between depressive and hyperthymic behaviors. In contrast, introversion/extraversion is not exclusively defined by the individual's affective patterns, and has not been studied.

Literature Review

Individual Differences and the Nature of Introversion

It is now widely understood that individual differences stem from a combination of genetic and environmental factors. In the process of development, children's caregivers provide a specific environment that shapes their development in combination with their genetic predispositions. However, the children's behaviors also affect how their caregivers respond to them and structure their environment; thus, there is a bidirectional process of influence in child development (Scarr, 1992). In the context of the development of introverted traits, an individual might inherit a genetic predisposition for introverted behaviors. Introversion/extraversion is among several personality domains that are strongly affected by heredity (Digman, 1990). If the person's environment supports those behaviors—for example, the caregivers expose a child to more solitary than social activities—then the child will be likely to develop higher levels of introversion. However, children might not develop as strong introverted tendencies if their surrounding environment does not encourage it. Because the developmental influence is bidirectional, children's unique behaviors will also affect how the environment responds to them; for example, caregivers might respond to children who show preferences for introversion by

either encouraging or discouraging these tendencies. This dynamic process helps explain how both nature and nurture contribute to a wide range of introverted and extraverted behaviors.

In consideration of the individual differences that exist among people, some researchers have suggested that it would be beneficial to tailor therapeutic interventions to match particular temperamental and personality styles (Scarr, 1992). Such an individualized approach would address the challenge posed by a great variation of presentations even among individuals with the same psychiatric diagnosis, contrasting with psychologists' tendency to describe psychiatric disorders in terms of similarities among individuals within the diagnostic category. Indeed, most research is more concerned with distinguishing among diagnoses than among people with the same diagnosis. For example, many studies, (e.g., Forty et al., 2008), seek to distinguish between bipolar depression and unipolar depression, while others look for differences between the two subtypes of bipolar disorder (e.g., Maina et al., 2007). However, even individuals who are grouped together within a category such as bipolar disorder may possess differences from one another, including age, cultural background, personality, and even the symptoms they experience.

Individual differences in temperament have been found to explain some of the variance in symptoms of bipolar disorder. For example, individuals with bipolar disorder differ in their predominant polarity, with some patients presenting more often with depressive symptoms and others experiencing predominantly manic or mixed episodes. Researchers in one study found that these differences correlated with individual differences in temperament; for example, cyclothymic and hyperthymic temperaments were associated with predominantly manic or hypomanic polarity (Azorin et al., 2015).

Known Factors That Contribute to Misdiagnosis

Classification of symptoms. Mania is one of the major mood states that characterizes bipolar disorder and differentiates the disorder from unipolar depression. It is defined by several criteria in the DSM-5, including "A distinct period of abnormally and persistently elevated, expansive, or irritable mood and abnormally and persistently increased goal-directed activity or energy, lasting at least one week and present most of the day, nearly every day…" (American Psychiatric Association, 2013, p. 124); it must meet at least three of these criteria: grandiosity, decreased need for sleep, more talkative than usual, distractibility, and racing thoughts.

Full manic episodes are differentiated from hypomanic episodes primarily based on their severity and duration. Manic episodes are by definition more severe; they generally cause impairment to the individual's functioning, can include psychotic features, and must last for at least one week to meet DSM-5 criteria. Hypomanic episodes, in contrast, generally do not impair the individual's social or occupational functioning, do not include psychotic features, and must last for at least four days to meet criteria. The presence of a full manic episode is required to diagnose bipolar I disorder; hypomania without a history of full mania meets criteria for bipolar II disorder (American Psychiatric Association, 2013).

Mania and hypomania must also be differentiated from hypomanic personality; a hypomanic personality is a personality style characterized by a pattern of elevated mood, sociability, and high level of energy, but does not meet criteria for a disorder. While it is a personality pattern found in many people without psychopathology, it has been studied as a potential predictor of bipolar disorder in some individuals (Jones & Day, 2008).

Individuals' symptoms are frequently mistakenly classified as unipolar depression when their manic symptoms have not yet presented or when hypomanic symptoms are overlooked.

When individuals are misdiagnosed with unipolar depression, they are likely to be given antidepressants rather than mood stabilizers, which can exacerbate symptoms. Misdiagnosis can also further lead to a delay in the patient receiving efficacious treatments. In addition to appropriate psychopharmacological interventions like mood stabilizers, distinct therapeutic strategies for bipolar disorder are often time sensitive. Once the appropriate treatment is finally started, it will likely be less effective if the patient has already experienced multiple mood episodes (Bowden, 2001).

Cultural factors. The relationship between personality factors and misdiagnosis is still early in the exploration process; cultural factors, however, are known to play a strong role in symptom presentation and diagnosis. Accurately diagnosing a client requires clinicians to have a systematic method for evaluating cultural information, including cultural identity, cultural explanations for the illness, cultural factors affecting the relationship between the clinician and client, cultural factors affecting the client's psychosocial environment, and cultural factors that affect the overall process of diagnosis and treatment (Lewis-Fernandez & Diaz, 2002). When clinicians do not have a proper method for assessing cultural influences on symptoms, they have an increased risk of misdiagnosing clients. For example, it was found that compared to non-Latino Caucasians, African American and Latino clients with bipolar disorder or depression with psychotic features were more likely to be misdiagnosed with paranoid schizophrenia. In general, clients from cultural backgrounds outside of the United States may express distress and symptoms of mental illness in ways that are in accordance with their home culture's norms yet do not match DSM categories. Misdiagnoses could be reduced if clinicians had more systematic methods of identifying experiences of illness that are influenced by culture and may deviate from current diagnostic criteria (Lewis-Fernandez & Diaz, 2002).

Impact of cultural factors on personality differences. When examining how personality differences might be involved in misdiagnoses in bipolar disorder, one should also be aware of what those personality factors look like in different cultures, from larger world cultures to subcultures within the United States. Are introversion and extraversion phenomena that exist across cultures, or do they present differently among various cultures? Studies have supported the idea that personality factors tend to be generalizable across cultures. Specifically, research has supported the generalizability of the “five factor” or “Big Five” model of personality measured by the NEO Personality Inventory (Church & Lonner, 1998). The Eysenck Personality Questionnaire was also found to have several personality factors that generalized across cultures, one of which was extraversion. (Church & Lonner, 1998). Thus, cultural differences are unlikely to affect the presentation or measurement of personality factors such as introversion/extraversion.

While cultural differences do not appear to interfere with the process of measuring personality factors, culture does likely play a role in how those personality factors are valued or treated. For example, Chinese students were found to be more likely to respect and depend on people high in conscientiousness, while Australians tended to trust those high in extraversion. The U.S. school system is also affected by this bias, with teachers and parents having negative beliefs about introverted qualities in students while encouraging outgoing behaviors (Henjum, 1982). Cultures tend to promote and reward certain behaviors related to traits, but they cannot change the idea that innate individual differences exist (McCrae, Costa, Del Pilar, Rolland, & Parker, 1998). Thus, the phenomenon of differences in personality traits, including introversion/extraversion, exists across cultures, but cultural differences can influence how those traits and related behaviors are valued and treated.

Gender and bipolar symptoms. Another aspect of diversity that affects presentation of bipolar symptoms is gender. Bipolar disorder has been found to affect men and women equally overall; however, several studies have found that men and women differed in the presentation of their bipolar symptoms. For example, men were found to have an earlier onset for first manic episodes compared to women, and they also showed a significantly higher level of antisocial behavior in childhood (Kennedy et al., 2005). Women were found to present with more depressive symptoms at the initial onset of the illness and also showed predominantly depressive symptoms throughout the course of the illness (Nivoli et al., 2011). Kawa et al. (2005) had some similar findings: they reported that men were more likely to experience mania as the initial episode and that men and women showed different comorbidity patterns. Men showed higher rates of comorbid alcohol and drug abuse, pathological gambling, conduct disorder, and behavioral problems including subjective experiences of an inability to hold a conversation while manic. In comparison, women showed higher rates of comorbid eating disorders, weight and appetite changes, and insomnia during depressive episodes. If women present differently than men, particularly in their likelihood of initially showing depressive symptoms, it is quite possible that they are consequently more vulnerable to misdiagnosis.

Ethical Concerns Related to Misdiagnosis

Avoiding doing harm to others is one of the major ethical guidelines for psychologists. The APA ethics code states that, “Psychologists take reasonable steps to avoid harming their clients/patients, students, supervisees, research participants, organizational clients and others with whom they work, and to minimize harm where it is foreseeable and unavoidable” (American Psychological Association, 2015, p. 6). It is known that using improper treatments for individuals with bipolar disorder can not only be ineffective for treating their symptoms, but can

also cause harm. For example, patients who are treated with antidepressants or therapies that have not been found to be effective for bipolar disorder can experience worsening of their symptoms, and subsequent treatments, even those deemed efficacious for bipolar disorder, can become less effective (Bowden, 2001).

The ethical implications of a misdiagnosis of bipolar disorder can be serious. Thus, the study of within group differences in presentation and symptom constellation is warranted. If it is found that introverts experience symptoms differently from extraverts and are more prone to misdiagnosis, then this could become an ethical as well as a therapeutic issue for professionals involved in their treatment. Professionals could be left with the dilemma of whether to abide by the standard diagnostic criteria listed in the DSM-5 or to deviate from it in order to better suit the individual circumstances of the client. They may even consider advocating for a formal revision of the diagnostic criteria. They will need to consider what might be the most effective way to prevent misdiagnosis and avoid harm to the client.

Objective of the Study and Research Questions

The objective of this study was to determine whether introverts' experiences with mania differ from those of extraverts. This study compared the subjective experiences of mania in participants who differed in their level of extraversion according to their self-reports. Participants' experiences of their symptoms were measured by an open-ended questionnaire as well as the Altman Self-Rating Mania Scale (ASRM). Other experiences related to manic episodes, including coping strategies, use of support systems, and beliefs about others' perceptions of their symptoms were measured by the open-ended questionnaire as well.

This qualitative study addressed the following research questions:

1. What are introverts' subjective experiences of their mood episodes?

2. How do individuals high in introversion view their symptoms compared to those high in extraversion?

3. Do introverts believe that they perceive their symptoms differently than other people in their lives?

Methods

The following is a qualitative design that examined whether there are notable differences in participants' descriptions of their experiences with bipolar disorder.

Participants

A total of 21 participants responded to the complete survey but 18 had to be excluded due to incomplete responses. The remaining three participants were Caucasian young adults ranging in age from 19 to 26. Two identified as females and one male; two endorsed an educational background of "some college" and one endorsed a post-graduate degree. All participants self-reported having a primary diagnosis of bipolar disorder. Inclusion criteria included being age 18 or older and endorsing that they are currently receiving some form of mental health treatment (e.g., individual therapy, group therapy, informal support group, or medication management). Exclusion criteria included the participant endorsing having a primary diagnosis other than bipolar disorder.

Materials

The NEO-PI-3 Extraversion scale (Appendix A) was initially used as the primary measure of participants' level of extraversion; however, due to participants' incomplete responses to the survey the data from the first phase of collection could not be utilized, and a self-report measure of extraversion was added to the demographic questionnaire (Appendix C). The NEO-PI-3 is a recently updated version of the NEO-PI-R; the update was developed in order

to lower the reading level of some items to make them more accessible to subjects, but otherwise maintained similar properties to the previous version (McCrae, Costa, & Martin, 2005). The NEO-PI-R is commonly used to measure personality factors, including extraversion, in many populations and it has test-retest reliabilities above .75, internal reliabilities of .87-.92 for domain scales and .58-.82 for facet scales (Hogrefe Ltd., n.d.). Two-week test-retest reliability ranged from .86-.90 for the five domain scales. Internal consistency ranges from .74-.89, and .79 specifically for the extraversion domain. The NEO-PI-R is considered to have strong validity, with convergent correlations ranging from .34-.62 (Costa & McCrae, 2008). The inventory provides five response choices on a Likert scale, ranging from 'strongly agree' to 'strongly disagree.' Items measuring extraversion include, for example: 'I sometimes fail to assert myself as much as I should,' 'I find it easy to smile and be outgoing with strangers,' and 'I have never literally jumped for joy.' The NEO-PI-R assigns T scores and associated categorical labels, ranging from 'very high' to 'very low.'

The Altman Self-Rating Mania Scale (ASRM; Appendix B) was used to measure the presence and severity of five of the main symptoms of mania that correspond to the DSM-IV (as well as the current DSM-5) criteria: (a) elated mood, (b) increased self-confidence, (c) reduced need for sleep, (d) excessive talkativeness, and (e) increased activity. The ASRM can be used to measure the presence and severity of both mania and hypomania but does not specifically distinguish between the two; it uses a cutoff of 6 points or higher to indicate a high probability of a manic or hypomanic condition, and a score of 5 or lower indicates a lower likelihood of manic/hypomanic symptoms (Center for Quality Assessment and Improvement in Mental Health, n.d.). In regard to its psychometric properties, it has a specificity of 85.5 and a sensitivity of 87.3 (Altman, Hedeker, Peterson, & Davis, 1997, as cited by Center for Quality Assessment

and Improvement in Mental Health, n.d.). This scale instructs subjects to "choose the statement in each group that best describes the way you have been feeling for the past week." However, for this study the instructions were altered to instruct participants to choose options based on how they "usually feel when manic," so that data could be collected from participants regardless of how recently they experienced manic symptoms.

A demographics questionnaire (Appendix C) was used to gather basic data about the participant (age, gender, ethnicity, etc.) as well as information about the participant's diagnosis (age of onset, age of diagnosis, use of medications and therapy). A question was included in the demographics questionnaire asking participants to rate their perception of their level of extraversion on a five-point Likert scale. Following the demographics questionnaire, a list of open-ended questions were included to gather qualitative data about participants' subjective experiences of living with their condition (Appendix D). Questions were developed based on qualitative interview questions for a previous unpublished study on a related topic (Freedberg, 2011). The questions were then altered to suit the needs of the current study and focus primarily on experiences with mania as well as increase relevance to introversion.

Procedure

The survey was distributed through social media (e.g., Facebook, online forums). The survey was advertised and administered online rather than through an in-person interview; research has found that introverts tend to prefer online forms of communication and socialization compared to face-to-face communication (Goby, 2006), and online communication is considered a way of enabling both introverts and extraverts to communicate their ideas equally (Johnson, 2001).

Interested participants, after reading a description of the research posted on social media including the inclusion and exclusion criteria (Appendix E), clicked a link to the survey through 'Survey Monkey,' completed an informed consent form (Appendix F), and were offered the opportunity to enter a raffle for an Amazon gift card by submitting their email address separately. They were then asked demographic questions about age, diagnosis, current and previous treatment, and self-perception of level of extraversion. The next page of the survey asked participants to respond to several qualitative questions. The qualitative questionnaire was presented early in the survey so that participants would be less likely to experience fatigue and skip questions or put less effort into the questions compared to the two brief questionnaires that use a multiple choice format.

Following completion of the open-ended questionnaire, participants completed the Altman Self-Rating Mania Scale to assess the presence and severity of five manic symptoms. The original scale measures mania symptoms experienced within the past week, but participants were instructed to respond based on the symptoms they have typically experienced during past manic episodes. As this study did not measure how recent the symptoms were, the data sample was not limited to participants who were currently or had very recently experienced mania. Lastly, participants were asked to complete the portion of the NEO-PI-3—the extraversion subscale—salient to this study. After completing the survey, participants were debriefed by being shown a small paragraph (Appendix G) that reiterated the objectives of the study and thanked them for their participation.

Ethical Considerations

All eligible participants reported having a diagnosis of a major mental illness; therefore, care was taken to protect their health and safety during the research process. Participants were

informed of their right to withdraw from the study at any time. They were told that the limited identifying information collected would be kept confidential; participants were not asked to provide their name and were informed that all data would be stored electronically with password protection. This research did not include any deception; as part of the informed consent, participants read a brief description of the purpose of the study and the procedures it entails. The objectives of the study were reiterated at the end of the study as a method of debriefing participants.

As an additional safeguard, in order to participate in the study, subjects must have endorsed that they are currently receiving mental health treatment. It is important that participants had access to a professional they could consult if they experienced severe symptoms or felt they were in a crisis either during or following data collection for the study. Asking participants to endorse their participation in treatment helped ensure that they had access to support or services outside of the research study.

Results

Methods of Analysis

Qualitative data were analyzed using Interpretive Phenomenological Analysis (IPA) in order to gain a better understanding of how introverted and extraverted individuals with bipolar disorder make sense of their experiences.

IPA is a method of analysis used in some forms of qualitative research, which aims to shed light on how individuals find meaning in their experiences related to the study. Participants' experiences are most commonly captured through an interview, although other methods of data collection (e.g., diaries, letters, focus groups, or online chats) can also be used in order to capture first-person accounts of participants' experiences. Participants' statements are analyzed in detail

through the identification of themes and clusters of related themes. Both these themes and the researcher's interpretation of the data are presented. Because, through an IPA lens, researchers have their own experiences and thus cannot be entirely objective, it is important for researchers to identify their potential biases and describe them in the research (Pietkiewicz & Smith, 2014).

In terms of this study, as the researcher, I have personal experience with both introversion and bipolar disorder that can affect my perspective on the study and my expectations for the results. For example, it was through my personal experience that I observed how manic symptoms and the experience of those symptoms can be different for different people. I noticed that some people are portrayed as enjoying mania and possibly seeking more mania (e.g., by skipping medication), whereas I did not share this experience and instead noticed a degree of self-consciousness about the resulting personality changes. I was curious as to whether introversion might account for at least part of this observed difference. However, I am also influenced by clinical psychology's concept of both bipolar disorder and introversion, including the DSM-5 definition of it, so my views may differ to some degree from participants' understanding of these concepts. Keeping my personal biases in mind, it was important for me as the researcher to remain open to participants' experiences that differed from my own, or that I had not anticipated.

Each participant's response to the qualitative questionnaire was reviewed and significant themes were identified. The themes were then reviewed to determine any relationships among them, and they were grouped together thematically. These clusters were each assigned a label (e.g., common symptoms, atypical experiences, positive experiences, helpful coping mechanisms, and seeking support; see Table 2). A second rater was recruited to code the data separately from me; this helped improve objectivity during the coding process and further

lessened the influence of researcher bias on the results of the study. For this process, both raters collaborated to determine the major themes they saw in the data. The second rater then independently reviewed participants' responses and marked which quotes she believed reflected each theme. These ratings were then reviewed to determine the frequency with which the raters agreed or disagreed on the themes that were represented by each response. The second rater was also asked to identify any additional themes she uncovered.

In addition, both coders utilized a journal to reflect on their responses to the data. For example, I noted how each participant's symptoms and experiences were both similar and different to my own. I was also surprised by a participant's report of not experiencing euphoria during manic episodes, and intrigued by a participant's report of "clenching jaw" as a common experience during mania. I also found it disheartening when participants described basic treatments like "talk therapy," medication, and hospitalization as unhelpful and adverse experiences for them. However, I also found it encouraging that the participants found various coping strategies and support networks that worked for them.

Participants' responses to the Altman Self-Rating Mania Scale were assigned scores according to the ASRM's scoring manual (Center for Quality Assessment and Improvement in Mental Health., n.d.). These scores were utilized qualitatively to add depth to participants' descriptions of their symptoms. Participants were also asked to respond to questions from the NEO-PI-3 extraversion scale; however, due to incomplete responses to some of the surveys, T-scores could not be calculated to assess level of extraversion for all participants. Instead, level of extraversion was assessed from a self-rated response to a five point Likert scale.

The research intended to uncover and explore different themes that arise in introverts' and extraverts' experiences of bipolar symptoms. Prior to data collection, I had expected that certain

general patterns might arise in participants' accounts of their experiences. I believed that introverts would report some differences in their experiences of manic episodes compared to extraverted participants, especially regarding changes in their levels of talkativeness. For example, I expected that introverts might describe feeling more talkative than they normally are, but still not see themselves as "excessively" talkative compared to the general population. I also expected to hear of themes describing differences in sociability between groups during a manic episode. I thought that introverts might report a tendency to be more active and pursue more goals during a manic episode, but they might choose to engage in activities that involve comparatively less social interaction than more extraverted individuals with bipolar disorder.

Based on the analysis of three participants' responses (participants self-identified as "introvert," "extravert," and "neutral"), several themes were identified regarding their subjective experiences of manic episodes and their overall experiences of having bipolar disorder. The major clusters of themes included: (a) common symptoms, (b) atypical experiences, (c) initial awareness of manic episode, (d) negative effects of symptoms, (e) positive experiences of symptoms, (f) seeking support, (g) most and least helpful coping mechanisms, and (h) effect on identity. While many of their experiences overlapped, some differences were noted in how participants of varying levels of extraversion described their experiences.

Two coders were used to increase interrater reliability and reduce bias. Higher levels of agreement were found between the coders for the themes of most and least helpful coping strategies and seeking support, with more moderate levels of agreement on affecting identity, positive experiences, and common symptoms. Ratings were considered to have high levels of agreement when both raters assigned the same thematic label to a participant's response more often than they categorized responses into different themes. One coder also suggested an

additional theme of ‘reactions when support cannot be obtained.’ Overall, the coders showed the most agreement on coding the extravert’s responses and relatively less agreement on the neutral participant’s responses.

Common Symptoms Reported

Several of the symptoms mentioned were common among all participants, including increased talkativeness, increased activity, and decreased sleep. All participants described experiencing changes in their social interactions, but the most introverted participant described an increase in social withdrawal while symptomatic (“wanted to be left alone”), while the most extraverted participant described an increase in social interaction (“I just want to be the center of attention during this time”). The neutral participant described positive social experiences more similar to that of the extraverted participant, such as being “extra affectionate” and “I get really happy around my friends and want to be out socializing constantly.” In addition, the most introverted participant endorsed some symptoms differently as measured by the Altman Self-Rating Mania Scale. While all participants reported similar increases in speech and activity level and similar decreases in sleep, the most introverted participant endorsed no changes in positive mood or self-confidence while the other participants indicated feeling happier and self-confident most or all of the time while manic.

Atypical Experiences

The participants differed in their perceptions of experiences they have during manic episodes that they believe are not typical among others with bipolar disorder. The introverted participant reported not experiencing euphoria during manic episodes, and instead reported only mood changes of increased irritability and anger; comparatively, the other participants did endorse increases in perceived happiness during manic episodes. The neutral participant reported

a lack of “physical signs” of mania and hypomania, while the extraverted participant did not report any atypical experiences.

Awareness of Symptoms

Participants described their process of how they become aware that they are experiencing a manic episode, including comparing when they first notice their symptoms and when they believe others notice their symptoms. Both the introverted and extraverted participants described a similar process in which they develop awareness of their mania before others become aware. The introverted participant compared immediate internal warning signs (i.e., insomnia, racing heart, chest hurting) to the delayed awareness of others (“People around noticed within a day or so”). The extraverted participant similarly described becoming aware of an episode earlier than others due to familiarity with symptoms (“…since I’m pretty used to it by now”) and due to recognizing behavioral signs of an episode (“I can almost feel the onset in its early stages when I feel more sexually aggressive or not needing sleep”). This participant described choosing not to tell others when they notice symptoms starting, but believe others notice signs like irritability, talking fast, or making grandiose plans. However, the participant also stated that “Unless I actually verbalize [needing help], no one knows.” The neutral participant also described differences between internal warning signs (“I can feel my brain switch into overdrive sometimes, and I feel more positive”) and warning signs to others (“being annoying and impulsive”), but did not indicate any patterns regarding who notices the signs first.

Negative Experiences of Symptoms

Participants described a range of symptoms and experiences that they found to be the most bothersome or had the most negative effects on their lives. The introverted participant described several negative experiences: mood changes (irritability), effects on their social interactions, as

well as risky behavior and poor judgment. The neutral participant also described mood changes (hopelessness), and also described physical symptoms (restlessness, sweating, clenching jaw until jaw is sore). In contrast, the extraverted participant described the most negative experiences as the feeling of regret following risky behaviors and increased talkativeness that makes it difficult for others to understand them.

Positive Experiences of Symptoms

Despite the range of negative experiences and symptoms that participants faced, they also reported some symptoms that they found to be enjoyable or that had a positive impact on their lives. The most introverted participant commented on a positive aspect of experiencing racing thoughts, saying that this allowed them to "work out a lot of small problems." The neutral participant described an increase in activity as well as some positive social interactions that they attributed to their manic episodes. This participant believes this has helped their school work as well as their social life. The most extraverted participant noted an increase in self-confidence that helps them take on a leadership role and feel more successful at work. This was the only participant who described risk taking as a positive experience ("I love some of my risk taking"). Overall, the participants described similar experiences in their enjoyment of being more active and productive due to their manic symptoms.

Effects on Social Interactions

All participants referenced ways in which their manic symptoms alter how they interact with others, including the ways in which they seek support from others. The introverted participant described some negative effects on their social interactions; they described becoming more socially avoidant when symptomatic ("…wanted to be left alone") and said that their social interactions are "heavily affected" in a negative manner. In regard to seeking social support, the

participant described talking to others as one of the least helpful coping mechanisms they've tried. In contrast, the neutral participant described social support from parents and friends, including receiving physical affection from them, as a helpful form of support during bipolar episodes. They described becoming more affectionate towards others during manic episodes and they believe this has strengthened bonds with others.

However, the neutral participant also describe a negative experience in which they dislike being alone while symptomatic and felt anxious when they are alone. The extraverted participant also described seeking out more social interaction while manic. This participant stated "I just want to be the center of attention during this time" and described how they seek out others to participate in risky behaviors with them. They also described relying on social support to gain reassurance that "I'm not my diagnosis" and to "help me understand whether or not it's my mania or actual desire to do something." Overall, the extraverted participant reported the most instances of relying on others for support and seeking out social interaction, while the introverted participant described their symptoms as having a more negative effect on their social interactions.

Coping Strategies

Participants discussed various types of coping strategies they have utilized while symptomatic, and they discussed which coping strategies were the most and least helpful for them. The introverted participant described specific types of medication as being helpful, while "talk therapy" was perceived as the least helpful strategy they had tried. The neutral participant described several helpful coping strategies, including having a support system of family, friends, and their doctor, having a roommate regularly remind them to take medication, physical affection like "hugs, cuddling," as well as a physical relaxation strategy of "taking deep breaths

and consciously relaxing my shoulders and jaw." This participant believed that psychiatric hospitalization and relying on prayer were not helpful strategies. The extraverted participant also mentioned using a support system, and described the support system as helping them "understand whether or not it's my mania or actual desire to do something." This participant also described how they choose to use alternative activities as distractions to help them avoid engaging in risky activities while manic, as well as making lists of things they're thankful for to help with depressive episodes. Unlike the introverted participant, the extraverted participant described medication as least helpful for them, stating "I hate how it makes me feel." They also mentioned that avoiding activities was not a helpful coping mechanism.

Effect on Identity

As participants described their experiences with manic episodes, they included descriptions of ways in which those experiences have affected their sense of identity. The neutral participant perceived that they are unlike their usual self when they have a manic episode; the participant stated, "I pretty much become the opposite of my normal self (I'm usually lazy, can hold normal/calm conversations, prefer being alone)." This change in their activity level, ability to hold conversations, and preference for being around others was perceived as affecting their sense of self. The extraverted participant also described ways in which their typical identity is altered during a manic episode, including wanting to be the center of attention and feeling increased confidence and leadership that affects their identity at work. This participant also commented on their ability to separate their sense of self from their bipolar diagnosis, and described relying on their support system to remind them that they are not defined by their diagnosis. The introverted participant, however, did not comment on ways in which their symptoms and experiences may affect their identity.

Additional Findings

In addition to the themes found in the participants' responses, some interesting findings were also noted in the data gathered from the demographics questionnaire. Participants varied in the ages at which they first noticed bipolar symptoms (ranging from 6 to 14 years) and the ages at which they were formally diagnosed with bipolar disorder (ranging from 16 to 19 years). The introverted participant reported a much longer delay (13 years) between the age of onset of bipolar symptoms and the age when formally diagnosed, while the extraverted and neutral participants reported a delay of four and two years, respectively. Additional diagnoses reported by participants were generalized anxiety disorder, post-traumatic stress disorder, and depression.

Discussion

This qualitative study uncovered several themes that illuminated the ways in which participants with bipolar disorder, who were of varying levels of extraversion, made meaning of their experiences with their symptoms. The themes that were identified could have implications for improving future treatment of this population by taking into consideration the ways in which clients of varying levels of extraversion may present or interpret their symptoms. This exploration aimed to understand individuals' experiences in depth rather than gather quantitative data in an effort to generalize the findings to a broader population. This study originally employed a mixed methods design, but I faced several challenges during recruitment and data collection resulting in a smaller qualitative exploration. The findings raised additional questions regarding areas for future study, including questions about the impact of cultural factors, possibly personality differences between people with bipolar I and bipolar II, and how the current findings could inform the process of diagnosing bipolar disorder.

Commonalities Among Participants

The participants' descriptions of their experiences with mania uncovered several common themes, although their experiences within each theme differed in some aspects. It was expected that some overlap would be found in regard to participants' major symptoms, since all participants reported meeting criteria for the same diagnosis. While I had expected some symptoms like increased activity and decreased need for sleep to be similar among participants, I found it surprising that introverts and extraverts did not differ in their experience of increased talkativeness since it seems more likely to be influenced by their personality. Since talkativeness is associated with mania (American Psychiatric Association, 2013) but is less typical among introverts (McCrae, Costa, & Martin, 2005), it was difficult to predict how this symptom may manifest in an introvert during a manic episode. I originally thought that any introverts who are quieter at their baseline (i.e., while in a euthymic state) might be less talkative during a manic state compared to those who are more extraverted; however, the data did not reflect this. It is possible that the most introverted participant simply wasn't any quieter than other participants at baseline, or that, as a symptom of mania, increased talkativeness affects people regardless of personality factors.

It was not surprising that participants believed their symptoms affect their social behavior and relationships. It was interesting to gain a better understanding of the nuances of how participants engage with others during manic episodes and how they interpret their social experiences differently, with some noting overall negative social experiences and others reporting examples of how their manic symptoms enhanced their relationships. I found it fascinating, though not unexpected, that the same sets of symptoms can have such profoundly different outcomes on people's social lives; within even just one individual's experience, manic

symptoms can offer both advantages and disadvantages for that person's relationships. This left me wanting to further explore how these individuals understand and navigate situations where their condition simultaneously appears to offer benefits and detriments for various aspects of their functioning.

I felt that it was important to ask participants about their process of becoming aware of their symptoms, as well as how they compare their internal process to that of other people who are aware of their symptoms. I wanted to better understand, and in some ways challenge, the notion that clients tend to have poor insight into their symptoms (Arduini et al., 2003). While clinicians have a tendency to expect less insight from clients with more severe illnesses, I wanted to examine what insight looks like from the client's perspective and whether there are aspects of that process that we may not recognize. For example, when an individual appears to lack insight into their symptoms, could it actually reflect that the client, clinician, and significant others are simply not communicating their insights with each other, or that clients are aware but trying to conceal their symptoms? In this study, participants described similar processes in which they became aware of their symptoms at the start of a manic episode, and believed that others only noticed later on. I found it interesting that they described many "internal warning signs" that others likely would not recognize; unless the participants clearly communicate their observations to others it is possible that they may appear less insightful about their symptoms. In addition, it is possible that participants' friends and family might recognize some of the symptoms earlier in the process than the participants realize, which they may not communicate to the participants. Overall, the participants with the highest and lowest level of extraversion reported similar processes of developing insight into their symptoms; I initially was not sure if I should expect them to differ in this aspect or not, since it was possible that a highly introverted person might

have the advantage of reflecting more on their internal world. However, in this study it appeared that all participants, regardless of level of extraversion, were able to observe and reflect on changes in their own behaviors and internal experiences. It may be worth further exploration in future research to shed light on this process and determine whether clients typically do have more insight into their symptoms than clinicians may expect, or whether their perception of their insight and others' awareness of their symptoms may be inaccurate.

Implications of Identified Themes

Common symptoms. While it was expected that the participants would show some differences in their responses to items on the Altman Self-Rating Mania Scale, it was surprising to find differences in their reports of positive mood and self-confidence. The introverted participant did not report any changes in positive mood or self-confidence while manic, which was surprising since changes in mood and self-confidence are typically expected during a manic episode and are among current diagnostic criteria for a manic episode (American Psychiatric Association, 2013). This suggests the importance for clinicians to not dismiss the possibility of mania when no increase in self-confidence is evident (as long as other diagnostic criteria are still met), or to be careful to recognize changes in mood other than positive changes (i.e., irritability) in certain clients (e.g., introverts).

Atypical experiences. While each participant described several symptoms that are expected for a person with bipolar disorder, it is important not to overlook the unique experiences that participants attributed to bipolar disorder but which may not be formally listed as symptoms in the DSM-5. These are experiences that participants believe are not typical for most people with bipolar disorder, but which they experienced as typical for them. For example, it was interesting that the highly introverted participant described it as a normal part of their

experience to feel irritability and anger during a manic episode while never experiencing euphoria. It was not surprising to me that participants experienced their symptoms differently from one another, but it would be helpful in the future to further explore whether it is "typical" for those with higher levels of introversion to experience this more atypical mood pattern, or whether it can vary by individual regardless of personality traits. I found it especially interesting that another participant referenced an unusual pattern of jaw discomfort and clenching while manic. This is not listed as an official symptom of bipolar disorder, yet it was enough of a salient experience for the participant to mention it multiple times. This served as a reminder to me to look for experiences that are important to the individual, and to not get stuck looking only for symptoms that perfectly fit diagnostic checklists. Had I relied only on having participants check off symptoms from a predetermined list (such as the ASRM used in this study), I would not have learned about the experiences that participants identified as important to them. Therefore, it is important that future researchers and clinicians do not discount these atypical experiences, which have meaning to individual clients and can potentially inform future phenomena to study. Clinicians should be cautious when diagnosing a client and consider how using the DSM-5 as a diagnostic tool can risk overlooking the unique ways in which each client's symptoms may manifest.

Initial awareness of manic episode. Each participant described having insight about the onset of a manic episode and described "warning signs" specific to each of them that indicate the beginning of an episode. Both the introverted and extraverted participant believed that they develop awareness of their symptoms before any other people around them recognize the signs. Although at times clinicians may question the level of insight clients have into their symptoms, it is possible that clients actually have an advantage in recognizing their symptoms because only

the client can access "internal warning signs." Participants in this study described internal and physical warning signs that others may not be able to see, including racing heart, chest pains, "switching into overdrive," and not needing sleep. Participants believed that other people would recognize their symptoms later on, or might not notice their distress at all unless the participant chose to tell them. It is also important to note that the participants described internal warning signs that varied widely from the signs that others recognize (e.g., subjective mood changes and physical experiences of insomnia and racing heart compared to observed behaviors like impulsivity and talking faster). Thus, it is important for people to understand that the symptoms they observe in the client, or the checklists they use to diagnose a manic episode, may not fully represent the client's experience; they may even be less accurate than the client's own internal meaning-making.

Negative effects of symptoms. All participants described ways in which their symptoms negatively impact their lives, but they chose different aspects to focus on. I found it interesting that the least extraverted participants focused more on internal sensations like mood (i.e., irritability and hopelessness) and physical discomfort (i.e., restlessness, sweating, clenching jaw), while the more extraverted participant focused on behaviors that are more apparent to others. While the data in this study cannot describe a definitive reason for these differences, it is possible that those higher in introversion are more likely to focus their attention inward and notice internal experiences. The extraverted participant, on the other hand, gave more attention to the experience of feeling regret following engaging in risky behaviors. It was interesting that the other participants did not mention as much about engaging in risky behaviors, as this is considered one of the main diagnostic criteria of manic episodes (American Psychiatric Association, 2013).

This finding raises the question of how common these risky behaviors truly are for people during manic episodes and whether risky behaviors might look different (e.g., internalizing behaviors like self-harm or social withdrawal versus externalizing behaviors like spending sprees or risky sexual behavior) depending on the individual's personality.

It is also possible that these participants, and people with bipolar disorder in general, have more negative experiences in common than were reported here. There could well be different negative experiences associated with different episodes during different developmental periods, for example. These findings describe only the experiences that were the most meaningful to participants in this study and/or were the most personally distressing at the time of the study.

Positive experiences of symptoms. One of the most interesting findings in this study was that all participants experienced symptoms that they found to be enjoyable or had a positive impact on their lives; these experiences went beyond society's common observation that "the client likes being manic" and instead were described in a more nuanced fashion. Participants not only described becoming more productive, but specified their perspective that their racing thoughts actually enabled them to think through many problems. One participant described their belief that mania helps their social life by increasing their positive social interactions. I found it refreshing to see these specific descriptions of *why* participants found certain aspects of their manic episodes enjoyable, rather than relying on assumptions that people might simply like being manic in general. Understanding this in more depth could even help clinicians working with clients who stop medication in an effort to experience mania, or even those who are grieving the loss of certain aspects of mania. This finding was also interesting considering that, while mania can increase activity and social behavior, it can also have a negative impact (e.g.,

participants also described being difficult to understand when they are overly talkative and being seen as "annoying" to others).

Perhaps it is reductionist to think about symptoms as being either negative or positive. For example, the extraverted participant, who had previously described their risk-taking behavior as negative in that it leads to regret, also endorsed their risk-taking as an enjoyable experience. It is intriguing that some symptoms and experiences were interpreted as simultaneously having positive and negative impacts on the participants. Such findings offer further support for clinicians to inquire more deeply about the experiences reported by their clients and not to assume that, for example, risk taking is always "bad" and sociability is "good."

Seeking support. Accessing social support is identified in current literature as a common strategy for helping clients manage bipolar disorder (Suto, Murray, Hale, Amari, & Michalak, 2010), but there is often less focus on the different ways in which individuals approach those interactions or the possible negative experiences when reaching out to others. Interestingly, participants described both positive and negative experiences they have had with obtaining support from others. It is important to consider whether introverts have a disadvantage in eliciting the support that they need from others, considering the introverted participant's reported tendency to withdraw ("…wanted to be left alone") and expect negative social experiences ("social interaction would be heavily affected"). It is also possible that, on the contrary, introverts actually benefit from having time alone to cope with their symptoms; they may need to utilize social support in a different manner than their extraverted counterparts. For example, while an extravert might best manage their symptoms by immediately seeking support from others and talking about their symptoms, an introvert may need time alone to "recharge" their

energy and reflect on their experiences before discussing their symptoms with significant others or even clinicians.

Through the process of using a second coder to increase interrater reliability and reduce bias, another potential theme in the domain of social support was identified. One participant spoke not only of seeking support but also of the struggles they encountered when they felt their efforts were unsuccessful. This theme, identified by just one of the three participants, seems salient in light of the challenges clients face with communicating their needs during a manic episode, as well as their feelings of isolation, worry over stigma, and difficulty getting their needs met from their community (Diaz-Caneja & Johnson, 2004). The process of identifying the need for support and finding the right kind of help seems integral to recovery for people with bipolar disorder and may be beneficial to study more in depth in the future.

Most and least helpful coping mechanisms. As the researcher, I found it worrisome, yet not entirely surprising, that participants identified some basic forms of treatment that clinicians often utilize (i.e., therapy, medication, hospitalization) as being the *least* helpful to them. The participants' responses left me reflecting on the interventions that I use regularly and I felt it was necessary to pause and reconsider how I have been using these interventions and whether they are truly as effective as I have come to believe. Even an intervention as basic as talking to others, which some participants described as a helpful coping mechanism, was still not universally seen as effective; the introverted participant did not describe seeking support from others, and even described "talk therapy" in general as unhelpful. Previous research does reflect positively on verbalizing one's concerns to others (whether in therapy or with family and friends) and having a network of people who can provide support to the individual has been described favorably in many studies (e.g., Freedberg, 2011; Johnson, Winett, Meyer, Greenhouse, & Miller, 1999).

However, it is important to consider that even though this form of social support may benefit many individuals with bipolar disorder, there may still be some individuals who do not prefer this particular strategy or who may access social support in a different manner (e.g., anonymous online support groups).

Previous research reflects a similar pattern of people with bipolar disorder's complex relationships with medication and therapy, including "love-hate relationships full of hopes and frustrations" (Freedberg, 2011, p.105) with their medications. Many of those participants in the previous study saw their medication as an important part of their recovery, yet had also resisted medication at some point for a variety of reasons including intolerable side effects. Similarly to the current study, participants in the previous research had mixed reactions to therapy, with some viewing it as helpful for coping with stress and others seeing it as a waste of their time or only useful in some cases when they found therapists with whom they connected well (Freedberg, 2011). In contrast, the introverted participant specified that using medication with sedating agents was helpful. However, this participant only specified "acute medication therapy" as a useful strategy and did not comment on use of long-term or preventative medications.

Unfortunately, due to the anonymous online format of the participants' reports, it was not possible to follow up about specifically what participants found unhelpful about each form of treatment. It would be helpful to determine whether their opinions reflect unique personal preferences or a broader consensus among those in the bipolar community, as well as to understand the specific concerns and challenges that people with bipolar disorder of various temperaments experience with each type of treatment.

It is also important to note that participants described multiple types of coping strategies (i.e., social support, physical strategies like deep breathing, using activities as distractions).

Having multiple coping options can be a strength for clients and offer flexibility and resilience when one strategy fails or is momentarily unavailable. I believe that future studies can benefit from not just simply uncovering which coping strategies are helpful or not, but rather looking at which strategies are helpful for which individual and under which circumstances. Moving beyond this, it would be beneficial to discover how clients shift from one strategy to the next and what helps them remain resilient when a coping strategy is not working.

While the list of what helped or hindered recovery of the participants does not necessarily represent the opinion of the broader population, it does suggest the importance of taking into account each individual client's needs and tailoring treatment to fit accordingly. Clinicians should be aware that certain treatments they take for granted, including the ones they are trained to deliver, may not be as useful or effective for everyone, and may even feel detrimental if clients feel misunderstood, frustrated, or helpless due to perceived lack of progress or disconnect with the therapist. Clinicians should remember to incorporate each individual's needs and strengths when designing treatment, even if that treatment does not always look like "traditional" therapy. For example, clinicians can consider giving an introverted client more silence to reflect on their thoughts, provide time for solo activities within the therapy session, or use creative means (e.g., expressive arts, online sessions) to communicate. For clients who feel the therapy process in general is not helping them, it may be worth considering referring them to alternate sources of support (spiritual leaders, peer support, meaningful activities) that may have more meaning to the client at that moment in time. To strengthen the therapy, clinicians should seek to fully understand how a client makes unique meaning of their experiences, and avoid biased interpretations based on generalizations of bipolar symptoms.

Effect on identity. Notably, all participants addressed the effect that symptoms had on their sense of identity. The data in this study did not show specific differences between how introverts and extraverts' sense of identity were affected, yet it still raised questions about identity development in general. Participants noted a sense of being unlike their normal selves during manic phases and believed their manic symptoms affected not only their behaviors but also their sense of confidence and identity at work. A larger sample size may be able to provide more information about which aspects of identity tend to shift in introverts and extraverts and how those groups react to this change in identity. For example, if an introvert generally identifies as a reserved person, but acts more outgoing during a manic episode, how will they make sense of behaviors that contradict their sense of self, and how might this process differ from that of an extravert who does identify as outgoing?

The Extraversion Bias

Previous research (e.g., Lischetzke & Eid, 2006; Lucas et al., 2008) has shown that society tends to be biased in favor of extraversion. The underlying assumption of such explorations is that introverts are not as happy as extraverts, leading to a research focus on introverts' negative qualities and behaviors. Considering this common bias, it was crucial in this research to hold a more open-minded view of introversion; this included choosing measures that are less stigmatizing to introverts and providing an open-ended format for participants to express their experiences and opinions.

While interpreting the data, I strived to avoid stigmatizing participants' experiences; for example, it was crucial to understand that the most introverted participant did not engage in social interactions in the same manner as other participants, and to avoid attaching negative

judgment to this. Instead, in this research, I looked at how each participant found coping strategies that worked best for them.

The relationship between personality and diagnosis is complex and bidirectional. Participants gave voice to the idea that their identities were shaped both by their personalities and by their experience with bipolar symptoms. In this particular study understanding the relationship between the diagnosed individual and their personality involved a level of complexity because participants' personalities affected their presentation of symptoms while their symptoms also affected how they displayed their personality traits. While one's temperament is determined by "affective, attentional and motor responses in various situations" (Rothbart, 1991, p. 4), in this research, people's responses to situations were shaped not only by a stable temperament but were also shaped by their symptoms during bipolar episodes. This pattern of being affected by a combination of one's symptoms and personality traits is common to any disorder or condition, but in this case it was important to understand the specific mechanism of how bipolar symptoms and personality traits interact. Participants noted that their responses to their environment varied depending on their level of mania or depression, as opposed to the more predictable and stable patterns of temperament. For these participants, their responses were shaped by a combination of their personality and symptoms.

Limitations

In the course of designing and recruiting this study, I ran into several significant challenges that limit the transferability and generalizability of the findings. First, this study relied on an anonymous qualitative methodology. I could not ask follow up questions or otherwise get participants to reflect further and expand on their responses. The study's small sample size of just three participants further limited the scope of understanding with just one participant

representing each level of a spectrum of extraversion. Thus, while the qualitative method helped to add depth and strengthen understanding of the participants' experiences, it cannot be generalized to a broader population. In the future, it will be helpful to establish more direct communication with participants whenever possible to ensure that I can ask clarifying questions about participants' responses, prompt participants to elaborate on their responses, and receive feedback from participants. It will also help to find additional groups and online forums from which to draw participants in order to expand the subject pool and increase the amount of data that can be interpreted.

Notably, too, a larger set of participants were administered the extraversion subscale of the NEO-PI-3, but due to incomplete responses from some participants their level of extraversion T-scores could not be calculated. The number of incomplete responses was due to an initial computer error that prevented response completion; even after this error was fixed, a number of participants chose to skip portions of the survey, which may have been due to fatigue or loss of interest in the survey. I instead relied solely on participants' qualitative self-ratings of extraversion. Without the extraversion T-scores to use as a basis to compare the groups, this study could not, as I originally intended, include quantitative data to describe any statistically significant differences between introverts and extraverts with bipolar symptoms measured by the Altman Self-Rating Mania Scale. It would have been ideal to have the T-scores alongside of the self-ratings as an additional source of data to support the extraversion ratings and provide quantitative data to supplement the qualitative data.

A major challenge that arose during the data collection process was the difficulty in finding participants who met all the criteria and were willing to complete enough of the survey in order for the data to be utilized. It was found that many participants consented to participate but

then did not attempt the survey or did not respond to enough questions so that their data could be included. Due to this challenge, it was necessary to edit the survey during the data collection process in an effort to elicit more complete responses from participants. It was particularly challenging to collect data anonymously through an online format, since I then did not get feedback about any issues with the survey or participants' opinions about the study. It may be helpful in the future to consider alternative ways of presenting the questionnaires, such as using a shorter extraversion questionnaire or revising questions to better capture participants' attention, in order to increase the likelihood of participants completing the full survey.

While the anonymous format was designed to protect participants, it also hindered the ability to communicate with participants and made it impossible to clarify their responses with follow-up questions. Unlike more traditional IPA interview formats conducted with a semi-structured and open-ended inquiry, this strategy prevented me from being able to clarify participants' responses and add more depth to the data. This format also limited me to only getting data through one perspective; I was not able to interview family, friends, or health providers working with the participants, so I relied only on the participants' perspectives. While this provided invaluable information, it also meant that I could only understand the participants' reports through their own lens. Since all people have their own biases, participants described their experiences through a biased lens. Using a different format and interviewing support systems as well would have given me access to a wider variety of perspectives.

While acknowledging these varying perspectives, it is also important to view the data through a social constructionist lens and consider how the main concepts being studied (i.e., bipolar disorder and introversion) are ideas that have been created and shaped through people's interactions with each other, and do not necessarily exist in an objective sense on their own. For

example, there is no one “correct” definition of bipolar disorder; people have observed behaviors and experiences that they then labeled, and the labels and diagnostic criteria have continued to change over time. Therefore, this study cannot rely on one stable and “true” concept of bipolar disorder, but rather it relies on a general understanding of the condition at one point in time; this current concept is also constructed by different groups of people, and tends to reflect more heavily the opinions of professionals within one field. Therefore, the data in this study must be understood with consideration for how it reflects the experiences of one group (clients) but relies on definitions shaped primarily by another group (clinicians and other professionals). A similar process can be seen for the socially constructed concept of introversion as well, where these participants were asked to identify a personality trait based on their own understanding of it, which may not necessarily align exactly with the still-evolving concept of introversion.

Cultural factors may have also affected the results of the study. This small sample could not offer much in the way of cultural diversity; the participants reported similarities in race, age, and education level. However, other forms of diversity reported by participants, including gender, medical history, and even their personal beliefs may also intersect and interact with subjects’ life experiences and perceptions of their experiences in addition to their differences in personality. There are many additional aspects of cultural diversity that could be explored in the future, including how religious beliefs or socioeconomic status may influence introverts’ and extraverts’ experiences with bipolar disorder.

It is therefore important to take into account how these multiple cultural factors, though beyond the scope of this inquiry, create interlocking systems that shape the individual as a whole. In this population, for example, intersectionality may present as a combination of introversion, bipolar disorder, gender, and other factors that together affect how the individual

perceives and interacts with the world. One individual with a bipolar diagnosis may learn to value assertive, outgoing, or other extraverted behaviors, or may live in a culture that promotes the use of medication and psychotherapy to treat bipolar disorder, while a person living with bipolar disorder with a different combination of cultural identities may reject these values.

Future Research

This research aimed to gain knowledge of how personality differences relate to bipolar symptoms to better inform diagnosis and treatment. It may be beneficial for future research to continue to explore whether personality factors are related to misdiagnosis of bipolar disorder. For example, in this study it was noted that the introverted participant reported a much longer delay (13 years) between the age of onset of bipolar symptoms and the age when formally diagnosed, compared to the extraverted and neutral participants who reported a delay of four and two years, respectively. Clinicians can benefit from understanding which factors, or combination of factors, have the most influence on the length of time it takes to accurately diagnose an individual with bipolar disorder.

While the current research used a qualitative design with a small sample size, and thus cannot generalize results, future research could benefit from using quantitative method and mixed methods employing larger and more diverse samples to increase generalizability. In the future it may help to explore other factors beyond personality or temperament that could influence individuals' presentation and experience of bipolar symptoms, such as comparing bipolar types I and II, gender differences, or cultural differences.

Clinical Implications

Considering the wide range of symptoms and experiences found in this study, it is important for clinicians to carefully consider the unique factors that can influence diagnostic

impressions for each individual client. The participants in this study had all eventually been diagnosed with bipolar disorder and reported different experiences of misdiagnoses and delay in reaching an accurate diagnosis. Indeed, all participants in this study reported a delay between their onset of symptoms and their diagnosis of bipolar disorder. In order to increase the accuracy of the diagnostic process, clinicians should consider the ways in which each client's presentation of bipolar disorder may differ from a "typical" or "expected" constellation of symptoms, with an eye toward how clients' personalities may affect how they interpret and report their experiences.

While clinicians are still expected to utilize diagnostic checklists to determine whether a client meets specific criteria for bipolar disorder, they should be aware that a client may experience those symptoms yet display them in different ways. Clients may even describe or interpret the same symptoms in different ways. For example, the neutral participant in this study described a tendency to annoy other people when manic, while the introvert described wanting to be left alone; these experiences could reflect two vastly different presentations of the same symptom (irritability). It is important for the clinician to understand the client's unique experience in order to accurately utilize the standard diagnostic checklists. To help clinicians begin to understand their clients' unique personalities and experiences, it can help to use a semi-structured interview to uncover aspects of their personality (e.g., ask clients to self-identify their level of extraversion), or in some cases utilize formal measures like the NEO-PI-3 or other assessments to shed light on their personality structures. With a more comprehensive, and possibly even more objective, view of the client's personality, clinicians can begin to develop a better sense of how the client might experience or make sense of different types of symptoms and use that knowledge to better inform the diagnostic process. Beyond the initial diagnostic

process, clients and clinicians can even use this knowledge to make sense of any experiences a client has that appear “atypical” for the diagnosis they were given.

For example, despite their shared diagnosis, the participants in this study noted very different impacts of mania on how they interact with others, on their likelihood to seek help, and on their preferences for different coping mechanisms. It is likely that clinicians would be less likely to recognize a manic episode, and subsequently miss a diagnosis of bipolar disorder, if a patient presents like the introverted participant in this study, by withdrawing or appearing less outgoing during a manic episode.

However, it is also possible that the diagnostic criteria for bipolar disorder is really quite accurate; perhaps the symptoms and experiences among participants are comparable but their personality and cultural biases shape which aspects of these experiences they attend to and remember. If this were the case, clinicians might observe similar behaviors in people with bipolar disorder across the entire introversion/extraversion spectrum, yet the clients might report their subjective experiences in different manners or find different meanings in their experiences. Thus, knowledge of how clients with different levels of extraversion perceive and find meaning in their experiences may help clinicians better understand their clients and can help inform the treatment process.

Overall, this research supported my expectation that participants with the same diagnosis would differ in their experiences with bipolar disorder and the ways in which they make meaning of their experiences. The participants, who reported varying levels of extraversion, described some similarities among their symptoms, which was expected given that they had all met criteria for bipolar disorder, but surprisingly even participants higher in introversion reported increased talkativeness. It is useful for those working with clients with bipolar disorder to understand in

more depth how clients perceive changes to their lives during manic episodes, including how it affects their social interactions, coping strategies, and their process of obtaining support. It is crucial to understand that within these domains, clients can have vastly different experiences. In order to better understand and diagnose each client, it is important to consider how a client's level of introversion or extraversion might affect how their symptoms manifest and how they understand their experiences. I hope that increasing awareness of this process, as well as future exploration of other factors that may affect how bipolar symptoms are expressed, will help clinicians continue to improve the diagnostic and treatment processes and enhance clients' quality of life.

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Appendix A

NEO-PI-3 Extraversion Scale

This questionnaire contains 48 statements. Please read each item carefully and choose the one answer that best corresponds to your agreement or disagreement.

Choose "SD" if the statement is definitely false or if you **strongly disagree**.
Choose "D" if the statement is mostly false or if you **disagree.**
Choose "N" if the statement is about equally true or false, if you cannot decide, or if you are **neutral** on the statement.
Choose "A" if the statement is mostly true or if you **agree**.
Choose "SA" if the statement is definitely true or if you **strongly agree**.

SD D N A SA

I find it easy to smile and be outgoing with strangers.

I don't get much pleasure from chatting with people.

I have strong emotional attachments to my friends.

Many people think of me as somewhat cold and distant.

I really enjoy talking to people.

I really like most people I meet.

I'm known as a warm and friendly person.

I take a personal interest in the people I work with.

I prefer jobs that let me work alone without being bothered by

other people.

I like to have a lot of people around me.

I usually prefer to do things alone.

I enjoy parties with lots of people.

I shy away from crowds of people.

I'd rather vacation at a popular beach than an isolated cabin in the woods.

Social gatherings are usually boring to me.

I really feel the need for other people if I am by myself for long.

I am dominant, forceful, and assertive.

I don't find it easy to take charge of a situation.

I have often been a leader of groups I have belonged to.

In meetings, I usually let others do the talking.

Other people often look to me to make decisions.

I would rather go my own way than be a leader of others.

In conversations, I tend to do most of the talking.

Sometimes I don't stand up for my rights like I should.

I have a laid-back style in work and play.

My life is fast-paced.

I'm not as quick and lively as other people.

I am a very active person.

My work is likely to be slow but steady.

I usually seem to be in a hurry.

I act forcefully and energetically.

I often feel as if I'm bursting with energy.

I like to be where the action is.

I wouldn't enjoy vacationing in Las Vegas.

I love the excitement of roller coasters.

I tend to avoid movies that are shocking or scary.

I often crave excitement.

I have sometimes done things just for “kicks” or “thrills.”

I like loud music.

I like being part of the crowd at sporting events.

I have never literally jumped for joy.

I have felt overpowering joy.

I rarely use words like “fantastic!” or “sensational!” to describe

my experiences.

I am a cheerful, high-spirited person.

I’m not happy-go-lucky.

Sometimes I bubble with happiness.

I am not a cheerful optimist.

I laugh easily.

Appendix B

Altman Self-Rating Mania Scale

The Altman Self-Rating Mania Scale is a short, 5-item self-assessment questionnaire that can be helpful in assessing the presence and severity of manic or hypomanic symptoms. Because this scale is compatible with the CARS-M, YMRS, and DSM-IV diagnostic criteria, it can be used effectively as a screening and diagnostic instrument despite its brevity.

There are 5 groups of statements in this questionnaire, read *each* group of statements carefully. **You should choose the statement in each group that best describes the way you USUALLY feel when manic (or hypomanic).**

Please note: The word "occasionally" when used here means once or twice; "often" means several times or more and "frequently" means most of the time.

1. Positive Mood

- o I do not feel happier or more cheerful than usual.
- o I occasionally feel happier or more cheerful than usual.
- o I often feel happier or more cheerful than usual.
- o I feel happier or more cheerful than usual most of the time.
- o I feel happier or more cheerful than usual all of the time.

2. Self-Confidence

- o I do not feel more self-confident than usual.
- o I occasionally feel more self-confident than usual.
- o I often feel more self-confident than usual.
- o I feel more self-confident than usual.
- o I feel extremely self-confident all of the time.

3. Sleep Patterns

- o I do not need less sleep than usual.
- o I occasionally need less sleep than usual.
- o I often need less sleep than usual.
- o I frequently need less sleep than usual.
- o I can go all day and night without any sleep and still not feel tired.

4. Speech

- o I do not talk more than usual.
- o I occasionally talk more than usual.
- o I often talk more than usual.
- o I frequently talk more than usual.
- o I talk constantly and cannot be interrupted.

5. Activity Level

- o I have not been more active (either socially, sexually, at work, home or school) than usual.
- o I have occasionally been more active than usual.
- o I have often been more active than usual.
- o I have frequently been more active than usual.
- o I am constantly active or on the go all the time.

From “The Altman Self-Rating Mania Scale” by E.G. Altman, D. Hedeker, J.L. Peterson, & J.M. Davis, *Biological Psychiatry*. Copyright 1997 by Elsevier. Reprinted with permission.

Appendix C

Demographics Questionnaire

Age:

Gender:

Ethnicity:

Race:

Level of Education: (some high school, high school diploma/GED, some college, college degree, post graduate degree)

How introverted or extraverted do you think you are: (very introverted, introverted, neutral, extraverted, very extraverted)

Diagnosis: (bipolar I, bipolar II, other bipolar disorder)

Additional diagnoses:

Age of onset of bipolar symptoms:

Age when diagnosed with bipolar:

Current medications:

Past medications:

Type(s) of therapy used: (individual therapy, group therapy, informal support group, medication management, expressive arts therapy, etc.)

Current:

Past:

Appendix D

Qualitative Questionnaire

1) What are common experiences/symptoms that you have during a manic episode?

2) Is there anything you *don't* typically experience during a manic episode that you think others usually do experience while manic?

3) Describe an example of what it was like for you during a manic episode, including your feelings, behaviors, and events happening around you.

4) Which symptoms/experiences have been the most bothersome to you or have had a negative effect on your life?

5) Which symptoms were the most enjoyable for you or had a positive impact on your life?

6) When you experience a manic episode, at what point do you first notice the symptoms? When do others notice your symptoms? Is there a difference between when you and other people recognize your symptoms?

7) What have been the coping mechanisms that have worked *best* for you?

8) What things you've tried have been the *least* helpful for you?

9) Have you felt supportive during difficult times? Who supported you and what did they do that was helpful?

10) Do you think others know it when you need help? Are there things you do to let people know you need help?

11) Any other comments you would like to add?

Appendix E

Recruitment Letter and Description of Research

My name is Ray McHale, and I am a doctoral student in clinical psychology at Antioch University New England. I would greatly appreciate your involvement in my online study about bipolar symptoms in introverts and extraverts. Participation may help increase the understanding of how introverts and extraverts experience bipolar symptoms. It should take about 30 minutes. Interested participants can enter a raffle for a $20 Amazon Gift Card.

In order to take part in the study, you must:

- Be 18 years or older and be diagnosed with bipolar disorder. Symptoms may be current or have been in the past.
- Currently be receiving mental health treatment. This can include individual or group therapy, informal support group, or medication management.
- You may *not* participate if you have a primary (main) diagnosis other than bipolar disorder.

If interested, you can find a link to the study below:

Appendix F

Consent Form

Project Title: *Differences Between Introverts and Extraverts with Bipolar Disorder*

Principal Investigator:

Ray McHale

Purpose of this Research: Through this research, I hope to learn if introverts and extraverts have different experiences with the manic symptoms of bipolar disorder. For this study, 'introverts' are people who direct more energy inward. 'Extraverts' are those who focus their energy outward towards other people).

Procedures: You will be asked to engage in the following survey. By clicking "Next" below, you will be giving your informed consent. You will then be asked to:

1. Provide basic information about yourself, (e.g., age, education, and diagnoses)
2. Answer open-ended questions about your experiences with mania
3. Complete a survey on extraversion
4. Answer brief questions on mania symptoms

The survey will likely take about 30 minutes. You will then be able to provide your email address for entry in a raffle for a $20 gift card to Amazon.com. Your email will be kept separate from your survey and will remain confidential. Providing your email address is optional. You may leave out your email and remain entirely anonymous.

Benefits & Risks: Your responses to the survey will add to the knowledge of how introversion might relate to bipolar disorder. This may help treatment teams understand clients better. You may also learn more about yourself as you reflect on your experiences.

There are no perceived physical threats if you take part in this study. However, you will be asked to reflect on your experiences with bipolar symptoms, which may cause some discomfort.

Confidentiality and Anonymity: All of your responses to the survey will remain anonymous. Your responses will be protected by a password. Even if you choose to provide an email address for the raffle, it will be kept separately from your responses and I will not ask for your name. Your email address will not be shared

with anyone for any reason, should you choose to provide it. It will remain safely locked and protected, and will be destroyed after the raffle is held.

Voluntary Participation: You are always welcome to withdraw your participation without penalty of any kind, and your unfinished responses will not be used.

Questions: Please feel free to contact me at the above phone number and email address. In addition, my research advisor is Dr. Martha Straus, Ph.D. and she can be reached at . You may also contact Dr. Kevin Lyness, Chair of the Antioch University New England IRB at: . If you are feeling distressed after taking this survey, you can contact your treatment provider or call the National Suicide Prevention Lifeline at 1-800-273-8255.

Thank you for your participation,

Ray McHale, M.S.

Appendix G

Debriefing Statement

Thank you for participating in this study. This study was designed to investigate whether introversion/extraversion are related to the symptoms of mania that people with bipolar disorder experience, as well as the ways in which introverts and extraverts make meaning of their symptoms and experiences with bipolar disorder. Your responses have been recorded and will be used to develop a better understanding of how introversion and bipolar symptoms may be related. If you have any questions about the study, please feel free to contact Ray McHale by email or by phone

Appendix H

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Table 1

Level of Extraversion and ASRM Scores

Participant	Extraversion Level	Positive Mood	Self-Confidence	Sleep Patterns	Speech	Activity Level	Total Mania
021	Introverted	0	0	3	3	4	10
026	Neutral	3	3	4	3	4	17
017	Extraverted	3	4	3	4	3	17

Table 2

Participants' Responses and Thematic Codes

Participant	**Intro/ Extravert**	**Participant Quote**	**Theme**	**Cluster of Themes**
021	Introvert	pressured speech	increased talkativeness	common symptoms
		high energy	activity increase	common symptoms
		irritability/anger	negative mood	common symptoms/most negative effect on life
		insomnia/little need for sleep	sleep decrease	common symptoms
		euphoria	positive mood	atypical experiences
		I would start many projects and leave them unfinished	activity increase	common symptoms
		wanted to be left alone	social avoidance	common symptoms
		social interaction would be heavily affected	social changes	most negative effect on life
		poor judgment, risky behavior	risk	most negative effect on life

		racing thoughts, could work out a lot of small problems	positive symptoms	positive experiences
		I notice insomnia first, or physical symptoms like heart racing/chest hurting	internal signs of mania	first signs of mania
		People around notice within a day or so	signs of mania recognized by others	first signs of mania
		acute medication therapy, with sedating agents	medication/physical strategies	helpful coping mechanisms
		talk therapy	talking to others	least helpful coping mechanisms
		I usually initiate the process	signs of mania recognized by others	seeking support
026	neutral	talking fast, repeating myself a lot…I feel like I can't control my mouth and I talk waaayyyy too much - sometimes about weird stuff	increased talkativeness	common symptoms
		restlessness, insomnia, clenching jaw, extra sweating	physical symptoms	common symptoms

		insomnia	sleep decrease	common symptoms
		extra affectionate	positive social interaction	common symptoms
		I don't get physically hyper/manic	physical symptoms	atypical experiences
		I get really happy around my friends and want to be out socializing constantly	positive social interaction/seeking social interaction	common symptoms
		…but sometimes I feel like I annoy everyone because of the talking and I repeat stories a lot	negative social interaction	common symptoms
		I get a lot of school and housework done	activity increase	common symptoms
		I don't like being alone and get anxious when I am	seeking social interaction	common symptoms
		Sometimes I feel panicky and my arms get numb	physical symptoms	common symptoms
		I pretty much become the opposite of my normal self (I'm usually lazy, can hold normal/calm conversations, prefer being alone)	symptoms contrary to identity	affecting identity
		I also hate feeling restless and how much I sweat. And	physical symptoms	most negative effect on life

		sometimes my jaw gets really sore from clenching		
		Feeling really productive and wanting to get up and do things has helped my school and social life	activity increase/positive social interaction	positive experiences
		I feel super affectionate sometimes and it has helped me bond with people.	positive social interaction	positive experiences
		I can feel my brain just switch into overdrive sometimes, and I feel more positive	internal signs of mania	first signs of mania
		My friends notice when I'm being annoying and impulsive	signs of mania recognized by others	first signs of mania
		I have a really strong support system of several friends and family members, and having them understand, listen, and comfort me has helped loads. I also have an amazing doctor.	talking to others	helpful coping/seeking support
		taking deep breaths and consciously relaxing my shoulders and jaw	physical strategies	helpful coping mechanisms

		Going to a mental hospital. That was absolutely horrible	hospitalization	least helpful coping mechanisms
		praying doesn't help	religion/spirituality	least helpful coping mechanisms
		My parents always have always had my back, and I have good friends that understand. My roommate reminds me to take my medicine every day which is crazy helpful.	social support	helpful coping/seeking support
		A lot of the time when I'm upset affection (hugs, cuddling) helps.	social support	helpful coping/seeking support
		sometimes I totally lose my shit and it's pretty obvious I need help.	signs of mania recognized by others	seeking support
017	extravert	risky behaviors (sex, drugs, breaking law, etc.)	risky behavior	common symptoms
		fast talking (and am all over the place when I do talk in terms of topic)	increased talkativeness	common symptoms
		grandiose planning	increased activity/grandiosity	common symptoms

		I feel jittery, as if I can't stop moving around	increased activity	common symptoms
		I rarely sleep	decreased sleep	common symptoms
		want to always be doing something more	increased activity	common symptoms
		Like, if it's time for bed I'll try to get someone to do something risky with me.	increased social interaction	common symptoms
		I just want to be the center of attention during this time	increased social interaction	common symptoms/identity
		I will usually do things I regret when the manic episode is over	regret actions	common symptoms
		I hate feeling the regret after engaging in risky behavior	regret actions	most negative effect on life
		it's hard for people to understand what I say during my manic moments because I talk too fast and am all over the place	increased talkativeness	most negative effect on life
		I love some of my risk taking	risky behavior	positive experiences
		I tend to say yes easier at work and take the lead with confidence during a manic	increased self-confidence	positive experiences/identity

		episode. Because of this, I'm recognized as an outstanding employee.		
		[I notice symptoms] usually at the beginning of the episode, since I'm pretty used to it by now	recognize symptoms early	first signs of mania
		I can almost feel the onset in its early stages when I feel more sexually aggressive or not needing sleep	behavioral signs recognized by self	first signs of mania
		I don't tell anyone about it…I think it's usually my irritability or talking fast is what clues them in. Significant others have mentioned it's when I start having grandiose plans.	signs of mania recognized by others	first signs of mania
		writing 5 things every day that I'm thankful for or I find positive that day	positivity, gratitude	helpful coping mechanisms
		I talk to my informal support system and he usually can help me understand whether or not it's my mania or actual desire to do something.	social support	helpful coping/seeking support

		distracting myself with another activity and staying away from my phone also helps in not engaging in risky activities.	distractions/avoiding social	helpful coping mechanisms
		medication, I hate how it makes me feel	medication	least helpful coping mechanisms
		trying to abstain from activities totally	avoiding activity	least helpful coping mechanisms
		[felt supported] by friends because they assured me that I'm not my diagnosis. I can be whoever I want and my actions don't define me.	social support	seeking support
		…they assured me that I'm not my diagnosis. I can be whoever I want and my actions don't define me.	learning to separate self and diagnosis	affecting identity
		unless I actually verbalize [needing help], no one knows.	signs not recognized by others	first signs of mania
		I try to get attention by acting out, but those go unnoticed so	learning to communicate needs to others	seeking support

		now I just try to be more direct and honest.		

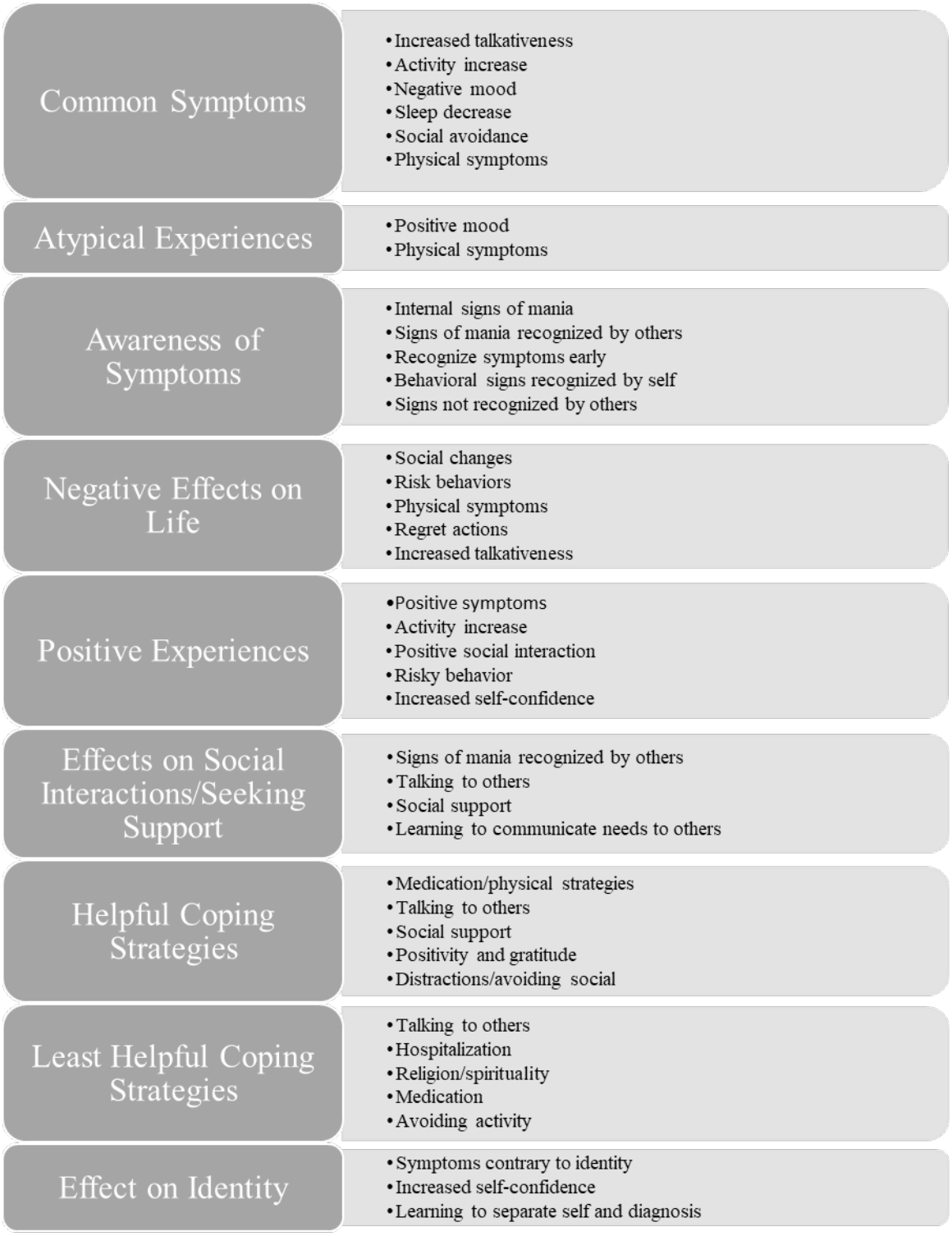

Figure 1. Themes and Clusters of Themes Identified