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Identity in bipolar disorder: Self-worth and achievement

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Abstract

This article considers self and self-concept in bipolar disorder. Bipolar disorder, defined on the basis of manic symptoms, is a highly debilitating psychopathology. It is heavily grounded in biology but symptom course is still very responsive to psychological and social forces in the lives of persons who have the disorder. This review assumes an overall view of the self that is typical of personality psychology: self as traits, self as goals and aspirations, and ongoing efforts to attain those goals. In this review, we will discuss two different facets of self and identity in bipolar disorder. First, we review a body of goal pursuit literature suggesting that persons with bipolar disorder endorse heightened ambitions for attaining goals and recognition from others. Second, we will review multiple findings which suggest that among persons with bipolar disorder, self-worth depends on measurable success in an extreme way. We will consider how the intersection of these two themes may lead to unique identity challenges for people with bipolar disorder, drawing from self-report, behavioral, and neuroscience findings to critically examine this viewpoint.

Keywords

ambition; behavioral activation system; bipolar disorder; contingent self-worth; identity

1 | INTRODUCTION

This article focuses on how self and identity play out in bipolar disorder. The concept of self has been approached in diverse ways over an extensive period of time by (among others) scholars in psychology, psychiatry, neuroscience, and philosophy (e.g., Dahl, Lutz, & Davidson, 2015; Gennaro, 2015; Gillihan & Farah, 2005). In this article, we assume a view of the self that is rooted primarily in personality psychology. Even personality psychology has a wide range of perspectives (e.g., Carver & Scheier, 2012), resulting in models of the self that are multifaceted. One facet would view the self as being partly the person's traits and how the person enacts the properties specified by the traits. From this vantage point, problems in the self arise when a person occupies an extreme position on any trait dimension that has strong implications for social integration.

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CONFLICT OF INTERESTS

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A slightly different view would suggest that the self consists partly of the person's goals and aspirations (both conscious and out-of-conscious), and the striving that the person engages in toward those goals and aspirations (Markus & Nurius, 1986; Mischel & Shoda, 1995). From this vantage point, problems in the self arise when goals lack clarity, when they are too demanding, when there are no clear paths to their attainment, and when their attainment creates problems elsewhere within the self or in the self's life space (Carver, 2018). This latter viewpoint tends to predominate in the discussion that follows.

There are many other ways in which this viewpoint can be modified, creating further complexity. For example, some goals appear to be intrinsically valuable in themselves, whereas other goals are extrinsic—valuable only as means to other outcomes (Ryan & Deci, 2018). To be committed to the latter can result in situations in which the person is pressured (by others or by oneself) to attain outcomes that are not of intrinsic value to the person and may even be antithetical to what Ryan and Deci (2018) call the true self.

Bipolar disorder is characterized by periods of acute manic symptoms and (in many cases) periods of depression during which the sufferer thinks, feels, and behaves in ways that are uncharacteristic of their out-of-episode selves. In addition to the challenge posed by these aberrant experiences in and of themselves, these experiences confront people with bipolar disorder with a subtler and more chronic struggle related to self and identity. Specifically, people with bipolar disorder often have a set of traits that have mixed consequences. On the one hand, these properties are associated both with elevated risk for the disorder and elevated risk for relapse. On the other hand, these same traits can sometimes lead to positive outcomes and promote valued self-related characteristics. This creates a unique identity challenge for the person with bipolar disorder. In this review, we explore how these issues manifest through actions and intentions, self-oriented cognitions, and explicit attempts to grapple with identity in the context of bipolar disorder.

In recent work, a rich array of tools for studying self-related processing has been developed, including behavior, self-report, qualitative and imaging methodologies (Legrand & Ruby, 2009). In bipolar disorder, most of the work has relied on behavioral, self-report, and qualitative methods. Neuroimaging work is available, however, for more specific questions about goal pursuit in bipolar disorder; we incorporate those narrower studies in this review.

2 | DEFINING BIPOLAR DISORDER

Bipolar disorder is defined on the basis of manic symptoms; it sometimes, but not always, involves depressive symptoms as well. Manic symptoms include elated or irritable mood, increases in energy or activity, very little need for sleep, extreme levels of confidence, and extreme talkativeness. Depressive symptoms include low mood, decreased ability to experience pleasure, low energy, and feelings of worthlessness.

Diagnostic criteria for bipolar disorder include at least one manic episode (in the case of bipolar I disorder), or a combination of less severe manic episodes, termed hypomania, taken together with periods of major depression (in the case of bipolar II disorder). Cyclothymia refers to rapid-cycling mood episodes occurring over at least 2 years that do not quite meet

the full criteria for hypomania or major depression. The umbrella term of bipolar spectrum disorder encompasses bipolar I and II disorders, cyclothymia, and additional manifestations of manic and depressive symptoms, including hypomanic periods without depression, or episodes that fail to quite meet the diagnostic criteria of symptom severity or duration.

An episode is defined by a set of symptoms that interfere with function, which may last from days to months at a time. Bipolar disorder is highly recurrent, and most persons with bipolar disorder continue to experience relapse at least once per year, even when best available treatments are provided (Gitlin & Miklowitz, 2017). Although bipolar disorder is considered episodic, subsyndromal levels of manic or depressive symptoms and functional impairment are often still present during remission (Gitlin & Miklowitz, 2017; Huxley & Baldessarini, 2007). This creates a substantial challenge for persons with bipolar disorder when it comes to self-concept, as the baseline mood periods that serve as a frame of reference may include remnants of symptoms and consequences related to the disorder.

In addition to the diagnosed samples, we consider findings from at-risk samples. These cohorts include offspring of parents with bipolar disorder and persons who score high on self-report measures such as the Hypomanic Personality Scale (HPS; Eckblad & Chapman, 1986), General Behavior Inventory (GBI; Depue & Iacono, 1989), and Mood Disorder Questionnaire (MDQ; Hirschfeld et al., 2000). The HPS has been found to predict the onset of bipolar disorder (Kwapil et al., 2000) and includes items that assess a history of hypomanic symptoms along with related personality traits. The GBI assesses the history of depression and hypomania as well as mood variability. The MDQ includes a checklist of hypomanic symptoms that co-occur in the same time frame and include some level of impairment.

Epidemiological studies suggest that 25%–33% of those with bipolar spectrum disorders in community samples do not experience periods of major depression; it is a common but not universal feature of bipolar disorder (Eisner, Johnson, & Carver, 2008). There is a large literature on negative life events and depressive cognitions which suggests that bipolar depression shares a remarkable overlap with unipolar depression in terms of cognitive predictors, correlates, and maintaining factors (e.g., Alloy, Abramson, Walshaw, & Neeran, 2006; Carver & Johnson, 2009; Johnson & Fingerhut, 2004; Pavlickova et al., 2013; Scott, Stanton, Garland, & Ferrier, 2000). Similarly, anxiety within bipolar disorder is related to many of the psychological correlates observed for anxiety in the general population (Muhtadie & Johnson, 2015; Simon et al., 2003). Throughout this review, we focus on mania as the defining feature of bipolar disorder. Though we cover some topics with relevance to depression or anxiety, a thorough analysis of those syndromes goes beyond the scope of this review (see Cuellar, Johnson, & Winters, 2005 for review).

In what follows, we consider a set of identity and goal pursuit findings in both high-risk and diagnosed samples. The inclusion of high-risk samples allows for consideration of which features may be present before illness onset. We begin by discussing findings over the past several decades suggesting that bipolar disorder is characterized by high levels of behavioral activation, and a set of findings indicating that this may be expressed specifically through inordinately high ambitions. Then we consider a separate literature concerning self-

perceptions related to goal attainment and achievement. In this context, we raise some findings that suggest that persons with bipolar disorder may be vulnerable to what has been called contingent self-worth—the idea that one feels worthy of acceptance and self-acceptance only under certain conditions (Crocker & Wolfe, 2001). We then consider the clinical implications of having both high ambition and contingent self-worth, describing ways these two characteristics may amplify each other, and discussing how these patterns might be manifested in treatment.

3 | THE BEHAVIORAL ACTIVATION SYSTEM AND AMBITION IN BIPOLAR DISORDER

Across species, there is an advantage in being able to quickly recognize cues that signal threat and reward, to prompt avoiding or approaching such signals. According to a theory proposed by Gray (1972, 1981, 1990), relative tendencies to avoid or approach in the context of relevant environmental signals can be understood as biologically based dimensions termed behavioral inhibition system and behavioral activation system (BAS; also known as the behavioral facilitation system, behavioral approach system, or the approach motivation system; Carver & White, 1994; Johnson, Edge, Holmes, & Carver, 2012).

Over the past 30 years, several theorists have proposed that manic symptoms are tied to elevations of BAS sensitivity or engagement (Depue & Iacono, 1989; Johnson, Edge et al., 2012). The BAS guides behavior toward reward-relevant stimuli, with the goal being to move toward something desired. To do this, BAS-related functions include a broad range of affective and cognitive processes in support of goal-directed behavior.

Three elements are important in considering BAS function: inputs, outputs, and sensitivity (Johnson, Edge et al., 2012). BAS inputs refer to cues in the environment that signal the proximity of or potential for reward—for example, the smell of coffee, or an advertisement for a new technological gadget. BAS inputs act as the stimuli that elicit behavior. BAS outputs include increases in activity, energy, confidence, sociability, and exploration (Depue & Iacono, 1989). BAS outputs guide the ensuing behavior and cognition to approach the signaled reward (in this example, making coffee, or buying a new phone or computer). BAS sensitivity refers to the likelihood that BAS inputs will lead to BAS outputs, and the corresponding intensity of BAS output following a given input. BAS inputs are features of the environment, while BAS sensitivity is an individual difference. For two people who find the smell of coffee pleasant, one might pass at the chance for a cup while another might be motivated to immediately pursue coffee, exhibiting different BAS sensitivities. BAS sensitivity moderates the intensity of BAS output for a given BAS input (Johnson, Edge et al., 2012). In the laboratory setting, BAS input often takes the form of monetary incentives or performance-based positive mood inductions, and output is measured as subsequent engagement on a task. It is important to consider both BAS sensitivity and inputs (cues of incentive) as predictors of BAS output (Johnson, Edge et al., 2012).

3.1 | Evidence of BAS hypersensitivity in bipolar disorder

Depue and Iacono (1989) initiated the wave of interest in relations between BAS and bipolar disorder by drawing on clinical observations. They noted that BAS outputs have a remarkable correspondence to manic symptoms, including elevated mood, inflated self-esteem, increased sociability, increased goal-directed activity, and excessive involvement in pleasurable activities. Within their model, mania occurs when the outputs of BAS are sufficiently high.

One commonly used measure of BAS sensitivity is Carver and White's (1994) self-report BAS scale. The scale was designed to capture ways that BAS sensitivity would manifest in overt behavior and subjective experience. Factor analysis yielded three empirically separable but related subscales, capturing (a) effort at pursuit of goals (Drive), (b) the tendency to respond to rewarding outcomes with energy and enthusiasm (Reward Responsiveness), and (c) the tendency to pursue positive experiences without regard to potential threats or costs (Fun-Seeking).

The BAS subscales have been well validated as relating to setting more approach goals in life (Jones, Shams, & Liversidge, 2007), valuing approach goals (Alloy et al., 2009), experiencing more high arousal positive affect during goal pursuit (Heponiemi, Keltikangas-Jaervinen, Puttonen, & Ravaja, 2003), and stronger affective, cognitive, and neural responses after receiving a reward (Beaver et al., 2006; De Pascalis, Varriale, & D'Antuono, 2010; Germans & Kring, 2000; Van den Berg, Franken, & Muris, 2011). The BAS scales have also demonstrated excellent test-retest reliability over as long as a two-year period (Brown, 2007). Within bipolar disorder, a large number of studies have shown that BAS scales are elevated during remission among those with bipolar I disorder and bipolar spectrum disorders, are correlated with measures of mania risk, such as the HPS, and predict the onset of bipolar disorder and the course of manic symptoms among those who have been diagnosed with bipolar I disorder (Johnson, Edge et al., 2012). BAS scores do not appear to be a direct consequence of manic symptoms, in that elevations of BAS scores are observed during periods of remission and among those at risk for the disorder (Johnson, Edge et al., 2012; Meyer, Johnson, & Winters, 2001).

One of the key functions of BAS is thought to be the initiation of locomotor activity, which is often a precursor to approaching a goal (Depue & Iacono, 1989). High energy and activity levels constitute cardinal features of mania in the DSM-5 (American Psychiatric Association, 2013), and it has been argued that activation may be a more reliable diagnostic criterion than changes in mood state (Akiskal & Benazzi, 2005). Supporting this view are results from an early study using actigraphy (wearable monitors that measure motion and motor activity), which found that activity levels corresponded closely to changes in other manic symptoms during a several day observation period, and increases in activity were an excellent signal of impending shifts to mania among participants with bipolar I disorder (Wehr, Goodwin, Wirz-Justice, Breitmaier, & Craig, 1982). More recent studies using ambulatory monitoring devices to measure psychomotor activity and other types of movement have similarly found increased activity in a laboratory setting containing interesting (potentially reward-relevant) stimuli, in samples with bipolar I disorder in episodes of mania (Perry, Minassian, & Paulus, 2009) and euthymia (Henry et al., 2013).

This corroborates the notion that increased activation represents a key characteristic of bipolar disorder.

Consistent with a profile of BAS hypersensitivity, some research suggests that goal attainment life events may trigger manic symptoms in persons with bipolar disorder. That is, three longitudinal studies have found that goal attainment life events (interpersonal, financial, occupational or other life events that reflect goals a person was motivated and working toward) predicted subsequent increases in manic symptoms; this did not occur after more general positive life events (Johnson et al., 2008, 2000; Nusslock, Abramson, Harmon-Jones, Alloy, & Hogan, 2007). Effects were observed in bipolar I disorder (Johnson et al., 2008, 2000) and in bipolar spectrum disorder (Nusslock et al., 2007). Of import, baseline manic symptoms were not correlated with either goal attainment or positive life events. The effects were observed even when ruling out life events that were the consequences of the symptoms. The pattern overall suggests that life events that involve goal attainment may serve as BAS inputs and promote manic symptoms in vulnerable persons.

In sum, before the onset of symptoms, persons with bipolar disorder appear to have a heightened tendency to respond actively to cues in the environment that signal the availability of reward, without a similarly increased sensitivity to threat cues (Johnson, Edge et al., 2012). In the next section, we discuss how BAS hypersensitivity in bipolar disorder sets a framework for placing a premium on extrinsic achievement.

3.2 | BAS output as effort expenditure for rewards

As noted above, BAS is conceptualized as a motivational system. Accordingly, one output of BAS would be the expenditure of effort to attain potential rewards. Using several different indices, researchers have shown that people with bipolar I disorder (Fulford, Johnson, Llabre, & Carver, 2010; Hayden et al., 2008) and bipolar spectrum disorder (Harmon-Jones et al., 2008) are willing to expend more effort in the pursuit of goals than are those without mood disorders. In one approach, Hayden & colleagues (2008) examined how quickly individuals would sort cards in order to earn a reward. People diagnosed with bipolar I disorder who were euthymic at the time of the study completed the card sorting task faster than did healthy controls when given the chance to earn monetary rewards for faster sorting. The results of this study suggest the possibility that contextual cues of potential for reward spur active engagement to a greater extent in those with bipolar disorder, and that this tendency is present in the absence of current symptoms.

Researchers have also conceptualized BAS output as a degree of cognitive engagement in response to a rewarding stimulus, and tested whether persons with bipolar disorder show more willingness to expend cognitive effort than do healthy controls in the context of reward. Harmon-Jones & colleagues (2008) provided participants with the chance to earn money (reward trials) or lose money (punishment trials) for performance on an anagram task in which trials became harder over time. They used left frontal cortical activation to index task engagement. They hypothesized that people diagnosed with bipolar spectrum disorder would have an increased level of effortful engagement specifically on the reward trials, but not the punishment trials. Consistent with this, people diagnosed with bipolar disorder (compared to healthy controls) showed greater relative left frontal cortical activation while

preparing for the difficult reward trials, but not the difficult punishment trials. There were no group differences on the medium or easy reward trials. That is, people with bipolar disorder sustained efforts longer as rewards became more difficult to obtain. Within the bipolar disorder group, current self-reported levels of activation correlated with increased left frontal cortical activation. Similar findings regarding willingness to work for difficult rewards emerged in studies of undergraduates at high risk for mania, as defined by high GBI scores (Harmon-Jones et al., 2002).

In sum, greater willingness to expend effort in pursuit of reward has been found at a behavioral and a physiological level among persons with bipolar disorder in euthymic states and among persons at risk for bipolar disorder. This pattern appears consistent with higher valuation or lower cost of difficult-to-obtain rewards.

3.3 | Elevated expectations of success among persons with bipolar disorder

A fair amount of evidence from self-report scales also indirectly supports this idea of willingness to expend increased effort toward goal attainment among persons diagnosed with bipolar disorder. Johnson and Carver (2006) developed a self-report measure termed the WASSUP to capture the degree to which people set highly ambitious and difficult to attain life goals. The WASSUP comprises a set of factor analytically derived subscales designed to capture statistically improbable life goals involving extrinsic recognition (Wealth and Popular fame) as well as intrinsically motivated life goals (e.g., Friendship and Family subscales). Respondents are asked to indicate how likely they are to set the respective goal for themselves. Items related to extrinsic recognition include “someone will write a book about your life” (Popular fame) and “you will have 20 million dollars or more” (Wealth). Subscales related to intrinsically motivated life goals include “your children will see you as the perfect parent” (Family) and “everyone you know will love you” (Friendship).

The extrinsic subscales, Wealth and Popular fame, have been particularly relevant to bipolar diagnosis. Across studies, people diagnosed with bipolar I disorder and those diagnosed with bipolar spectrum disorder, even during remission, endorse highly ambitious extrinsically motivated life goals on the WASSUP (Alloy et al., 2012; Carver & Johnson, 2009; Johnson, Carver, & Gotlib, 2012). They are not more likely to endorse other, more intrinsic goals such as elevated ambition for social connection. Although the goals are dampened somewhat among those with bipolar disorder who are unemployed, elevations appear to persist even as those with bipolar disorder experience multiple episodes and hospitalizations, and the stressors that occur with those periods (Johnson, Carver et al., 2012).

These elevated goals are also captured when other measurement approaches are used. For example, when asked to describe life goals in an open-ended fashion, people diagnosed with bipolar I disorder described more ambitious goals than did those without bipolar disorder (Tharp, Johnson, Sinclair, & Kumar, 2015). The goals do not appear to be a compensation for the experiences and problems that result from a bipolar diagnosis, in that risk for mania as measured with the HPS also correlates with high WASSUP scores (Chen & Johnson, 2012; Fulford, Johnson, & Carver, 2008; Fulford, Sinclair, John, & Johnson, 2014; Gruber & Johnson, 2009; Johnson & Carver, 2006; Johnson, Carver et al., 2012; Johnson & Jones, 2009; Ruiter & Johnson, 2015; Stange et al., 2013). These ambitions also do not appear to

be an artifact of manic symptoms, in that this profile is observed after adjusting for subsyndromal current mood symptoms (Carver & Johnson, 2009; Fulford et al., 2008; Gruber & Johnson, 2009; Johnson & Carver, 2006; Johnson, Carver et al., 2012; Stange et al., 2013; Tharp et al., 2015). Hence, those with bipolar disorder, and those at risk for bipolar disorder, appear to endorse stably high life ambitions. The WASSUP extrinsic scales have also been validated against family beliefs about the importance of achievement (Chen & Johnson, 2012).

WASSUP elevations appear to function as a double-edged sword, with some positive and some negative outcomes related to WASSUP elevations. High scores on the WASSUP have been found to predict the onset of bipolar spectrum disorder among adolescents characterized as high risk based on high BAS scores (Alloy et al., 2012), and among adults who have been diagnosed with bipolar I disorder, a more severe course of mania (Johnson, Carver et al., 2012). Consistent with a large literature on high ambition as a predictor of scholastic and occupational success in general (Ames & Archer, 1988; Brattesani, Weinstein, & Marshall, 1984), there is also evidence that high WASSUP scores relate to greater lifetime artistic accomplishment and greater likelihood of becoming gainfully employed as an artist among those with bipolar spectrum disorder diagnoses (Johnson et al., 2015). Hence, this core feature of the disorder appears tied to both the course of manic symptoms, and also some of the success patterns that have been observed among people with bipolar disorder.

3.4 | Biological mechanisms of goal striving

Human and animal neuroscience has helped clarify the neural mechanisms that may underlie or correspond with behaviors related to goal pursuit. In the animal literature, researchers have long examined individual differences in willingness to expend effort in order to gain rewards (Salamone, Correa, Farrar, Nunes, & Pardo, 2009). Most typically, an animal is presented with a choice between an easily obtained but small reward as compared to a larger reward that requires more work (e.g., more lever presses, a steeper ramp, or a barrier to climb over). Biological mechanisms of this tendency have been examined through experimental and pharmacological research and are relatively well understood, with major contributions from striatal dopamine (Salamone et al., 2009). Dopamine is also implicated in comparing relative values of possible outcomes and coding the difference between the actual versus expected outcome, but does *not* play a key role in the hedonic experience of pleasure (Berridge & Kringelbach, 2008). Thus, manipulations of midbrain dopamine would be expected to affect the motivational aspects of and mobilization toward reward, but not necessarily the ability to experience pleasure in the moment.

Consistent with the motivational role of dopamine, reactivity to cues signaling reward (e.g., BAS input) has also been closely tied to dopamine levels in the striatum (Schultz, Stauffer, & Lak, 2017). There has long been evidence that pharmacological manipulations to increase dopamine levels can induce manic-like symptoms, and that an increase in dopamine in people with bipolar disorder can increase an already elevated preference for high-risk, high-reward options in reward learning (Whitton, Treadway, & Pizzagalli, 2015).

One possible mechanism accounting for increased dopa-mine availability involves decreased dopamine transporter (DAT) levels in people with bipolar disorder. A number of translational studies have shown that mice with depleted DAT show behaviors similar to those observed in mania, such as increased activity, diminished sleep, and increased exploratory behaviors (Perry et al., 2009; Van Enkhuizen et al., 2015). Furthermore, in animal studies, manipulations to decrease DAT led to behavior that resembled bipolar mania more closely than manipulations that increased the levels of norepinephrine, an excitatory neurotransmitter associated with arousal (Perry et al., 2009).

In tandem to the link between overt goal-directed behavior and increased midbrain dopamine availability, some evidence suggests an association between increased midbrain dopamine levels and achievement-oriented cognitions in bipolar disorder. Among those with bipolar I disorder, the WASSUP Popular Fame subscale has been validated against spontaneous blink rate (a downstream proxy for striatal dopa-mine levels) while anticipating an opportunity to earn reward (Peckham & Johnson, 2016).

While these studies offer compelling evidence to suggest differential dopamine activity in bipolar disorder which may relate specifically to goal striving behavior and cognitions, more evidence is needed to clarify the precise mechanisms at work. Some constraints include the current impossibility of experimentally manipulating dopamine levels in humans without influencing other neurotransmitters, and the expense of imaging technology necessary to track dopamine and DAT (Ashok et al., 2017).

4 | CONTINGENT SELF-WORTH

In this section, we consider the possibility that bipolar disorder is characterized by a distinct pattern of self-evaluation in the domain of goal pursuit. Specifically, we will review evidence consistent with the idea that persons with bipolar disorder view goal attainment as being key to their self-worth. We consider the extent to which this may reflect a pattern of contingent self-worth, in which global evaluations of self-esteem fluctuate depending on performance in specific domains (Crocker & Wolfe, 2001). This style of self-evaluation contrasts with a model in which one’s perception of self-worth is stable, independent of perceived success in specific domains. Contingencies of self-worth may be internal (i.e., “virtue”) or external (i.e., “grades”, “family support”), though internal contingencies tend to be less precisely defined and harder to measure (Crocker, 2002). Higher levels of externally contingent self-worth have been found to predict greater vulnerability to depressive symptoms (Sargent, Crocker, & Luhtanen, 2006).

Although researchers have not directly tested the model of contingent self-worth in bipolar disorder, many studies of bipolar disorder have incorporated the Dysfunctional Attitudes Scale (DAS; Weissman & Beck, 1978), which has some relevance to contingent self-worth. The DAS was originally developed as a measure of cognitions characteristic of depression vulnerability (Weissman & Beck, 1978). It assesses the subjective importance of self-worth of achievement and need for approval for evaluations of self-worth. Items include self-evaluative statements based on contingencies the original authors deemed unrealistic and thus dysfunctional (e.g., “If I fail at my work, then I am a failure as a person”; “If others

dislike you, you cannot be happy"). It has since been suggested that the DAS is a measure of contingent self-worth (Kuiper, Olinger, & Air, 1989; Sturman, Flett, Hewitt, & Rudolph, 2008). However, some DAS items appear to index beliefs that do not necessarily indicate contingent self-worth (e.g., "I should always have complete control over my feelings; I ought to be able to solve my problems quickly and without a great deal of effort"). Thus, some, but not all, DAS items appear to capture contingent self-worth, and it represents a highly relevant though non-exact measure of this construct.

Factor analyses of the DAS in different samples have yielded somewhat discrepant results. Emergent subscales have included goal attainment, autonomy, perfectionism, achievement, performance evaluation, need for approval, and dependency. Still, there is consistency in that some items relate to perceptions of judgment from others (need for others' approval/ dependency) and the others relate to accomplishment, with factors differing more subtly in their emphasis on the process versus the outcome of achievement (e.g., having control over one's abilities vs. achieving great outcomes). Overall, items on the DAS refer to the perceived *consequences* of positive or negative outcomes in domains of achievement and affiliation in terms of their impact on the sense of self. Of most relevance here, a unique factor structure has emerged for those with bipolar I disorder compared to the factor structures observed in other populations (Lam, Wright, & Smith, 2004).

Earlier, we discussed the presence of high goal setting across mood states of bipolar disorder, relatively independent of symptoms. Beliefs about the importance of achievement and goal attainment for self-worth also appear to characterize bipolar I disorder samples during remission (Lam et al., 2004; Wright, Lam, & Newsom-Davis, 2005; Scott et al., 2000; but see Alatiq, Crane, Williams, & Goodwin, 2010). In diagnosed samples with some degree of current mood symptoms, scores on DAS items related to achievement have been significantly greater compared to those of controls (in bipolar spectrum disorder, Alloy et al., 2009) and participants with unipolar depression (in bipolar I disorder, Lam et al., 2004; but see Jones et al., 2005) when accounting for levels of depressive symptoms. Intriguingly, elevations in scales related to dependency and need for approval appear more specifically tied to current depressive symptoms, and are less likely to be elevated for all individuals with bipolar I disorder (Lam et al., 2004). This suggests that the core features of the disorder may be more related to self-related cognitions concerning achievement and goal attainment.

Not only have high DAS scores been observed in bipolar disorder, but those scores appear related to the course of the symptoms. Self-critical and perfectionist tendencies regarding accomplishments have been tied to a greater risk of depressive and anxious symptoms in bipolar disorder, respectively (in bipolar I & II disorder; Corry et al., 2013; in bipolar spectrum disorder; O'Garro-Moore, Adams, Abramson, & Alloy, 2015). Among high-risk groups, higher DAS scores are linked to subsyndromal depressive symptoms (Fuhr, Hautzinger, & Meyer, 2014). To our knowledge, there is no evidence to suggest elevated DAS scores in high-risk groups absent of current mood symptoms; studies examining this link have reported nonsignificant correlations between risk for mania and DAS scores (Jones & Day, 2008; Jones et al., 2007).

4.1 | Reactivity to achievement-related outcomes

To the extent that self-worth depends on success, one would expect persons with bipolar disorder to show heightened reactivity to success manipulations in laboratory settings. This does appear to be the case. For example, in several studies, persons at risk for bipolar disorder showed greater increases in confidence (Meyer, Barton, Baur, & Jordan, 2010) and self-esteem ratings (Pavlova, Uher, Dennington, Wright, & Donaldson, 2011) after an initial success. There is also limited evidence to suggest increased reactivity to failure among people with bipolar disorder. Following life events that induced frustration, participants with bipolar I disorder who had a more severe history (a greater number of past manic and depressive episodes) remained less energized, interested, and excited for a longer period of time before returning to baseline (Wright, Lam, & Brown, 2008).

Beyond life events and laboratory research, those with bipolar disorder tend to have some insight into this profile. For example, in one study, individuals at risk for bipolar disorder endorsed a tendency to overgeneralize the meaning of small successes, and those with a history of depression endorsed the tendency to overgeneralize the meaning of small failures (Eisner et al., 2008). Among a sample of persons with bipolar I disorder, many endorsed feeling that they had experienced successes that triggered their manic episodes (Edge et al., 2013). Taken together, these results support the importance of both successes and failures in influencing internal states as well as symptoms among persons with bipolar disorder.

Beyond extreme cognitive responses to success, people with bipolar disorder appear to also show distinct behavioral responses to small successes. One key study examined the dynamics of goal pursuit in participants with remitted bipolar I disorder relative to a control group, in which participants tracked expected and actual progress toward preestablished goals at sequential time points. In general, when participants made more progress on a goal than expected, they decreased efforts toward that goal during the next time point (Fulford et al., 2010). In other words, they showed a tendency to relax efforts immediately after a small success. Participants with bipolar disorder showed significantly less of this tendency to “coast” following better-than-expected progress toward a goal. These results imply that the same cue that signals the onset of a “rest and reassess” period for most people appears to signal continued persistence for those with bipolar disorder.

Few studies have examined the interaction between contingent self-worth and reactivity to domain-specific life events. One longitudinal study approximated this line of inquiry, though. It showed that persons with bipolar II disorder and cyclothymia who endorsed higher levels of self-criticism and performance standards showed increased hypomania after positive events related to achievement and attainment and increased depressive symptoms after negative life events in the same domain (Francis-Raniere, Alloy, & Abramson, 2006). This effect was specific to life events and values related to achievement: interpersonal concerns did not interact with life events in this domain to predict increases in depressive or hypomanic symptoms. These results are consistent with the depiction of increased reactivity to achievement-oriented events among people with bipolar disorder who are particularly concerned with performance.

4.2 | Self-esteem instability in bipolar disorder

One of the manifestations of contingent self-worth is characteristically unstable self-esteem (Crocker, 2002)—defined by marked variability rather than higher or lower absolute levels. A predictive relationship between self-esteem instability and depression has been established for decades; for example, two prospective studies found that self-esteem that varied to a greater degree across contexts or time predicted future depressive symptoms among those not initially depressed (Roberts & Monroe, 1992) and among those who experienced high levels of daily stress (Kanner, Coyne, Shaefer, & Lazarus, 1981). Several studies suggest that self-esteem in bipolar disorder may be characterized by marked variability as well. More specifically, greater variability in daily self-esteem scores over the course of a week has been shown among participants with bipolar depression (Van der Gucht, Morriss, Lancaster, Kinderman, & Bentall, 2009), as well as those in remission (Knowles et al., 2007; Van der Gucht et al., 2009), in comparison to healthy controls and even to participants with remitted unipolar depression (Knowles et al., 2007).

Greater instability in self-esteem also has been observed before the onset of a diagnosable disorder, among one at-risk sample of students with high HPS scores, two samples comprising a mixture of participants with bipolar spectrum disorder and high-risk based on HPS and DAS scores (Bentall et al., 2011), and one sample of offspring of parents with bipolar disorder (Jones, Tai, Evershed, Knowles, & Bentall, 2006). One caution is that all of these high-risk samples, with the exception of that of the first study in Bentall & colleagues (2011), were already characterized by high levels of negative affect compared to controls. More research is needed to consider whether self-esteem lability can be observed before mild mood changes are apparent within those at high-risk for bipolar disorder.

In sum, self-esteem instability appears to be a concern among diagnosed bipolar samples during euthymic and depressive periods, and to be observable among at-risk bipolar samples. Self-esteem ratings are closely linked to mood lability. Taken together, these findings suggest a tight linkage of mood symptoms and self-esteem, so that mood lability is closely tied to the self-esteem instability apparently characteristic of bipolar disorder. It is possible that self-esteem instability is a consequence of contingent self-worth in bipolar disorder, but more research is needed to elucidate this potential relationship.

4.3 | Great expectations and self-worth based on achievement: potential clinical implications

So far, we have considered a wide range of quantitative empirical studies involving behavior, self-report, and physiological indices of behavior and cognition to approach the idea of highly ambitious expectations, goal pursuit tendencies, self-concept based on achievement, and how these themes may intersect in bipolar disorder. We've discussed the idea that people with bipolar disorder set very high goals for themselves, see achieving those goals as central to their sense of self-worth, are highly reactive to life events and laboratory manipulations involving success, and describe overgeneralizing the meaning of small successes. They also show labile self-esteem, which has been used as an index of contingent self-worth in basic studies outside bipolar disorder (Kernis, Cornell, Sun, Berry, & Harlow, 1993). Some of

these patterns, including heightened ambitions and behavioral reactivity to incentive cues, appear to be present before the onset of bipolar disorder.

Consistent perseverance toward a goal is an essential ingredient of achievement and success, especially when compared to giving up on a goal too quickly. In the case of bipolar disorder, however, this persistence is coupled with extremely high and often unrealistic expectations of success. The goals that those with bipolar disorder set can be extremely hard to attain. While small successes that move a person toward these extreme goals are likely to occur, they are not likely to generate a full sense of satisfaction and goal attainment. Accordingly, when most people would tend to experience a sense of satisfaction and contentment in acknowledgment of an accomplishment, persons with bipolar disorder may already be revving up in preparation toward the next goal. This is consistent with work that has found that persons at greater risk for mania (as assessed by HPS score) elected more effortful task versions following monetary reward—but did *not* report concurrent increases in positive affect (Johnson, Ruggero, & Carver, 2005). Thus, increased goal striving and high expectancies of goal attainment in bipolar disorder may attenuate the frequency of relishing positive experiences for persons with bipolar disorder.

Coupled with setting extremely hard to attain goals, those with bipolar disorder often endorse feeling that their self-worth depends on attaining their goals. This seems to be a particularly pernicious combination.

For clarity, consider the following illustration: Tom is a middle-aged man with bipolar disorder who has gotten several promotions across 20 years working at the same company—he believes that he could become CEO, though his coworkers think this is unrealistic. Performance in the workplace is extremely important to Tom; he considers this as a barometer for his overall value as a person. During a yearly performance review, Tom receives positive feedback and a small salary bonus. While he is pleased with the evaluation, he does not take a break to celebrate and relax. Rather, he takes it as a sign to work harder and for longer hours, as it strengthens his expectation in reaching the eventual goal. As long as Tom receives sufficient positive feedback on his performance, his sense of self-worth is buoyed, but he is vulnerable to experiencing a lowered sense of general self-worth as soon as he receives a semblance of negative feedback. Furthermore, because his marker for success (becoming CEO) is so high, smaller successes in the occupational domain don't feel like satisfying accomplishments for him. Thus, he has a hard time lightening the personal impact of failures by accessing memories of past success, and he feels crushed when things do not go well at work.

In sum, among persons with bipolar disorder, there is evidence to support extremely high goal setting, persistent pursuit of difficult goals, and a sense of self-worth overly viewed through the lens of achievement. The overly high goals make it hard to attain satisfaction regarding accomplishment, and the reliance on accomplishment for self-worth makes this a particularly worrisome pattern. Below, we examine the effects of achievement sensitivity and goal striving on symptom changes and self-esteem.

5 | QUALITATIVE STUDIES OF IDENTITY IN BIPOLAR DISORDER

Qualitative studies provide additional value in understanding the themes underlying the personal experience of bipolar disorder and highlight recurrent patterns of identity challenges. A number of qualitative studies have used thematic analysis techniques to examine patterns in the self-described impact of bipolar disorder on identity. Beyond the well-established concerns that many with bipolar disorder experience about the side effects of medications (e.g., Lingam & Scott, 2002; Proudfoot et al., 2009), there are more core issues that make it difficult to accept the diagnosis. People with bipolar disorder relate in diverse ways to their diagnosis. Some consider it to be an integral part of their identity, while others separate themselves from the label; some consider it to have a negative effect on identity, while others report that it has a positive or neutral impact (Michalak et al., 2011).

Some challenges may be even greater for young people whose diagnosis of bipolar disorder takes place earlier in the development of a sense of identity. Participants in an adolescent and younger adult sample described a tension between mood and personality, and some considered the illness completely enmeshed in their sense of self (Inder et al., 2008). Among a sample of people aged 15-years old who received the diagnosis, one theme that emerged included difficulty maintaining consistency, which was especially salient in achievement contexts such as work and school. Participants described the development of their self-concept to be riddled with contradictions and doubt, including the problems of negotiating long periods of time during which they would think, feel, and behave distinctly from “baseline” periods (Inder et al., 2008).

Similar themes of inconsistency have emerged in adult samples as well (Jonsson, Wijk, Skarsater, & Danielson, 2008). One study using a theoretical sampling method found that many with bipolar disorder highlighted a theme of inconsistency, and its negative effects on relationship continuity (Fernandez, Breen, & Simpson, 2014). This same study found that people described feeling at once out of control and over-scrutinized by others who were concerned that they may lose control. This led to feelings of low confidence and self-doubt. Some people described reclaiming some control through self-help groups.

Persons with bipolar disorder who adopt a “patient identity” tend to adhere to medications, but also report feelings of powerlessness (Fernandez et al., 2014). Participants described feelings of failure bred from a perceived discontinuity in mood, confidence, or values. When considering a goal with a long horizon—such as academic, relationship, or career opportunities—those with bipolar disorder may anticipate greater likelihood of instability and fluctuations in mood which impacts confidence and motivation, all of which may decrease the perceived likelihood of completion or increase expected time to completion.

Taken together, these identity challenges converge on struggles to maintain continuity as well as concerns about future implications of inconsistent behaviors and emotional state. A possible latent factor linking discontinuity in emotional and behavioral patterns to the expressed distress may be self-concept clarity. Self-concept clarity has been defined as having clearly defined and confident beliefs about the self, as well as perceived stability in self-related attributes (Campbell et al., 1996). In nonclinical samples, a lack of self-concept

clarity has been found to relate to lower life satisfaction among those who experience discontinuities between their past and present self (Ritchie, Sedikides, Wildschut, Arndt, & Gidron, 2011). That is, discontinuity in one's sense of self appears detrimental for perceived well-being. This suggests the need for more careful consideration of how those with bipolar disorder form a stable sense of self-concept in the face of these challenging discontinuities.

6 | LIMITATIONS IN THE EMPIRICAL STUDIES

Above, we have highlighted two separable literatures suggesting that those with bipolar disorder tend to set very high goals, and yet believe that their self-worth depends on attaining their goals. Although it seems reasonable to think that these two dimensions would intersect in troubling ways for the sense of self and for symptom stability, we have not found a longitudinal study that assesses both dimensions. In the attempt to understand these issues of self-worth and goal setting, the field would benefit from more studies with longitudinal designs, large sample sizes, and data collected from the same individual across mood states. To our knowledge, no direct self-report measures of contingent self-worth have been implemented in bipolar samples. The DAS approximates this concept, but not all of its items show theoretical consistency with contingent self-worth. A more precise measure would include clearly delineated domains with items phrased in terms of direct impact on self-perception.

7 | IMPLICATIONS FOR TREATMENT

While established pharmacological and psychosocial treatments for bipolar disorder can be quite effective, treatment adherence has been a historical struggle for both clients and providers (e.g., Berk et al., 2010; Colom & Vieta, 2004). Providers should be aware of the identity challenges presented by bipolar disorder, which may affect motivations for certain types of treatment. For example, a client with a strong value on achievement may find messages of chronicity, the likelihood of relapse, and the biological nature of mood swings to conflict with strongly held ideals of managing any threats to accomplishment. Difficulties engaging with treatment may be further intensified among clients who believe that their hypomanic symptoms promote productivity (Jamison, Gerner, Hammen, & Padesky, 1980). Supporting this notion, among a sample of people with bipolar disorder, those who endorsed positive effects of hypomanic symptoms were less likely to respond to cognitive therapy (Lam, Wright, & Sham, 2005). It is worth noting that research to date, albeit slim, does not suggest that hypomania leads to high-quality output for most (Johnson, Murray et al., 2012). Nonetheless, clinicians may need to systematically consider how productivity and manic symptoms covary for a given client (Murray & Johnson, 2010).

Providers will do well to the extent that they stress that the client is a partner in attaining health, that treatment can foster better control over symptoms in support of lifestyle restoration and growth, and that self-management techniques can be helpful. It is possible that addressing concerns related to identity and bipolar disorder throughout treatment may improve client motivation and treatment adherence.

We highly recommend that clinicians gather information about high goal setting, perseverance in the pursuit of those goals, and beliefs that self-worth depends on attaining success. When extreme ambitions are apparent, delicacy is required. Providers who are quick to label extreme ambitions as unrealistic may be met with resistance by clients who consider achievement central to self-worth. Motivational interviewing may be one way to approach this challenge more sensitively. Many clients report that holding extreme goals supplies a sense of meaning to their life, and it is important for clinicians to gain a better understanding of why such goals matter for a given client. The costs of high goals may vary considerably across clients as well, from material and emotional resources that are expended in the pursuit of goals, to the experience of not being able to attain enough progress, to potential mood exacerbations during periods of intense goal pursuit. Beyond these costs, motivational interviewing strategies are relevant for understanding how a client views the pros of setting extremely high goals. In the case of an apparent contingent self-worth, clinicians should work with the client to strengthen the sense of self-compassion (in the face of failure) and to support other ways of bolstering self-worth without dependence on extreme accomplishment.

8 | CONCLUSION

The studies reviewed here suggest that even before onset, persons with bipolar disorder set higher goals for themselves and persist to a greater extent toward those goals than do others, especially in the context of cues that signal impending reward. Further, successful achievements appear to constitute essential criteria upon which self-worth is evaluated among many people with bipolar disorder. It is important for researchers to consider that these two strands could have very important clinical implications. It seems intuitively reasonable to consider that people who hold extremely high standards of achievement and who also base their self-worth specifically on these accomplishments may be particularly vulnerable to mood shifts in the face of external feedback about their accomplishments.

Although holding optimistic expectations and engaging in goal striving behavior can lead to some positive consequences, failures or frustrations in this domain relate specifically to increases in depressive symptoms and lowered self-esteem in bipolar disorder. Extreme interpretations of positive or negative outcomes in the domain of achievement could contribute to a pattern of self-esteem instability. These extremes in goal-oriented cognition could help explain the substantial challenge that people with bipolar disorder describe in qualitative studies in establishing a stable sense of identity: persons with bipolar disorder must reconcile considerable internal variability in forming a self-concept. Therapists can be extremely helpful in addressing these pressures. At the same time, we hope that researchers will devote more effort to exploring the possibility that those individuals with bipolar disorder who experience the combination of elevated ambition and perceived extreme significance of achievement may be particularly vulnerable to consequences of goal attainment life events.

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