The nature and treatment of depression in bipolar disorder: A review and implications for future psychological investigation

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Abstract

Bipolar depression is poorly understood and researched, yet it is has a huge impact on functioning in bipolar disorder. This review explores the current status of research regarding the phenomenology, natural history, neuropsychology, psychosocial predictors and cognitive style of bipolar depression. The current status of pharmacotherapy and psychological treatment of bipolar depression is also described. In particular, the manner in which cognitive behaviour therapy for bipolar depression has been adapted from CBT for unipolar depression is critically evaluated. It is concluded that there appears to be a considerable overlap between the features of unipolar and bipolar depression, yet there is also emerging evidence for specific elements. The ability of current psychological theories of bipolar disorder to account for the findings are compared, and as a consequence, a new preliminary integrative model is proposed to direct future hypothesis-led research, which will need to incorporate more suitable populations and utilise more objective methods of assessment.

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It is vital to understand depression in bipolar disorder. Symptoms of bipolar depression occur with greater frequency, last longer and cause more disruption than mania, entailing a greater disability and economic burden (Bowden & Krishnan, 2004; Mitchell & Malhi, 2004). Up to two-thirds of intensively treated patients with bipolar disorder continue to experience depression or depressive cycling (Post et al., 2003). After apparent recovery from a bipolar episode, sub-syndromal symptoms of depression remain

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in the long term, estimated at over 30% of subsequent weeks in bipolar I disorder (Judd et al., 2002) and over 50% of subsequent weeks in bipolar II disorder (Judd et al., 2003).

In this critical review we will argue that bipolar depression is a neglected area that deserves more systematic investigation in terms of phenomenology, neuropsychology, cognitive style and psychological treatment. We first provide an overview of the nature of depression within bipolar disorder and in particular we ask whether it can be distinguished from unipolar depression. In the main section of the review, we provide a brief overview of the pharmacological treatment of bipolar depression and describe and critically evaluate existing psychological treatments, in particular cognitive behavioural therapy. We conclude that more direct attempts should be made to define the nature of bipolar depression and determine the degree to which it actually overlaps with unipolar depression, as is commonly assumed.

1. The nature of bipolar depression

1.1. Clinical description and symptoms

Around 90% of patients who experience mania will also experience depression (Goodwin & Jamison, 1990). Indeed several investigators have suggested that the minority of patients who appear to report unipolar mania tend to reveal untreated depressive episodes after a careful history is taken (Pfohl, Vasquez, & Nasrallah, 1982). The majority of bipolar I patients will have reoccurrences of both mania and depression (Roy-Byrne et al., 1985). Within the population of individuals with bipolar II disorder, depression is more frequent, severe and of longer duration than episodes of hypomania (Dunner, 1993). The longitudinal National Institute of Mental Health (NIMH) study indicated that bipolar patients experience more episodes of depression than unipolar depressed patients (Roy-Byrne et al., 1985), although each episode appears to average a shorter duration in bipolar patients, at around 4 months (Angst & Preisig, 1995; Winokur, Coryell, Keller, Endicott, & Akiskal, 1993). There is some indication from a prospective study that, prior to the introduction of modern pharmacological therapies, the duration of depression (as well as mania) was much longer, at around 2 to 3 years (Winokur & Tsuang, 1996). Women with bipolar disorder appear to experience more episodes of depression than unipolar depressed patients (Roy-Byrne et al., 1985), although each episode appears to average a shorter duration in bipolar patients, at around 4 months (Angst & Preisig, 1995; Winokur, Coryell, Keller, Endicott, & Akiskal, 1993). There is some indication from a prospective study that, prior to the introduction of modern pharmacological therapies, the duration of depression (as well as mania) was much longer, at around 2 to 3 years (Winokur & Tsuang, 1996). Women with bipolar disorder appear to experience more episodes of depression than men (Leibenluft, 1996). The most critical symptom of depression is arguably suicidal ideation and suicide attempts. Completed suicide and suicide attempts occur mainly during the depressed phase of the illness (Isometsa, Henriksson, Aro, & Lonnqvist, 1994; Lopez et al., 2001). Estimated rates of suicide in bipolar disorder are around 15% (Simpson & Jamison, 1999). A study of 648 individuals with bipolar disorder found that the key factors associated with suicide attempts were: a history of sexual abuse, a lack of confidant prior to illness onset, more previous hospitalisations for depression, suicidal thoughts when depressed and a cluster B personality disorder (Leverich et al., 2003).

The criteria for depression are identical for unipolar and bipolar disorder in the major diagnostic systems of DSM-IV and ICD-10. However, it may be clinically useful to identify potential bipolar patients during depression and prior to an episode of mania. It has been suggested that bipolar depression differs from unipolar depression in being more characterised by behavioural symptoms such as hypersomnia, lethargy and apathy, in comparison to the pessimistic thoughts and feelings of worthlessness characterising unipolar depression (Colom, Vieta, Torrent, & Martínez-Aráñ, 2003; Potter, 1998). One study of 920 patients has suggested that bipolar depression is also associated with a poorer quality of life in the areas of general health, social functioning, and the physical and emotional
domains of their lives in comparison to unipolar patients (Yatham et al., 2004). We now focus on the studies that have investigated whether the two disorders can be distinguished in terms of their profiles of depressive symptoms (for more comprehensive reviews, see Cuellar, Johnson, & Winters, 2005; Mitchell & Malhi, 2004; Mitchell et al., 1992).

An early study comparing matched bipolar and unipolar depressed patients indicated that the bipolar patients showed less agitation, anxiety and somatisation than the unipolar patients (Beigel & Murphy, 1971). In their seminal book, Goodwin and Jamison (1990) summarised further earlier studies indicating that bipolar depression is characterised by higher rates of suicide attempts, more psychomotor retardation, hypersomnia and more psychotic symptoms. However, they pointed out that many of these studies did not involve adequate unipolar comparison groups. Also, many of these studies carried out multiple comparisons and therefore the positive results may have reflected chance findings (Mitchell & Malhi, 2004). More systematic studies have now been completed.

Winokur, Coryell, Endicott, and Akiskal (1993) followed up patients every 6 months for 5 years and identified that bipolar patients had a younger onset of depression that was more acute. Mitchell et al. (1992) initially compared matched groups of unipolar and bipolar patients and found no group differences in levels of psychomotor retardation. However, later studies by this group produced more marked findings. Parker, Roy, Wilhelm, Mitchell, and Hadzi-Pavlovic (2000) identified higher rates of melancholia, psychomotor disturbance and pathological guilt in 83 bipolar I depressed patients compared to 904 unipolar depressed patients. In a later analysis of matched subgroups of these patients, Mitchell et al. (2001) found significant differences in several areas of symptomology. They summarised these as a ‘bipolar depression signature’ which involved signs of psychomotor retardation (such as non-reactive mood, delayed verbal responses and general slowing of movements); melancholic symptoms (such as worthlessness); history of psychotic depression; unvarying mood and marked anhedonia; ‘atypical’ depressive symptoms (e.g. hypersomnia and leaden paralysis); and the absence of anxiety, tearfulness, initial insomnia and the tendency to blame others.

A further method to attempt to distinguish groups is to assess the co-occurrence of certain symptoms. Papadimitriou, Dikeos, Daskalopoulou, and Soldatos (2002) found that bipolar depressed patients were less likely to report loss of appetite than unipolar depressed patients, but a significant minority of bipolar patients reported a co-occurrence of the symptoms of loss of appetite, sleep disturbance, loss of energy and low interest that were not found to co-occur in the unipolar group. This preliminary evidence on co-occurrence indicates a possible syndrome of pervasive disruptions in the biological aspects of behaviour that is unique to some individuals with bipolar disorder. Further recent findings include a study of patients with seasonal affective disorder which found that the bipolar patients reported more severe depressive symptoms, greater psychomotor agitation (not retardation) and greater social withdrawal than unipolar patients (Goel, Terman, & Terman, 2002). Goel et al. (2002) also distinguished between subgroups of bipolar patients. Bipolar I patients showed more psychomotor retardation and social withdrawal than bipolar II patients. On a related point, Benazzi (2003) found no increased rates of psychomotor retardation when comparing bipolar II patients and unipolar patients. Thus, elevated levels of psychomotor retardation may be more characteristic of depression in bipolar I disorder.

Each of the above significant findings need to be qualified by several studies finding no significant group differences in symptoms between bipolar and unipolar depression (e.g. Benazzi, 1999; Dorz, Borgerini, Conforti, Scarso, & Magni, 2003; Wetzler, Khadivi, & Oppenheim, 1995). In the light of this conflicting evidence, there is a need for more objective measures of symptoms. For example, Kuhs and
Reschke (1992) assessed psychomotor activity using continuous actometric monitoring over 48 h and found no differences between unipolar and bipolar depressed patients.

Overall the evidence suggests that if there are differences in symptom profile between bipolar and unipolar depression, they are subtle and not pathognomic at present in the sense that certain symptoms clearly distinguish bipolar from unipolar depression. However on balance, symptoms of psychomotor retardation and ‘atypical’ symptoms do seem to emerge as significant, at least in bipolar I disorder. Further research is required using matched groups, longitudinal designs and objective measures where possible.

1.2. Depression in the course of bipolar disorder

There is little published data on the change in symptom course over the lifetime. An early study of consecutive admissions suggested that, out of 146 cases, 125 began with depression and only 21 began with mania (Kinkelin, 1954). Later studies have explored the conversion from unipolar depression to bipolar I disorder over subsequent years, which averages at around 1% per year (Angst & Preisig, 1995; Coryell et al., 1995), although rates for depressed children and adolescents appear to be higher (Kovacs, 1996). Akiskal and colleagues have analysed the factors that predict the emergence of bipolar disorder in depressed patients and they were: onset of depression prior to 25 years of age, hypersomnia and motor retardation, a family history of bipolar disorder and the triggering of episodes by psychotropic medication or childbirth (Akiskal, Walker, & Puzantian, 1983). In a longitudinal study of bipolar II patients, the predictive factors for hypomania were mood lability, high levels of energy and activity, daydreaming and social anxiety (Akiskal et al., 1995). Despite the development of hypomania and mania over time, once established, the proportions of episodes of mania and depression have been found to remain relatively stable over 20 years (Angst & Weis, 1967). It appears that only a minority of patients cycles into depression from mania without a period of remission; Zarate, Tohen, and Fletcher (2001) found that 16% of patients cycled into depression from mania and they were characterised by higher levels of depressive symptoms during their admission for mania. MacQueen et al. (2002) found this group to respond less well to pharmacological treatment than those who became depressed following a period of remission.

Bipolar depression may also predict longer term outcomes. Scott and Pope (2003) found that levels of depression assessed at baseline showed a trend to predict a relapse of an affective episode 1 year later. In a retrospective study of 425 bipolar patients attending a secondary psychiatric service, Frangou (2002) found that depression at first presentation was associated with a higher number of episodes. Judd et al. (2003) reported that bipolar II patients, as well being more likely to experience episodes of depression, were also more likely to have a more chronic course of the disorder, compared to individuals with bipolar I disorder. These findings relating to the long term impact of depression provide a further reason for focusing on its treatment. It may be that depression itself leads to disruptions in social and occupational functioning that have a future impact on relapse. Alternatively, the depression may be a marker for dysfunctions in psychological and biological processes that exacerbate depressive symptoms and increase risk for future relapse of depression and mania. The possible nature of these processes will be described in later sections of the review.

1.3. Depressive symptoms during dysphoric mania, mixed states and remission

The symptoms of depression transcend discrete depressive episodes, and may even predominate during episodes of mania. A review of early phenomenological studies indicated that symptoms of
depression and dysphoria constitute the second most common symptom during mania (after irritability), reported by 72% of patients (Goodwin & Jamison, 1990). In a detailed factor analytic study of 237 patients with mania (n=204) or mixed states (n=33), Cassidy et al. (1998) found five independent factors, the first and strongest of which was ‘dysphoric mania’. The symptoms with a positive loading on this factor were (in descending order of magnitude): depressed mood, anxiety, guilt, mood lability and suicide. Thus, it may be important to consider addressing depressive symptoms even during mania.

Unlike mania, mixed episodes are explicitly characterised by depressive symptoms. According to DSM-IV, a mixed episode requires a full manic and depressive syndrome intermixed nearly every day for 1 week. Several authors have voiced concern that these criteria are too restrictive because there is no established definition of mixed states involving sub-syndromal depressive symptoms in the context of mania as described above, or sub-syndromal manic symptoms in the context of depression (e.g. Dayer, Aubry, Roth, Ducrey, & Bertschy, 2000; McElroy et al., 1992). Mixed states have been variously called ‘mixed mania’, ‘depressive mania’ and ‘dysphoric mania’. Owing to their imprecise definition and biases in the selection of samples their frequency ranges from 5% to 70% depending on the criteria used (Dayer et al., 2000). However, they appear clinically important, leading to higher suicidal risks than ‘pure’ mania (Dilsaver, Chen, Swann, Shoaib, & Krajewski, 1994; Goldberg, Garno, Leon, Kocsis, & Portera, 1998; Strakowski, McElroy, Keck, & West, 1996), longer episodes duration and a worse outcome (Dilsaver, Swann, Shoaib, Bowers, & Halle, 1993; Swann et al., 1997). Consequently, there has been a call for the development of operationalised criteria to define mixed states (Dayer et al., 2000).

Depressive symptoms also occur during periods of apparent remission. A prospective study of 146 bipolar I patients found that patients showed depressive symptoms 31.9% of the weeks throughout an average of 12.8 years in contrast to 8.9% of weeks spent in mania or hypomania and 5.9% of the weeks cycling or with mixed symptoms (Judd et al., 2002). The sub-syndromal symptoms were nearly three times as frequent as full-blown bipolar episodes. Even more striking were the findings for 86 bipolar II patients (Judd et al., 2003). They had depressive symptoms during 50.3% of the follow-up weeks in contrast to only 1.3% of the weeks with hypomanic symptoms and 2.3% of the weeks with cycling or mixed symptoms, and again sub-syndromal symptoms were around three times more common than episodes of major depression. Sub-syndromal symptoms are of significant clinical importance. In a sample of bipolar I patients, Altshuler, Gitlin, Mintz, Leight, and Frye (2002) have shown that a higher level of sub-syndromal symptoms of depression is associated with a greater impairment in global functioning.

1.4. Neuropsychology of bipolar depression

There has been widespread investigation of the neuropsychology of bipolar disorder, as indicated in several reviews (Bearden, Hoffman, & Cannon, 2001; Clark & Sahakian, in press; Mitchell & Malhi, 2004; Murphy & Sahakian, 2001; Quraishi & Frangou, 2002). We shall provide an overview here in order to address three key questions relating to bipolar depression. First, do bipolar patients show neuropsychological deficits during depression that are not present during remission, i.e. are state dependent? Second, can bipolar depression be distinguished from mania by its neuropsychological profile? Third, can bipolar depression be distinguished from unipolar depression by its neuropsychological profile?

In answer to the first question, Clark and Sahakian (in press) reviewed evidence to indicate that bipolar depression can be distinguished from remission by its neuropsychological profile but it largely
shares this profile with mania. The non-specific episodic profile involves deficits in executive functioning, such as planning, working memory and verbal fluency (Borkowska & Rybakowski, 2001; Sweeney, Knicie, & Kupfer, 2000) and may be related to reduced activity in the dorsolateral region of the prefrontal cortex (e.g. Baxter et al., 1989; O’Connell et al., 1995).

Regarding the second question, there appears to be no evidence at present for neuropsychological deficits in bipolar depression that distinguish it both from mania and the remitted state (e.g. Martínez-Arán et al., 2004). While unipolar depression can be distinguished from mania by the absence of mania-specific neuropsychological dysfunctions, such as sub-optimal decision-making (Murphy et al., 2001) and poor impulse control (Murphy et al., 1999), these processes have not been studied in bipolar depression.

Regarding the third question, results are mixed regarding the distinction between unipolar and bipolar depression. There is some evidence that bipolar depression is associated with poorer memory as indicated by the California Verbal Learning Test (Burt, Prudic, Peyser, Clark, & Sackheim, 2000; Wolfe, Granholm, Butters, Sanders, & Janowsky, 1987) and poorer performance on a range of tasks assessing executive functioning (Borkowska & Rybakowski, 2001). Notably, this study was well controlled: the patients were matched for symptom severity and duration of illness and were all unmedicated for a month prior to testing. Nevertheless, duration of illness is clearly a factor that can cut across both disorders. Fossati et al. (2004) found that patients with recurrent unipolar depression and those with recurrent bipolar depression showed deficits in verbal memory that were not present in patients who were experiencing their first episode of unipolar depression.

In summary, bipolar depression is associated with neuropsychological deficits (especially in executive functioning) that are similar but possibly more severe than those found in unipolar depression. These deficits do not distinguish bipolar depression from mania and it remains to be tested whether bipolar depression and mania can be discriminated through their neuropsychological profiles.

1.5. Psychosocial predictors of depressive relapse

In order to engage in treatments that may help prevent the relapse of bipolar depression, it is first important to know whether it is in any way influenced by psychosocial factors. There is insufficient space here to review this evidence in detail, but comprehensive reviews are published elsewhere (Johnson & Meyer, 2004; Johnson & Roberts, 1995). The key findings relate to environmental factors, personality traits, and cognitive style.

First, there is a general finding that negative life events predict relapses of any kind (mania, depression or mixed episodes) in bipolar disorder (Ellicott, Hammen, Gitlin, Brown, & Jamison, 1990; Hunt, Bruce-Jones, & Silverstone, 1992). A more detailed analysis indicated that interpersonal events, such as bereavement and divorce, were more likely to trigger relapse (Hammen, Ellicot, & Gitlin, 1992). However, one published study found no evidence of the role of negative life events in relapse (McPherson, Herbison, & Romans, 1993). McPherson et al. (1993) explained this discrepancy by pointing to the fact that their sample had experienced more manic episodes than Hunt et al. (1992).

Possibly the most convincing source of evidence for the role of psychosocial stressors in relapse bipolar disorder comes from studies of expressed emotion (EE), which refers to structured observations of intrusive or hostile comments from family members towards the person with bipolar disorder. Prospective studies have confirmed that high levels of EE in relatives predict increased rates of relapse in bipolar disorder (Miklowitz, Goldstein, Nuechterlein, Snyder, & Mintz, 1988; Priebe, Wildgrube, &
Mueller-Oerlinghausen, 1989). The effects of EE appear to be particularly important when they are received from parents, in contrast to spouses (Miklowitz et al., 1996). Furthermore, a study of the interaction patterns between bipolar patients and their relatives has found that negative non-verbal behaviour after an acute episode, rather than verbal behaviour, discriminated between high and low EE relatives (Simoneau, Miklowitz, & Saleem et al., 1998). For example, high EE families looked away from their relative, showed angry facial expressions or used a sarcastic tone of voice, in contrast to low EE families who smiled, looked attentive and used a warm and supportive tone of voice. A further study found that high EE was associated with attributions of the patient’s symptoms and negative behaviours to personal and controllable factors (Wendel, Miklowitz, Richards, & George, 2000). Studies of EE do not appear to have discriminated between episodes of depression and mania in their presentation of results, although evidence suggests that psychological treatment directed at reducing EE has a larger effect on depression than mania (Miklowitz et al., 2000; see later).

A minority of studies have focused specifically on the predictors of bipolar depression. A prospective design showed that rates of severe, independent life events were comparable in preceding both unipolar and bipolar depression (Hammen, 1995). Perris (1984) made a similar finding using a retrospective design. A retrospective study following suicide found that severe life events were reported by family members to be equal in frequency when comparing patients with unipolar and bipolar disorder (Isometsa, Heikinen, Henriksson, Aro, & Lonnquist, 1995). A prospective study found that poor social support predicted increases in depression but not mania over time (Johnson, Meyer, Winett, & Small, 2000). There is also evidence that certain factors affect manic symptoms and not depression, namely events that disrupt circadian rhythms (e.g. long distance travel) and goal-attainment events (e.g. performing in a play) precede increases in manic symptoms but not depression (Johnson et al., 2000; Malkoff-Schwartz et al., 1998). However, there is a lack of controlled prospective studies that compare rates of life events preceding bipolar depression and unipolar depression in comparison to periods of remission or mania.

Regarding personality style, there is evidence that measures of neuroticism (as measured by the N-scale of the Eysenck Personality Questionnaire; EPQ) predict increases in depressive but not manic symptoms (Heerlein et al., 1998; Lozano & Johnson, 2001). Indeed, neuroticism levels appear to be similarly high in unipolar and bipolar depression (Bagby et al., 1996; Goodwin & Jamison, 1990). The concept of neuroticism itself is designed to assess the tendency to experience negative affect and is associated with a range of psychopathology. Therefore, studies of cognitive style provide the opportunity to assess whether specific biases in processing mediate this effect. Scott and Pope (2003) found that low self-esteem predicted relapse in bipolar patients. Johnson et al. (2000) found that low self esteem predicted increases in depressive symptoms over time. In a later study of bipolar I patients, high scores on the Dysfunctional Attitude Scale and the Negative Automatic Thoughts Questionnaire were correlated with current depressive symptoms and predicted increases in depression over time but they did not predict mania (Johnson & Fingerhut, 2004). One study of undergraduates with either hypomanic or depressive symptoms found that a dysfunctional cognitive style interacted with negative life events to predict depressive symptoms over 1 month (Reilly-Harrington, Alloy, Fresco, & Whitehouse, 1999). However, no studies appear to have involved bipolar patients and confirmed whether this effect is comparable to unipolar depression.

An overview of psychosocial predictors of depression provides suggestive evidence for several possible factors in the development of bipolar depression. They are: severe life events, poor social support, high levels of expressed emotion in family members, neuroticism and a dysfunctional cognitive style. Notably, each of these factors have also been identified as predicting unipolar depression. There is
Some evidence for psychosocial predictors specific to bipolar depression (poor social support, negative cognitions) versus mania (disruptions in circadian rhythms, goal-related life events), and there is also evidence for factors that may overlap between the two (negative life events, high EE). However, few studies provide direct evidence to answer the key question of which psychosocial factors specifically predict episodes of bipolar depression using a long-term prospective design involving a patient sample.

1.6. Cognitive style and processing during depression

Psychological therapy, especially CBT, often targets cognitive style and processing in unipolar depression, yet few studies have investigated these factors during bipolar depression. Early studies used projective tests to assess cognitive style (Donnelly, Murphy, & Scott, 1975; Singer & Brabender, 1993). Donnelly et al. (1975) showed that bipolar depressed patients’ perceptions of Rorschach Tests were characterised by a focus on objective features in bipolar patients (e.g. “It looks like a bat”) in contrast to unipolar patients who imbued the inkblots with personal meaning (“It could symbolise two dejected people”). They proposed that the bipolar patients were focusing on the objective features to try to suppress the anxiety-provoking features of the images, i.e. a form of cognitive avoidance. Singer and Brabender (1993) replicated these findings, indicated by lower levels of cognitive elaboration (“slippage”) in the bipolar depressed group relative to patients with mania or unipolar depression.

The majority of research into cognitive style and processing has focused on the remitted state or mania. Interestingly, these studies tend to indicate that euthymic bipolar patients show a cognitive style normally associated with concurrent unipolar depression, involving overgeneral memory, poor problem-solving and elevated dysfunctional attitudes, even when accounting for depressive symptoms (Mansell & Lam, 2004; Scott, Stanton, Garland, & Ferrier, 2000). There is further evidence for an overlap in processing style during bipolar depression. Hollon, Kendall, and Lumry et al. (1986) found no significant differences in dysfunctional attitudes and negative automatic thoughts between unipolar and bipolar depressed individuals. Lyon, Startup, and Bentall (1999) found that, relative to healthy controls, depressed bipolar patients selectively process negative self-relevant information, as assessed by the emotional Stroop task and a free recall task. Although unipolar depressed patients were not involved in this study, these biases have been widely demonstrated in this population (for a review see Harvey, Watkins, Mansell, & Shafran, 2004). A study using the Depressive Experiences Questionnaire to assess dependency needs found no difference between the bipolar and unipolar groups when currently depressed, and they were both higher than controls (Rosenfarb, Becker, Khan, & Mintz, 1998).

In a comprehensive study of cognitive style, Scott and Pope (2003) compared bipolar depressed patients to both unipolar depressed patients and bipolar patients during the remitted and hypomanic phases of their illness. The participants with bipolar depression reported similar levels of dysfunctional attitudes to the unipolar depressed group, but lower levels of negative self-esteem. The two groups did not differ on overall levels of sociotropy and autonomy (Beck, Epstein, & Harrison, 1983) although the bipolar depressed groups did show higher levels on one subscale: Preference for Affiliation, which refers to the desire to be in the company of other people. Scott and Pope (2003) also compared remitted, hypomanic and depressed bipolar patients. The depressed patients showed higher levels of dysfunction on the measures of cognitive style than the other two groups when the measures were assessed together. In particular, the bipolar depressed patients showed lower self esteem and higher levels of dysfunctional attitudes.

Recent research on unipolar depression has emphasised the role of response style in increasing symptoms and precipitating relapse. In particular, there is evidence that rumination in response to low

Taken together, it appears that while studies using projective tests indicated evidence for differences in cognitive style between unipolar and bipolar depressed patients, self-report and laboratory-based studies have found that the two groups overlap in most domains of cognitive style that have been assessed. Nevertheless, provisional evidence indicates that bipolar depression may be characterised by greater cognitive avoidance, higher preference for affiliation with others and less negative self-esteem. Future hypothesis-led studies could focus on the cognitive styles that would better distinguish bipolar depression.

2. Summary of findings and implications for theory and research

As emphasised throughout, much of the evidence for differences between unipolar and bipolar depression across each of the domains described above is either inconsistent, provided by only one or two studies, or does not involve adequate controls. Factors such as early onset, mood lability and a family history of bipolar disorder provide some potential diagnostic information but they do not help us understand the psychological mechanisms involved. We reviewed emerging evidence that symptoms of bipolar depression may differ between bipolar I and bipolar II patients. Other key discriminating factors that may show different psychological profiles include late-versus-early age of onset and a presence or absence of a family history of bipolar disorder. Despite the inconsistencies, we will now present an overview of the above findings and discuss their implications for future developments in psychological theory and research, before moving on to review treatment approaches to bipolar depression. The key points are as follows:

1. A worse outcome in bipolar disorder is predicted by more severe depression, mixed states and depressive symptoms during remission. This highlights the enormous clinical importance of depressive symptoms in bipolar disorder throughout its course.
2. The symptoms of unipolar and bipolar depression overlap to a large degree, but bipolar depression, especially in bipolar I disorder, may involve more psychomotor retardation and ‘atypical’ symptoms.
3. The neuropsychological profile of bipolar depression overlaps with mania and unipolar depression, but bipolar depression may be associated with more severe deficits than unipolar depression.
4. The cognitive style and psychosocial predictors of bipolar and unipolar overlap considerably, but bipolar depression may be associated with cognitive avoidance, preference for affiliation and less negative self-esteem.

The overarching finding from the studies reviewed is that depression and depressive symptoms in bipolar disorder are pervasive, potent and predictive of pathology. It therefore appears at least as
important to understand and treat depression in bipolar disorder as it is to help reduce the impact of mania. However, no specific theoretical accounts of bipolar depression appear to exist. This is a clear shortcoming. There are several theoretical accounts of bipolar disorder but they typically focus on the causes of mania (see Power, this issue, for a more exhaustive overview). For the purposes of this review, three longstanding, but partially overlapping, psychological models will be compared: contemporary manic defence models (e.g. Abraham, 1911/1953; Bentall, 2003; Neale, 1988), behavioural activation models (e.g. Depue, Krauss, & Spoont, 1987; Gray, 1994; Johnson et al., 2000) and cognitive behavioural models (e.g. Healy & Williams, 1989; Jones, 2001; Lam, Jones, Hayward, & Bright, 1999; Mansell & Lam, 2003; Scott, 2001).

The contemporary manic defence model proposes that mania in bipolar disorder is a defence against depression, in particular feelings of failure and low self-esteem. Bentall (2003) has suggested that certain behaviours, such as risk-taking, act to suppress depressed mood, but as a consequence lead to the increased stimulation and disruption in activity that increases the risk of mania. The behavioural activation models propose that bipolar disorder is characterised by a dysregulated biological system governing goal-directed behaviour. During mania the system is overactive, whereas during depression the system is underactive. Finally, the cognitive behavioural models propose that individuals with bipolar disorder hold certain dysfunctional assumptions that, when activated by relevant life events, trigger biases in cognition that escalate either the symptoms of mania or depression. In particular, feeling states are often appraised in a distorted way in relation to ‘autonomous goal-oriented’ beliefs. For example, individuals may believe that feelings of inactivity indicate they cannot achieve their goals, whereas feelings of energy indicate that they can achieve anything.

Importantly, these theories make few direct predictions about the specific characteristics of bipolar depression, but certain elements can be inferred. With respect to the contemporary manic-defence hypothesis, any evidence that the state of depression is perceived as particularly aversive to individuals with bipolar disorder would be consistent with the view that mania operates to suppress the feelings associated with depression. It could be argued therefore that the sporadic evidence for greater psychomotor retardation, earlier age of onset, and greater neuropsychological deficits is consistent with the model. However, it is not direct evidence for the manic-defence model as other explanations are equally plausible (e.g. these may be markers for a more severe illness). Only more direct studies of the perception of depression in individuals with bipolar disorder can suitably test this proposal. Specifically, is it the case that individuals with bipolar depression perceive their symptoms to be more aversive than those with unipolar depression? A preliminary study has found that individuals with remitted bipolar disorder reported more frequent recollections of a negative memory triggered during an autobiographical memory task than remitted unipolar participants (Mansell & Lam, 2004), and interestingly, several of these memories related to past episodes of depression and failure. Further systematic research is being carried out in this area (e.g., Morrison, Peyton, & Nothard, 2003). Future research may also need to focus on the cognitive style during bipolar depression. While the findings of cognitive avoidance and lower negative self-esteem in bipolar depression are also consistent with the suppression of negative feelings proposed in the model, these findings are patchy. Future studies could directly assess cognitive avoidance using controlled paradigms such as the dot-probe task or a priming task.

The findings identified in this review are also consistent with behavioural activation models of bipolar disorder. Both unipolar and bipolar depression are associated with reduced goal-directed behaviour, and where differences are noted, they tend towards bipolar depression showing more behavioural symptoms.
Again, the methodology of these studies needs to be improved. For example, the goal-directed behaviour elicited by the behavioural activation system could be assessed by laboratory reward-driven tasks rather than through inference from symptoms. The model would predict that individuals with bipolar depression would show more dysregulation in their mood (i.e. a larger increase or decrease) after engaging in a goal-directed task. A key problem with the behavioural activation account is that it does not incorporate psychological processes that might influence the dysregulation and could be addressed in therapy (although see Wright & Lam, 2004, for an integrative account).

The current cognitive behavioural models of bipolar disorder are supported to the extent that unipolar and bipolar depression overlap in their symptoms and cognitive style. This suggests that, to a large degree, the dysfunctional assumptions underpinning depression and the cognitive processes maintaining depression (e.g. rumination) are similar in both disorders. The occasional differences identified between the two conditions are less consistent with the model. Moreover, no studies have developed measures of cognitive style for bipolar depression, but imported those from unipolar depression. Therefore, an overlap is to be expected. The model would predict that bipolar depression could more dominated by rumination concerning themes of poor goal-attainment than unipolar depression. Interestingly, this prediction is not far removed from that of the contemporary manic-defence theory. The current cognitive models place the emphasis on the goal-attainment beliefs, whereas the manic-defence model places the emphasis on the depressed mood. It seems that both combine to produce an appraisal of depressed mood states as aversive.

3. A provisional integrative account of bipolar depression

It is clear that the three sets of theoretical accounts are broadly consistent with the findings, but none is directly supported or contradicted by them. In each case, we have identified key hypothesis-driven studies that would have the capacity to do so. Future developments in psychological theory may need to take account of the close overlap between existing psychological accounts. In a provisional formulation, we propose that bipolar depression is maintained by the co-occurrence of a dysregulated behavioural activation system, high goal-attainment beliefs, and negative appraisals of the deactivated state. More specifically, individuals with bipolar depression ruminate over the aversive consequences of their dysregulated behavioural state because of their pre-existing, rigid, extreme, personal goal-attainment beliefs. The process of rumination prevents them from engaging in behaviours that would help to regulate their behaviour and recover. Thus, a vicious cycle is formed. This cycle is clearly similar to the cognitive model of unipolar depression, but we propose that it is the content of the rumination that is specific to bipolar disorder. This is a common distinction between cognitive models; it is clear that many of the cognitive and behavioural processes maintaining psychological disorders are shared, i.e. ‘transdiagnostic’, whereas the content can differ greatly between different disorders (Harvey et al., 2004).

This simple model would predict that individuals with bipolar disorder would engage in more rumination involving the aversive consequences of their behavioural state with respect to the pursuit of personal goals than individuals with unipolar depression. For example, they would show more endorsement of the items, “Being inactive is intolerable because it means that I am a complete failure” and “If I have no pleasure in what I do then it means my life has no purpose”. Future research can investigate this provisional account.
One key sample for future research will be individuals with a family history of bipolar disorder who experience their first episode of depression. They provide an ideal sample to test the cognitive features of bipolar depression before the impact of multiple episodes of depression and illness duration set in. Furthermore, many of these individuals will not have experienced an episode of mania, and therefore it may be possible to assess whether any idiosyncratic components of bipolar depression (as opposed to unipolar depression) arise either as a consequence of mania or as a consequence of the process we have described.

4. The treatment of bipolar depression

4.1. Pharmacological treatment of depression

Since the middle of the last century, pharmacological treatments have largely dominated the treatment of bipolar disorder. Here we provide an overview of the current pharmacological treatment approach to bipolar depression (for more comprehensive reviews, see Altshuler, Frye, & Gitlin, 2003; Gijsman, Geddes, Rendell, Nolen, & Goodwin, 2004; Keck, Nelson, & McElroy, 2003).

Yatham, Calabrese, and Kusumakar (2003) have suggested that an acceptable first-line pharmacotherapy for bipolar depression should:

- Be an effective treatment for acute depressive symptoms,
- Be effective in preventing future depressive and/or manic episodes,
- Not induce mood destabilisation.

The most established mood stabilizer, and technically the only drug that definitely meets all Yatham and colleagues’ criteria is lithium. Although lamotrigine has been suggested as a first line alternative treatment in the American Psychiatric Association Guideline (2002), this drug did not get approval for use in bipolar depression in Europe because the clinical trial data was not considered sufficiently robust. In contrast, data from recent randomized controlled trials (RCTs) of atypical antipsychotic drugs such as olanzepine and quetiapine suggest these drugs have both an antidepressant effect and prevent depressive relapses. Indeed, like lithium, the atypicals also appear to reduce manic relapses as well—so these (and the combined olanzepine-fluoxetine tablet) may become first line recommended treatments of bipolar depression in the future. The use of lithium in the USA has fallen out of favour to a certain extent because of fears about side-effects (some of which are irreversible). However, lithium is the only mood stabilizer associated with a reduction in suicide rates in mood disorders (Geddes et al., 2004) and is still seen as a critical part of the first line treatment options in Europe (Goodwin, 2003).

The initial treatment of acute depression in bipolar disorders is to optimize the mood stabilizer treatment, for example by checking adherence with the prescribed dosages and ensuring serum levels are within the therapeutic window (Scott & Pope, 2002). A downside to the use of lithium in acute episodes may be the time taken to see significant reductions in symptoms. For this reason it is important to consider the role of antidepressants, as used in acute episodes of unipolar disorders. The most important message from Yatham et al. (2003) is that the use of such drugs in the absence of a mood stabilizer would not be regarded as good practice because there is a risk of ‘switching’ between depression and hypomania/mania or inducing or worsening rapid cycling. Switching occurs in about 12% of patients,
but can usually be avoided if the patient is also receiving lithium or an established mood stabilizer. If the use of a mood stabilizer and an SSRI (selective serotonin reuptake inhibitor) is not effective, it may be necessary to use one of the older TCAs (tricyclic antidepressants). Although these are more frequently associated with switching, the risk is minimized if they are used in combination and there is evidence that the TCAs are useful in treating more severe cases of bipolar depression (Gijsman et al., 2004). An alternative strategy is the use of a second mood stabilizer, e.g. the combination of lithium and valproate is quite common, or, in special circumstances, the use of a course of ECT may be recommended.

As in unipolar disorders, the treatment of mood instability requires long term prophylaxis. Ideally the patient should continue on a mood stabilizer for a minimum of 2 years (and most guidelines suggest 5 years). If the patient is unwilling to do this then the minimum time to continue the mood stabilizer for would be 6 months as this is the period of maximum likelihood of relapse. Adherence may be enhanced by reducing the dose to ensure minimal side-effects occur and encouraging discussion of any negative attitudes towards pharmacotherapy. Even if the patient requests discontinuation of mood stabilizers this must be done gradually as sudden withdrawal significantly increases the risk of a ‘rebound’ relapse.

For patients treated with a combination of a mood stabilizer and an antidepressant, the antidepressant should again be continued until about 3 months after full resolution of the acute episode and then slowly tapering the dose whilst carefully monitoring the patient for any evidence of symptom return. As discussed in this paper, the combined use of mood stabilizers and psychological treatments is now increasing recognized in clinical practice guidelines as an appropriate treatment strategy for those with frequent recurrences or those with complex presentations that do not respond well to medications alone, for example, comorbid substance misuse.

4.2. Non-adherence to medication

While the evidence suggests that pharmacotherapy is an efficacious treatment for bipolar depression, there is a substantial gap between efficacy and clinical effectiveness (Dickson & Kendall, 1986; Guscott & Taylor, 1994; Scott, 1995). For example, Schou (1997) found that while around 66% of individuals respond to lithium in research trials, only around 33% show an equivalent response in clinical settings. Medication non-adherence is likely to be a key reason for this discrepancy, which is estimated at between 18% and 52% (Jamison & Akiskal, 1983; Jamison, Gerner, & Goodwin, 1979; Schou, 1997). Scott and Pope (2002) found that, in contrast to those who adhered to their regimen of mood stabilisers, partially non-adherent individuals showed greater denial of the severity of the illness, more resistance to prophylaxis, a greater fear of side effects and more negative attitudes towards medication in general. Thus, psychological factors appear to explain non-adherence and therefore form a target for intervention. Many of psychological treatments discussed below include components that address these factors. One controlled study has shown cognitive behavioural techniques to be successful in promoting medication adherence with the consequence of reducing relapse rates in bipolar disorder (Cochran, 1984).

4.3. Psychological treatments for bipolar disorder

The established psychological treatments for bipolar disorder as an adjunct to medication are cognitive behaviour therapy (CBT), behavioural family therapy, interpersonal and social rhythm therapy (IPSRT) and psychoeducation. They appear to share a range of core characteristics in their format and content (Scott, 2002, 2004). In terms of format, the treatments are each highly structured and based on a
coherent stress-vulnerability model. They provide the patient with a personalised overview of their problems and a clear rationale for the intervention, they encourage the independent use of skills and knowledge learned and they promote the patient’s sense of self-efficacy. In terms of content, they each cover at least four key domains: psychoeducation about bipolar disorder; stabilisation of lifestyle and daily routines, medication adherence and relapse prevention. Stabilisation of routines is a particular focus given the evidence that disruption in routine and sleep are key factors preceding mania (Jackson, Cavanagh, & Scott, 2003; Malkoff-Schwartz et al., 1998). Recent reviews of psychological treatment for bipolar disorder conclude that they lead to significantly fewer relapses when compared to medication and standard psychiatric treatment alone (Scott, 2003; Scott & Gutierrez, 2004). We will now describe and review these interventions with respect to their impact on bipolar depression.

4.4. Cognitive behavioural therapies

Cognitive-behavioural therapy is established as an effective treatment for unipolar depression (Keller et al., 2000; Scott, Teasdale et al., 2000; Ward et al., 2000). While cognitive techniques are regarded as important, there is some indication that approaches that place more emphasis behavioural change are also effective in treating unipolar depression (Martell, Addis, & Jacobson, 2001). The majority of clinicians accept the cognitive-behavioural strategies used in unipolar depression as suitable for non-psychotic bipolar depression (Frances, Kahn, Carpenter, Docherty, & Donovan, 1998). However, this is an important assumption to question: the shift of CBT methods from unipolar depression to bipolar depression appears to have occurred with little systematic research on what might distinguish between the two conditions. Therefore, it is important to analyse whether the strategies for treating depression and depressive symptoms in bipolar disorder differ in practice from those used for unipolar depression, as indicated in published treatment manuals. We will then evaluate the limited existing evidence for the efficacy of CBT in treating depression and depressive symptoms in bipolar disorder.

A key component addressed in CBT for bipolar depression is the way that the patients deal with the serious losses that experience as a consequence of their bipolar disorder. Lam et al. (1999) propose that the cognitions of people with bipolar disorder are likely to centre around themes of loss in relation to the illness, dwelling on feelings of apathy and indecision, ruminating on poor levels of goal attainment, e.g. “I can’t do it” and “I am no longer able to”, and making unfavourable comparisons with others. These proposals have not been formally tested in patients with bipolar depression. In CBT, the negative automatic thoughts are addressed using thought diaries in a similar way to unipolar depression (Basco & Rush, 1996; Lam et al., 1999; Scott, 2001). It is suggested that the dysfunctional assumptions in which self worth is equated with autonomy and success may underly this negative thinking in bipolar depression (Lam et al., 1999; Newman et al., 2002). As in unipolar depression and other psychological disorders, these assumptions are addressed using Socratic questioning, cognitive restructuring and behavioural experiments.

Regarding behavioural techniques, the activity schedule is used to encourage a graded return to activity and the development of social support as in unipolar depression, but there are some adaptations (Basco & Rush, 1996; Lam et al., 1999; Newman et al., 2002; Scott, 2001). In particular, the patient is encouraged to see the benefits of pleasurable behaviours that do not involve large increases in activity and are not directed at achieving highly challenging goals. Having a bath or listening to relaxing music are examples. These adaptations have two functions: first, to discourage activities that may raise the risk of hypomania, and second to provide evidence against the dysfunctional belief that they must become
greatly activated and highly successful in order to overcome their depression. A regular routine of behaviour is also encouraged rather than merely the increase in levels of activity. Problem-solving is recommended, in a similar way to unipolar depression (Lam et al., 1999; Newman et al., 2002). The therapy may also include strategies to identify and develop strategies to cope with early signs of depression, in a similar way to relapse prevention techniques for unipolar depression (Lam et al., 1999; Scott, 2001). Importantly, there is evidence that the prodromes of depression are harder to predict than the prodromes of mania (Lam, Wong, & Sham, 2001). Therefore, more detailed work involving cognitive and behavioural techniques learned during therapy may be necessary to tackle the onset of depression.

CBT for bipolar disorder also focuses on the consequences of bipolar disorder for the patient’s sense of self (Lam et al., 1999; Newman et al., 2002). Stigmatisation is a real issue that impacts their social and occupational functioning. Further, patients may experience guilt and shame concerning behaviours during past manic episodes and they may have real losses to grieve owing to the damaging consequences of their illness to work, family and friendships. Other patients may experience intense feelings of helplessness, disillusionment and hopelessness associated with depression following their repeated relapses and failed treatments. There is evidence from a mixed sample of patients with schizophrenia and bipolar disorder that negative appraisals of the consequences of the disorder (e.g. low levels of perceive control of the illness, stigmatisation and social containment) were closely correlated with current symptoms of depression (Birchwood et al., 1993). Suicidal ideation is addressed in a similar way to unipolar depression, in particular by validation of feelings, formal risk assessment, identification of protective factors and exploring ‘suicidogenic beliefs’ (Newman, 2004; Newman et al., 2002). While each of these factors may be addressed in some cases of unipolar depression, they appear to form a stronger focus in CBT for bipolar disorder owing to the more chronic course of the disorder and the idiosyncratic impact of manic episodes. However, none of these proposals have been formally tested. As a final point, there appears to be no mention in the literature of specific therapeutic techniques used to address depressed symptoms that occur in the context of mixed states or mixed episodes.

Overall, it appears that CBT for bipolar depression uses the same methods and techniques as CBT for unipolar depression. The emphasis appears slightly different, although no studies have formally evaluated the differences. Possible differences include themes of negative thinking that are more closely linked to autonomy and success, behavioural techniques that emphasise pleasurable relaxing activities rather than achievement-orientated exciting activities, stabilisation of routine, acknowledgement of stigma, and the validation and emotional processing of the consequences of previous episodes of mania.

Only one study has assessed the efficacy of CBT for bipolar depression specifically. Zaretsky, Segal, and Gemar (1999) compared the effects of 20 sessions of CBT in bipolar and unipolar depressed patients using a matched-case control design. They used the treatment protocol of Basco and Rush (1996). The bipolar patients showed a comparable drop in depressive symptoms after treatment, but a smaller drop in dysfunctional attitudes. This study was limited in having no control condition.

The remaining studies of CBT for bipolar disorder did not specifically select or identify patients who were currently in an episode of depression. However, we will summarise those that have assessed depressive symptoms or relapses of depression as part of their outcome measures. Scott, Garland, and Moorhead (2001) compared 25 sessions of CBT to a waiting list control group. The CBT led to greater reductions in symptoms of depression over 6 months. In the first randomised controlled trial of CBT for
bipolar disorder, Lam et al. (2003) compared 12 to 20 sessions of CBT with treatment as usual. They found that the CBT group showed less symptoms of depression at 6 months; these gains persisted over 12 months but not to a statistically significant degree. Thus, there is tentative evidence for the efficacy of CBT in tackling bipolar depression, but there is not sufficient evidence to recommend its widespread practice. Future studies need to identify bipolar depressed patients at pre-treatment and monitor their depressive symptoms, relapse rates and global outcomes, in comparison to a control condition.

4.5. Other evidence-based psychological treatments

Many other psychotherapeutic approaches have been taken to bipolar disorder. A survey of psychiatrists found that half of them would recommend ‘eclectic’ psychotherapy for patients with bipolar depression (Sharma, Mazmanian, Persad, & Kueneman, 1997). Around 20% reported that they would recommend cognitive-behavioural therapy and 5% proposed psychoeducation. Therefore, it is important to evaluate whether other treatments are efficacious. Notably, as in most CBT studies, none have addressed current episodes of bipolar depression and therefore their impact on depressive symptoms will be evaluated.

One study focused on a key component of CBT for bipolar disorder-relapse prevention through the identification of warning signs and coping strategies (Perry, Tarrier, Morriss, McCarthy, & Limb, 1999). Between 7 and 12 sessions of relapse prevention were compared with treatment as usual. The patients were euthymic at the start of treatment. Over 18 months there were no differences in the rates of depressive relapse, in contrast to a significant effect on manic relapses.

Several groups have developed programmes of psychoeducation, which is usually delivered in a group discussion format led by a clinician and covers the key areas of medication adherence, stabilisation of routines and relapse prevention. A randomised controlled trial compared 21 sessions of group psychoeducation with a non-structured group therapy in euthymic patients (Colom et al., 2003). They found the treatment to be effective in reducing relapses of both depression and mania over 2 years. An earlier trial of group psychoeducation led to no effects on mood symptoms, but rates of relapse were not assessed (Van Gent, Vida, & Zwart, 1988).

The family focused treatment (FFT) developed by Goldstein and Miklowitz is the most widely research family intervention (Goldstein & Miklowitz, 1997). It focuses on improving family communication, problem-solving and coping strategies, and involves psychoeducation and relapse prevention. A randomised controlled trial compared 21 sessions of FFT over 9 months with brief psychoeducation followed by crisis management (Miklowitz et al., 2000). Over a 1-year period, the treatment group were less likely to experience a depressive relapse and showed less depressive symptoms overall, and this effect was particularly evident in those families who initially showed high levels of EE (see earlier). The effects were partially mediated by increases in patients’ positive non-verbal interactions during treatment (Simoneau, Miklowitz, Richards, Saleem, & George, 1999). In contrast, manic symptoms and relapse were not significantly affected by the intervention.

IPSRT combines the principles of Interpersonal Therapy (Klerman, Weissman, Rounsaville, & Chevron, 1984) with psychoeducation about bipolar disorder and behavioural interventions that encourage patients to stabilise their daily routines. A preliminary analysis of a randomised controlled trial comparing IPSRT with intensive clinical management found no difference in clinical outcome between the groups after 1 year of treatment (Frank et al., 1999). However, a further analysis of the results suggested that over time, patients assigned to IPSRT were less likely to experience periods
characterised by depressive symptoms than the control group, and tended to show a shorter time to recovery from depression (Swartz & Frank, 2001).

4.6. Discussion of treatments for bipolar depression

Table 1 summarises the treatment studies. After reviewing much of the above evidence and exploring the rationale behind different treatments, Swartz and Frank (2001) have suggested that CBT, FFT and IPSRT would be particularly suitable for treating current symptoms of depression. However, we urge some caution in advocating these treatments for depressive episodes in bipolar disorder until the evidence is available. In terms of the prevention of depressive relapse, CBT, FFT, IPSRT and the group psychoeducation programme developed by Colom and colleagues each appear to be effective. Notably, each of these interventions involves around 20 sessions. Brief forms of psychological therapy aimed purely at relapse prevention (e.g. Perry et al., 1999) appear to be less suitable for addressing bipolar depression. Several reasons have been posited for this (see Scott, 2002). For example, the warning signs of depression may be harder to distinguish from the sub-syndromal symptoms of depression present during remission and respond less quickly to changes in medication than mania.

During the review process, we have encountered many assumptions about the appropriate adaptations to make to therapy for bipolar depression but little empirical evidence for them. We suggest that the content of rumination during bipolar depression and its effects on maintaining symptoms need to be investigated further. Indeed, if evidence can be identified for the vicious cycle we have proposed between intrinsic dysregulation in behavioural activation, rumination over its aversive consequences and excessive goal-attainment beliefs, then future psychological interventions could be more specifically focused on these themes in future. Indeed, whatever the theoretical basis, there is a clear need for hypothesis-led research on the specific content of cognition in bipolar depression.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Form of treatment</th>
<th>No. sessions</th>
<th>N</th>
<th>Bipolar depression</th>
<th>Mania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perry et al. (1999)</td>
<td>Individual relapse prevention using CBT techniques</td>
<td>7–12</td>
<td>68</td>
<td>No effect on time to relapse</td>
<td>Longer time to relapse</td>
</tr>
<tr>
<td>Lam et al. (2003)</td>
<td>Individual CBT</td>
<td>c.20</td>
<td>96</td>
<td>Reduced rates of relapse</td>
<td>Reduced rates of relapse</td>
</tr>
<tr>
<td>Miklowitz et al. (2000)</td>
<td>Family-focused psychoeducation and behavioural intervention</td>
<td>21</td>
<td>101</td>
<td>Reduced symptoms; reduced rates of relapse</td>
<td>No reported effect</td>
</tr>
<tr>
<td>Colom et al. (2003)</td>
<td>Group psychoeducation</td>
<td>21</td>
<td>120</td>
<td>Reduced rates of relapse</td>
<td>Reduced rates of relapse</td>
</tr>
<tr>
<td>Scott et al. (2001)</td>
<td>Individual CBT</td>
<td>22</td>
<td>42</td>
<td>Reduced symptoms</td>
<td>Reduced symptoms</td>
</tr>
<tr>
<td>Frank (1999)</td>
<td>Individual IPSRT</td>
<td>c.24</td>
<td>82</td>
<td>Reduced periods; trend for shorter time to recovery</td>
<td>No reported effect</td>
</tr>
<tr>
<td>Zaretsky et al. (1999)</td>
<td>Individual CBT</td>
<td>20</td>
<td>22</td>
<td>Reduced symptoms</td>
<td>Not assessed</td>
</tr>
</tbody>
</table>
depression, and a stronger emphasis on the psychological treatment of depressive symptoms in bipolar disorder.

5. Summary and conclusions

We have provided an overview of symptom profiles, neuropsychological factors, psychosocial predictors, cognitive styles and treatment protocols associated with bipolar depression. Evidence from each of these domains is consistent in highlighting an overlap between unipolar and bipolar depression, yet there are also potential differences that need to be investigated in a well-controlled, hypothesis-led fashion. Depression, whether unipolar or bipolar, is likely to be preceded by negative psychosocial factors and characterised by a cluster of physiological, behavioural and cognitive impairments and biases. Current forms of cognitive behavioural therapy seeks to reduce current symptoms through modifying dysfunctional thinking, developing skills of monitoring and problem-solving and reducing counterproductive responses such as rumination and social withdrawal. Similar strategies are often involved in psychoeducation, FFT and IPSRT, with the latter two focusing more on the psychosocial factors and interpersonal processes that appear to contribute to bipolar depression. CBT also often involves work with family, friends and services. Despite the face validity of these emerging treatments, we have emphasised the major gaps in the theory, research and practice of psychological interventions in bipolar depression that need to be addressed.

Bipolar depression has been under-recognised and under-treated for too long, considering its huge impact on sufferers with bipolar disorder. The mechanisms of bipolar depression deserve more systematic, theory-driven research that acknowledges its similarity and potential distinction from unipolar depression. This is an exciting time for the development of treatments for bipolar depression and there is increasing evidence to suggest that there is a role for adjunctive psychological treatments to treat acute depressive symptoms and prevent relapse. However, little is known about what are the active components of these treatments. Any differential benefits of the several kinds of psychological treatments available have yet to be established but the data from controlled trials is promising and support the inclusion of these interventions in stepped programmes of care and treatment. Indeed most guidelines state that there is no such thing as medication alone as the treatment of bipolar disorders. Current recommendations on pharmacological treatment suggest that the use lithium, or lamotrigine, quetiapine, olanzapine, (or the combined olanzapine/fluoxetine tablet) may be used as first line medications, whilst other combined approaches, particularly lithium and an antidepressant, or two mood stabilizers may also be effective. In special circumstances ECT may still be used. The important issue is that psychological and pharmacological approaches must not only reduce acute symptoms, but restore functioning and also prevent relapses. Maintenance of adherence with medication is problematic, so an individual needs to fully understand that this is only one component of their treatment. Ultimately, bipolar depression needs to be considered within a comprehensive life-long view of bipolar disorder that incorporates individual differences in presentation, and the treatment of depressive symptoms placed within this context. The formulation-based approach of CBT, alongside appropriate medication, seems best suited to this effect. Future developments need to further enhance the emerging role for psychological interventions in reducing the impairment and distress caused by depressive symptoms in this common, yet still poorly understood disorder.
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