

Review

Psychotherapeutic intervention and suicide risk reduction in bipolar disorder: A review of the evidence

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Abstract

Background: 25–50% of bipolar patients attempt suicide at least once in their lifetime and completed suicide in this population is about 1% annually, about 60 times the rate of the general population. Psychotherapy may be an effective adjunctive option in preventing suicide in bipolar patients. It has been suggested that interpersonal, cognitive and behavioural techniques may be effective in controlling mood shifts, increasing compliance with pharmacotherapy, and maintaining morale in the face of therapeutic adversity and incomplete response. The aim of our study was to systematically review the literature concerning the efficacy of psychosocial interventions in reducing the risk for attempting or committing suicide.

Methods: We searched MEDLINE with the combination of the key words ‘psychotherapy’ or ‘psychoeducation’ or ‘cognitive therapy’ or ‘behavio(u)ral therapy’, ‘cognitive–behavio(u)ral’ or ‘family therapy’ or ‘social rhythm’ or ‘rhythm’ with ‘suicide’ and ‘bipolar’, limited to English language papers published between 1990 and January 2008. Papers were selected based on the criterium that they provided definite data on the role of psychotherapy in suicide prevention, and specifically in bipolar disorder.

Results: Our search returned 481 references, of which 17 were selected based on the above criteria. The selected papers were classified according to the area of suicide prevention they were dealing with as 1. Psychosocial and demographic factors, 2. Psychological profile and 3. Efficacy of psychotherapies.

Discussion: Our paper summarizes specific features and correlates of suicide in bipolar patients and possible targets of psychosocial intervention in the prevention of suicide in bipolar patients. Although studies researching the effect of psychosocial interventions on suicidal behaviour are virtually non-existent, hard data concerning the effectiveness of psychosocial interventions in bipolar disorder are emerging, but still suffer from methodological drawbacks.

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Keywords: Suicide; Psychotherapy; Bipolar disorder; Suicide prevention

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1. Introduction

It has been reported that at least 25% to 50% of patients with bipolar disorder (BD) attempt suicide at least once in their lifetime (Jamison, 2000; Valtonen et al., 2006). In BD, completed suicide rates average approximately 1% annually. This is impressively higher (60-fold) than the general population rate of 0.015% annually, which is an international figure. Another impressive element is the high lethality of suicidal acts in BD patients, suggested by a much lower ratio of attempts:suicide. In BD this ratio is approximately 3:1 when in the general population it is approximately 30:1 (Baldessarini et al., 2006). Although among Axis I disorders, major depressive disorder is most strongly associated with suicide accounting for 69% of cases, with bipolar disorder carrying the second strongest association (14%), bipolar disorder patients carry the strongest risk for completed suicide (Gray and Otto, 2001). Also, in BD, suicidal acts typically occur early and in association with severe depressive or mixed states (Balazs et al., 2006; Baldessarini et al., 2006; Rihmer, 2007).

Today we know that suicide is a complex and multicausal behaviour and needs a complex approach in order to understand it. The importance of mixed states and agitation have only recently been recognized adequately (Akiskal et al., 2005; Balazs et al., 2006; Isometsa et al., 1994a,b; Rihmer, 2007; Rihmer and Akiskal, 2006). They seem to be the strongest cross-sectional predictors and the most potent risk factors for suicide. Risk factors for suicide in BD include agitation, depressive mixed states (id. pseudo-unipolar depression) (Maser et al., 2002), higher number of prior depressive episodes and attempts (Oquendo et al., 2006; Valtonen et al., 2006), including a rapid cycling course, comorbid anxiety especially panic attacks and generalized anxiety disorder (Frank et al., 2002; Simon et al., 2007), personality disorders and substance and alcohol dependence (Comtois et al., 2004; Oquendo et al., 2007) and family history of suicide (Cavazzoni et al., 2007; Hawton et al., 2005; Oquendo et al., 2007). Unfortunately it seems that the recurrence of suicidal ideation across depressive

episodes shows a high consistency (Rihmer, 2007; Rihmer et al., 2002; Valtonen et al., 2005; Williams et al., 2006), while the fact that the majority of suicide victims die by their first attempt (Isometsa et al., 1994a, b; Rihmer et al., 2002) limits the value of the stronger prognostic variable which is the history of prior suicide attempt. On the other hand, there is evidence of familial aggregation of suicide pointing to genetic factors, a finding also confirmed by twin and adoption studies (Rihmer, 2007; Rihmer et al., 2002). Many more bipolar patients with a history of suicide attempts, compared to those without such a history, had a greater positive family history of drug abuse and suicide (or attempts), more hospitalizations for depression, a course of increasing severity of mania; more Axis I, II, and III comorbidities; and more time ill on prospective follow-up (Leverich et al., 2003, 2002). The clinical correlates of suicidal behaviour in bipolar patients are summarized in Table 1.

Since suicide is a multicausal behaviour, besides biological and psychopathological factors, which have a proven strong though less than desired predictive validity, social and cultural environment and psychosocial factors such as younger age, being divorced or widowed, and experiencing adverse life-situations seem to relate with increased suicidal ideation and higher prevalence of attempts.

On the other hand, during the past two decades there has been a substantial decline of suicide rates throughout Europe, the US and Canada. Data show that the most

Table 1
Clinical correlates of suicide in bipolar patients

Correlates of suicide in BD patients suggested by the current review

- Agitation
- Depressive mixed states (id. pseudo-unipolar depression)
- Higher number of prior depressive episodes and attempts
- Comorbid anxiety especially panic attacks and generalized anxiety disorder
- Comorbid Personality disorders
- Comorbid substance and alcohol dependence
- Family history of suicide

pronounced decrease took place in countries with traditionally high suicide rates and the decline was greater for women. It seems that better recognition of major depression as well as availability of treatment with antidepressants and mood stabilizers could be one of the major underlying factors. It is also possible that contemporary suicide attempters suffer from more severe forms of depression in comparison to attempters in the past, maybe suggesting that the overall intervention is so far at least partially effective (Henriques et al., 2004). What is impressive is the fact that in spite of frequent medical contact before the suicide event, only a small minority of depressive suicide victims had received appropriate antidepressant pharmacotherapy, and this observation is particularly strong concerning primary care. It is almost certain, although relevant data do not exist, that psychosocial treatment is also inadequately administered.

Psychotherapy may be effective as an adjunctive option. Many authors suggest that interpersonal, cognitive, and behavioral techniques may become increasingly important to control automatic shifts in mood, in helping to maintain active treatment compliance with pharmacotherapies, implementing an early intervention system based on the development of a structured early warning system; and maintaining morale in the face of therapeutic adversity and incomplete response. In this way, the role of psychosocial treatment could be essential in the prevention of suicide.

The aim of the current article was to systematically review the literature for the efficacy of psychosocial interventions in reducing the risk for attempting or committing suicide.

2. Materials and methods

The MEDLINE was searched with the combination of the key words ‘psychotherapy’ or ‘psychoeducation’ or ‘cognitive therapy’ or ‘behavio(u)ral therapy’, ‘cognitive-behavio(u)ral’ or ‘family therapy’ or ‘social rhythm’ or ‘rhythm’ with ‘suicide’ and ‘bipolar’. The search was limited for papers written in English, published after 1990 (included) and was last performed in January, 2008.

The search returned 481 references. After the inspection of the abstracts, only 17 were selected and included in the current review based on the criterion that they provided definite data on the role of psychotherapy in suicide prevention, and specifically in bipolar disorder.

3. Results

The papers including original data on the effectiveness of psychosocial intervention in the prevention of

suicide were very rare. Some papers were trying to identify psychosocial risk factors, so they were included in the current review under the concept that identifying relevant risk factors would be the first step in the development and testing of appropriate interventions. We are emphasizing only the factors investigated concerning their relationship to suicide in bipolar disorder, not suicide in general.

Thus the selected papers were classified according to the area of suicidal behavior they were dealing with, that is 1. Psychosocial and demographic factors, 2. Psychological profile and 3. Efficacy of psychotherapies. Of course, the papers retrieved do not cover all the areas of 1 and 2, since the search strategy was not designed for this purpose. However, they specifically attempt to cover these areas in relationship to suicidality.

The quality of the papers was rather low in terms of evidence-based medicine. There were no randomized placebo-controlled studies and most of them concern exploratory research and case-control studies. The quality and small number of studies do not permit any in depth analysis of the data.

3.1. Psychosocial and demographic factors related to suicidal behaviour in bipolar patients

There are some papers which identify psychosocial factors predisposing to attempted or committed suicide in bipolar patients. Poor psychosocial adaptation (Allen et al., 2005), or recent psychosocial stress are such factors (Leverich et al., 2003, 2002), like occupational problems or interpersonal problems with spouse or romantic partner (Tsai et al., 1999), however, they are likely to be dependent on the victim’s behaviour and do not constitute independent factors (Isometsa et al., 1995). There are some data suggesting that bipolar suicidal patients might also have greater personal history of early traumatic stressors and a history of sexual abuse (Leverich et al., 2003, 2002). One study suggests that over 50% of the BD sample had a history of trauma compared with 10% of the controls (Rucklidge, 2006). Also early parental separation more than triples the risk of future suicidal acts in bipolar men (Oquendo et al., 2007). Another study reported that life stress did not contribute to attempt among those with very early onset BD (Pettit et al., 2006).

Race is another factor with bipolar African-Americans reporting a greater number of inpatient hospitalizations (9.8 versus 4.4) than Caucasians, as well as a higher suicide attempt rate (64% versus 49%) (Kupfer et al., 2005). In Latinos, suicidal behaviours held a stronger relationship to moral objections to suicide and survival

Table 2
Demographic and psychosocial correlates of suicidal behaviour in bipolar patients

- Poor psychosocial adaptation
- Recent psychosocial stress
- Occupational or interpersonal problems with spouse or romantic partner
- Over 50% may have a history of trauma compared with 10% of the controls
- Greater personal history of early traumatic stressors and a sexual abuse
- Early parental separation
- Race
- Cultural constructs (e.g. in Latinos) mediate protective effects

and coping skills than to ethnicity. Self-identification as Latino was reported to relate with espousing cultural constructs that mediate protective effects against suicidal behaviour (Oquendo et al., 2005).

The psychosocial and demographic factors related to suicidal behaviour in bipolar patients are summarized in Table 2.

3.2. The psychological profile related to suicidal behaviour in bipolar patients

Bipolar patients are reported to have lower self-esteem, more hopelessness (Beck et al., 1993; Valtonen et al., 2006), a more external locus of control and greater difficulties regulating emotion in anger-provoking situations. They were also found to have poorer coping strategies than the controls. Further, hopelessness was found to be the best predictor of those BD adolescents reporting suicidal ideation (Rucklidge, 2006). Hostility and fewer reasons for living also increased the risk of future suicidal acts for women (Oquendo et al., 2007). It has been reported that Harm Avoidance was lowest in patients with no suicide attempts and no family history of suicide, higher in patients with family history of suicide or patients with suicide attempts, and significantly highest in patients with suicide attempts and family history of suicide. Patients with suicide attempts and family history of suicide also had more anticipatory worry, fatigability and asthenia (Engstrom et al., 2004). It is also reported that low self-esteem lasting into remission seems to be related to the expression of suicidality during depressive episodes of bipolar patients, while no similar pattern is evident in unipolar patients (Daskalopoulou et al., 2002).

Poor psychosocial adaptation and the personality factor “openness” were stronger contributors to suicidal ideation among prior attempters while anxiety and extraversion appeared protective against ideation. Among

nonattempters, neuroticism had the predominant influence on suicidal ideation (Allen et al., 2005).

Depressive rumination and suicidality is not fully explained by depression, thus other psychological mechanisms or traits are likely to be also involved. In men, lower emotional processing may also play a role in this relationship (Simon et al., 2007).

In terms of DSM personality disorder diagnosis, borderline personality disorder seems to more than triple the risk of future suicidal acts in men (Oquendo et al., 2007) while other authors suggest that a significant risk is related to any cluster B personality disorder (Leverich et al., 2003; Leverich et al., 2002).

In essence the psychological profile as described by these studies corresponds to the cyclothymical temperament.

The characteristics of the psychological profile related to suicidal behaviour in bipolar patients are summarized in Table 3. It highly corresponds to cyclothymia and cyclothymic/irritable/anxious temperament.

3.3. Efficacy of psychosocial interventions in preventing suicidal behaviour in bipolar patients

There is only one study targeting specifically the effect of adjunctive psychotherapy on suicidality in bipolar patients. This study in 175 patients receiving lithium failed to show any difference on suicidal rates between specific psychotherapy and intensive clinical management involving regular visits with empathic clinicians, suggesting that maybe any psychosocial intervention could be somehow beneficial leading to an overall 17.5-fold decrease in the suicidal rate (Rucci

Table 3
The psychological profile related to suicidal behaviour in patients with bipolar disorder

- Lower self-esteem
- More hopelessness (was found to be the best predictor)
- More external locus of control
- Greater difficulties regulating emotion in anger-provoking situations
- Have poorer coping strategies
- Hostility and fewer reasons for living also increased the risk
- Harm Avoidance is higher
- Higher Openness
- More anticipatory worry, fatigability and asthenia
- Lower Extraversion
- Higher Neuroticism has a predominant influence on suicidal ideation
- Lower emotional processing in men
- Borderline personality disorder
- Any cluster B personality disorder

Note: Low self-esteem lasting into remission seems to be related to the expression of suicidality during depressive episodes of bipolar patients, while no similar pattern is evident in unipolar patients.

et al., 2002). However, these results are not controlled with a placebo method.

Another recent randomized study suggests an immediate effect of Mindfulness-based Cognitive Therapy (MBCT) in comparison to waiting list on anxiety and depressive symptoms among bipolar patients with a history of suicidal ideation but not on suicidal ideation or rate per se, and the sample was very small (14 bipolar patients) (Williams et al., 2008).

4. Discussion

Since nearly two-thirds of suicide attempters have major depression, and also because a great majority of patients attempting suicide seek professional medical help prior to their suicidal act (Isometsa et al., 1994a,b; Luoma et al., 2002; Rihmer, 2007; Rihmer et al., 2002) early identification of suicidal behaviour is not only possible to a significant degree but also intervention could make a difference especially since a marked anti-suicidal effect has been reported with long-term lithium therapy in bipolar patients (Angst et al., 2005; Cipriani et al., 2005; Rihmer and Akiskal, 2006).

The emphasis should be placed on the understanding of the association of suicide with depression, and on the detection and recognition of possible signs of suicide intention in patients seeking medical help especially outside psychiatric practice. Today the vast majority of suicides happen outside the domain psychiatrists see and treat, although victims are likely to suffer from a mental disorder. This is a huge challenge for medicine and society together.

Although full clinical recovery and good quality of life for the patients is the ideal target in everyday clinical practice, suicide is the most important (and most visible) treatment outcome in patients with psychiatric disorders. Current major depressive episode, particularly in the presence of prior suicide attempt and in the absence of treatment is the most important medical condition that exists as a risk factor for both completed and attempted suicide (Coryell and Young, 2005; Rihmer, 2007). The mortality rate because of suicide in mood disorders patients is between 5 and 15%, and among mood disorder patients who have ever been hospitalized, the rate is between 15 and 20% (Bostwick and Pankratz, 2000). Prospective and retrospective clinical studies strongly support the evident clinical observation that if major mood disorder patients commit or attempt suicide, they do it almost exclusively in the context of severe major depressive or mixed affective episode and very rarely during euthymia and euphoric mania (Leon et al., 1999; Rihmer, 2007; Rouillon et al., 1991; Valtonen

et al., 2007), indicating that suicidal behaviour in patients with mood disorder is a state- and severity dependent phenomenon. Therefore, to diagnose and treat acute mood episodes effectively as early as possible and to stabilize the period of euthymia is essential for suicide prevention. Since up to 66% of suicide victims and suicide attempters contact their GPs or psychiatrists 4 weeks before the suicidal act (Luoma et al., 2002; Pirkis and Burgess, 1998) primary care doctors and psychiatrists play a priority role in suicide prevention.

Hard data concerning the effectiveness of psychosocial interventions in BD are emerging, but still suffer from methodological drawbacks in comparison to the methodology and standards of the pharmaceutical products and the procedure the pharmaceutical agents underwent in order to get a label. This is among other things an effect of lack of economic interest from the side of major investors and partially an effect of the very nature of non-biological therapeutic methods. A major obstacle is the method that should be used to design a truly double blind placebo-controlled study for the testing of these methods and modalities.

Studies researching the effect psychosocial interventions have on suicidal behaviour are virtually non-existent. Of course this is partially because suicidal behaviour is difficult to research upon, but the bulk of papers are ‘opinion’ rather than ‘review’ and sometimes they misreport data in a circular way. For example Zaretsky et al. (2007) write that ‘It is possible that psychotherapeutic interventions can target specific symptoms in bipolar disorder, such as insomnia and suicidality. CBT has demonstrated positive effects on treating primary insomnia and on suicide prevention. However, published data on this issue are relatively lacking. Additional studies are needed ...’ In order to support this argument for suicidality, these authors cite two papers which do not include relevant data at all (Frank et al., 2000) or report that psychotherapy was not better than intensive clinical follow-up (Rucci et al., 2002).

In spite of these limitations, it seems that some kind of psychosocial intervention might have a beneficial effect for bipolar patients. Possible targets for such an intervention as suggested by these data are shown in Table 4. Other additional targets suggested by theoretical approaches are shown in Table 5. Findings of randomized clinical trials indicate that psychosocial interventions enhance long-term outcomes when added to pharmacotherapy (Miklowitz and Johnson, 2006). A recent review of the literature suggests that interpersonal group therapy, cognitive-behavioural therapy, group sessions for partners of persons with bipolar disorder,

Table 4

Possible targets of psychosocial intervention in the prevention of suicidal behaviour, identified by data

Recent psychosocial stress (Occupational or interpersonal problems)	Social hassles and support system	Cyclothymic temperament
Race (e.g. African-American) & Cultural constructs (e.g. in Latinos)		
Early losses and trauma		
Hopelessness	Anxiety	
More external locus of control		
Have poorer coping strategies		
Hostility and fewer reasons for living		
Harm Avoidance		
Openness		
Anticipatory worry, fatigability and asthenia		
Extraversion	Borderline personality features	
Lower emotional processing in men		
Borderline personality disorder		
Any cluster B personality disorder		
Early parental separation		
Greater personal history of early traumatic stressors and sexual abuse		
Lower self-esteem	Suboptimal pharmacotherapy	
Greater difficulties regulating emotion in anger-provoking situations		
Higher Neuroticism		
Lack of access to specialized care		
Lack of adherence to medication		

and patient and family psychoeducation were effective interventions in adherence improvement and indirectly could influence the suicidal rates (Sajatovic et al., 2004). The questions whether there is a specific effect of a specific psychotherapeutic method, and whether specific issues like suicidality or adherence can be specifically tackled, remain unanswered.

In this frame, there are some data suggesting that psychotherapy improves the medium and long-term prognosis of bipolar illness. A recent randomized controlled trial of cognitive therapy in 52 bipolar patients

for 6 months reported that at the end of the study the CT group had lower depression scores and less dysfunctional attitudes (Ball et al., 2006). Another randomized controlled study on 293 patients concerning the effectiveness of family-focused therapy, interpersonal and social rhythm therapy, and cognitive behavior therapy on bipolar depression suggested that patients receiving intensive psychotherapy had significantly higher year-end recovery rates (64.4% vs 51.5%) and shorter times to recovery than patients in collaborative care. No statistically significant differences were observed in the outcomes of the 3 intensive psychotherapies (Miklowitz et al., 2007). More data are available concerning psychoeducation which seems to emerge as the first line of psychosocial intervention (Rouget and Aubry, 2007).

Table 5

Possible targets of psychosocial intervention in the prevention of suicidal behaviour, identified by theoretical approach and opinion

– Depression
– Social rhythms
– Psychoeducation
– Mourning over lost ‘highs’
– Grief over ‘former self’
– Patient’s and his/her family’s acceptance of the disease
– Occupational rehabilitation
– Interpersonal role disputes
– Family (e.g. expressed emotion: criticism, hostility, overinvolvement)
– Role transition
– Interpersonal deficits
– Prevention
– Suicidal ideation

Table 6

Targets of psychosocial intervention during different phases of bipolar illness

Acute phase
Conducting assessments, building a therapeutic alliance, providing reassurance and support
Stabilization phase
Structured and task oriented. Therapy gives the patient the chance to do something active about their illness
Maintenance period
More intensive psychotherapy (e.g. insight oriented exploration, modifying intrafamilial communication styles etc.)

Table 7

Specific areas concerning suicidal acts to work psychotherapeutically

- Keep the responsibility of the act to the patient
- Chain analysis
- Explore ‘altruistic’ motives
- Explore punishing or manipulating attitude
- Suicidal acts as a form of non-verbal communication
- A true wish to die
- A psychodynamic interpretation does not decrease the seriousness of the ideation

Accumulated data has shown that psychoeducation, family-focused psychoeducation, and cognitive-behavioral therapy seem to be the most efficacious interventions in the prophylaxis from recurrences in medicated bipolar patients and can help the patient and family members to learn to identify early warnings of evolving episodes so that earlier treatment can occur and to identify triggering factors (Colom et al., 2003a,b, 2005, 2004; Reinares et al., 2004; Scott et al., 2006).

A search of the literature on suicide prevention revealed 17 randomized, controlled studies, which the authors reviewed to determine the efficacy of strategies aimed at eliminating psychosocial risk factors for suicide. Three strategies emerged as efficacious: (1) applying interventions to elicit emergency care by patients at times of distress; (2) training in problem-solving strategies; and (3) combining comprehensive interventions that include problem-solving with intensive rehearsal of cognitive, social, emotional-labeling, and distress-tolerance skills. On the basis of their review of the literature, the authors make recommendations for suicide prevention for patients with bipolar disorder. Patients with acute anxiety may be less capable of tolerating uncomfortable affects and utilizing other resources, such as social supports or cognitive strategies, to reduce suicidality. Psychosocial interventions to prevent suicide should focus in part on problem-solving skills and improved tolerability of distress (Gray and Otto, 2001).

When psychosocial treatment is implemented, it should be appropriate to the phase of the illness, because different targets and techniques are suitable during the acute, the stabilization and the maintenance phase. The therapist should keep the patient responsible for his/her life, perform a chain analysis, explore the underlying motivation and psychological function and always must have in mind that psychological understanding and interpretation does not waive the severity of suicidal ideation (Tables 6 and 7) (Miklowitz, 1996).

There is much research still needed to clarify issues relevant to how we can best use psychosocial interventions in the prevention of suicide. The unresolved questions include cross-cultural issues in suicide and

bipolar disorder; and the adaptation of interventions shown to be effective in reducing suicidal behaviours in non-bipolar populations (Miklowitz and Taylor, 2006). Standardizing the administration of such intervention and coding procedures and targets is another formidable task (Miklowitz, 1996).

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Conflict of interest

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