Braz J Med Biol Res, September 2012, Volume 45(9) 862-868

doi: 10.1590/S0100-879X20120007500109

Group cognitive behavior therapy for bipolar disorder can improve the quality of life

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Abstract

Bipolar disorder (BD) can have an impact on psychosocial functioning and quality of life (QoL). Several studies have shown that structured psychotherapy in conjunction with pharmacotherapy may modify the course of some disorders; however, few studies have investigated the results of group cognitive behavior therapy (G-CBT) for BD. Our objective was to evaluate the effectiveness of 14 sessions of G-CBT for BD patients, comparing this intervention plus pharmacotherapy to treatment as usual (TAU; only pharmacotherapy). Forty-one patients with BD I and II participated in this study and were randomly allocated to each group (G-CBT: N = 27; TAU: N = 14). Thirty-seven participants completed the treatment (women: N = 66.67%; mean age = 41.5 years). QoL and mood symptoms were assessed in all participants. Scores changed significantly by the end of treatment in favor of the G-CBT group. The G-CBT group presented significantly better QoL in seven of the eight sub-items assessed with the Medical Outcomes Survey SF-36 scale. At the end of treatment, the G-CBT group exhibited lower scores for mania (not statistically significant) and depression (statistically significant) as well as a reduction in the frequency and duration of mood episodes (P < 0.01). The group variable was significant for the reduction of depression scores over time. This clinical change may explain the improvement in six of the eight subscales of QoL (P < 0.05). The G-CBT group showed better QoL in absolute values in all aspects and significant improvements in nearly all subscales. These results were not observed in the TAU control group.

Key words: Group therapy; Psychotherapy; Bipolar disorder; Mania; Depression

Introduction

Several studies have shown that bipolar disorder (BD) can have a severe impact on psychosocial functioning and quality of life (QoL) (1-4). Some psychologically structured approaches favor the adhesion of BD patients to pharmacological treatment, with better results related to the reduction of depression symptoms than mania (5). There is growing interest in characterizing QoL in BD populations (6).

In a study in which QoL was assessed in 50 euthymic bipolar patients (7) using the Medical Outcomes Survey SF-36 (MOS SF-36) (8,9), the scores of bipolar patients on all of the SF-36 subscales were significantly lower than those of controls (7).

Psychoeducation and cognitive behavior therapy (CBT) are the approaches most extensively studied for treating BD. Both of these treatment methods present consistent evidence of positive results (10-15). CBT strategies aim to manage and prevent cognitive, affective and behavioral symptoms associated with the depressive or mania phase with the patient’s and, at times, the family's active cooperation (16,17). These strategies intend to reduce negative consequences in psychosocial and interpersonal areas, thus improving the QoL of individuals with BD (4,18).

Individual CBT has been extensively studied, and its effectiveness has been confirmed in controlled studies. These investigations found that CBT led to significant changes in dysfunctional thoughts and behaviors that could interfere with compliance with pharmacological treatment (19).

Only one article (20) has suggested that CBT is not likely to be an effective adjunctive therapy for the general population with recurrent, non-rapid cycling BD. Other studies using individual or group CBT (G-CBT) reported improvements in medication adherence, mood and social functioning.
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Psychoeducation is an intervention used by cognitive be-

(21-34). Furthermore, when investigated over time, these
gains were maintained at follow-up (21-29,32). CBT shows
efficacy in several significant phases of the disorder and
can improve the QoL of BD patients by maintaining their
euthymic phase or reducing the frequency and intensity of
mania or depressive episodes (24-32).
Unfortunately, few studies have used G-CBT for BD
patients (22,27,31,32). Palmer et al. (22) used G-CBT
and compared its results to those obtained before and
after G-CBT plus pharmacotherapy. They evaluated the
effectiveness of 17 weekly sessions in 6 BD patients on
maintenance mood stabilizers. Their results showed a
significant improvement in well-being in 2 patients and a
trend to improved well-being in a third patient. Furthermore,
all patients experienced improvement in social adjustment
from the pre- to the post-test period.
In another study, Patellis-Siotis et al. (27) compared G-
CBT plus pharmacotherapy versus pharmacotherapy alone.
They showed that the addition of G-CBT (14 sessions) to
pharmacotherapy adherence in 38 BD patients improved
their functioning and QoL. By the end of treatment, scores
changed significantly in favor of the G-CBT group.
Costa et al. (31) compared the results of 14 sessions of G-
CBT combined with pharmacotherapy to those obtained
with the use of pharmacotherapy alone. The study sample
was small, but it was relevant to have a control group. G-CBT
patients presented fewer symptoms of mania, depression
and anxiety, as well as fewer and shorter mood change
episodes. The authors demonstrated that G-CBT improved
especially depressive symptoms.
Gomes et al. (32) evaluated only euthymic patients. Ad-
junctive G-CBT was used to prevent recurrence of episodes
in 50 BD patients. The results were compared with those
obtained with treatment as usual (TAU) alone. The authors
concluded that there was no significant difference between
groups about relapse, but the median time to relapse was
longer for patients treated with G-CBT compared to those
receiving TAU.
Castle et al. (33) and Isasi et al. (34) used psycholo-
gical intervention programs in groups of BD patients to
enhance relapse prevention. Both studies showed that
there were lower rates of relapses and hospitalizations in
the treatment group. Isasi et al. (34) investigated patients
with refractory BD.
However, we highlight that the number of G-CBT ses-
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Psychoeducation is an intervention used by cognitive be-
the TAU group 13 received lithium, and only one participant received carbamazepine.

**Instruments**

Patients were interviewed using the Structured Clinical Interview for DSM-IV (SCID-I and -II) (39). MOS SF-36 (8) was applied pre- and post-treatment to evaluate QoL. MOS SF-36 was designed to measure health status, broadly defined, and to examine limitations in functioning related to physical activity, social activities, function in specific areas, and general health.

Mood symptoms were also assessed in all participants with the administration of BDI (37) and YMRS (38). Weekly ratings on the BDI were obtained, whereas YMRS was applied three times, i.e., at the beginning, middle and end of treatment. The participants were evaluated in a blind manner in the application of YMRS.

**Treatment procedures**

The study was approved by the Ethics Committee and all participants gave written informed consent.

Patients were randomly allocated to G-CBT (N = 27) or TAU (N = 14). A variable that influenced some participants who were previously allocated to the G-CBT was the availability to participate 2 h per week in the schedule of the group. In the end, it was difficult to expand the TAU group, with a consequent difference in the number of subjects in the two groups.

Subjects were assessed before, during, after, and up to 6 months post-treatment with respect to their depression, mania and QoL scores.

**Treatment as usual**

Twelve participants in the TAU group received sessions as prescribed by the psychiatrists who were trained to apply the tests. In this group, mood symptoms were assessed for 14 weeks in addition to a 6-month follow-up.

**G-CBT**

Twenty-seven subjects participated in G-CBT. CBT interventions for BD are intended to educate the patient and his/her family regarding treatment for and common difficulties associated with the disorder; to teach a method for monitoring the occurrence and severity of mania or depressive symptoms (mood chart); to facilitate compliance with pharmacological treatment (psychoeducation and reality test of thoughts and beliefs); to provide psychological strategies, specifically cognitive-behavior abilities, to manage stress factors that can interfere with treatment or elicit episodes of mania and/or depression (control of the circadian rhythm, daily thought records, social skills training, problem solving, etc.), to reduce the trauma and the stigma associated with the diagnosis (18,40).

An experienced clinical psychologist administered the protocol, which consisted of 14 G-CBT weekly sessions, 2 h each. The intervention was divided into 2 phases: the first phase consisted of three sessions during which the therapist focused on psychoeducation for the patients and their family (BD, symptoms, medications); in the second phase, patients learned CBT skills, including specific behavioral and cognitive interventions. The CBT treatment protocol employed in the present study is based on the treatment protocol described in ‘Cognitive-Behavioral Therapy for Bipolar Disorder’ by Basco and Rush (16).

**Statistical analysis**

Pearson chi-square and Fisher exact tests were performed to determine whether the TAU group and the G-CBT group differed with respect to demographic characteristics and co-morbid diagnoses. Statistical analysis of variance was used to test for intra- and inter-group differences between scores recorded pre-, during and post-treatment. The level of significance was set at P < 0.05.

Regression analysis was applied to learn more about the relationship among several variables. The 14th week score was the dependent variable, and we selected gender, civil status, educational level, psychiatric comorbidity, group, time (week), and the scores of each week as predictor variables.

**Results**

**Demographic characteristics**

No significant differences in demographic variables were found between the TAU group and the G-CBT group at pre-test (P < 0.05), as shown in Table 1.

**Mood scales**

Clinical scores were categorized into subclinical, mild, moderate, and severe depression (BDI: 0-11/12-19/20-35/36-63) (37), and subclinical, hypomania and mania (YMRS: 0-11/12-19/20-58) (38) before treatment.

There were no significant differences between groups in baseline scores for the BDI and YMRS scales. The average depression scores indicated mild depression in both groups, and the YMRS scores indicated subclinical hypomanic/manic symptoms in both groups.

Mood scale scores for the two groups at the beginning, middle and end of treatment are presented in Table 2.

Favorable results were also obtained for G-CBT by regression analysis. Considering all of the variables controlled in the study, the only one that was significant for the reduction of depression scores over time was the group variable, which was favorable to G-CBT ($R^2 = 0.909/P = 0.002$).

The time variable was significant for the lowering of anxiety scores in G-CBT. The 11th session was a key period for the reduction of anxiety ($R^2 = 0.904/P = 0.027$).

Regression analysis showed that some variables were
QoL scores

Evaluation of the baseline SF-36 scores for each group indicated that there was only a significant difference for the "Mental health" subscale (P = 0.0126), with the TAU group presenting slightly higher average scores. The other seven subscales showed no statistical differences in the first session.

After comparing the initial and final SF-36 scores in each group, no significant differences (P > 0.05) in the subscales were detected in the TAU group (Functional capacity; Physical aspect; Pain; General health status; Vitality; Social aspects; Emotional aspects; Mental health), whereas there was significant improvement in all of the subscales in the G-CBT group (Physical aspect: P = 0.031; Pain: P = 0.019; General health status: P = 0.042; Vitality: P = 0.003; Social aspects: P = 0.001; Emotional aspects: P = 0.007; Mental health: P = 0.017), except for Functional capacity (P = 0.071).

The overall results demonstrate that there was an increase in all of the subscale scores of the G-CBT, that is, there was a substantial increase in QoL, with an average increase of 17.8% in each subscale. In contrast, the results for the TAU group either remained the same or sustained a reduction at the end of 14 weeks.

The initial and final data of the subscales are shown in Table 3.

The regression analysis was once again favorable to G-CBT. In 6 of the 8 subscales, the group variable was significantly different in explaining the score increase: Functional capacity (R² = 0.65/P = 0.007), Pain (R² = 0.60/P = 0.015), General health status (R² = 0.77/P = 0.002), Vitality (R² = 0.46/P = 0.036), Social aspects (R² = 0.41/P = 0.044), Emotional aspects (R² = 0.56/P = 0.001), Mental health (R² = 0.46/P = 0.081). Participation in G-CBT was an important explanatory variable for the improvement of patients’ QoL.
Discussion

Group therapy was well tolerated by the BD patients, as indicated by the fact that 92.59% of the patients participated in G-CBT from the beginning to the end of the study, supporting the report of Patelis-Siotis et al. (27).

The addition of G-CBT to the pharmacological treatment was effective. The patients presented less mania, depression and anxiety symptoms as well as a reduction in the frequency and duration of mood change episodes.

It is important to note that the depression scores of the G-CBT group were slightly higher than those of the control group at baseline, however, on average, both groups demonstrated mild depression. CBT sessions were important for the improvement of depression symptoms. In this way, we corroborated the findings of Scott et al. (26), Ball et al. (29), Reilly-Harrington et al. (20), Patelis-Siotis et al. (27), and Costa et al. (31) who investigated the efficacy of individual (20,26,29) and group (27,31) CBT, and also reported reduction in depression symptoms.

Although there was a reduction in the indices of mania, the model did not prove to be effective because regression analysis showed that none of the variables investigated influenced the reduction of mania scores. Reilly-Harrington et al. (20), who investigated 20 sessions of CBT for BD, also found that patients did not present a significant reduction of mania symptoms. Nevertheless, subjects in both groups presented low scores for YMRS since the first assessment, a complicating factor that can explain a non-significant reduction in the mania scores. This can be explained by the good and regular use of mood stabilizers throughout the 14 weeks.

The G-CBT group showed better QoL in absolute values and significant improvement in almost all aspects, excluding only “Functional capacity”. This was not the case for the TAU patients. Furthermore, we corroborated the results of Patelis-Siostis et al. (27) since there was a reduction in YMRS scores, while there was also a significant improvement in the “Vitality” subscale.

The current study has several limitations. First, there was a difference in the number of subjects between groups. Second, patients with severe mania or depression were excluded. Third, although there were no significant differences in baseline scores, the G-CBT group had slightly higher mean raw scores for anxiety, depression and mania prior to treatment. This could favor a less apparent reduction of symptoms in the TAU group. Furthermore, there was a lack of follow-up to evaluate whether the patients sustained the gains achieved during therapy.

CBT used in conjunction with pharmacotherapy for BD patients may modify the course of the disease. We report that there are improvements in mood and QoL. G-CBT may be particularly useful in the treatment of bipolar depression.

When compared with other studies, the present investigation differed in number of treatment sessions, subjective measures, and follow-up. In the future, replication studies on CBT for BD patients should be conducted to control possible limitations and producing clearer results. Additional controlled studies using G-CBT and larger samples are needed to add evidence of effectiveness.

Acknowledgments

Research supported by CNPq (#470382/2006-6).
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