

REVIEW ARTICLE

Update on the treatment of bipolar disorder: the impact of family psychoeducation

BRUNA RESENDE DE SOUZA ALMEIDA*
CARLA GRAZIELLI SOARES DE ALMEIDA
CARLOS CÉZAR MARTINS DE OLIVEIRA
DANIELLA CRISTINA ASSIS MACHADO

Academic on the medical course at the University José do Rosário Vellano – Unifenas, Belo Horizonte city, MG, Brazil.

SARAH RUCKL

PhD in mental health and teaching of medical students at the University José do Rosário Vellano – Unifenas, Belo Horizonte city, MG, Brazil.

VERA ANGELO ANDRADE

PhD in gastroenterology, coordinator and professor of the medical school at the University José do Rosário Vellano – Unifenas, Belo Horizonte city, MG, Brazil.

Abstract: Objective: to conduct a systematic review of the literature regarding the impact of family psychoeducation on the treatment of bipolar disorder.

Methodology: PubMed, Lilacs, Web of A search was conducted in Science, Science Direct and Scopus using the descriptors: family psychoeducation and bipolar disorder. The last 13 years were considered.

Results: 542 articles were found and after considering inclusion and exclusion criteria, 29 were selected for the study. Three other articles nominated by specialist were also used. Overall, patients diagnosed with bipolar disorder should be treated with drug therapy combined with psychotherapy. Most studies showed that the conventional treatment associated with psychoeducation reduced relapse rates and hospitalizations and that long-term programs generated better results. A comparison between supportive psychotherapy and family psychotherapy showed that it was only effective in patients who received the latter.

Conclusion: although the role of pharmacological treatment is well established for the patient, (OU “ESTABLISHED IN LITERATURE”?) almost all articles consulted claim that if family psychoeducation is associated with medication, it can help with the early detection of warning signs of a crisis, reduce hospitalization rates and help reduce the number of drugs taken.

Keywords: bipolar disorder; family therapy; psychotherapy group

1. Introduction

Bipolar Affective Disorder (BAD) is characterized by the alternation of hypomanic/manic and depressive episodes, in varying degrees of intensity, with or without psychotic symptoms. Depression is characterized by depressed mood, loss of interest or pleasure, feeling of tiredness, feelings of guilt or low self-esteem, disturbed appetite and/or sleep and poor concentration^{1, 2}.

The hypomanic/manic episode comprehends euphoric or irritable moods, psychomotor excitement, increased self-esteem, acceleration of thought and speech, overestimation of their own capabilities, excessive optimism and significant reduction of sleeping needs³. BAD is a chronic disorder, associated with a heavier burden including high rates of mortality and high economic costs, and it is the sixth leading cause of loss of family and social life disability of all medical conditions⁴. The genetic basis is well established: 50% of BAD patients have at

* Correspondence to: brunaresende.sa@gmail.com

least one affected relative, and offspring are at a higher risk of developing the disorder, when compared to the general population. The annual costs of the treatment of bipolar disorder are estimated at \$ 45 billion per year in the United States⁵.

BAD treatment includes several types of drugs, such as lithium, anticonvulsants, antipsychotics and antidepressants, often used irregularly. Electroconvulsive therapy, also a biological treatment, is especially suitable for poly-medicated patients or when there is an imminent risk of suicide and aggression. Other therapeutic approaches include individual psychotherapy, which helps the patient to gain a better understanding of their feelings, insecurities and fears and the disorder itself. Even when using appropriate drug strategies, the course on BAD is often characterized by chronic symptoms and high rates of relapse and hospitalization^{6,7}. In order to complement drug treatment and reduce relapses and hospitalizations, psychosocial interventions have been added to the treatment of bipolar disorder⁸. Psychoeducation is a didactic and systematic psychotherapeutic intervention, which aims to inform patients and their relatives about a disorder⁵. One of the main goals of family psychoeducation is medication compliance, and to teach patients and relatives by means of theory and practice, in order to enable them to understand and cope with the disorder.⁶ Other important topics covered include early identification of warning signs of a manic episode such as alternations of mood, despair, anxiety, constant dissatisfaction, impulsiveness, restlessness, insomnia and diffuse pain in addition to management of situations provoked by stress and anxiety. In addition, people are taught how to manage situations that provoke stress and anxiety, so that these do not become elevated, because the family that has high stress rates becomes incapable of recognizing the differences between the personal characteristics of the patient and the characteristics of the psychological disorder. Perception of BAD by the patient and his family and the importance of medication has a direct influence on the pharmacological treatment. Thus, the more informed people are about the disease, how it manifests itself, what treatments are available and their importance for stabilization of the clinical picture, the greater adherence to treatment, leading to a better prognosis.⁹

Literature suggests the combination of drug treatment and family psychoeducational intervention to reduce relapses and hospitalizations, improve the quality of social life and increase adherence to drug treatment.¹⁰ Direct relatives are the most affected emotionally, which shows the importance of the family involvement. They are the ones who suffer the greatest consequences in relational problems, which bear the financial and emotional imbalance of patients, and are constant victims of both moral and physical assaults. On the other hand,

they are of great importance in combating the crisis and are the first to observe the changes made by carriers. It is also important to emphasize that knowledge of the disease leads to self-knowledge and personal preparation. Despite the awareness of the importance of family involvement, most studies still only discuss individual psychoeducation. New studies are needed to educate health professionals about the importance and effectiveness of family involvement in psychoeducation. The objective of this study is to conduct a systematic review of the literature of the last ten years about family psychoeducation and the impact pharmacological treatment has on bipolar disorder.

2. Methodology

They consulted articles about BAD and family psychoeducation with keywords *family*, *psychoeducation* and *bipolar*. The following databases were used: PubMed, Lilacs and Science, Science Direct and Scopus websites, but no further suggestions were made by the Desh and Mesh descriptors, regarding other keywords. Articles and studies in all languages, published between 2005 and 2018, were consulted to obtain information on adult patients with BAD but no other psychiatric comorbidities, where the therapies provided were only family or individual psychoeducation more so the former for the same or different study group.

In this review we included case studies on control, randomized, clinical, multi-center trials, systematic reviews and letters to the editor. The last consultation was made on 26/06/2018. Data was extracted separately from articles and the bias of each study in terms of results was also assessed separately.

3. Results

There was an initial selection of 542 items available, 112 in the pubmed database, 33 in scopus, 6 in lilacs, 219 in the science website and 172 in science direct. 18 of these were discarded because of duplication in databases, a further 381 were rejected by title and 114 by the summary that included criteria or themes that are not in accordance with the objective of this work, target audience or type of intervention. Other diseases are also only addressed in psychoeducation and individual pharmacology so the remaining 29 articles were therefore used in the study. Three other articles nominated by a specialist were also used. From the studies used, four were randomized, three were clinical trials, two control cases and five have different types of studies, more specifically: randomized prospective, interventional controlled, randomized interventional, randomized controlled and multicenter studies. The other eighteen are literature reviews. The major limitations demonstrated in these studies were short trial periods and small samples.

Table 1

Authors	Year	Type of study	Main findings
Santin A, et al¹	2005	Systematic review	It is essential to identify patients with drug addiction problems who are maintaining the disorder's changes and to refer them to specific therapies to evaluate the individual aspects presented by each one
Miller IW, et al²	2008	Randomized controlled clinical trial	The efficacy of adding family interventions to bipolar patients and their families may depend on the level of family involvement with the patient's treatment.
Depp CA, et al³	2008	Systematic review	A structured approach to the enhancement of medication adherence should be a part of the treatment followed for all patients with bipolar disorder. The combination of pharmacotherapy and psychosocial intervention may be the most promising route to attaining recovery
Knapp P, et al⁴	2005	Systematic review	Psychotherapeutic approaches need to be used early to improve medication adherence and help the patient to identify the prodromes of the disease. Such approaches also have effects on residual symptoms, which are associated with chronicity and high levels of suffering and disability
Bonsack et al⁵	2015	Systematic review	Family psychoeducation is a complementary and not a substitute form of treatment. This mode of intervention alters the relationship between patient and family caregivers to become partners in treatment. However, it is not an easily accessible system.
Pellegrinelli et al⁶	2010	Letter to editor	There is a relationship between correct transmitted information and better adherence to treatment. On the other hand, it is important that psychoeducation also includes an opinion for patients' mistaken beliefs that can impair the assimilation of information and the consequence of adherence to treatment and good results.
Fiorillo et al⁷	2013	Systematic review	Most of the studies analyzed showed that intervention by family members improves the course of bipolar disorder, in particular by preventing relapses and reducing hospital admissions.
Vieta E, et al⁸	2005	Systematic review	Combining psychologic interventions with drug treatment increases overall effectiveness of the treatment, mostly by further protection from relapse or recurrence. Psychoeducation, family-focused psychoeducation and cognitive-behavioral therapy seem to be the most efficacious interventions in the prophylaxis against recurrences.
Miklowitz DJ, et al⁹	2008	Randomized controlled clinical trial	Treatments that emphasize medication adherence and early recognition of mood symptoms have stronger effects on mania, whereas treatments that emphasize cognitive and interpersonal coping strategies have stronger effects on depression.
Morris CD, et al¹⁰	2007	Systematic review	The emotion expressed in the bipolar patient's family is a prognosis indicator, so future work will need to refine existing treatments and identify means of disseminating evidence-based practices for several family members and contexts
Sienaert P, et al¹¹	2008	Systematic review	Knowledge about disease and confidence in therapy increases compliance in treatment and prevents recurrence. Therefore, the therapy is considered a condition for good treatment.
Eisner LR, et al¹²	2008	Controlled experimental study	After the interventions, the knowledge of the participants increased, resulting in a decrease in criticism and then in the levels of anger and guilt of their relatives with bipolar disorder. This suggests that anger may still be an important target justifying direct intervention.
Gonzalez-Pinto A, et al¹³	2008	Control Case	After implementing the psychoeducational program, a reduction was evident in the family burden of the bipolar patient, which shows that the this burden can be modified with psychotherapy.
Reinares M, et al¹⁴	2008	Randomized controlled clinical trial	A psychoeducation group intervention for the caregivers of bipolar patients is a useful addition to the usual treatment given to patients to reduce the risk of recurrences, particularly mania and hypomania, in bipolar disorder.
Ozerdem A, et al¹⁵	2009	Case Series	Family psychotherapy was implemented in ten patients and a satisfactory result was obtained. Due to the small sample size and lack of control group, it can be concluded that there was a better recovery from the crisis periods and recurrence was avoided.
Reinares M, et al¹⁶	2009	Randomized controlled clinical trial	Psychoeducation for caregivers of bipolar patients may improve the long-term outcome in terms of time elapsed before the recurrence, especially if psychological interventions are introduced early in the disease.

(continued)

Authors	Year	Type of study	Main findings
Madigan K, et al ¹⁷	2011	Randomized controlled clinical trial	Family psychoeducation for bipolar disorder has been effective in increasing knowledge and in reducing the emotional weight of caregivers, but it is no different from solution-focused group psychotherapy. In addition, involving families in an early stage of the disease may lead to a higher rate of acceptance of family education programs.
Smith DJ, et al ¹⁸	2011	Randomized controlled clinical trial	The study proposed a psychoeducational intervention on the internet but there was no significant difference between the groups, although there was a modest improvement in the psychological subsection.
Vecchio VD, et al ¹⁹	2011	Controlled experimental study	The findings suggest that family psychoeducational interventions are feasible in the routine context of Italians who follow up on bipolar disorder in health centers. The most frequent difficulties found in the implementation of family intervention were the integration of family work with other responsibilities and the length of time to perform the intervention.
Lucksted A, et al ²⁰	2012	Systematic review	Family psychotherapy is an effective therapy when adapted to each situation and each patient. A combination that works well for one patient may not work for another.
Prasko J et al ²¹	2013	Systematic review	Cognitive behavioral therapy, interpersonal and social rhythm therapy, individual, group and family psychoeducation increase the stabilizing effect of pharmacotherapy
Çuhadar D et al ²²	2014	Controlled experimental study	The results of our study and others have demonstrated that psychoeducation can be effective in reducing internalized stigmatization. To incorporate such psychoeducation program, routine practices in this area will be effective in terms of improving the life quality of patients suffering from internalized stigmatization.
Zaki N, et al ²³	2014	Clinical trial	The behavioral family psychoeducational program proved to be beneficial in the management of patients suffering from bipolar disorder and had a positive impact on their caregivers in terms of reducing the latter's burden
Reinares M, et al ²⁴	2014	Systematic review	The efficacy of psychological interventions seems to vary according to the characteristics of the patients involved and the course of the disease
Miziou S et al ²⁵	2015	Systematic review	Psychosocial interventions are most effective when applied to patients who are at an early stage of the disease and who are euthymic when recruited.
Gay C et al ²⁶	2015	Systematic review	The psychoeducational approach is one of the bases of the management of bipolar disorder. It cannot replace drug therapy but it is critical for optimizing treatment and adherence, decreasing relapses and recurrences, and improving therapeutic alliance.
Nagy N et al ²⁷	2015	Randomized controlled clinical trial	Behavioral family therapy programs are an effective complement of pharmacotherapy for bipolar disorder in terms of reducing rates of relapse and re-hospitalization.
Fredman SJ, et al ²⁸	2015	Randomized controlled clinical trial	The family-based therapy has shown discrete superiority in relation to brief psychoeducation (crisis management) regarding improvements in patients' manic symptoms over 2 years.
Fiorillo A, 2et al ²⁹	2015	Multicenter study	Family intervention by the Falloon model is effective in improving the social outcome of patients with bipolar disorder.

4. Discussion

BAD carriers should be treated with drug therapy combined with supportive psychotherapy, but there is still controversy about the most appropriate psychosocial intervention to be employed. We evaluated the factors related to poor patient compliance in the treatment of BAD in the literature review Santin, Cereser and Rosa¹. The main factors pointed out by this study are patients' attitudes and beliefs regarding treatment, alcohol and drug use, lack of knowledge about the disease, lack of family structure, among others. According to the study, psychoeducation is able to aid in these factors, and it is indispensable for

identifying patients with adherence problems and referring them to these sessions.

Knapp and Isolan⁵ evaluated the effectiveness of psychotherapeutic interventions related to pharmacology in the treatment of BAD from a systematic review of the literature available. The goal was to identify the current evidence of the effectiveness of psychotherapeutic interventions. This led them to conclude that there is sufficient evidence to suggest that interventions of psychoeducation, individual or group, associated with pharmacotherapy, may be promising for the treatment of bipolar patients. Even brief interventions that emphasize medication adher-

ence and early identification of symptoms may be beneficial in preventing new mood swings and longer euthymic periods. Patients who adhere to medications and who are aware of their prodromal symptoms are likely to benefit from other interventions with broader approaches.

Vieta, Pacchiarotti, Scott, Sanchez-Moreno, Marzo and Colom¹⁰ found the need to implement psychoeducation before the patient becomes refractory to such intervention. According to the 2008 study by Miklowitz¹¹, psychoeducation is an effective supplement for the prevention of relapse episodes and stabilizing the framework in bipolar patients when combined with drug treatment, showing model treatments containing 12 or more sessions that consistently achieved better results than three or fewer sessions. The same was described in a case report by Morris, Myklowitz and Waxmonsky¹² and also in the 2008 study by Sienaert and Fruut¹³. Also according to this study, psychoeducation is effective in reducing relapse, early detection of warning signs for a manic crisis by family members and helping the family and patients to cope better with the disorder. The same results were obtained in the study by Eisner and Johnson¹³ in which 97% of patients felt afterwards that they would be able to handle their problem more effectively.

González-Pinto, Vega, Mosquera, Lopez and Gutierrez¹⁵ found that the subjective, objective and total overloads group decreased significantly after the 12 psychoeducation intervention sessions, when compared to the control group. Reinares, Maria Colom, Francesc, Sanchez-Moreno, Jose et al¹⁶, the same year, found that in a sample of 113 patients there was no significant difference between the group receiving psychoeducation and the control group. A similar phenomenon occurred in the randomized clinical trial of Ozerdem, Oguz, Miklowitz and Cimilli¹⁷, in which the result of the study was not significant in the evaluation of psychofamilial intervention in addition to pharmacological treatment.

According to the study by Reinares, Maria Colom, Francesc, Rose, R et Adriane al¹⁸ concluded that psychoeducation for caregivers of additional bipolar patients and pharmacological treatment of patients with BAD is effective in treatment adherence of patients in early stages of the disorder.

In the study by Madigan, Egan, Brennan, Hill, Maguire, Horgan et al¹⁹, a sample of 47 patients were divided into three groups of ten in the usual treatment, 19 in psychotherapy and 18 in psychoeducation. There was no significant difference between psychotherapy and psychoeducation, but there was a great difference between usual care and the psych approach. According to Pellegrinelli, Roso and Moreno⁹, it is important that psychoeducation associated with the treatment of BAD include not only information about the disease and its treatment but consider the inadequate beliefs of patients who may hinder the assimilation

of the information provided and consequently hinder the adherence to treatment and achievement of good results.

The study by Smith, Griffiths, Poole, Florio, Barnes, Kelly et al²⁰ compared two groups of patients with bipolar disorder to assess the impact of psychoeducation of patients and family members from a computer program previously developed. It was concluded that there were no significant differences between the group that received the usual therapy in conjunction with computer assistance and the group that received only the usual therapy.

The study by Del Vecchio, Luciano, Malangone, Giacco, Rose, Sampogna et al²¹, evaluated the viability of the family psychoeducational approach in routine work of Italian patients under medical supervision because of BAD. A total of 79 patients and their relatives were subjected to intervention. Numerous advantages have been reported in the conduct of intervention, among which is the improvement of professional skills and job satisfaction and interpersonal relationship, which was also described by Lucksted, Alicia, McFarlane, William Downing, Donna et al²² and Prasko, Jan, Ociskova, Marie, Kamaradova, Dana et al²³. This also concluded that behavioral interventions are the first line adjuvant treatment to pharmacotherapy. Similarly, Fiorillo, Sampogna, Del Gaudio, Luciano Del Vecchio⁹, aiming at comprehensive, long-term treatment with good results, proposed the combination of drug treatment and family psychoeducational intervention showed both improvement in social functioning, reduction of relapses and hospitalizations and increased adherence to drug treatment.

The Çuhadar and Çam²⁴ study, conducted in 2014, distributed a sample of 63 patients in two groups: an intervention group and another control group. It was noted that the approval of stereotypes, social withdrawal and total stigmatization of patients were significantly reduced in terms of psychoeducation of the intervention group. In the of Zaki, Awaad, Elbatrawy, Elmissiry and Zahran²⁵ study in the same year, the outcome of bipolar disorder was rated in Egyptian patients who received family psychoeducation. The total sample of 111 patients was divided into two groups, the first receiving family psychoeducation plus pharmacotherapy and the second receiving supportive psychotherapy plus pharmacotherapy. There was a significant improvement in clinical, social status and quality of life of patients who participated in family psychoeducation sessions, which was not observed in the group that only received supportive psychotherapy.

In 2014, Reinares, Sanchez-Moreno, Fountoulakis²⁶ concluded, after a study in which they observed the benefits of psychoeducation in relation to the percentage, number and time of relapse and hospitalization of the patient, that family psychoeducation showed a reduction in treatment costs compared to individual psychotherapy, but both showed similar clinical results.

According to Miziou, Stella, Tsitsipa, Eirini, Moysidou, Stefania et al²⁷, family intervention seems to have benefits especially for caregivers, but it is uncertain whether it has an effect on the patient. Already Gay²⁸ refers to psychoeducation as a cornerstone in the management of bipolar disorder. The study points out, however, that it cannot replace drug treatment, but should be used as a complement, so it is essential to optimize treatment adherence and prevent relapses and recurrences. It was also completed by Bonsack, Rexhaj, Favrod⁸ in the same year.

The randomized Nagy, Sabry, Khalifa, Hashem Zahran, Khalil²⁹ study compared two groups of patients with bipolar affective disorder, the first group receiving family psychoeducation and pharmacotherapy and the second receiving supportive psychotherapy and pharmacotherapy. Study data revealed that patients who received family psychoeducation had fewer relapses (25.3%) and hospitalizations (1.49%) compared to the group of patients who received supportive psychotherapy (34.3 and 50 %, respectively). Similarly, Fredman, Baucom, Boeding³⁰, also in 2015, concluded that patients with family members who had an adequate involvement in family psychotherapies have achieved better results in treatment adherence, with fewer relapses and depressive disorders compared to patients who had families with inappropriate involvement. Already Fiorillo, Andrea Del Vecchio, Valeria, Luciano, Mario et al³¹, in the same year, in case-control, did not detect statistical significance, but found a slight decrease in the prescription of psychotropic drugs in the group receiving the associated family pharmacological treatment. While in 2017, Olga Velentza, Evangelia Grampsa and Euterpi Basiliadi³² concluded in their study that psychoeducational intervention in the family, with the patient's participation in the healing process, appears to be relieving through its various components. In-

formation about the disease and the inducement of hope, improvement in communication and expression and management of "difficult" emotions seem to be comforting while, along with the patient's family participation/processing-related issues, offers a solution to a framework of tangible and practical problems, resulting in alleviation of the relative/caregiver burden.

Several methodological limitations can be identified, namely: first, some studies have divided the groups studied into the same number of participants^{19, 25}. In other studies, the number of patients who began the study was different from the number that finished²⁵, the evaluation period was short^{14, 25, 30} samples were small^{15, 17, 20} or groups had no control^{17, 31}. Similarly, one study addressed only the initial stage of the disease and another¹⁸ was of no statistical significance¹⁹. Therefore, all studies and review articles used in this study have limitations, even if they are only methodological.. The limitations of the articles that were used in this study hampered the interpretation of their results, which is the main limitation of this study.

5. Conclusion

Although the role of pharmacological treatment is already established for the patient, almost all studies described above, regardless of the approach followed, suggest that family psychoeducation should be used in combination with drug treatment. Educational interventions have several benefits such as the reduced frequency of relapses and hospitalizations, early detection by the family of signs of manic crisis, decreased social withdrawal of patients and the possibility to reduce the drugs used. Therefore, the literature used in this study suggests that pharmacological treatment combined with family psychoeducation benefits the BAD of a patient and his family.

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