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EFFECTS OF META COGNITIVE-BEHAVIORAL GROUP THERAPY AND FAMILY PSYCHO-EDUCATIONAL WITH DRUG THERAPY IN DECREASE OF MANIA AND DEPRESSION SYMPTOMS IN BIPOLAR DISORDER

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ABSTRACT

Introduction: Bipolar disorder is one of the psychiatric disorders which disrupts a patient's performance in many areas. This study was an attempt to examine the impact of meta-cognitive behavioral group therapy, family education, along with drug therapy in alleviating the symptoms of mania and depression in bipolar patients.

Methods: This study was a quasi-experimental group with pre- and post-test and control group. 54 bipolar men and women entered this study through convenience sampling method and they were randomly divided into three groups each comprising 18 patients. All three groups received meta-cognitive behavioural therapy as well as receiving family education and their medications equally. The instruments used included demographic features questionnaire, Bech Mania Scale, and Hamilton Depression Scale. The gleaned data were analysed using Covariance.

Results: The post-test findings in the group treated through meta-cognitive behavioural method along with family education and drug therapy demonstrated remarkable progress in alleviating symptoms of mania and depression (p<0.05). Moreover, there was a significant difference between mania mean scores in the three groups at follow-up stage (p=0.002). Treatment through

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meta-cognitive behavioral therapy along with family education was effective in preventing relapse of mania symptoms. This was not significant for depression (p=0.06).

Conclusion: Drug therapy along with meta-cognitive behavioral therapy and family education can be more effective in reducing the symptoms and preventing recurrence of symptoms at different stages of bipolar disorder.

INTRODUCTION

Chronic diseases can seriously disrupt communications, job encounters, biopsychosocial function and academic performance (1-6). Bipolar disorder, which is also known as manic-depression illness, is a brain complication which results in abnormal changes in a person's temperament and his/her activities or energy (7). In some cases this disorder can have more severe consequences like attempting suicide (8) .One of the most fundamental issues which must be taken into account in treating such patients is create meaning for cognitive phenomena from which the patients suffer (9). Meta-cognitive methods have been at the center of attention in modern psychotherapy mostly due to the fact that the existing methods ignore the role of inefficient thoughts along with factors which underlie such thoughts (10). Cognitive- behavioral group therapy is founded on systematic protocols comprising important data and practices to develop specific cognitive and behavioral techniques (11). These techniques make significant contribution in helping patients identify and quit irrational beliefs as well as in rectifying psychological disorders in patients afflicted with depression and bipolar disorder (12). One of the therapeutic methods for bipolar disorder is family-based treatment. Families play a crucial role in treating such disorders as bipolar and schizophrenia. Families can either be influenced by patients or speed up the patient's recovery process (13). However, practitioners are still divided on applying family-based interventions in treating bipolar patients (14). Medications which are prescribed along with psychological procedures are based on different phases of the disease. In treating patients in maniac phase medications such as lithium, for mixed phase 'atypical antipsychotic medicines, and in depression phase drugs such as Quetiapine, Olanzapine / Fluoxetine combination or lamotrigine are commonly prescribed. Ultimately, patients are referred for group psychological therapies in order to prevent relapse of the disease (15). Studies conducted on the use of meta-cognitive therapies on temperament disorders indicate that meta-cognitive therapies can be more effective in alleviating the symptoms of patients (16). These therapies have been regarded as cost-effective and complication-free in the field (17). On the other hand, considering the complexity of treatment procedures in such patients , the necessity of attending to different phases of bipolar patients, and scant attention which has been paid to the significant role of families as factors which can facilitate the treatment process, the current study was undertaken to determine the effectiveness of meta-cognitive behavioral group therapy and family training along with drug therapy in alleviating the symptoms of mania and depression in bipolar patients.

METHODS

In this pre-post test experimental study 54 bipolar men and women were selected from among patients hospitalized in psychiatric ward of Hajar Hospital in Shahrekord through convenience sampling. The patients' ages ranged 18 to 65 and they all consented to participate in this study. The patients entered this study based on psychiatrist's diagnosis (according to diagnostic criteria of DSM-IV) and such criteria as having the minimum primary school degree, developing insight into the disease, not entering the acute phase, and having a spouse, family, or close relatives. The exit criteria for the participants included: having crippled limbs, cognitive dysfunctions like dementia and mental retardation, alcohol abuse, addiction to other narcotics, change in the type of disorder while examining patients, discontinuing treatment sessions for different reasons, and their having experienced stressful or unpredictable events in their lives.

The instruments used in this study were of three types. The first instrument was a questionnaire on hospitalized patients' demographic information. The second one was Bech Mania Scale. This test scrutinized and assessed 11 symptoms of manic bipolar patients such as (kinesthetic and verbal activities, confusion of thoughts, voice level and bong , hostility and vandalism, temperament, self-confidence, destructive encounters, sleep, sexual interests ,and reduction in work and performance) according to a Likert Scale (18). The face validity of this research was also examined by a team of psychologists and psychiatrists. This questionnaire enjoyed an acceptable reliability and validity ($\alpha = 0.79$). The third section of the questionnaire was Hamilton's (1967) Depression Scale (19). This scale has five levels for scoring. The correlation coefficient of this test with Hamilton's rating scale was (0.73) for depression, (0.76)

with Zung's depression self-assessment scale, and (0.76) with MMPI depression scale (20). The patients' recovery criterion was assessed on the basis of clinical interviews and the above scales.

Meta-cognitive Treatment Session

First session: Emotions, their different aspects, and nonverbal states due to emotions are all explained to the patients and a kind of optimism is inspired in them. Session 2: Reviewing and practicing materials from the first session for the patients. Practitioners explain to the patients that bipolar disorder is an emotional disorder which has different periods. The patients are asked to list different ways of tackling this disorder. Session 3: Various treatment methods for bipolar patients are elaborated along with bipolar patients' behavioral approaches. The patients will also be provided with a weekly schedule for their daily routines. Session four: The interested patients are given information on emotional intelligence, emotional consciousness, and its adaptive expression along with some assignments for them. Session Five: the patients were informed on adjusting cognitive dimension of emotions according to three behavioral, cognitive, and emotional aspects. Then the patients were provided with the requisite materials to practice. Session six: The assumptions underlying bipolar disorder along with some strategies to modify and process them were examined. Session seven: Strategies to control anger were presented with some materials for practice. Session eight: Different types of stress and ways to deal with them were addressed.

Family Psycho-educational Treatment Session

Session One: Providing the patient's family members with explanations on bipolar disorder and its different treatment procedures. Session two: Presenting strategies on reducing stress within a family. Session three: Explaining the value of family, communication, and identification of behaviors in families. Session four: Explaining the relationship between emotions in families and working out conflicts in interpersonal relationship. In the end, discussions and conclusions on the topics were made.

Statistical Analysis

SPSSv16 and AVCOVA were used to analyze the gleaned data. Also Tucky post hoc test was used to compare the three groups.

Ethical Considerations:

This research was approved in Ethics Committee of Shahrekord University of Medical sciences by no. 90-5-4.

RESULTS

Results indicate that the samples age means in the study was 37.85 years with the patients' age ranging from 18 to 63 years. 43.3% of the samples were female and 46.7 were male. As for marital status, 62.9 % of the participants were married, 24.2.% were single, 3.7% were divorcees and 8.3% had other statuses. The majority of the participating patients had junior high school degree and 33.3% had high school diploma or degree, 12.9 % had associate degree, and only 9.3% had Bachelor degree or higher. Homemakers had the most number of participants (35.2%) and 27.8% were employees, 7.4% were workers, and 7.4 % were unemployed.

The highest number of disease episodes was 33.3% three times; while the lowest number with more than six times was 1.8%. As for family history for bipolar participants, 22.2% of them had 6 to 8 years and 22.2% had more than 11 years of history for the disease which is the highest percentage; while in two groups this figure was between 1 to 2 years, the lowest percentage. Regarding the number of patients' hospitalization, the findings revealed that 28.7% of the patients were hospitalized twice and 28.7% were hospitalized in the psychiatry ward. Also 3.7% of the participants were hospitalized 5 times and another 3.7% hospitalized 6 times, these figures were the lowest and highest number of hospitalization respectively.

The mean scores for mania in meta-cognitive behavioral treatment were 39.27, 36.19, 38.08 in pre, post, and follow-up stages respectively. These means for drug-treated groups were 33.9, 36.4, and 38.28 and 36.72, 32.73, 35.62 for meta-cognitive behavioral treatment along with family education respectively. These figures for drug-treated group were 24.83, 24.44, and 22.88 respectively. Based on the above findings, the third group i.e. meta-cognitive behavioral treatment along with family education group had the most changes among other groups.

Table 1. Results of covariance on the effects of therapeutic interventions on improvement of mania and depression symptoms in post-test.

Statistical Variables		Sum of Squares	df	Mean of squares	F	Sig.	Observed Power
Mania Symptoms	**Pre-test**	278.154	1	278.154	43.38	<0.001	1.000
	therapeutic interventions	217.055	2	108.527	16.92	<0.001	1.000
Depression Symptoms	**Pre-test**	55.400	1	56.400	7.116	0.01	0.74
	therapeutic interventions	101.478	2	50.744	6.456	0.003	0.88

Findings in Table 1 show that there was a significant difference between the post-test means for mania scores among the three groups in a way that after controlling pre-test scores as covariates, the difference between the means was significant (F=15.92 , P<0.001). Moreover, there was a significant difference between the means for depression in post-test scores. (*p*=0.0003, F=6.45).

Table 2. Pair-wise comparisons of therapeutic intervention in improving patients with mania and depression at post-test stage.

Variables	Group I	Group J	Mean	Std Error	Sig.
Mania Symptoms	A	B	0.704	0.854	0.414
		C	4.838	0.903*	<0.001
	A	B	-0.704	0.854	0.414
		C	4.134	0.865*	<0.001
	A	B	-4.838	0.903*	<0.001
		C	-4.134	0.865*	<0.001
Depression Symptoms	A	B	3.08 *	0.937	0.002
		C	2.737 *	0.940	0.005
	A	B	-3.08 *	0.937	0.002
		C	-0.344	0.935	0.715
	A	B	-2.737*	0.940	0.005
		C	0.344	0.935	0.715

A: Drug Therapy; B: Drug Therapy+Meta-cognitive Behavioral Therapy; C: Drug Therapy+Meta-cognitive Behavioral Therapy+Family Education

As depicted in Table 2, there is a significant difference between groups A, B, and C in a way that this difference in group C , in contrast with groups A and B, was (p<0.001).This is indicative of the influence of "meta-cognitive behavioral treatment along with family education" in alleviating mania symptoms at post-test stage. However, this difference was not significant between groups A and B (P=0.41).On the other hand,

there was a salient difference between group A as opposed to groups B and C in depression scale in a way that this difference in group A (as opposed to group B) was P=0.002.This was p=0.05 in contrast to group C which shows that treatment with drug along with meta-cognitive treatment and family education have a positive impact in reducing depression symptoms. This difference was not significant between groups B and C (p=0.71).

Table 3. Covariance results on the effect of therapeutic interventions on improving symptoms of mania and depression at follow-up stage.

Variables		Sum of Squares	df	Means of Squares	F	Sig	Observed Power
Mania Symptoms	**Pre-test**	281.391	1	281.391	57.7	<0.001	1.00
	therapeutic interventions	70.08	2	35.04	7.186	0.002	0.92
Depression Symptoms	**Post-test**	16.119	1	16.119	2.923	0.094	0.38
	therapeutic interventions	31.443	2	15.722	2.851	0.067	0.53

As depicted in table 3. there is a significant difference between mania scores among the three groups at follow-up stage. However, this difference was not significant for depression. (p=0.002 vs. p=0.067).

Table 4. Pair-wise comparisons of therapeutic intervention in improving patients with mania and depression at follow-up stage.

Variable	Group I	Group J	Mean difference	SD	Sig.
Mania Symptoms	A	B	0.199	0.745	0.791
		C	2.659*	0.787	0.001
	A	B	-0.199	0.745	0.791
		C	2.640*	0.755	0.002
	A	B	-2.659*	0.787	0.100
		C	-2.460*	0.755	0.002
Depression Symptoms	A	B	1.172	0.785	0.142
		C	1.859*	0.787	0.022
	A	B	-1.172	0.785	0.142
		C	0.687	0.783	0.384
	A	B	-1.859 *	0.787	0.002
		C	0.687	0.783	0.384

As the figures in Table 4 show, there was not a significant difference between groups A, B, and C in preventing the relapse of mania symptoms. This difference in group C (as opposed to group A) was (p<0.001) and in group B it was (P=0.002) which is indicative of greater impact of group C, as compared to other groups, in preventing the relapse of mania symptoms. The difference between groups A and B was not significant (P=0. 79).

DISCUSSION

This study sought to examine the effects of meta-cognitive treatment and family education in alleviating and preventing the symptoms of mania and depression among bipolar patients. The findings indicated that the mean for mania and depression in meta-cognitive, behavioral, and family education therapy group was higher in comparison with medication-treated group. Another study which examined the influence of meta-cognitive treatment and family education on inefficient thoughts of bipolar patients showed that concomitant meta-cognitive treatment, family education, and drug therapy was far

more effective than drug therapy alone(21). in a study scrutinized "group cognitive behavioral therapy" on bipolar patients. It was found that the concomitant use of this therapeutic method along with medications rendered better results than drug-therapy alone (22). Moreover, other researches revealed that in treating such disorders as depression, anxiety, dysfunctional attitude and ruminative response, cognitive behavioral along with meta-cognitive behavioral therapies were more effective in treating severe cases of depression than drug-therapy only (17).This has already been confirmed through different studies on a variety of mental disorders (23-25).One thing is for certain and it is the fact that the main underlying objective in cognitive behavioral therapy is promoting the patient's awareness in encountering different situations and helping him/her make judicious decisions depending on those conditions. This skill can enable the patient to lessen part of his/her concerns and ruminations by securing help from his /her mind, developing self-awareness, meta-cognitive behavioral flexibility, and controlling emotions. Thus, this therapeutic method can prove effective in lessening mania and depression symptoms and preventing their recurrence.

It this study it was demonstrated that the means for mania and depression in meta-cognitive behavioral, drug-therapy, and family education group were significant in post-test. While this difference was also significant in the follow-up stage except for depression. It can be posited that the existence of a sustainable support center like the patient's family can be quite effective in alleviating the symptoms or preventing the relapse of the diseases. A good number of studies have attested to the crucial roles of families in reducing bipolar patients' symptoms (14, 21, 26). Stress originated from the disease itself or the stress induced by society can negatively influence the mental structure of families. This potential challenge requires a psychological intervention in these patients' families which will lead to the speeding up of the disease recovery in addition to its benefits for families at as a whole. Furthermore, family-based interventions can prevent relapse of symptoms and last longer than other interventions. However, Miklowotz conducted a study and showed that family-focused interventions per se cannot fulfill the patient's needs. He maintained that these interventions along with drug therapy will produce better long-term results (14). The findings of another have cast doubts on the effectiveness of families in controlling bipolar patients' symptoms and it has been argued that the evidence is scant to make such a claim (11). It ought to be added that drug-therapy per se cannot be an effective method in the same way psychological and family-focused therapy alone do not meet all requirements of bipolar patients (25). It can be maintained that there a number of other variables such as the impact of genetic factors and inability in producing neurotransmitters in the brain which can led to long-term disruption or the lengthening of the treatment procedures for depression (in this study) or mania symptoms.

Meta-cognitive-behavioral treatment in tandem with drug-therapies can prove effective in alleviating the symptoms of bipolar disorder at maniac and depression phases. Also a supportive system like the patient's family can be beneficial in preventing the relapse of the disease. Drug-therapy along with meta-cognitive behavioral therapy as well as family education can help reduce the symptoms or prevent the relapse of bipolar patients at depression and maniac phases.

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