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The efficacy of cognitive-behavioral therapy on depression and life satisfaction in mothers with children admitted to psychiatric hospital

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Abstract

Introduction: The present study was conducted to determine the effectiveness of cognitive behavioral therapy on depression and life satisfaction in mothers with children who admitted in the psychiatric hospital.

Materials and Methods: The population of this clinical study included all mothers in Mashhad with children who admitted in Ibn-e-Sina psychiatric hospital. 30 mothers were selected and divided randomly into two control and experimental groups. The experimental group trained cognitive-behavioral treatment protocol (10 ninety minutes sessions). Data collected through Diener Life Satisfaction Inventory (1985) and Beck Depression Inventory. Data analyzed by descriptive (mean and standard deviation) statistics tests and inferential statistical methods (covariance analysis) via SPSS software version 22.

Results: Cognitive behavioral therapy increased life satisfaction and reduced depression significantly in experimental group compared to control group ($P < 0.05$) and this effect last during follow-up period.

Conclusion: These findings suggest that cognitive behavioral therapy has positive impact on depression and life satisfaction in mothers with children admitted in psychiatric hospital.

Keywords: Cognitive-behavioral therapy, Depression, Life satisfaction, Mothers, Psychiatric disorders

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Introduction

Since the mother is the first person to be in contact with the child and has the most relationship with the child, the child's disease is the most important role in mental health, including depression and satisfaction of her mother (1).

The presence of a child with mental disorder in the family (due to the particular behavioral problems of these children) for mothers, who deal more with children than others, is a source of stress and affects their mental health and compatibility (2). The feeling of depression and lack of merit, which indicates a feeling of disability and inability to perform parental duties, has the greatest impact on parental stress (3).

Over the last three decades, attention has been increased in life satisfaction and treatment of depression as an important factor in evaluating the therapeutic outcomes and the effectiveness of treatment in physical and psychological disorders. Traditional approaches to assess the outcome of treatment or its effectiveness are mainly focused on the symptoms of the disease, and less about life satisfaction and depression and related concepts, although changes in the symptoms of the disease does not indicate a change in recovery necessarily (4).

The presence of depression and lack of life satisfaction in the mothers of children admitted to the psychiatric hospital can also have a negative effect on the child's illness, and since recurrence of depression and decreased life satisfaction are very tense for the patient and family and lead to a lot of cost for drug treatment, disability or hospitalization (5).

In fact, one of the complications of childhood mental illness is maternal depression. Mothers with sick children experience high levels of depression and reduced life satisfaction (6). One of the worst events in marital life is the unhealthy child. As parents become aware of the child's mental illness, many of their wills and hopes become frustrated, their

problems begin and their level of life satisfaction decreases (7).

Mothers with sick children may be disrupted by their children's problems and become worried and afraid of their ability to achieve their goals and lose their hope (8). Life satisfaction is one of the components of mental health in mothers of children with mental illness. Satisfaction means having an understanding that seeks to meet the need (9).

Life satisfaction exists when the current status of a person in family relationships is consistent with what he expects and dissatisfaction with life occurs when the present situation of the person is incompatible with what is expected. The presence of children with a psychiatric disorder affects on the assessment of their mothers of themselves and their lives and it impacts on different aspects of their lives (10).

One of the treatments that which used today for a wide range of disorders is cognitive-behavioral therapy, which can reduce the depression of mothers with sick children and improve their life satisfaction. The cognitive-behavioral pattern is not just a specific method, it is a part of all the views and it is an approach on its own. Cognitive-behavioral therapy is the basis of the essential connection of the components of thinking, feeling and behavior. Beck believes that therapists can help people rebuild their thoughts to better cope with psychological stress (11).

In fact, in this therapeutic approach, the patient is encouraged to view the relationship between negative thoughts and feeling of depression as hypotheses to be tested and the behaviors as result of negative automatic thoughts as benchmark for assessing the validity or validity of those thoughts (12). In this approach, the treatment process is designed to detect negative and automatic thoughts and cognitions, identify the links between cognition, affect and determined behavior, and opposite evidences and distorted thoughts to replace the realistic

interpretation of distortion cognition and succeed in achieving marital satisfaction and reducing depression (13).

Madani and colleagues found that cognitive behavioral therapy based on spirituality was effective on the resilience and life satisfaction of mothers with slow-step children, and there was a significant difference between the two groups (14). Saleh, Mahmoudi and Paydar concluded that cognitive-behavioral intervention can be used as one of the effective therapeutic methods in the treatment of students' emotional-behavioral problems (15).

Ghamari, Dastani and Ghadimi found that cognitive-behavioral therapy had an effect on decreasing the rate of depression and rumination in people with chronic fatigue syndrome (16). Esmaili and colleagues concluded that cognitive-behavioral therapy can change the lifestyle of patients with type 2 diabetes in terms of self-development, responsibility, interpersonal relationships, nutrition, physical activity, stress management and reducing their depression (17).

Erhardt and Baker, in a ten-week parenting program on parenting children with mental illness, concluded that providing proper behavior management practices would increase parents' self-esteem, positive parent-child interactions and reduce child's behavioral problems (18). Mash and Johnston, studying on 40 parents with children with mental disorders, showed that positive parenting education and proper behavioral management practices would promote family mental health and reduce depression, anger and stress among parents (19).

Rabiner compared the psychological characteristics of parents with mental illnesses and parents with healthy children and concluded that parents with mentally ill children had more mood and anxiety disorder, lack of satisfaction in parenting and dissatisfaction with their role than parents with healthy children (20). In a research study, Mash, Johnston and Barkley concluded that in the families of

children with hyperactivity/attention deficit, parental stress, inability to parental care, alcohol consumption, restriction of relationships, marital conflict, separation, divorce, anger, depression and isolation are greater (21).

According to the above, the present study aims to investigate the effectiveness of cognitive-behavioral therapy on depression and life satisfaction in mothers with children admitted to psychiatric hospitals. Because depression is very stressful for the patient and the family and costs a lot for medical treatment, disability or hospitalization and according to the results of the conducted researches, it seems that cognitive-behavioral methods are effective in the treatment of depression and low life satisfaction. Therefore, the present research is important that cognitive-behavioral therapy is used to plan appropriate psychotherapies, promotion of psychological health services and the development of related policies in society.

Materials and Methods

The statistical population in this study consisted of all mothers whose children were admitted to the psychiatric hospital due to mental disorders in Mashhad city. The statistical sample of the study consisted of 30 individuals selected with convenient method and randomly assigned to control and experimental groups.

The inclusion criteria included the presence of a child admitted to the psychiatric hospital and a satisfaction to participate in the study. Exclusion criteria included the presence of a psychiatric disorder or a marked disorder in mother, a severe stressful event such as the loss of loved ones and etc. in the last three months and substance abuse.

The experimental group received cognitive-behavioral therapy and both groups were evaluated for depression and life satisfaction at the end of the sessions.

First session 1: Introduction, discussion about the importance of lifestyle and depression, and their role in exacerbating

and sustaining disorder, and reviewing the structure of the sessions and the rules and regulations related to the treatment program.

Second and third session: Discussing the relationship between thinking, feeling and behavior and how to affect each other, methods for understanding irrational thoughts, and explaining the processing errors of learning, re-evaluating thoughts and challenges as options for changing irrational thoughts.

Fourth session: Includes anger management training, guided relaxation to reduce anxiety and stress and provide homework for the next week.

Fifth session: Review the homework of the previous session. Discussion on the theory of emotional disturbance (or cognitive theory of depression) and the practice of classifying beliefs.

Session Six: Talking about satisfaction with life and its principles and solutions

Seventh session: Preparation of the main list of beliefs, practice. Starting a basic list of beliefs, teaching cognitive maps, preparing grades for mental discomfort, practicing and discussing social support for patients, homework for the next week.

Eighth session: Reviewing the homework of the previous session, discussing the change of beliefs (beliefs that have changed during the course of human history and during the life of the participants) and testing the beliefs (judgment) and homework for the next week.

Ninth and tenth sessions: Recommendations for solutions to life

satisfaction, general overview and practice skills learned in previous sessions.

Research instrument

A) *Beck Depression Inventory (Second Edition)*: This questionnaire is a 21-item self-reporting tool of depression symptoms (scaled from 0 (lack of depression or mild depression) to 3 (severe depression) experienced in the past two weeks when a person receives a score between 0 and 63. Obviously, higher scores indicate higher depression (22). In Iranian studies, this questionnaire was valid and the Cronbach's alpha coefficient for total questionnaire was 0.86 (23).

B) *Diener's Life Satisfaction Questionnaire (1985)*: This questionnaire is one of the most widely used tools for measuring life satisfaction, which consists of five questions with a 7-degree Likert scale from I totally agree to I totally disagree that the internal reliability coefficients and its re-testing are reported 0.87 and 0.82 respectively (24). The internal consistency of the scale and its retest reliability in the Iranian population were 0.85 and 0.77 respectively (25).

Descriptive and inferential statistics were used to analyze the data. In the descriptive statistics section, the mean and standard deviation were used and in the inferential statistics section, covariance analysis was used. SPSS software was used for statistical analysis.

Results

In this section, demographic information is provided on the research sample, which indicates the age and level of education of cases.

Table 1. Demographic data of cases

Variable		Control group	Experimental group
Age (Year)	20-27	1	0
	28-35	4	5
	36-43	5	5
	44-51	3	4
	52-58	2	1
Educational level	Diploma and under	9	10
	Bachelor degree	5	5
	Master degree and higher	1	0

According to the table, most of the research samples are aged 35-28 and 36-43 years old, and most of them have a degree in diploma and under diploma.

The Kolmogorov-Smirnov test was used to check the normality of the variables.

Table 2. Data related to normality of variables

Variable	Test	Mean	SD	Kolmogorov-Smirnov	P
Depression	Pre-test	16.20	3.00	1.95	0.623
	Post-test	12.16	3.22	1.81	0.361
Life satisfaction	Pre-test	77.10	14.26	1.12	0.210
	Post-test	81.41	16.42	1.24	0.102

Considering the significant level of both variables in the pre-test and post-test is higher than 0.05, it can be said that the data for both variables in the pre-test and post-test are normal and parametric statistical methods can be used.

In this section, descriptive information (number, mean, and standard deviation) of the two experimental and control groups in the depression variable was presented to determine the effect of cognitive-behavioral therapy on the depression in mothers with children admitted to the psychiatric hospital.

Table 3. The means and standard deviation of depression and life satisfaction scores in pre-test, post-test and follow up in control and experimental groups

Variable	Group	Pre-test		Post-test		Follow-up	
		Mean	SD	Mean	SD	Mean	SD
Depression	Experimental	16.91	3.39	9.00	2.48	10.02	2.51
	Control	15.50	2.61	15.33	3.69	15.52	2.62
Life satisfaction	Experimental	81.33	11.87	89.40	16.72	86.06	15.65
	Control	72.87	16.65	73.43	16.13	72.18	16.05

As the information in the table above shows, the mean of depression and life satisfaction in the experimental group is significantly different in the pre-test and post-test, while the difference between the mean of depression in the control group is

not significantly different in the pre-test and post-test. The covariance analysis is used to examine the significance of these differences and the level of impact and test power.

Table 4. The results of covariance about effect of cognitive-behavioral therapy on depression and life satisfaction in mothers with children admitted to psychiatric hospital

Variable	Phase	Degree of freedom	Mean of squares	Fischer test	P	Effect size	Statistical power
Depression	Pre-test	1	91.60	12.90	0.002	0.38	0.928
	Post-test	1	300.71	36.42	0.000	0.66	0.998
Life satisfaction	Pre-test	1	110.14	2.91	0.000	0.26	0.221
	Post-test	1	421.95	11.95	0.002	0.62	0.869

As the information in the table above shows, the effect of cognitive-behavioral therapy on depression and life satisfaction in mothers with children hospitalized in psychiatric hospital is significant and the

effect size is 66% and 62%, respectively. In summary, cognitive-behavioral therapy can be effective in depression and life satisfaction in these mothers.

Table 5. The results of covariance about effect of cognitive-behavioral therapy on depression and life satisfaction in mothers with children admitted to psychiatric hospital

Variable	Phase	Degree of freedom	Mean of squares	Fischer test	P	Effect size	Statistical power
Depression	Pre-test	1	91.60	12.90	0.002	0.38	0.928
	Post-test	1	300.71	36.42	0.000	0.66	0.998
Life satisfaction	Pre-test	1	110.14	2.91	0.000	0.26	0.221
	Post-test	1	421.95	11.95	0.002	0.62	0.869

Also, cognitive-behavioral treatment is effective on depression and increased life satisfaction in mothers with children

Discussion

Cognitive-behavioral therapy has been effective in improving the depression and increasing the life satisfaction in mothers with children admitted to the psychiatric hospital in the post-test phase, and this effect has also been sustained in the follow-up phase. This finding is consistent with the results of research was done by Habibi et al. which using group cognitive method on 18 mothers with a child with destructive behavioral disorders and developmental disorders. In this study, post-test scores of Beck Depression in mothers who undergone cognitive therapy were significantly different from pre-test. Also, the difference between the control and experimental groups was significant (26).

In Halperin, Nathan, Drummond and Castel's research on the ability of cognitive-behavioral group therapy to reduce the symptoms and symptoms of depression in schizophrenic patients, the results showed that group intervention had a positive and meaningful effect in the experimental group, while none the effect or change in signs and symptoms of depression in the control group has not been observed (27).

Another study by Genaabadi on stress management using cognitive-behavioral therapy was performed on 48 mothers with children with developmental disorders and maladaptive behavioral disorders. In this study, mothers were divided into two groups: case and control groups. The experimental group received 8 sessions of cognitive-behavioral therapy while the control group's mothers received no intervention. Both groups were evaluated with a depression, anxiety and stress scale. The results of the study showed that the scores of the mothers of the experimental group in depression and anxiety in the pre-test stage were severe and in the post-test

admitted to psychiatric hospital ($P<0.05$). This effect is persistent during follow up ($P<0.05$).

phase was moderate. Stress scores in the pre-test phase changed from severe to mild to post-test, and these changes were statistically significant. Also, there was a significant difference between the two groups in the post-test stage. The change in depression score using cognitive-behavioral therapy was consistent with this study (28).

In another study by Rezaei and Farrokhi using cognitive-behavioral group therapy on mothers with mentally retarded children, the results showed that this treatment was effective on the level of anxiety, life expectancy and marital satisfaction in experimental group and it significantly reduces the anxiety and increase of life expectancy and marital satisfaction in these mothers, which is consistent with the results of the present study on improving the life satisfaction among the mothers who undergone cognitive-behavioral therapy (29).

Concerning the efficacy of cognitive-behavioral treatment on improving the life satisfaction in mothers with a child admitted to the psychiatric hospital, it can be stated that life satisfaction is a complex, general, and multi-aspects concept that it depends to physical and social conditions in addition to the individual's mental perception. Therefore, it seems that in order to improve it, it is necessary to have a long-term and comprehensive intervention that focuses not only on the patient's psychological dimension, but also on the physical, social and environmental aspects, so that these cases and the limited sample to one region can be considered as the limitations of this research.

Conclusion

The findings of this study indicate that cognitive-behavioral therapy has a positive effect on depression and life satisfaction in mothers with children admitted to the psychiatric hospital.

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