

## J. Appl. Environ. Biol. Sci., 6(8)78-87, 2016 © 2016, TextRoad Publication

ISSN: 2090-4274
Journal of Applied Environmental
and Biological Sciences
www.textroad.com

# The Effect of Occupational Therapy Activities on Self-Efficacy of Housewives with Mood Disorders after Discharge from the Hospital: Clinical Trial

Saeed Vaghee<sup>1</sup>, Zohre Nakhaee Moghaddam<sup>2,\*</sup>, Seyed Alireza Sajadi<sup>3</sup>, Hamid Chamanzari<sup>4</sup>, Mohsen Sepehrikia<sup>5</sup>, Azam Salarhaji<sup>6</sup>

- 1. Evidence Based Care Research Centre, Instructor of Psychiatric Nursing, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran
- MS in Psychiatric Nursing, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran
   Assistant professor of clinical psychology, psychiatry and behavioral sciences research center, Ibnesina hospital,
   Mashhad, Iran
  - 4. Evidence Based Care Research Centre, Instructor of Medical-Surgical Nursing, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran
  - 5. MS in Psychiatric Nursing, psychiatry and behavioral sciences research center, Ibnesina hospital, Mashhad, Iran 6. Department of Health, Neyshabur University of Medical Sciences, Neyshabur, Iran

Received: March 29, 2016 Accepted: June 24, 2016

#### **ABSTRACT**

**Background and Purpose:** Studies have shown that mood disorders are continually associated with low self-efficacy. Reducing the self-efficacy exacerbates mood symptoms, poor performance and communication problems such as shyness and fear. Through conducting targeted activities, occupational therapy deeply believes in the relationship between work and health. This study was conducted with the aim to determine the effect of occupational therapy activities on self-efficacy of housewives with mood disorders after discharge from the hospital. **Method:** In this randomized controlled clinical trial study conducted in 2015, a total of 70 patients 18-50 years old with mood disorders in psychiatric teaching Ebn'e Sina Hospital of Mashhad were selected by using available sampling method and then randomly divided into two intervention and control groups with 35 persons. In the intervention group, 20 sessions occupational therapy with 90 to 120 minutes were conducted and the control group received no intervention. Study units completed the Sherer's self-efficacy scale in two phases before occupational therapy intervention and two months and a half after the sessions. Data were analyzed by using descriptive statistics, Fisher exact test, Mann-Whitney, independent t, and paired t in SPSS v.11.5 software.

**Findings:** The results showed that there was no statistically significant difference in mean of self-efficacy scores at pre-test between intervention and control groups  $(56.7 \pm 8.1 \text{ and } 55.1 \pm 7.9 \text{ ; p} = 0.67)$ . But the mean of post-test score in the intervention group  $(62.0 \pm 11.4)$  compared with the control group  $(54.3 \pm 7.6)$  was significantly increased (p < 0.001).

**Conclusion:** Results of the study show that the occupational therapy after discharge is effective in increasing the self-efficacy of patients with mood disorder and can be introduced as a way to increase self-efficacy in patients.

**KEYWORDS:** Mood disorders, Self-efficacy, Occupational therapy

## INTRODUCTION

Mood disorders include a large group of psychiatric disease which unusual mood and disturbances associated with it constitute the dominant clinical feature of them (1). Lifetime prevalence of mood disorders have been reported with different cultivars from 2% to 25% (2). The disorders include bipolar disorder and major depression. The major depression is a common disorder that its lifetime prevalence in men was 15% and in women was 25%. The prevalence of bipolar disorder is less and about 1% and is identical in men and women (3). The prevalence of these disorders in the United States is 7% and is 0.3-1.5% in the world (4, 5).

Depression is twice common in women than men. It can be due to hormonal differences, labor effects, and differences in psychosocial stressors (3). In addition, women than men have a higher risk for disease and menopause due to physiological causes such as pregnancy, lactation, and disability and suffer from diseases associated with lack of physical activity (6). In Iran, about 58.4% of the population are housewives, people who have no source of income or social status (7). Direct and indirect costs of this disease will face not only family, but also the community with significant financial pressure and impose ruinous losses including cultural, emotional, political, economic,

demographic, social and family losses on the community. These diseases are often associated with the phenomenon of hospitalization, inadequate treatment, discharge, relapse of disease and readmission due to the treatment process of patients and then skills, capabilities and opportunities of patients are limited and interpersonal problems create among them (8).

Based on studies conducted, low levels of self-efficacy is one of the factors available in all psychiatric disorders (9). Self- efficacy is assurances concerning that the person feels about carrying out a certain activities. The concept overshadows the amount of effort and performance level of a person (10). Self-efficacy is one of the most important structures of social cognitive theory that Bandura recognized it as a person's judgment about his ability to do a specified action. Self-efficacy refers to the internal state of a person experiences as "competent" to do what is asked of them (11) and can enable a person to adopt health promoting behaviors and leave unhealthy behaviors. People who believe in their effectiveness do additional efforts to overcome obstacles and difficulties, and self-efficacy will be effective in amount of endurance, diligence and perseverance of people for achieving the expected aims in dealing with obstacles (12). In contrast, people with low self-efficacy have pessimistic thoughts about their abilities, and even if they are willing to do it, they will avoid from the activity and causes fatigue and anger arise, leading to a deficiency in a person's quality of life (11-13).

Paharia and boyer define the self-efficacy as the richest interpersonal sources that empower individuals to perform individual tasks and is considered as a predictive factor in changing health behaviors (14).

In investigating and comparing the effectiveness of self-esteem, self-efficacy and achievement motivation training on quality of life and its domains in women with motor physical disabilities, Moradi et al. found that the increase of self-efficacy will help in the realization of performance success, observational substitutions, verbal persuasion, and physiological arousal adjustment (15).

Despite the effectiveness of drug therapy that is often done during periods of hospitalization, but symptoms and recurrence of disorder send patients to hospital and create a cycle of drug therapy again. In this respect, followup after discharge is deemed to be an important issue that unites the cohesion of admission and after admission conditions of patient. Follow-up the process of disorder and pay attention to what occurs for patients after hospital discharge is the clearest clinical proof for the effectiveness or lack of effectiveness, usefulness or lack of usefulness in effectiveness or ineffectiveness of treatment (16). Therefore, planning for discharge and psychosocial interventions, thereby increasing the empowering patients, reducing length of hospitalization and frequency of hospital admission should be considered (17). In the process of psychotherapy, nurses can have a significant role as important member of medical team, taking into account a variety of physical, psychological, social needs of patients (18, 19). As well as, rehabilitation team has the responsibility of leading and backing up all rehabilitation programs (20). The ultimate goal of treatment team is to increase the patient to necessary capabilities for promoting selfefficacy and self-esteem (21). In recent years, psychotherapy and especially psychosocial interventions have received more attention along with drug therapy. One of these interventions is occupational therapy, which is considered as one of the psychosocial treatments and prevents performance reduction of patients in social interactions (17). Occupational therapy is an applied science which deals to empower people with disabilities in the performance and activities of daily living, occupation and leisure through carrying out targeted activities and deeply examines the issue that occupation is part of the human nature and there is a direct relationship between occupation and health (22).

In different studies, the effectiveness of these interventions in improving the life quality of chronic psychiatric patients (23, 24) and reducing positive and negative symptoms of schizophrenia patients have been confirmed (25). As well as, occupational therapy interventions can be effective in increased daily functioning, social participation and well-being of people with dementia and their careers and thereby improve patient independence and reduce the cost of private care (26).

On the contrary, Eklund research has shown that the implementation of occupational therapy has not affected the life quality of patients with mental disorders (27). Bayer's research has shown that the implementation of short-term occupational therapy cannot affect the integration of social elements among schizophrenia patients in long-term (28).

On the other hand, Salize has emphasized that although occupational therapy is an important part of the treatment of schizophrenic patients, but little information is available about the effectiveness and its care value in the treatment of these patients (29).

According to searches conducted by researchers in the prestigious research centers, much research on mood disorders has been so far done. But unfortunately, though self-efficacy in patients with mood disorders may be due to the nature, complications and lifetime of disease as well as follow-up after discharge of patients, especially in people who are housewives have less attracted the attention and intervention of investigators, the researcher

attempted to evaluate the effect of occupational therapy activities on self-efficacy of housewives with mood disorders after their discharge from the hospital.

## **METHODS**

This is a randomized controlled clinical trial study which its population includes all housewives women hospitalized in women wards of Ebn'e Sina psychiatric hospital in Mashhad that have been released from the hospital with a diagnosis of mood disorder at the time of conducting the study. The sample size was 35 individual in each group by using pilot study through the formula "mean comparison in the two communities" via calculating mean and standard deviation of total score of self-esteem in the intervention and control groups at confidence level 95% and test power 80%; then taking into account the 15% loss of sample size, 40 individuals in each group (total 80 patients) were considered. After that, they were randomly put in one of two intervention group (n = 40) and control group (n = 40).

At the end of the study, 5 patients in the control group refused to attend the post-test; in the intervention group, one person in post-test and four people were absent during meetings and thus the final volume of sample after the loss was 70 people.

First, course selection form which includes exclusion and inclusion criteria, was examined by the researcher on the day of discharge from a review of patient records and eligible patients were selected. Inclusion criteria were diagnosis of mood disorder to be made by a psychiatrist, live in the city of Mashhad or suburbs; willingness to participate in the study, to be between 18-50 years old; to be higher than thefifth-grade education level, have at least physical and cognitive ability to participate in intervention sessions, not using drugs; discharge after the completion of hospitalization with a view of psychiatrist.

Exclusion criteria were opt out of the study for any reason; the use of other non-drug therapies and special training classes outside of the desired therapeutic program, in addition to drug treatments that patients receive it at the same time, cases that they are not participating for two days in occupational therapy activities; lack of following up the process of standard and medical treatment; having chronic physical disorders such as cancer and kidney disease, patient readmission; being employed at the time of research, creation of a new crisis in life like the death of loved ones, second marriage, divorce and pregnancy and lack of participation in post-test. Then, patients were given necessary explanations about the research objectives, and written informed consent was obtained to participate in the study, and demographic characteristics was completed as interview by using patients' records; as well as, the necessary coordination about the presence of patient in occupational therapy unit was performed with the patients family.

Data collection tools in this study were demographic information form of study units and Sherer's standard questionnaire for self-efficacy measurement and Cassidy's social support questionnaire. Demographic information form consists of 14 questions that's prepared based on research objectives and according to the latest resources and related articles. Sherer's self-efficacy questionnaire has 17-item which has been graded based on the Likert scale with 5 degree ranging from strongly disagree (score 1) to strongly agree (score 5). Grading the scale is in a way that each item is given from 1 to 5. The scores of items No. 1, 13, 8, 9, 3 and 15 increased from right to left and the score 1 to 5 is awarded and the scores of rest increases in reverse, i.e. from left to right, and the score 5 to 1 is awarded. This scale has a maximum score of 85 and a minimum score of 17 that low score indicates low self-efficacy and the higher score indicates high self-efficacy. The validity of Sherer's self-efficacy questionnaire has been conducted in multiple studies such as Bakhtiari Barati (1997). To assess the structural validity of general self-efficacy scale, he correlated scores obtained from this scale with the size of several personality characteristics (Rotter's internal and external control scale, subscales of personal control, Marlowe's social grade scale and Rosenberg's bounds and interpersonal competence scale) that the predicted correlation was between self-efficacy scale and sizes of average personality characteristics (0.61 and was significant at the level 0.50) to confirm the intended structure (30). In this study, the validity of this tools was approved based on content validity which was evaluated appropriate and acceptable by 10 members of the Faculty of Nursing and Midwifery in Mashhad University of Medical Sciences. Its reliability in research of Bakhtiari Barati (1997) r = 0.79 (30) and A'arabiyan r = 0.91 (31) is achieved. The reliability of the questionnaire was evaluated through internal consistency. Cronbach's alpha coefficient was 0.76 (32). In this study, the reliability of the questionnaire was measured by Cronbach's alpha coefficient. This means that the number of 15 participants were assessed by the researcher in terms of these tools and then, its reliability was determined by Cronbach's alpha, which was approved by the amount of 0.78.

In addition to constant presence in the hospital and visiting women wards and women's education Ebn'e Sina psychiatric hospital in Mashhad, the researcher checked patient records and identified the desired patients in the case of diagnosis of (bipolar-depression) mood disorder. The procedure of discharge from the hospital is in this way that the patient's family are called through a social worker after patient discharge by a psychiatrist and they act to his

discharge after referral. This time probably lasts between 1-3 days. While visiting the wards and calling with nurses in each ward at every day, researcher immediately referred to the ward after being informed of the patient discharge process and called with the desired patients and study units were selected. Sampling was in available form. The intervention group was presented face-to-face necessary explanations by researcher about the research objectives to each patient in the environment treatment for 5 to 10 minutes and then, the necessary coordination in the way of presence of patients in occupational therapy unit was carried out in the according to a written set program which was put at the disposal of the intervention group; At the time of doing occupational therapy, researcher controlled all administrative steps of the work through necessary coordination with occupational therapy unit charge; for the intervention group, the presented occupational therapy activities were scheduled by researcher in a total of 20 sessions of 90-120 minutes, for 10 weeks, two days per week, so that research units can participate in occupational therapy activities without limitation. Occupational therapy program was conducted based on reducing restrictions and increasing empowerment considering the interests and abilities of the patient and according to the efficient psychosocial occupational therapy model (Cara) (33). According to this model, occupational therapy activities were conducted in four areas. The topics include:

- 1. (Therapeutic use of self)
- 2. (Therapeutic use of occupations)
- 3. (Consolation)
- 4. (Education)

These axes were conducted in the following activities:

- 1. The first part: physical and sports activities including table tennis, golf, shooting the ball with the foot or hand and brain teasers include manch, dose and chess.
- 2. The second part: social group activities including participation in group therapy and discussion groups.
- 3. The third part: professional work activities including flowering, carpentry, pottery, crafts, carpet weaving, mat weaving, knitting and soldering iron.
- 4. The fourth part: art activities including music therapy, poetry, painting, drawing, calligraphy, mosaic, journalistic, and writing fiction.

According to planning set as well as based on his willingness and request, patient participated in at least one mentioned above activities on a voluntary basis every week from every sector. In general, activities that were given to patients with mood disorders were structured, repetitive, simple, short term, accessible and understandable activities which directly correlated with the patient's personal interests. To emphasize the presence of patients in occupational therapy at the time of discharge from the hospital, necessary coordination was conducted with the patient's physician, while patients choose two days a week on his own and attend with his desire. To remind attend meetings, researcher was connected with patients via phone call and amenities such as bus tickets were provided for them to sweep and the necessary coordination was made with the patient's family.

In all stages of the research, all Ethical Issues on approved research in Medical Sciences at the research deputy of university related to the present study including obtaining written agreement of the Ethics Committee of the University, receiving a written letter from the College of Nursing and Midwifery and delivering it to the head of the psychiatric hospital of Ebn'e Sina, obtaining written informed consent from study participants, coding questionnaires to keep the privacy of participants and ensure them for withdrawing the study at any time, if they were not wish to continue the study, were observed. At the end of intervention sessions, Sherer's self-efficacy questionnaire was given again from subjects and also the mentioned questionnaire was obtained by inviting the control group after 2.5 months after discharge on an individual basis in the place of occupational therapy.

In compliance with the ethical issues, research was placed at the disposal of control group after the end of sessions of training pamphlets related to occupational therapy and its benefits. Thus, the desired information was collected, classified and then compared and statistically analyzed by SPSS software, version 11.5. To verify the normal distribution of quantitative data of Kolmogorov-Smirnov test was used. Chi-square test, Fisher's exact and independent t were used to evaluate homogeneity of quantitative and qualitative variables. Independent t-test intergroup variables, and paired t-test for intragroup comparing were used. In the tests carried out, confidence level was %95 and significance level was considered  $\alpha = 0.05$ .

This study was approved in Iran's clinical trial center with registration code IRCT2015072223292N1 and in Ethics Council of Mashhad University of Medical Sciences with code of ethics 930794.

## **Findings**

This study aimed to investigate the effect of occupational therapy activities on self-esteem of housewives with mood disorders after discharge from the hospital. According to Table 1 and 2, there was no significant differences between the two intervention and control groups in terms of demographic information of patients (p< 0.05) and two groups were homogeneous in this respect. The most frequent demographic information in the intervention group was related to marital status (%60), high school education level (%35) and lack of occupational therapy experience (%63) with mean age of  $33.1 \pm 8.8$ , duration of disease in years  $2.5 \pm 0.7$  and frequency of previous hospitalizations was  $2.4 \pm 1.0$  times. The most frequent demographic information in the control group was related to marital status (%51), high school education level (%37) and lack of occupational therapy experience (%66) with mean age of  $34.3 \pm 9.1$ , duration of disease in years  $2.6 \pm 0.7$ , previous hospitalizations was  $2.3 \pm 0.9$  times. According to Table 3, the mean score of self-efficacy was assessed by using independent t-test. Statistical analysis showed that self-efficacy in two intervention and control groups had no significant difference before occupational therapy and was similar (P =0.67); but this test showed a statistically significant difference in two groups after occupational therapy (P =0.03).

Before starting the occupational therapy sessions, the mean score of self-efficacy in the intervention group was  $56.7 \pm 8.1$  and in the control group was  $55.1 \pm 7.9$ ; after completion of the intervention, the mean score of self-efficacy in the intervention group was  $62.0 \pm 11.4$  and in the group control was  $54.3 \pm 7.6$  that the difference of mean scores of self-efficacy after occupational therapy was significant in the intervention and control groups according to independent t-test (P =0.23), and this represents the changes of scores after occupational therapy. In addition, intra-group comparison of paired t results showed that the mean score of self-efficacy has no significant difference before and after occupational therapy in the control group (P =0.37). But mean of self-efficacy score before and after occupational therapy was significantly different in the intervention group (P<0.001). This means that the occupational therapy in intervention group increased self-efficacy score.

As well as, mean difference of self-efficacy score before and after the intervention was 0.7 in the control groups and was 5.3 in the intervention group which this difference was statistically significant according to independent t-test (P<0.001).

According to Table 4, it can be said that the mean score of social support before occupational therapy in the control group was 11.7 and in the intervention group was 11.0 that the difference was not statistically significant according to independent t-test (P =0.24) which reflects the homogeneity of scores of social support before occupational therapy, and there is no statistically significant relationship between social support and self-esteem and self-efficacy.

After occupational therapy, social support score increased slightly to 11.9 in the control group andmean score of social support after occupational therapy in the intervention group was 11.11 which the mean score of social support after occupational therapy in the intervention and control groups there was no significantly different according to independent t-test (P =0.25), so that the social support was homogeneous for two groups before intervention, and there was no change in social support score after intervention and so the social support score was homogeneous for two groups after occupational therapy.

The mean difference of social support before and after the intervention was 0.20 in control groups and has been 0.22 in the intervention group which this difference was not statistically significant according to independent t-test (P = 0.96).

**Table 1-** Compare the demographic variables of two intervention and control groups of patients with mood disorders

Profile of patients		Group		P-value
	•	Intervention	Control	
	Unmarried	11(%31)	13(%38)	
Marriage status	Married	21(%60)	18(%51)	P-value=0.78
	Divorced	3(%9)	4(%11)	
	Elementary	6(%17)	5(%15)	
	Guidance	11(%31)	12(%34)	
Education	High school	12(%35)	13(%37)	P-value=0.99
	Higher	6(%17)	5(%14)	
Occupational therapy	Yes	13(%37)	13(%37)	
experience	No	22 (%63)	23 (%66)	P-value=0.80

	Group		
Variables	Intervention	Control	P-value
	SD ±Mean	SD ±Mean	
Patient age	33.1 ±8.8	34.3 <del>+</del> 9.1	P=0.56
The patient's duration (years)	2.5 <b>±</b> 0.7	2.6 <b>±</b> 0.7	P=056
The patient frequency of hospitalization (times)	2.4 ±1.0	$2.3 \pm 0.9$	P=0.81

Fisher's exact test, Mann-Whitney test and chi-square test

Table 2. The mean age and related information of patients with mood disorders in Mashhad, 2015

Independent t-test

	Before occupational therapy	After occupational therapy	The difference before and after intervention	Result of paired t-test
Group	SD ±Mean	SD ±Mean	SD ±Mean	
Intervention	8.1 <b>±</b>	11.4 <del>*</del> 62	$6.4^{\pm}5.3$	df=34 t=3.962 p<0.001
Control	7.9 ± 55.1	7.9 <sup>±</sup> 55.1	$4.6 \pm 0.7$	df=34 t=0.899 p=0.37
Independent t test result	df=68 t=0.432 p=0.67	df=68 t=2.270 p=0.03		=68 .498 .001

**Table 3.** Mean and standard deviation of social support for intervention and control groups before and after occupational therapy

	Before occupational therapy	After occupational therapy	The difference before and after intervention	Result of paired t-test
Group	SD ±Mean	SD ±Mean	SD ±Mean	
Intervention	3.1± <sub>8.0</sub>	4.0 <sup>±</sup> 11.1	$1.6^{\pm}0.2$	df=34 t=0.524 p=0.60
Control	2.0 <sup>±</sup> 11.7	1.0 <sup>±</sup> 11.9	1.6 <sup>±</sup> 0.2	df=34 t=0.729 p=0.47
Independent t test result	df=68 t=1.190 p=0.24	df=68 t=1.152 p=0.25	df=68 t=0.052 p=0.96	

## DISCUSSION

The aim of this study was to determine the effect of occupational therapy on the self-efficacy of housewives with mood disorders after discharge from the hospital that the results of this study showed that the mean score of self-efficacy in the intervention group significantly increased compared with the control group after implementing occupational therapy. Hojjati Abed (2009) conducted a study entitled effectiveness of psychosocial occupational therapy services on quality of life in patients with chronic psychiatric disorders in Tehran that occupational therapy had a positive effect on life quality of patients and patients' quality of life scores significantly increased after 24 sessions (34). One of the variables that can be influenced by mood disorders is self-efficacy. According to Bandura, self-efficacy is person's degree of satisfaction from himself, positive judgments about the abilities and ultimately, ensure in acquisition of success in fulfilling the task (6). The formation of this property in people will lead to this result that person organizes their activities based on their own and manages their tasks successfully without the need to others. He alone decides and has a positive and open attitude in a sense, acceptance and responsibility and this is what patients need. The important thing is that the self-efficacy and empowerment of persons can be increased by creating the appropriate field to develop skills and achieve success in various aspects (35). By helping the patients with mood disorder who consider themselves dysfunctional through breaking down large tasks into more detailed skills that are easy to do and assigning a part of it at any time to individuals and monitoring the performance and giving feedback to them, they earn small successes which increases the feeling of self-efficacy in them. If the activity is chosen by the patient and the patient's interests in the election to be considered, it is a motivation in

internal terms and the patient enjoys the activity and increasingly feels the efficacy (36). Small victories may seem trivial in itself. But they make a sense of motion, progress and prosperity. Identification and appreciation from small victories create move field that leads people to efficacy and competence feeling (37) which a person's motivation can be increased through occupational therapy and doing targeted activities and collage, magazines photographs, means of image and music, poetry, art, crafts, sports, teamwork and presentation of activities that are more likely to succeed and led to achieve the precious sense of self-sufficiency and competency, environment adaption, social relationships and receiving approval and achieving to meaning in life (38, 39). These activities permits a man to enjoy during his activity therapeutic sessions and the insight that the patient does not always feelings of depression increases and suitable thoughts is strengthened for the patient and leads to behavior change (36). Therefore, findings the study of Hojjati Abed can be considered as a confirmation on the findings of the present study regarding the effectiveness of occupational therapy on self-efficacy.

In other studies, Foroozandeh (2007) and Holzner (1998) realized the effectiveness of occupational therapy on signs and symptoms and life quality of schizophrenic patients (24, 25).

Schwarzer (2007) showed that self-efficacy has a negative correlation with anxiety, depression, stress, psychological burnout and physical complaints and has a positive correlation with self-confidence, optimism and positive emotions (40).

Mental health is influenced by interaction of three variables of creativity, self-efficacy and coping method. From this perspective, mental health is considered as a product of new attitude and insight (creativity), efficient beliefs and behaviors (self-efficacy) and effective coping with psychological pressure. Many researchers have noted a positive relationship of mental health and self-efficacy (41). Given the existence of the relationship between mental health, self-efficacy and self-esteem, it can be concluded that findings of this study were consistent with the study of Schwarzer and these studies indirectly confirmed the findings of the current study based on the effect of occupational therapy on self-efficacy.

Also in a study conducted by Ogunyemi (2007), the relationship of self-efficacy with confidence and optimism was positive, it has been reported negative with anxiety, depression and physical symptoms (42). Therefore, studies indirectly confirmed the findings of present research about the effect of occupational therapy on self-esteem.

Sturkenboom (2013) carried out a study to determine the effect of occupational therapy on improving the daily performance in patients with Parkinson's disease in the Netherlands. The results of this study demonstrate the effectiveness of occupational therapy on satisfaction, performance and independence of self-care activities of people with Parkinson's disease (43). Hinojosa (2004) considered the occupational therapy as an effective way to improve the life quality of patients with Alzheimer's disease (44). As well as, study of Wales et (2012) in Australia shows effect of occupational therapy to reduce disability among older people after discharge (26) which is consistent with this study and these studies can be as a confirmation of the present study.

However, unexpectedly, research of Eklund (2007) showed that the implementation of occupational therapy has not affected the quality of life in patients with schizophrenia (27). Although the effect of occupational therapy on self-efficacy were assessed in this study which itself is a part of life quality of patients, the results of this study are different in this respect. Perhaps one of the reasons is the research community which Eklund study was conducted on patients with schizophrenia, while patients with mood disorders participated in our study who were discharged from hospital and were in mood stabilization phase. Another difference can be complex, multidimensional, dynamic and subjective nature and quite unique concept of life quality that can be effective in understanding and patient satisfaction from occupation, because Quality of Life Questionnaire is a measure which examines the self-evaluation of patients and the results are subject to feelings and beliefs of the patient.

Hees (2012) in a study showed that occupational therapy does not affect the self-efficacy and improvement of symptoms of depression and returning to work in employees with major depression (45). One of the reasons could be lack of motivation and hopelessness. It may have not seen slight changes in disease symptoms as a sign of improvement during the intervention period. While, occupational therapy intervention takes place at patients' discharge time and after that in the present study that patients are in the mood stabilization phase. Another reason is that the tools used to assess the self-efficacy are different with the tools in this study.

But the effect of occupational therapy on self-esteem of people with mental disorders (17, 46), reducing disability of older people (26) in self-care and ability to perform daily living tasks (43, 47) and in improving quality of life (44) has been verified in different researches.

Occupational therapy is based on the opinion that health and well-being both affect the work pattern and are affected by it. Participative occupational therapy is between the therapist and client, where the client is accepted, his values are respected and interventions are coordinated fit to his needs and client will be helped in decision-making (48). In another study, the effectiveness of occupational therapy services and life skills training on self-esteem, work performance and quality of life of patients with substance abuse has been shown (49) that is consistent with the study.

Occupational therapy can be effective in social skills training and helping people with mental disorders for getting into community and being useful in social situations. In the field, Morris et al (2005) showed that occupational therapy enhances the performance of patients in social interactions and increases the patients' performance and cognitive effects (50). Also, Buchain et al in their study on schizophrenia patients resistant to treatment came to the conclusion that hybrid occupational therapy helps to improve the situation of patients with appropriate drugs that this is effective especially in their everyday activities and interpersonal relationships (51) that these studies can also confirm the findings of this study based on the effect of occupational therapy on self-efficacy.

The limitations of this study may be due to psychological condition of subjects when completing the questionnaire, the possibility of giving wrong answers of subjects and the lack of synchronization of drugs used among patients.

## Conclusion

According to the findings of this study, the use of occupational therapy services can be effective in increasing the self-efficacy of patients with mood disorders. It is recommended that providing occupational therapy services after treatment of mood disorders, providing occupational therapy services after discharge of patients in the treatment of mood disorders pay be more attention and patients with mood disorders benefit from the services outside the hospital stay as well. For future studies, it is recommended that occupational therapy services of hospitalized patients to be compared with occupational therapy services of outpatients to the control group. As well as, effectiveness of these interventions can be examined in other psychological variables such as emotional intelligence, anxiety, depression and other positive and negative variables associated with mental illness.

## Acknowledgments

This article is the result of approved projects of Research Deputy in Mashhad University of Medical Sciences. Therefore hereby it is sincerely thanked and appreciated from Mashhad University of Medical Sciences for funding this research, the respected officials of Mashhad School of Nursing and Midwifery, the respected professors and instructors of Mashhad School of Nursing and Midwifery, Ebn'e Sina psychiatric hospital staff and respected participants for their cooperation.

#### REFERENCES

- 1. Sadock BJ, Sadock VA. Kaplan and Sadock's synopsis of psychiatry: Behavioral sciences/clinical psychiatry: Lippincott Williams & Wilkins; 2011.
- 2. Dashtbozorgi B, Ghadirian F, Khajeddin N, Karami K. Effect of family psychoeducation on the level of adaptation and improvement of patients with mood disorders. Iranian Journal of Psychiatry and Clinical Psychology. 2009;15(2):193-200.(persian)
- 3. Kooshan M, Vaghee S. Psychiatric mental health nursing 2. Tehran: Publishers andishe rafi.1382.(persian)
- 4. Masaeli N, Afshar H, Molavi H, Molkian A. Evaluate the psychometric properties of mood disorders. Behavioral Sciences Research. 1391;10(4):250-7.(persian)
- 5. Ganji M. Abnormal psychology based on DSM-5. Tehran: savalan Publications. 2013.(persian)
- 6. Hashemi SZ, Rakhshani F, Keykhaei R, ZarebanI, Tizvir A. Relationship between self-efficacy with physical activity stages of change in housewives. 2013:363-9.(persian)
- 7. Khalvati M. To evaluate the ability of housewives and factors affecting it in Shiraz. Journal of Social Research. 1388;2(4):151-73.(persian)
- 8. Ghanbari B, Ebrahiminezhad M. Effectiveness of group art therapy on interpersonal communication skills of women with chronic mental disorders hospitalized in rehabilitation center for chronic psychiatric patients. Journal of Fundamentals of Mental Health.9-222:(3)13;2011 .(persian)
- 9. Schultz D, Schultz S. Theories of personality: Cengage Learning; 2012.
- 10. Rosenstock IM, Strecher VJ, Becker MH. Social learning theory and the health belief model. Health Education & Behavior. 1988;15(2):175-83.
- 11. Olson MH. An introduction to theories of learning: Psychology Press; 2015.

- 12. Bandura A. Cultivate self-efficacy for personal and organizational effectiveness. Handbook of principles of organization behavior. 2000;2:120-39.
- 13. Karademas EC, Kalantzi-Azizi A. The stressprocess, self-efficacy expectations, and psychological health. Personality and individual differences. 2004;37(5):1033-43.
- 14. Boyer BA, Paharia MI. Comprehensive handbook of clinical health psychology: John Wiley & Sons; 2008.
- 15. Moradi A. Comparison of the effects of teaching self-esteem, self-efficacy and motivation on the quality of life of women with physical-motor disabilities. Research on Exceptional Children. 1390;10(1):64-49.(persian)
- 16. Baratian H, Barekatain M, Moulavi H, Mousavi Madani N. A six months follow up of symptom severity and quality of life in bipolarI patients after discharge. Journal of Behavioral Sciences. 1392;11(1):10-7.(persian)
- 17. Rezvan Z, Alizadeh A. The effectiveness of occupational therapy services day center on self-esteem and duration of hospitalization of patients with chronic mental patients. Research in Rehabilitation Sciences. 1392;9 (4):667-58.(persian)
- 18. Habibi R, Salehmoghadam A, Talae A, Ebrahimzadeh S, Karimi monaghi H. Effect of a Family-Centered Problem Solving Education Method on Self-Esteem in Drug-Users. 2012. (persian)
- 19. Saeedinejat S, Vafaeenajar A. The Effect of E-Learning on Students' Educational Success. Iranian Journal of Medical Education. 2011;11(1):1-9.(persian)
- 20. Brunner LS, Smeltzer SCC, Bare BG, Hinkle JL, Cheever KH. Brunner & Suddarth's textbook of medical-surgical nursing: Lippincott Williams & Wilkins; 2010.
- 21. Sanaie N, Nejati S, Zolfaghari M, Alhani F, KazemNejad A. The effect of family-centered empowerment in self efficacy and self esteem in patients undergoing coronary bypass graft surgery. Journal of Research Development in Nursing & Midwifery. 2013;10(2):44-53(persian).
- 22. Stein F, Cutler SK. Psychosocial occupational therapy: A holistic approach: Singular, 1998.
- 23. FOROUZANDEH N, FOROUZANDEH M, Delaram M, Safdari F, DERAKHSHANDEH S, DARIS F, et al. The effect of occupational therapy on some aspects of quality of life in schizophrenic patients. 2009;10(4)
- 24. Holzner B, Kemmler G, Meise U. The impact of work-related rehabilitation on the quality of life of patients with schizophrenia. Social psychiatry and psychiatric epidemiology. 1998;33(12):624-31.
- 25. Forouzandeh N, Akbari N, Kazemian A, Hasanpour A, Safdari F. The effect of occupational therapy on symptoms of schizophrenic patients. University of Medical Sciences shahr kord. 1386;9(3):21-7.(persian)
- 26. Wales K, Clemson L, Lannin NA, Cameron ID, Salked G, Gitlin L, et al. Occupational therapy discharge planning for older adults: a protocol for a randomised trial and economic evaluation. BMC geriatrics. 2012;12(1):34.
- 27. Eklund M ,Leufstadius C. Relationships between occupational factors and health and well-being in individuals with persistent mental illness living in the community. Canadian Journal of Occupational Therapy. 2007;74(4):303-13.
- Bayer W, Köster M, Salize HJ, Höhl W, Machleidt W, Wiedl KH, et al. [Longer-term effects of inpatient vocational and ergotherapeutic measures on the vocational integration of patients with schizophrenia]. Psychiatrische Praxis. 2008;35(4):170-3; discussion 3-4.
- 29. Salize H, Schuh C, Reichenbacher M, Stamm K, Längle G. [Lowering vocational rehabilitative measures during inpatient psychiatric longterm treatment costs of patients with schizophrenia? Results of a controlled multicenter study]. Psychiatrische Praxis. 2007;34(5): 246-8.
- 30. Bakhtiari barati s. Examine the relationship between self-efficacy and multiple variables, self Esteem and self-discovery with academic performance in third grade students new system in Ahvaz: Faculty of Education and Psychology; 1376.(persian)
- 31. Erabiyan A, Khodapanahi M, Heydari M, Sadeghpour S. Investigate the relationship between self-efficacy and mental health andacademic success of students. Journal of Psychology.32:360-71.(persian)

- 32. Asgharnejad T, Khodapanah iMK, Heydari M. The Relationship between self-efficacy ,Locus of Control with educational success .Journal of Psychology. 1(3)(persian)
- 33. Cara E, MacRae A. Psychosocial occupational therapy: An evolving practice: Nelson Education; 2012.
- 34. Hojati Abed E knA, Rafiei H, Karimlou M. . The Effective of PsychosocialOccupational Therapy Services on Quality of Chronic Psychiatric. . J Rehabil 2010;11(41):23-8.(persian)
- 35. Bandura A. Self-efficacy: toward a unifying theory of behavioral change. Psychological review. 1977; 84(2):191.
- 36. Cara E, MacRae A. Psychosocial occupational therapy: A clinical practice: Cengage Learning; 2005.
- 37. Whetten DA, Cameron KS, Wesley A. Developing management skills. 2000.
- 38. Wilcock AA. An occupational perspective of health: Slack Incorporated; 2006.
- 39. Kielhofner G. Conceptual foundations of occupational therapy practice: FA Davis; 2009.
- 40. Schwarzer R, Luszczynska A. Health behavior constructs: Theory, measurement, and research. National Cancer Institute Website Retrieved URL: http://dccps cancer gov/brp/constructs/selfefficacy/index html.2007
- 41. PirKhaefi A, BorjAli A, Delavar A, Eskandari H. Structural Relationship between Creativity, Self-efficacy and Coping with Mental Health. JEPS. 2011:87-107.(persian)
- 42. Ogunyemi AO, Mabekoje SO. Self-efficacy, risk-taking behavior and mental health aspredictors of personal growth initiative among university undergraduates. Electronic Journal of Research in Educational Psychology. 2007;5(2):349-62.
- 43. Sturkenboom I, Graff MJ, Borm GF, Adang EM, Nijhuis-van der Sanden MW, Bloem BR, et al. Effectivenessof occupational therapy in Parkinson's disease: study protocol for a randomized controlled trial. Trials. 2013;14(1):34.
- 44. Dooley NR, Hinojosa J. Improving quality of life for persons with Alzheimer's disease and their family caregivers: Brief occupational therapy intervention. American Journal of Occupational Therapy. 2004; 58(5): 561-9.
- 45. Hees HL, de Vries G, Koeter MW, Schene AH. Adjuvant occupational therapy improves long-term depression recovery and return-to-work in good health in sick-listed employees with major depression: results of a randomised controlled trial. Occupational and environmental medicine. 2012:oemed-2012-100789.
- 46. Willoughby C, Polatajko H, Currado C, Harris K, King G. Measuring the self-esteem of adolescents with mental health problems: theory meets practice. Canadian Journal of Occupational Therapy. 2000;67(4):230-8.
- 47. Graff MJ, Vernooij-Dassen MJ, Thijssen M, Dekker J, Hoefnagels WH, Rikkert MGO. Community based occupational therapy for patients with dementia and their care givers: randomised controlled trial. Bmj. 2006; 333(7580): 1196.
- 48. Sumsion T, Smyth G. Barriers to client-centredness and their resolution. Canadian Journal of Occupational Therapy. 2000;67(1):15-21.
- 49. Martin LM, Bliven M, Boisvert R. Occupational performance, self-esteem, and quality of life in substance addictions recovery. OTJR: Occupation, Participation and Health. 2008;28(2):81-8.
- 50. Bell MD, Bryson GJ, Greig TC, Fiszdon JM, Wexler BE. Neurocognitive enhancement therapy with work therapy: productivity outcomes at 6-and 12-month follow-ups. Journal of rehabilitation research and development. 2005;42(6):829.
- 51. Buchain PC, Vizzotto ADB, Henna Neto J, Elkis H. Randomized controlled trial of occupational therapy in patients with treatment-resistant schizophrenia. Revista Brasileira de Psiquiatria. 2003;25(1):26-30.