

# Psychotherapy and the Length of Hospitalization in the Patients With Mental Disorders: A 2-Year Follow-up Study

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**Background:** Psychotherapy is a process in which the therapist tries to use the best methods to help the patients with mental disorders to improve symptoms, increase quality of life, social functioning, and self-esteem and reduce the length of hospitalization in psychiatric wards.

**Objectives:** The current research aimed to examine the effect of psychotherapy services on the length of hospitalization in the patients with mental disorders.

**Patients and Methods:** This experimental study, in which a pretest and posttest were employed to examine the experimental and the control groups, was conducted in a psychiatric hospital. In both experimental and control groups, the length of subjects' hospital stay one year before and one year after providing the psychiatric services was measured. Chi-Square test and analysis of variance were used to analyze the differences between the groups. Statistical analysis was performed using SPSS software, version 19, and  $P < 0.5$  was considered as significant.

**Results:** Results of the current study showed a significant difference between the two groups regarding the length of hospitalization; findings indicated that the length of hospitalization was virtually different in the studied population after the intervention ( $P < 0.05$ ).

**Conclusions:** Psychotherapy interventions can reduce the length of hospitalization in the patients with mental disorders.

**Keywords:** Psychotherapy; Hospitalization; Mental Patients

## 1. Background

Psychiatric disorders cause major health and economic problems in societies, including our society, which make a sense of dissatisfaction and decrease the quality of life and also caused by mental, biological and social contextual factors (1). Previous studies showed that reduction in life expectancy (2), increasing the risk of suicide (3), drug dependency as a secondary disorder (4), rate of divorce and celibacy (5), days of absence from work and disability (6) are observed in patients with psychiatric disorders more than normal people. Currently, 40 million people worldwide have severe mental disorders and more than 90% of such patients in the developing countries do not get any mental health care (7). Using mental health services and costs are seriously increasing, during 2009-2010, 11.8% of the admitted patients in hospitals had psychiatric disorders and 25.5% of them needed acute care (8). Improving the quality and quantity of health care, and reducing its costs are the goals of the health systems (9). For this purpose, appropriate and effective indicators are considered; length of hospitalization is an important indicator in the efficiency of hospital care (10). Reducing the

length of hospitalization is a major goal of health services management (11); discharge planning, psychotherapy and social interventions are effective factors in increasing the patients empowerment, reducing the length of hospitalization and frequency of hospital admissions (7). Psychotherapy consists of different techniques to treat mental health, emotional and some psychiatric disorders. It is also useful in the primary care setting, long-term care, and in-home settings (1). Psychotherapy causes emotional regulation with changing neuronal structure in patients. According to the meta-analysis, using neural imaging after psychotherapy showed efficacy of psychotherapy on depression, PTSD (post trauma stress disorder), and panic attacks (12). A study based on Assertive Commitment Therapy in the schizophrenia achieved improvement and reduction of inpatient care (13). Modules approach, which promotes evidence-based therapies such as CBT (cognitive behavior therapy), may offer a promising way in the treatment of outpatients (14). Despite the severe needs of the patients with mental disorders, family poor performance and parental conflict may reduce patient recovery

process (15), and cause more economic and social costs for the patients (16). Few studies evaluated the efficacy of psychotherapeutic interventions on the length of hospitalization, while many others evaluated the effectiveness of these interventions on other aspects of the disease such as symptoms, quality of life, etc.

## 2. Objectives

The current study aimed to assess the effect of psychotherapy on the length of hospitalization in the patients with mental disorders.

## 3. Patients and Methods

The current experimental study, in which a pretest and posttest were employed to examine the experimental and the control groups, was performed in a psychiatric hospital from 2010 to 2013. Psychotherapy sessions were considered as the independent variable and days of hospitalization as the dependent variable. The sample included all the patients admitted to the psychiatric hospital with a history of admission to psychiatric wards. The interventional group consisted of 12 patients (available sampling method) admitted to the hospitals who participated in the psychotherapy sessions and 12 patients who did not use mental health services but had a history of hospitalization in psychiatric wards, randomly selected as the control group. To avoid bias, after reviewing the medical records of the admitted patients, all patients with the same gender, age, diagnosis, hospitalization days and date of admission were selected as the experimental group. Then, patients were randomly selected from the matched samples. Patients in the intervention group used psychotherapy services after completion of hospitalization. But the control group did not use any type of psychotherapy services. The length of hospitalization in both groups (intervention and control), one year before and one year after providing psychiatric services, was calculated by reviewing medical records of the patients. Thus, the number of hospital stay days in the two groups during hospitalization was recorded. Psychotherapy sessions were held

weekly for at least six months. Psychotherapy approaches such as cognitive-behavioral approach, Mindfulness-Based Cognitive Therapy (MBCT) and other interventions like family and couple therapy was used. All sessions were conducted individually. Chi-Square test and analysis of variance were used to analyze the differences between the groups. Statistical analysis was performed using SPSS software, version 19;  $P < 0.5$  was considered as significant.

## 4. Results

There were subjects of different genders in each group including 3 male and 9 female with the age range 17-56 years; mean 35.5 (SD = 12.36) and 37.58 (SD = 10.17) in the experimental and control groups, respectively. The mean and standard deviation of hospitalization days before and after psychotherapy for the groups are shown in Table 1. Educational level in the groups was high school diploma and bachelor degree. Groups were matched regarding age, gender, and educational level. Each group included subjects with major depression (five cases), bipolar disorder (three cases), and obsessive compulsive disorder (four cases). Diagnostic criteria were according to DSM-IV-TR (diagnostic and statistical manual of mental disorders), psychiatrist's interview, and patient records. Levine test, which is used to check the equal variances, showed that hospitalization days in the groups indicated the assumption of equal variances and compliance ( $P > 0.05$ ,  $P = 0.19$ ,  $F(1, 22) = 1.8$ ). To evaluate the effect of psychotherapy sessions in reducing the length of hospitalization, the analysis of variance was conducted. There were significant differences between the two groups regarding the length of hospitalization and compliance with these assumption ( $F(1, 22) = 1.8$ ,  $P = .19$ , ( $P > 0.05$ ). That represents variances equality. To assess the effect of psychotherapy sessions on reducing the length of hospitalization, the analysis of covariance was conducted. Results showed a significant difference between the two groups regarding the length of hospitalization ( $F(1, 22) = 6.006$ ,  $P < 0.05$ ) (Table 2). Mean and standard deviation for the length of hospitalized in the experimental and control groups were  $12.15 \pm 5.48$  and  $31.18 \pm 5.48$ , respectively.

**Table 1.** Descriptive Characteristics of the Length of Hospitalization in the Control and Experimental Groups <sup>a</sup>

Situation	Before Psychotherapy	After Psychotherapy
<b>Hospitalization days</b>		
Experimental group	45.16 ± 69.62	15.08 ± 31.45
Control group	35.25 ± 46.96	28.25 ± 64.49

<sup>a</sup> Data are presented as Mean ± SD.

**Table 2.** Summary of Variance Analysis <sup>a</sup>

Source Changes	Eta	P	F	M	df	Ss
<b>Hospitalization days</b>	0.22	0.023	6.006	2156.49	1	2156.49
<b>Errors</b>				359.07	21	7540.582
<b>Total</b>					24	46972

<sup>a</sup> Abbreviations: Eta, partial squared; F, frequency; M, mean; df, degrees of freedom; Ss, sum of squared, P, significantly.

## 5. Discussion

In the past, prolonged hospital stay was common, but nowadays, short-term inpatient and outpatient treatment is recommended. Gunderson, based on his clinical experience suggests that when the outpatient treatment is limited, the risk of hospitalization increases (17). Some studies showed that short-term inpatient or outpatient treatment compared with prolonged hospitalization was more effective in patients with psychiatric disorders. Also, short-term treatment resulted in a reduction of the frequent use of mental health services (18). The current study showed a significant difference between the two groups regarding the length of hospitalization. Gaining work experience, compliance with social life, and learning other skills will be more difficult for patients with psychiatric disorders who have prolonged hospitalization (19). In other words, prolonged hospitalizations in psychiatric wards have little effect (20). And also, family support of the patients with mental disorders can improve their social activities and quality of life and reduce long-term hospitalization (21). Another study investigated the positive role of social education and family support in the rehabilitation of 500 patients who had prolonged hospitalization in psychiatric hospitals (22). Also using the self-care model that involves patients in their treatment process improved the patients and reduced the hospital stay (23), results of these studies were compatible with the findings of the current study. Several studies have discussed the positive effect of occupational therapy on improving the disease symptoms, quality of life, social functioning (24), increasing self-esteem, and reducing the length of hospitalization in patients with psychiatric disorders. Due to the few studies on affective factors on hospitalization and effective psychotherapy interventions on reducing the length of hospitalization for patients with mental disorders, it is recommended that further studies investigate the effects of psychotherapy in various diagnostic and therapeutic procedures in such patients.

### 5.1. Limitations

Limitations of this study include the lack of diagnosis separation, drug treatment, and psychotherapy approaches.

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