

The Effect of Psychoeducational Interventions on Illness Management in Families of Schizophrenic Patients



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ABSTRACT

Objective: Educating families and caregivers of schizophrenic patients on controlling and managing the disorder, has found particular importance in clinical psychology. The present study aims to examine the effect of Psychoeducational interventions on illness management in families of schizophrenic patients.

Methods: The present study is a quasi-experimental research with pretest-posttest design, and two control groups. The study sample consisted of 30 families with a schizophrenic member. The families were selected from referrals to a psychiatric center in Tehran (during a period of 40 days) who met the inclusion criteria, and were randomly placed into three groups: an experimental group, a control group with placebo, and a control group without placebo (10 persons in each group). A researcher-made questionnaire was used to collect data. The experimental group received trainings (a training package) and attended a group discussion on schizophrenia. The placebo group attended similar meetings, but without educational content and group discussion, and the second control group were only assessed in the pretest and posttest. After finishing the training sessions, and following an interval of 3 months, the posttest was conducted for each group. The study data were analyzed using univariate analysis of variance (ANOVA). All statistics were carried out using SPSS software, version 11.

Results: According to the results, the experimental group had significantly higher gain scores ($\alpha \leq 0.05$) than the two control groups, on the following variables: an increase in the adaptability of the patient in daily functioning, from the viewpoint of both a clinical psychologist and the patient's family, an increase in the family's knowledge of the illness, and a reduction in the adverse effects of the illness on the family's feeling and attitude.

Conclusion: The present study showed that family education is effective in increasing patients' adaptability and patients' family knowledge, and in reducing the adverse effects of the illness.

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1. Introduction

Schizophrenia is a severe mental disorder that is diagnosed through symptoms such as delusions and hallucinations, disorganized speech (e.g. derailment or incoherence), grossly disorganized or catatonic behavior, reduction in the range and intensity of emotional expression or passivity. The individual's areas of functioning such as work, interpersonal relations, or self-care are markedly below the level achieved prior to the onset of the disorder. These symptoms continue for at least 6 months (Sadock, Ruiz, & Sadock, 2014).

Schizophrenia is a psychiatric disorder involving chronic or recurrent psychosis (Bustillo & Weil, 2016). Schizophrenia is a debilitating mental disorder that severely affects not only the patient, but also the whole family. The caregivers undertake almost the whole burden of looking after the patient. This responsibility places them and the entire family system under extreme pressure, with negative consequences (Caqueo-Urizar et al., 2014).

Family intervention includes family members in therapeutic sessions with the goal of improving all family members' mental health and understanding of the disorder. This type of intervention aims to enhance the capacity of both patients and their families for problem solving and illness management. Family interventions have a focus on providing information about the disorder, and emphasizing instructions for medication and treatment adherence. Taking care of a family member with a mental illness imposes a burden on various aspects of family life. This burden may be increased if the mentally ill individual has a criminal history (Rowaert et al., 2016).

Education about schizophrenia and its treatment makes it possible to make informed decisions to control the disorder, take measures to treat the disorder, and tackle the obstacles (Smith & Segal, 2014). It is important that family members know as much as possible about this disorder. With the help of a therapist, family members can learn strategies for coping with stress, as well as problem-solving skills (NIMH, 2015). The family-based interventions described here are psychoeducational interventions, and their aim is to improve the knowledge of patients and their primary caregivers about schizophrenia, and to change their behavior through better recognition of the symptoms of the disorder, and learning how to handle these problems by using psychoeducational interventions (Chan, Yip, Tso, Cheng, & Tam, 2009).

Previous studies on the attitude of families toward schizophrenia show that a change in the attitudes can

significantly improve living environments, and reduce the recurrence risk and burden of caregiving. By receiving sufficient information, caregivers can provide complete care and support for the patients. Caregivers' lack of knowledge can lead to frequent recurrences of the disorder, an increase in the burden of care, and finally, withdrawing from providing care (Shibre et al., 2012). Many types of family-based interventions have been shown to reduce the severity of schizophrenia (Cohen, Glynn, Hamilton, & Young, 2010).

Illness management includes controlling medication consumption, problem-solving strategies, communication skills and empathy toward the patient, and understanding the different issues regarding the illness. The attitude of the family is a crucial factor in relapse prevention. Schizophrenic patients whose caregivers are high in expressed emotion, and do not have an appropriate attitude toward the patients and their illness, are exposed to an increased risk of recurrence of the disorder (Birami, 2008). Through education and increasing knowledge, the caregivers' attitude could be changed, and the unfavorable outcomes of their negative attitude could be reduced. Evidence shows that in cases where caregivers have a clear understanding of the disorder, symptoms, and patient's moods, their agitation and the pressure they experience are reduced, and their ability to cope with problems increases (Chien, Norman, & Thompson, 2004).

When schizophrenia is diagnosed, providing care can be stressful for the caregivers. Psycho-educational interventions can increase the knowledge of patients and their primary caregivers about schizophrenia, have a positive impact on the psychological and physical health of patients and the quality of life of their primary caregivers, and reduce the burden of providing care (Leff, 2000).

Family-based interventions require that the patient's immediate family join the intervention group not only to improve the outcomes of treatment and prevent recurrence, but also to improve the mental health of family members and help them understand the disorder. This type of intervention aims to increase the capacity of both patients and their families to resolve issues and manage the illness. Family interventions often focus on teaching psycho-educational programs, as well as improving coping strategies.

On the other hand, sometimes people with schizophrenia do not receive support from their families. Without treatment, their symptoms may become more severe, and their strange behavior may isolate them from their family (Diane, 2015). Family love and support play an important role in the treatment of schizophrenia. Helping a schizo-

phrenic family member without benefiting from social services could be difficult, therefore, family caregivers need to use these kind of services. They also need to take care of themselves against the difficulties of caregiving.

The person taking care of a schizophrenic family member may deal with difficult emotions, including fear, guilt, anger, frustration, and disappointment. It may be hard for a caregiver to accept the disorder; they may worry about schizophrenia label, and try to hide the disorder from others, or may become confused by the strange behaviors that they do not understand (Smith & Segal, 2014). Although, the content of psychoeducational intervention varies between different studies, there are common factors among these studies (Kulhara, Chakrabarti, Avasthi, Sharma, & Sharma, 2009; Nasr & Kausar, 2009).

Naglino et al. (2006) provide general information about schizophrenia, knowledge of symptoms, the need for medication, problem-solving strategies, and communication skills for patients and primary caregivers. Psychoeducational interventions are usually done by psychiatrists (Paranthaman et al., 2010), as well as mental health nurses and social workers (Chien & Lee, 2010).

Birami (2008) believes that negative attitude of caregivers toward these patients creates the belief in them that they are incapable of taking care of their patients, therefore they may feel that they have failed in their efforts for providing care. Lack of knowledge about the symptoms of the illness is one of the causes of tension in the families of patients with mental disorders that creates a crisis in the family. Shibre et al. (2012) also argue that caregivers' lack of information may lead to frequent relapses, an increase in the burden of caregiving, and finally refusal to care for the patients. In addition, studies on the factors associated with the symptoms of schizophrenia have shown the relevance of some demographic factors.

In a study conducted by Caqueo-Urizar et al. (2014) on the factors related to caregivers, it was found that age, gender, and educational level, influenced the attitude of caregivers. Nadem Bouini et al. (2013) also argues that caregivers' history of psychological training decreases the consequences of a negative attitude (Nadem Bouini et al., 2013).

Patients' and primary caregivers' knowledge of schizophrenia can impact positively on patients' physical and psychological outcomes and primary caregivers' burden of care and quality of life (Hasan, Callaghan, & Lymn, 2015)

This study was conducted in order to determine the effect of psychoeducational interventions on illness man-

agement in the families of schizophrenic patients, with an emphasis on the following hypotheses:

- Group training for the families of schizophrenic patients, affects the adaptability of patients in daily functioning.
- Group training for the families of schizophrenic patients, increases families' knowledge of the disorder.
- Training for the families of schizophrenic patients, reduces the adverse effects of the illness on the family's feeling and attitude.

2. Methods

The present study is a quasi-experimental research, with pretest-posttest design and two control groups (with and without placebo). The independent variable in this study is family education, and the dependent variables are as follows: the patients' adaptability in daily functioning, from the viewpoint of both a clinical psychologist and the family, family's knowledge of the disorder, and adverse effects of the illness on the family's feeling and attitude.

The statistical population consisted of families of male schizophrenic patients of psychiatric centers in Tehran province. 30 families that met the inclusion criteria were selected. The inclusion criteria were as follows: male, between 18 and 45 years old, admitted to a clinic for recurrence of symptoms and creating problems at home, under medical treatment and living at home, diagnosed with chronic paranoid schizophrenia by a psychiatrist according to DSM-5 criteria, an education level above the fourth grade and below the ninth grade of elementary school, and middle to low socio-economic status. Only the primary caregiver was selected from each family. First of all, the participants were informed about the purposes and procedures of the study, and their written consent for participation in the study was obtained.

The 30 individuals selected from the main caregivers in families were subjected to pretest, and were randomly divided into three groups: an experimental group, a control group with placebo, and a control group without placebo (10 persons in each group). After finishing the training sessions, and following an interval of 3 months, the posttest was conducted for the three groups.

The Questionnaire for Assessment of Patient's Adaptability in Daily Functioning by the Family: this is a researcher-made questionnaire measuring patient's mental status and daily functioning at home, and is answered

by the patient's family. This 15-item questionnaire was developed based on Kaplan and Sadock's Synopsis of Psychiatry (2014), and modified by university professors. The items are rated on a Likert-type scale ranging from 0 (poor) to 3 (very good). The 1-week test-retest reliability of the questionnaire was very high (0.97).

The Questionnaire for Assessment of Family's Knowledge of Schizophrenia and Related Issues: this questionnaire was developed based on Kaplan and Sadock's Synopsis of Psychiatry (2014), and modified by university professors. It contains 25 questions assessing issues related to symptoms, treatment, and family's treatment of the patient, and family's knowledge of these issues. The items are rated on a 2-point scale (right and wrong). The 1-week test-retest reliability of the questionnaire was very high (0.97).

The Questionnaire for Assessment of the Adverse Effects of Illness on Family's Feeling and Attitude: this is a researcher-made questionnaire, and has 13 questions assessing the feeling and attitude of the families with a schizophrenic patient at home. It was developed based on Kaplan and Sadock's Synopsis of Psychiatry (2014), modified by university professors. The items of the first part of the questionnaire are answered on a 3-point scale as 0 (high), 1 (medium), or 2 (low), and the items of the second part are answered on a 2-point scale (right and wrong). The 1-week test-retest reliability of the questionnaire was very high (0.99).

This research was initially conducted on 5 families with a schizophrenic patient in order for the researcher to gain mastery of the research method, remove the potential barriers, and select appropriate implementation methods. The families of the first experimental group were trained directly by a psychologist, attended group discussions, and used each other's experiences. The training program was presented in 6 sessions (twice a week). An hour of each session was devoted to direct training by a psychologist, and another hour was devoted to group discussion. This group consisted of the patients' primary caregivers who trained other family members at home. The content of the

educational program was based on the problems expressed by the families of patients in the preliminary sessions, as well as the research literature on the subject (Table 1).

The families in the control group with placebo, participated in group sessions, just like the experimental group, but did not attend any training program. The families in the control group without placebo neither participated in group sessions nor received any training, and only participated in the pretest and posttest.

The means and standard deviations were calculated for descriptive statistics, and the univariate analysis of variance (ANOVA) was used for inferential. The Scheffe post-hoc test was used for the paired comparison of the groups. All the analyses were performed using SPSS software version 11.

3. Results

In this section, the results of each hypothesis are reported separately.

Group training for the families of schizophrenic patients, affects the adaptability of patients in daily functioning.

The patients' adaptability in daily functioning was measured using two questionnaires: the Questionnaire for Assessment of Patient by a Clinical Psychologist, and the Questionnaire for Assessment of Patient by the Family.

In table 2, the means and standard deviations of the assessment of patients by a clinical psychologist and the family, in pretest and posttest, have been reported for the three groups. The results of the analysis of variance showed a significant difference between the gain scores of the three groups (experimental, control with placebo, and control without placebo), based on the assessment of patients by a clinical psychologist ($F(2, 27)=20, P<0.01$) and the family ($F(2, 27)=45, P<0.01$). The Scheffe post-hoc test revealed a significant difference between the gain scores of the ex-

Table 1. Educational content of the sessions.

| | |
|----------------|---|
| First session | Description of the disorder (general description, symptoms and progression of the disorder) |
| Second session | Description of the disorder (prognosis and treatment) |
| Third session | How to deal with the symptoms (aggressive moods, aggression, paranoia) |
| Fourth session | How to deal with the patient's symptoms (delusions, hallucinations, agitation, disorganized thoughts, and withdrawal) |
| Fifth session | Family's treatment of the patient |
| Sixth session | Cooperation, everyday activity, employment, and family's attitude |

Table 1. Analysis of variance for assessment of patient by a clinical psychologist and the family.

| Variables | Group | Pretest (M±SD) | Posttest (M±SD) | F | P-value |
|--|-------------------------|----------------|-----------------|----|---------|
| Assessment of the patient by a clinical psychologist | Experimental | 46.1(14.7) | 75.8(14.2) | 20 | ≤0.10 |
| | Control with placebo | 32.2(23.2) | 38.2(24.7) | | |
| | Control without placebo | 31.9(19.3) | 28(17.1) | | |
| Assessment of the patient by the family | Experimental | 32.7(17.2) | 64.4(14.9) | 45 | ≤0.10 |
| | Control with placebo | 24.7(18) | 25.3(17.5) | | |
| | Control without placebo | 26.6(25.8) | 22.4(19/1) | | |

PRACTICE in
CLINICAL PSYCHOLOGY**Table 2.** Analysis of variance for families' knowledge of schizophrenia.

| Variables | Group | Pretest (M±SD) | Posttest (M±SD) | F | P-value |
|---------------------|-------------------------|----------------|-----------------|-----|---------|
| Families' knowledge | Experimental | 72.8(6.2) | 99.6(1.3) | 117 | ≤0.10 |
| | Control with placebo | 78.4(6.3) | 80(8.6) | | |
| | Control without placebo | 71.6(13.6) | 70(12.5) | | |

PRACTICE in
CLINICAL PSYCHOLOGY**Table 3.** Analysis of variance for families' feeling and attitude.

| Variables | Group | Pretest (M±SD) | Posttest (M±SD) | F | P-value |
|--|-------------------------|----------------|-----------------|------|---------|
| The adverse effects of the illness on the family | Experimental | 32.7(20.4) | 64.5(15.9) | 30.2 | ≤0.10 |
| | Control with placebo | 27.3(22.2) | 28.2(22.8) | | |
| | Control without placebo | 21.8(18.5) | 23.2(21.1) | | |

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perimental group, control group with placebo, and control group without placebo, at 95% confidence level.

Group training for the families of schizophrenic patients, increases families' knowledge of the disorder.

As you can see in Table 3, the significance level is less than 0.01, therefore, it could be concluded that there is a significant difference between the three groups in terms of family's level of knowledge ($F(2, 27)=20, P<0.01$).

The paired comparison of the means also showed that the change in the positive direction was significantly higher in the experimental group than in the other two groups ($P\leq 0.05$).

Training for the families of schizophrenic patients, reduces the adverse effects of the illness on families' feeling and attitude.

As you can see in Table 4, there was a significant difference between the gain scores of the three groups in terms of the adverse effects of the illness on the family ($F(2, 27)=30.2, P<0.01$). The paired comparison of the means also showed

that the change leading to a reduction in the adverse effects of the illness on the family was significantly higher in the experimental group than in the other two groups ($P\leq 0.05$).

4. Discussion

The results of the present study showed that training for the families of schizophrenic patients, affects the adaptability of patients in daily functioning. An improvement in adaptability was confirmed by the assessments conducted by both a clinical psychologist and the patient's family. This finding is consistent with the results of the studies conducted by [Awad et al. \(2008\)](#), [Leff \(2000\)](#), [Cohen et al. \(2010\)](#), and [Caqueo-Urizar et al. \(2014\)](#) which showed that educational intervention with the families of schizophrenic patients is associated with prevention of relapse.

The study results also showed that training for the families of schizophrenic patients, increases families' knowledge of the disorder. This result is consistent with the results of the studies conducted by [Shibre et al. \(2012\)](#), [Cohen et al. \(2010\)](#), [Leff \(2000\)](#), and [Chan et al.](#)

(2009), which showed that providing information about diagnosis, treatment, progression and prognosis of the disorder to patients' caregivers, reduces patients' agitation, and prevents relapse. Having a good Knowledge of the disorder and its treatment could help families have a better performance, and it can guide them to help their ill family member.

Another result of this study was the effect of training for the families of schizophrenic patients on decreasing the adverse effects of the illness on families' feeling and attitude. This result is consistent with the results of the studies conducted by Awad et al. (2008), Smith and Segal, (2014), Hasan, Callaghan and Lymn (2015), and Weisman de Marni, Weintraub, Gurak and Maura (2014), which showed that a change in the emotional attitude of patients' relatives (such as labeling, guilt, anger, and being worried about oneself, the patient and the future) has an important role in the effectiveness of family-based psychoeducational programs in the progression of schizophrenia.

Basically, the findings of such studies have shown that families with low expressed emotion and better attitude toward the disorder believed that their patient was ill. On the other hand, families with high expressed emotion believed that the patient was mainly problematic. Therefore, it is required to change the beliefs of the patients' families about the patient's behavior, in a way that they understand the patient's behavior based on his/her disorder rather than anything else.

In general, it could be concluded that educational sessions and group discussions have positive effects on illness management (reducing the recurrence of symptoms, increasing the families' knowledge of the illness, and reducing the adverse effects of the illness on the family). Therefore, in order to change a family's attitude, a therapist can focus on correcting some aspects of the relationship between the patient and their family members. Finally, we can conclude that psychoeducational training should be considered as a useful approach to create a balance in the family, in order to reduce the effects of patient's vulnerability on the family. This could be a step toward further treatment and prevention of recurrence and relapse of the disorder, and improving the mental health of the other members of the family.

Limitation and Recommendation

The participant families' lack of familiarity with the family education and intervention programs, time limitations, and difficulties of gathering family members together, were among the limitations of the present study. Gener-

ally, a long period of time is required to perform this kind of studies, but, it was beyond the scope of this research. Due to different problems and responsibilities of the male and female patients, the present study was conducted only on male subjects. Therefore, it is recommended that the present study be replicated with female subjects. Due to time limitations and executive problems, there were only 10 participants in each study group, so it is recommended that the present study be replicated with larger samples.

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