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Original Article

The effect of home visits on self-efficacy in patients with schizophrenia: A clinical trial

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Abstract

Introduction: One of the major problems of chronic patients such as schizophrenic patients with is difficulty in being able to take care of them and impose psychological burden on the family. This study aimed to determine the effect of home visits on self-efficacy in patients with schizophrenia.

Materials and Methods: In this clinical trial in 2017-2018, 60 patients with schizophrenia who admitted in Ibn-e-Sina hospital of Mashhad-Iran were randomly divided into experimental and control groups. The experimental group received the home visit program based on a community-based mental health group management method for two months (four to six 45-60 minute sessions), while the control group received routine care. The self-efficacy of both groups was measured by a general self-efficacy questionnaire before the intervention and at the end of the second month. Data were analyzed by SPSS software version 16 and descriptive statistics and independent t-test, Mann-Whitney, paired t-test, Wilcoxon, and Chi-square.

Results: The results showed that the mean score of self-efficacy in the two groups before the intervention was not statistically significant (P= 0.52) but after the intervention, self-efficacy score in the experimental group was significantly higher than the control group (P< 0.001). The results of Wilcoxon test also showed that the mean score of self-efficacy in experimental group was higher significantly in the post-intervention phase (P< 0.001)

Conclusion: The results of this study showed the positive effect of home visiting program on improving self-efficacy in schizophrenic patients. Therefore, it is recommended to use this program in empowering these patients.

Keywords: Home visit, Schizophrenia, Self-efficacy

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Introduction

Schizophrenia is considered the most severe and crucial mental illness. It is estimated that more than 1% of the general population suffers from this illness (1-3). Today, this disorder is one of the most important and debilitating mental illnesses in all psychiatric and psychological societies of the world (4). The functions of these patients in various occupational, educational, social, interpersonal, and self-care are impaired, and patients need permanent care in various dimensions. Long-term social problems have been identified as a major feature of schizophrenic patients. Social poverty, lack of self-care, functional problems, and disability are the diagnostic criteria for schizophrenia in most diagnostic systems (1,4).

One of the goals of World Health Organization in promoting mental health and treating mental illness is to reduce the length of hospital stay and expand social services (5). On the other hand, how to provide psychiatric services to a large number of these patients is facing many problems and issues that can be studied and pondered in developing countries from different dimensions (6,7) because the current health system is a species that pays less attention to the period after treatment and empowering patients to care at home. While, to overcome the problems, complications of treatment, prevent recurrence, and improve the quality of life of these patients, their participation in the process of treatment and care is important. It is necessary to increase awareness, change attitudes and acquire skills (8,9).

Recently, the role of the patient in the self-care process has received much attention, to the extent that new models of chronic patient care, such as the empowerment program, are based on the role and responsibility of the patient in daily self-care (8). Self-efficacy is one of the concepts defined by indicators such as empowerment, predisposing factors, and essential skills acquired for the empowerment process (9). Therefore, patients who feel confident in taking care of themselves are more likely to perform these tasks. Self-efficacy is an essential prerequisite for behavior because it acts as an independent part of the individual's basic skills (10). Improving the self-efficacy of a schizophrenic patient is also important to the patient's family. The families of schizophrenic patients are faced with unpredictable stressors that impose a tremendous psychological burden on them (11). In addition to the costs of disability, treatment, and hospitalization, this includes other economic and social costs indirectly due to inadequacy and disruption of the family and social system to which the patient belongs (12).

Nurses, as the most extensive professional group in the health care system, can provide follow-up treatment, reduce the number and frequency of hospitalizations, as well as reduce treatment and hospital costs by providing services (12). In fact, the patient and his/her family need follow-up counseling and education (13). So far, several models have been designed for use in the clinic and to meet clients' needs. Empowering patients plays an important role in health care and is based on the individual's participation in the treatment process. The patient's participation in self-care activities requires self-efficacy or, in other words, belief in his/her abilities (14). Home care programs have increased in response to increasing patients at the community level. One of the reasons for this rapid growth is the approved effectiveness of home care in patients in the face of the needs of such patients, which has been confirmed as an increase in the efficiency and effectiveness of this method. In most countries, the home visit program is part of a more comprehensive model of social psychiatry, which is why few studies have explicitly focused on this program and have often studied the effectiveness of the entire community psychiatric system (15).

Therefore, considering that no study has been reported on the effect of home visits on patient self-efficacy and the psychological burden of these patients' families. Therefore, these concepts have been studied separately and maintain the nurse-patient relationship with these patients. The model of continuous care and psychological education package also emphasize this issue, so the present study aimed to assess the effect of home visits on patient's self-efficacy of schizophrenic patients discharged

from Ibn-e-Sina Psychiatric Hospital in Mashhad city.

Materials and Methods

The study population of this study conducted in 2017-2018, included all hospitalized patients in Ibn-e-Sina Psychiatric Hospital in Mashhad city with diagnosis of schizophrenia. Sixty patients who met inclusion criteria were randomly assigned to the intervention and control groups. A pilot study was performed on 20 patients (10 patients in each group) to obtain the mean self-efficacy score. Thus, the sample size with 95% confidence level and 80% test power was estimated to be 26 people in each group, and considering the drop, 30 people in each group were studied. In addition, we did not drop in this study. Inclusion criteria include willingness to participate in research, aged 18 to 60 years, having at least a intermediate (between elementary and high school) educational degree, not having mental retardation or diagnosis of bipolar disorder by a psychiatrist, not having chronic physical illness (cancer, diabetes, hypertension) at the same time, not having other cognitive impairments (mental retardation, dementia, Alzheimer's disease), and the living with the primary caregiver. Exclusion criteria included not attending more than one training session, participating in another training program on home care during research and cancellation, or unwillingness to continue participating in the study for any reason.

Research instrument

A) The Demographic Information Questionnaire: It included the demographic characteristics such as age, sex, level of education, occupation, marital status, family income level, and duration of illness.

B) The Self-efficacy Scale for Chronic Diseases: This scale was developed by Lorig et al. It measures the changes in self-efficacy in patients with chronic diseases. In the present study, the reliability of this questionnaire was evaluated by the internal consistency method and by calculating Cronbach's alpha correlation coefficient. Thus, during the pilot study, a questionnaire was completed for 20 volunteer patients with schizophrenia in one test, then the reliability of the instrument was evaluated using Cronbach's alpha correlation coefficient, which was confirmed by r= 0.91.

In the present study the researcher also completed a personal information questionnaire based on the patients' medical records and interviews with the patient's primary caregivers. The home visit program was implemented based on the community-based mental health management method for the research units in the experimental group in the home visit group. This method (home visit based on group management model) includes the following features: 1- A comprehensive and complete range of services (pharmaceutical and non-pharmaceutical and mainly in the form of home visit) is provided; 2. Multidisciplinary groups provide services to patients residing in a covered area; 3. The groups include at least a psychiatrist, a community psychiatrist, a social worker, and usually an occupational therapist and psychologist, and in some cases a general practitioner; 4- One person from the group is responsible for care coordination. This method does not have specific executive restrictions, such as patients per staff. This program was set up immediately after the patients were discharged from the hospital and were implemented every week. In this method, the home visit team consists of a psychiatrist or general practitioner, a psychiatrist, and a social worker who conducts the visits every one or two weeks. Meetings were held in 4 to 6 sessions (2 months). The duration of each session was 45-60 minutes, in which the researcher, in addition to the usual activities of the home visit group, spent 15 minutes in each session on psychiatric care. The training sessions were organized so that the patient and family needs and problems were examined during the first session, and the necessary care was taken during the following sessions based on the designed model. The educational content of these sessions and care included treatment training, medication side effects, communication needs, follow-up conditions, sleep and rest patterns, movement, exercise, and smoking and substance use. Table 1 lists the home visit group training sessions, the content, training method, and instructor (researcher).

Table 1. Arrangement and content of the home visit program

Session	Content	Method
First	Introducing the group and its goals, examining the situation and expressing the educational and skill needs of the patient and family, explaining the illness, and its complications	Lecture, group discussion, question and answer
Second	Explanation about the causes of the disease, underlying factors, aggravator factors	Lecture, group discussion, question and answer
Third	Review of basic needs for medical regimen, explanation of side effects of medications, review of side effects in patients, and group discussion	Lecture, group discussion, question and answer
Fourth	Justifying the need to pay attention to the regular use of medications, adhering to the medical regimen, following the treatments	Lecture, group discussion, question and answer
Fifth	Control of patient performance, recommendations, and practical tips regarding communication patterns with schizophrenic patients	Lecture, group discussion, question and answer
Sixth	Exercise and its benefits (mental and physical) and its effect on the illness, the effect of nutrition, exercise, sleep and proper activity on control of disorder	Lecture, group discussion, question and answer

For patients in the control group, routine interventions and training were performed. Based on hospital accreditation, patients and families in both groups received the necessary care information for schizophrenia when they were discharged in format of CDs and educational pamphlets.

Finally, two months after the discharge, the patient and family were invited to attend the Ibn-e-Sina Hospital classroom and complete the self-efficacy questionnaire.Data were analyzed using SPSS software version 16, descriptive statistics, independent t-test, Mann-Whitney, paired t-test, Wilcoxon, and Chi-square.

Results

The demographic characteristics of the participants and homogeneity in the two groups are presented in Table 2. Based on the result, there were not any significant differences between the two groups. So, the two groups were homogenous.

Comparing the scores of self-efficacy in schizophrenic patients (inner groups and between groups) is presented in Table 3.

Table 2. Comparing the demographic characteristics of schizophrenic patients

Variable	Experimental group	Control group	P
Age (Year)	34.7 ± 13.8	33.7 ± 11.3	0.982
Gender	N (%)	N (%)	0.273
Male	22 (73.3)	18 (60.0)	
Female	8 (26.7)	12 (40.0)	
Educational level	N (%)	N (%)	0.810
Elementary	6 (20.0)	4 (13.3)	
Intermediate	0 (0.0)	5 (16.7)	
High school	18 (60.0)	12 (40.0)	
Higher education	6 (20.0)	9 (30.0)	
Marital status	N (%)	N (%)	0.348
Single	13 (43.3)	13 (43.3)	
Married	6 (20.0)	7 (23.3)	
Widow	3 (10.0)	0 (0.0)	
Divorced	8 (26.7)	10 (33.3)	
Occupational status	N (%)	N (%)	0.052
Unemployed	22 (75.9)	27 (90.0)	
Self-employed	5 (17.2)	2 (6.7)	
Retired	2 (6.9)	1 (3.3)	
Family income	N (%)	N (%)	0.667
Insufficient	24 (80.0)	17 (56.7)	
Sufficient	6 (20.0)	13 (43.3)	
Duration of disorder (Year)	3.9 ± 1.8	4.3 ± 2.0	0.578

Table 3. Comparing the scores of self-efficacy in schizophrenic patients (inner groups and between groups)

Self-efficacy	Experimental group	Control group	P (between groups)
Pre-test	5.4 ± 0.6	4.8 ± 0.6	0.524*
Post-test	6.3 ± 0.7	5.0 ± 0.6	<0.001**
P (inner group)	<0.001***	0.186****	

*Independent t test, **Mann-Whitney, ***Wilcoxon, ****Paired t test

Discussion

The present study showed that after home visit program, the self-efficacy of schizophrenic patients in the experimental group was improved significantly compared to the controls. Although no similar study has been found in this regard, one of the prerequisites for self-efficacy in disease control is gaining knowledge about it because gaining knowledge can empower people to follow treatment, change behavior and reduce problems and complications. In addition, it assists in causing illness, reducing recurrence and readmission of the patient. In this regard, Shamsaei et al. conducted a study entitled "study of the effect of home nursing care on the treatment of schizophrenic patients hospitalized in Hamadan hospital." This study showed that in both stages of evaluation (3 and 6 months), the frequency of recurrence and hospitalization of patients in the experimental group was significantly lower than in the control group. Also, the patients in the experimental group followed their medication instructions more accurately and regularly than the patients in the control group, which in this regard, there was a significant difference between the two groups (16). Considering that gaining knowledge leads to behavior change, adherence to treatment, and ultimately reducing the frequency of recurrence and readmission of the patient, the results of the two studies are comparable and consistent. Among the reasons for concordance are the characteristics and mechanism of the effect of home care used in the two studies. Furthermore, because home nursing care for schizophrenia patients allows the process of treatment, care, and rehabilitation of patients after discharge from the hospital to continue in a regular, accurate, and scientific manner, maintain communication between the health team, family, and patient and accessibility Provides schizophrenia patients with easy access to health care (16).

Fallahi Khoshknab et al. also conducted a study aimed to determine the effect of home care in preventing readmission of acute schizophrenic patients. This study showed that after 3 and 6 months of follow-up, the rate of readmission of patients in the experimental group was significantly lower than the control group (17). This study also shows the effect of home visits on people's awareness. Factors that can be effective in the learning process include physical, emotional, and mental fitness, motivation and purpose, previous experiences, learning situation, and environment; providing appropriate teaching methods and practices and repetition that home visit has such characteristics, especially since it is based on health theories (17,18).

Heidari et al. aimed to determine the effect of a self-management program on self-efficacy of patients with chronic obstructive pulmonary disease. They showed three months after the intervention, the mean self-efficacy score of experimental group was significantly higher than the control group (19). Considering that self-management programs and home visits are in the categories of health promotion models and the goal of both of them is to promote the independence and function of the patient and the chronic nature of both diseases, the results of the two studies can be combined and compared. It can be said that the results of these two studies are consistent with each other. Because home visits, by educating people, make them sensitive to follow-up treatments and care in the post-discharge period, like the results of the present

study. Therefore, it can be concluded that home visits have made the importance of follow-ups, and maintaining contact with the physician. Researchers believe that the difference in prioritization for patients' educational needs in the post-discharge period between the patient and the service provider is significant, so patients should be involved in determining their educational needs and care planning decisions (20). In the intervention designed in the present study, this issue has been considered. The results also show that the patients involvement has in self-care and decision-making increase continue the follow-ups and contact with physician.

Hosseini et al. also conducted a study entitled "determining the effect of home nursing care on the complications of immobility in the musculoskeletal system of patients with stroke." This study showed that after the intervention, the complications of immobility in the musculoskeletal system of patients in the experimental group were less than patients in the control group (21). Considering that the reduction of the incidence of complications due to the disease indicates the patient's ability to manage his/her disease, so the results of the two studies can be compared with each other. Because this model introduces the clients as a continuous and effective care factor in their health process and continuous care, a regular process to establish practical, interactive, and consistent communication between the client and the nurse as a provider of health care services to identify needs and problems. This intervention motivates the clients to accept continuous health behaviors and help maintain their recovery and improve their health, which is entirely appropriate and coordinated with the characteristics of chronic diseases (22).

Sharifirad et al. also conducted a study to explain the role of self-efficacy in the self-care of patients with diabetes. This study showed that self-efficacy provides a useful framework for understanding and predicting the extent of adherence to self-care behaviors and the effectiveness of self-management in the treatment of diabetes. Among these, issues associated with changing life habits, such as eating habits, smoking, and exercise, require high self-confidence, and self-efficacy are more complicated (23). However, training based on the home visit model for characteristics such as strengthening the constructive ability of individuals can improve management of disease this model effectively organizes human beings' cognitive, social, emotional, and behavioral skills to achieve different goals. In this model, having individuals' knowledge, skills, and previous achievements are not good predictors of future performance, but human belief in their ability to do them affects how they perform (24). Therefore, the improvement of the mean score of disease management in patients with schizophrenia in the present study is not unexpected.

Lobban et al. also conducted a study entitled "feasibility of a supported self-management intervention for relatives of people with recent-onset psychosis: REACT study". The researchers concluded that the self-management training package effectively reduces the stress caused by the disease, increases adaptability, and increases the general health of schizophrenic patients (25). The results of this study are somewhat consistent with the present study results because, in both studies, educational programs are planned, and the active participation of patients and their involvement in educational classes have been able to increase patients' awareness about the disease acceptance and reinforcement. Their compatibility and this issue can lead to social activities and more active participation in such activities. The present study also indicates that home visits have convinced patients to accept the disorder and improve management it by participating in this program and strengthening his/her spirit. One of the limitations of this study was the limited population to patients with schizophrenia the generalizability of the results to other patients with mental illnesses is limited.

Conclusion

Considering the positive effect of home visits on improving the self-efficacy of patients with schizophrenia, this educational and care model may help this group of patients to manage their illness. Therefore, this care model is useful to improve the self-efficacy of patients with

schizophrenia to avoid complications, hospitalization, and costs ultimately.

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