

Original Article

**The effects of nursing discharge plan (post-discharge education and follow-up)
on self-care ability in patients with chronic schizophrenia hospitalized
in Razi psychiatric Center**

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Abstract

BACKGROUND: Schizophrenia is a debilitating psychotic disorder that affects patients' personality, career-related and social functioning. Patients stop medications after discharge or inpatient care, when they feel relatively recovered. Most patients do not know that they are sick and they need medication for recovery due to lack of information and cognitive impairment, which makes them incompetent for self-care. A well designed discharge plan with disease management, prevention cares and education along with follow-up can significantly improve patients and decrease the health care costs; because it helps them take care of themselves and maintain a certain level of health. This study aimed to determine the effect of discharge, education and follow-up program on self-care abilities of patients with chronic schizophrenia.

METHODS: This was a quasi-experimental study, using a hospital based accessible sampling method. Participants included 60 schizophrenic patients who were randomly divided into two groups of intervention and control (30 patients in each group). After their symptoms were relatively controlled, the intervention group received a service of post-discharge program and home-care for 6 months. Data were collected before, and one month after education up to 6 month after discharge, using a demographic data questionnaire and a researcher-made questionnaire for self-care. Validity and reliability of instruments were approved by content validity and test-retest, respectively. Also, ethical approval for this study was obtained from the University of Social Welfare and Rehabilitation Science.

RESULTS: There was a significant difference between the self-care abilities after intervention (from month 1 to month 6) in the intervention group compared with the controls. It means that conducting a discharge plan, education and follow-up increased the self-care abilities of the participants in the intervention group compared with themselves and control group members.

CONCLUSIONS: Educating patients and their families and follow-up cares after discharge along with medications led to independency, self-care improvement and cognitive and social functioning of schizophrenic patients.

KEY WORDS: Discharge planning, self-care, schizophrenia.

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Nowadays, psychiatry considers human being as a bio-psycho-social unit, being always in a kind of dynamic adjustment. The result of such a view on the psychotic life has made us naturally closer to the reality in finding the causes and nature of psychotic disorders.¹

Among psychotic diseases, schizophrenia is one of the most debilitating ones which destroys individual, job-related and social functioning² and chronic schizophrenia is actually the main part of rehabilitation service demands in psychiatric wards.³

The incidence rate of schizophrenia in

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normal population is about one percent; therefore, it can no way be considered a rare disorder.⁴ The prevalence of schizophrenia in the last study conducted in Iran is reported to be 0.6%, which is equal to 420,000 patients considering the current population of Iran (around 70 million). Estimating that the costs of a disease for the society is a complicated task, the total medical and indirect costs of schizophrenia (such as mortality and lose of efficiency) is about 50 billion dollars in the United States and about 75% of patients with severe schizophrenia are disabled and unemployed.⁵

Moreover, the existence of a serious chronic disease in the family usually has a deep impact on the family structure, roles and their functioning. For this reason, the role of families in prevention, medication and rehabilitation of psychotic and physical diseases are very important. According to statistical estimations, more than 76.7% of schizophrenic cases have relapses due to incomplete medication, lack of necessary follow-ups, rejection from families (turbulent families), families' lack of knowledge to deal with the patient, etc. Educating patients' family members can change their attitude towards schizophrenia so that they can appropriately face problems and complications.⁶

Studies showed that families whose patients have a high level of self-care are more satisfied with their patients and are more willing to continue caring for their patients. Also, care providers prefer patients with less self-care skills and more destructive behaviors to be kept under supervision in the institutional environments.⁷

In recent century, there has been a change in the approach of providing health care for psychiatric patients and the aim is to hospitalize only those psychiatric patients who are a threat to themselves or others. Increase of health care expenses in one hand and attitude change towards community based health services and increase of patients with chronic schizophrenia and elderly who need home-care on the other hand, have played important roles in creating and developing the philosophy of presenting mental health care at home. The results of these

services that begin with discharge from hospital and continue in the community showed the necessity of such services more.

Those with chronic psychotic disorders most benefit from home-care services and just in such conditions, they can have a productive, satisfactory life with acquisition of skills and necessary supports.⁸ Continuing the treatment of schizophrenia is necessary and includes discharge plan and specific treatments based on the society,⁹ because studies showed that schizophrenic patients stop medications after discharge from hospital or receiving inpatient services and relative recovery. Most of these patients cannot understand that they need medication to recover completely or even do not know that they are sick.⁵ Therefore, lack of ability to process information and lack of cognitive functioning in these patients leads to incompetency in taking care of themselves.⁸ The focus of mental health is strengthening self-care and recovery and improving quality of life along with preventing frequent repulses. Therefore, nursing interventions for schizophrenic patients are focused on patients' safety, accepting the disease, educating the medications and continuity of treatment, intervention at the time of hallucinations and delusions, social skills and self-care and should also include discharge plan for follow-ups after treatment.⁹ Patients' follow up after discharge and creating strong links between hospitals and the society are among important nursing duties.¹⁰ This can significantly improve patients and decrease health expenses and social costs and can be a good prognosis for chronic mental patients because it encourages them to participate in their health care and be responsible for their health.¹¹ This task should be done by cooperation of various specialties aiming at assuring thoroughly and continuous care after discharge based on the patients' needs.¹² So, considering the importance of this issue for patients, their families and the society, and considering that there has been no study on the effects of such interventions on self-care skills of schizophrenic patients in Iran or other countries, and that most studies have just focused on the effects of education and follow-up care on the

frequency of hospitalization and relapses, this study was conducted to determine the effect of education and providing health care services at the residence of schizophrenic patients after discharge on their self-care abilities.

Methods

This was a quasi-experimental study on 60 male patients with chronic psychiatric disease, in the age range of 18 to 50 years, hospitalized in acute wards of Razi psychiatric hospital. All the patients were ready for discharge after their physician controlled the symptoms, their families were residing in the city of Tehran and were able to take care of the patients and who had no disability or physical chronic disease. The patients were divided into intervention and control groups (30 in each group).

Hospital based accessible sampling was used and patients who were diagnosed with schizophrenia by their psychiatrists, met our inclusion criteria and their families were willing to participate, were entered in the study after the objectives and method of the study were explained to them. The intervention group were transferred to the research section after hospital treatment and in the process of discharge, after their symptoms were relatively controlled based on the inclusion criteria. Then, they attended 3 educational sessions on self-care, importance of treatment continuity and medications, ways to improve and maintain physical, mental and social health and methods of overcoming stress. The content of the sessions were selected from mental health sources and the teaching was performed by nurses and psychologists of the hospital ward. Also, an educational session was held for patients' families on the importance of the mentioned issues, how to intervene in crisis situations and deal with mental disorder symptoms. Data were collected using a demographic questionnaire and self-care checklist. The validity of the instruments was approved by the faculty members of the university and their reliability was measured by test re-test, by giving them to a group of 10 patients twice with a gap of two weeks. The reliability of the self-care questionnaire was calculated as $r = 89\%$. Data for the

study were collected before, one month after the educational sessions and 6 month after discharge. In the discharge plan, the first visit was scheduled at home by a nurse to check the patients' family condition before discharge. Then, the second visit was done 15 days after discharge and during the first and second 6 months after discharge; visits were performed every 15 days and every month, respectively.

Evaluation of the control group was the same as that for intervention group, but without any intervention. Absolute and relative frequency tables and charts were used to present the characteristics of study subjects and Kolmogorov-Smirnov test was used to check data normality (distribution). Also, to compare the results of before and after study, the paired t-test with a significant level of 95% ($p \leq 0.05$) was used. It should be mentioned that the management of all follow-up activities was done by nurses and ethical issues were followed based on the university ethical guidelines.

Results

The results of this study showed that most subjects in both intervention and control groups were aged between 30 to 39 years old. Most subjects of both groups were single and had high school studies. The age when the disease started and the first hospitalization in most subjects of the intervention group was 20-25 years of age and in controls was 14-19 years of age. It means that both groups were in the age range of 14 to 25 when the disease started or when they were hospitalized. Most subjects in the intervention group (73.4%) received more than 8 educational sessions and home visits within 6 months follow-up and during this time, 30% of them needed intervention in crisis and 20% were referred to hospitals. The results of the study on demographic data showed that among all measured variables of the subjects in both intervention and control groups, just the patients' age at the first hospitalization was significantly different which had no effects on the result of this study (Table 1).

Table 1. Demographic variables of participants in the intervention and control groups

Variable	(t) amount	P-value
Age	-0.14	0.889
Number of children	1.329	0.189
Age when the disease started	1.822	0.074
Duration of disease	-1.181	0.242
Patient's age at the first hospitalization	2.54	0.014

Considering the results of Kolmogorov-Smirnov test, self-care ability variable had a normal distribution in total and in both groups ($p > 0.05$). Therefore, paired t-test was used to find the difference of means between the two groups before and after the discharge plan.

The mean score of self-care ability in the control group at the time of discharge and six months later showed a significant difference ($p \leq 0.05$). The mean self-care score was 44.26 before the discharge, which was related to the health care and treatment during hospitalization, and it decreased to 38.98, which was related to lack of supervision and follow-up (Table 2).

The results showed that the most frequent self-care ability score before the discharge plan was 36.7% for the control group and 33.3% for the intervention group and the score level was 41-50. However, the most frequency of scores after discharge was in the intervention group (43.3%) and the score level of 56-60. Increased changes of patients in the intervention group (56.7%) during fourth and fifth months and the decrease of frequency in the age group 35-40, from 3.3% after discharge to 0% in the 4th and 5th

months showed that the self-care ability of patients in the intervention group during discharge plan was obviously improved.

Comparing the self-care ability of the intervention group also showed that the difference between the mean of this variable before and after conducting discharge plan was statistically significant ($p < 0.05$). This showed that the discharge plan during hospitalization increased highly the patients' self-care ability and this increase was seen in the 1st, 2nd, 3rd, 4th, 5th and 6th months after discharge and as a result discharge plan and patients' follow-up in the society via providing health care at home and education, etc., had significant effects in increasing self-care ability of the participants in the intervention group (Table 3).

The mean self-care ability between the two groups before the discharge plan had no significant difference, but after the intervention, this difference became significant ($p < 0.05$). It means that conducting discharge plan improved the self-care ability of the intervention group (Table 4).

Table 2. Self-care ability score of the participants in the control group before and 6 months after discharge

	Statistic	P level	CI		Correlation coefficient	P level
			Lowest	Highest		
Self-care ability before and 6 months after discharge	2.560	0.016	1.066	9.533	0.190	0.316

Table 3. Self-care ability score of the participants in the intervention group before and after discharge plan

	(t)	P level	CI		Correlation coefficient	p level
			Lowest	Highest		
Before and after hospitalization	-9.04	0.00	-12.01	-7.58	0.541	0.02
Before and after 1st month	-11.68	0.00	-13.12	-9.21	0.578	0.001
2nd to 6th month	-15.77	0.00	-15.25	-11.74	0.659	0.00

Table 4. Self-care ability score of the participants in the intervention and control group before and after discharge plan

Variable	(t)	P level	CI	
			Lowest	Highest
Before	-1.158	0.252	-4.912	1.312
After	7.843	0.000	-12.660	21.339

Discussion

The results of this study clearly showed the effects of home care and providing a good discharge plan on the self-care ability and independence of patients with chronic mental disorders. In fact, schizophrenia is a complicated disease with various psychotic symptoms that leads to disability and many problems in various aspects of social and psychological life and most patients may need treatment and care for their whole life.¹³

Nursing care at home for schizophrenic patients can continue the process of treatment, care and rehabilitation of patients after being discharged from hospital in an orderly, precise and scientific way. It can also keep the relation between health care provider team, patients and their families and provide easy access of schizophrenic patients to health care services.¹⁴

The results of this study showed that both groups before the discharge plan had almost the same low level of self-care abilities. Haber et al., also believed that self-care ability of schizophrenic patients reduces after discharge because they stop medication and treatment follow-up. Moreover, this disease is chronic and patients have obvious functioning reduction.⁷ Carson et al., also said that decrease of self-care ability was one of the major problems in chronic schizophrenia.¹⁴

The results of the study determined that most subjects had the highest scores of self-care ability from the time of discharge up to the 5th month after that. It means that self-care ability in the intervention group increased due to receiving educational and follow-up services and these services improved their ability and made them more independent, which was the main aim of this study.

Comparing the self-care ability of the intervention and control groups after 6 months showed that 63.4% of the participants in the in-

tervention group had the highest scores, while no one in the control group had such a score. Therefore, follow-up and providing care services at home and educating patients and their families have been effective in improving the self-care ability of participants in this study. These findings are in the same line with the results of other studies. For example, most studies say that the main goal of home care based on discharge plan is to improve the self-care and independency of psychiatric patients and consider educating patients and their families as important factors of self-care and independency.¹⁵⁻¹⁷ Ryu et al also in their studies reported that psycho-social educations provided before and after discharge to patients with chronic psychiatric disorders improved patients' knowledge of their disease, their social functioning, communication skills and increased patients' self-care abilities.¹⁸ Glynn et al. also provided psycho-social educations to their patients' families and taught their schizophrenic patients about the nature of their disease and found these educations very effective in reducing symptoms and improved their patients' functioning as well as the burden of disease on families.¹⁹ The results of this study also showed the obvious effects of discharge plan on improving self-care abilities.

As Derstine believes, discharge plan for psychiatric patients make them successfully return back to the society.¹⁷ Erwin also says that discharge plan improves independency of psychiatric patients and a precise planning can reduce costs, improve symptoms and reduce the relapses and frequent hospitalizations.¹¹ Seo et al., also found that educating social skills to patients with chronic schizophrenia using problem-solving method can improve patients' skills for social life and increase their self-esteem and abilities for independent life.²⁰ The study of Marcus et al., on the number and costs of hospi-

talization of patients with severe schizophrenia during 3 years in the USA showed that developing and continuing care ranges and medication therapies at the residence of patients can decrease the frequency and severity of their disease attacks and can guide them to have a more independent life.²¹ The results of many other studies also showed that patients with chronic psychiatric disorders especially chronic schizophrenia are in fact a vulnerable population with poor sanitary conditions and lack of access to necessary health care. The health contradictions that these patients have and the chronic stress due to mental illness stigma and its subsequent social isolation provoke their poor health. Therefore, practical plans and cooperative studies in the developing countries should focus on development, implementation and evaluation of local care programs in order to provide proper care accessible to patients at their residences.²² In addition, by participating in such medication-care programs, patients would not see the disease and recovery as something separated from them and their tolerance and acceptance of their career, education and in general, socialization at the community would be increased.²³

Finally, considering the results of the present study and similar studies it can be concluded that discharge plan, education and follow-up care and medications at the residences of schizophrenic patients have many beneficial outcomes and not only improve patients' abilities in cognitive and functional aspects, also makes it possible for patients to have access to proper

health care services that they need. One of the problems faced by the researchers of the present study was lack of interest in patients and their families to receive care services at home. This problem was solved by providing free medications during the study as well as registering patients to receive free services in the clinic.

Recommendations

- Designing proper discharge plan based on education and follow-up care services at the psychiatric patients' residences should be considered an effective therapy and complementary to existing treatments and should be used in psychiatric wards.
- Health care policy makers and authorities as well as hospital managers should develop nursing services and home care for psychiatric patients so that providing follow-up, treatment and rehabilitation services to schizophrenic patients become accessible and easy in the society.
- Students in specialties related to psychiatric rehabilitation should be educated for follow-up care and home care services so that their knowledge and practice for psychiatric health programs in the society are improved.

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