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The Effect of the Social and Independent Living Skills, the Community Re-entry Program Application for Patients with Schizophrenia on their Functional Remission and Drug Adherence

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ABSTRACT This research has been conducted to determine the effect of "social and independent living skills, the community re-entry program" implemented in schizophrenic patients on the functionalities and medication compliance. The research sample included 30 patients with schizophrenia. After evaluating the patients with questionnaires, the FROGS (Functional Remission of General Schizophrenia) Scale, Morisky Compliance Scale and Drug Attitude Inventory, the "Social and Independent Living Skills, The Community Re-entry Program" (SILSCRP) has been applied, and the same tests have been reapplied after the 6th month of the training to the patients who had been followed up by monthly phone calls. Evaluating the average scores of the functional recovery scale and its subscales in schizophrenia patients, it has been found that the overall total score was 52.1 and the Social Functioning Subscale total score was 19.6, respectively. It has been determined in the paper that the SILSCRP training given to the patients with schizophrenia has affected the functionalities and the medication compliance of the patients positively. The SILSCRP training program has increased the functionalities and medication compliance of the patients with schizophrenia. Training and rehabilitation in the chronic mental disorders should be prominent in our country.

INTRODUCTION

Although Schizophrenia is serious and important due to the illness symptoms and the accompanying problems, it is considered to be a disorder that can be treated today (Mortan and Sutcu 2012; Bilge et al. 2016; Karakas et al. 2016). Providing functional remission is an important treatment goal that allows the patients to reintegrate into the community and business life and reduce the social burden and the health-custody costs (Heldin et al. 2007). The functional remission in schizophrenia includes results such as the development of cognitive performance and social functionality as well as the symptom control (Emiroglu et al. 2009).

Schizophrenia is a disease that requires the application of multiple treatment methods together due to the various characteristics in the fields such as the etiology, the clinical manifestations, the course and the termination (Arslantas et al. 2009; Sonmez 2009).

Failing to make the ambulatory monitoring plan before the patients with schizophrenia leave the hospital, preparing them to deal with the environmental stressors and the inadequacy of the community-based rehabilitation programs leads to them being re-admitted to the hospital (Duman et al. 2006). While drug therapy is essential, the most appropriate method is the integration of various unique psychological and social interventions (Deveci et al. 2008; Schooler 2006). Psychosocial interventions include cognitive behavioral therapy, social skills training programs, family interventions, group therapy and psycho-education practices (Basogul and Buldukoglu 2015).

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The psychosocial skills training is a program that enables the patients to cope with the disease easily, prevents the flare-up and the recurrence of the disease and improves the social functionality, the insight about the disease, the adherence to drug therapy and the quality of life (Deveci et al. 2008). psycho-education should focus on teaching the individuals how to live with their problems and disabilities (Duman et al. 2007).

The community-based rehabilitation applications for individuals with chronic mental disease are not sufficient and in some institutions the ambulatory monitoring is being applied and limited programs in which the families are involved are being applied (Duman et al. 2007).

In the research, it has been stated that patients with schizophrenia need to be supported emotionally, socially and financially, educated and encouraged to acquire skills (Gumus 2006; Duman et al. 2006).

Studies have shown that the rehabilitation services are insufficient for the patients with chronic mental disease in Turkey and also where they need to be supported about the functionality and the coping methodology of the disease (Yurtsever 2001; Yildiz et al. 2002; Duman 2006).

Working in the area of interventions, for the patients with schizophrenia are quite limited. Studies with such interventions need to be conducted for patients with schizophrenia. For these reasons, improving the social functionality and the adherence to therapy of the patients are the aims of the community re-entry program.

H_0: The Community Re-entry Program improves the functional remission to therapy of the patients.

H_1: The Community Re-entry Program improves the adherence to therapy of the patients.

METHODOLOGY

Study Design

It was planned as a single group pre-test and post-test pre-experimental model.

Setting and Sample

The population of the research consisted of 61 patients with schizophrenia who were under treatment in the Regional Training and Research Hospital psychiatric clinic. The study sample consisted of 30 patients from the population who met the inclusion criteria for the research and agreed to participate in the research. The inclusion criteria for the patients were as follows;

- being under treatment in psychiatric clinic, being diagnosed with schizophrenia according to DSM-IV criteria,
- being able to learn descriptions in each learning activity
- being able to give appropriate answers
- being able to give attention to those described during the session
- being in need of learning the skills taught in this program
- being able to adapt to the functioning of the group

Ethics Consideration

The research was approved by the ethics council. Those who were willing to participate in the research were taken into the study. After having explained to the individuals who would participate in the research about the purpose of the research and the necessities to be done, they were informed that they were free to decide whether to participate in the research or not. Written consent was obtained from the patients participating in the research, and from the relatives in some patients.

Measurements

The survey form that determined the socio-demographic and disease characteristics, the Functional Remission Scale in the Patients with Schizophrenia, Morisky Medication Adherence Scale and Drug Attitude Inventory were used to collect data.

The Survey Form

There were 13 questions in the survey form which determined the socio-demographic characteristics (gender, age, educational level, marital status, employment, place of residence, family members, income level, social security) and the duration of the disease.

The Functional Remission Scale in Patients with Schizophrenia

The Functional Remission Scale in schizophrenia was designed by the professionals of

the "Functional Remission in Schizophrenia Observation Group". It was a 5-point likert scale which consisted of 19 items and viewed the improvements in functionality separately from the symptoms of the disease. It had 4 sub-dimensions including social functionality daily living activities, occupational functionality, health care and treatment. The applications came off in the form of semi-structured interviews. The application time was approximately 30 minutes. The assessment was based on information received both from the patient himself and his family. The period of time that was to be questioned in the assessment was the last month before the interview. There were five assessment levels for each item. While the first level (not shown) stateed the improvement in the lowest level, 5th level (perfectly shown) referred to the "ideal" functional level. There were also the 2nd level (partially shown), the 3rd level (sufficiently shown) and the 4th level (almost all shown). And when stuck between two levels, the lower level was selected. The maximum points that can be taken from the scale were 95 and the minimum is 19.

The scale consisted of the subscales of daily living skills, the social functionality and the health care and treatment measures and the functional remission in three different areas. There were questions that would help the interviewer to assess each item. The reliability coefficient which was developed by Llorca et al. was found to be 0.90 (Llorca et al. 2009). The validity and reliability study was conducted by Emiroglu in Turkey (Emiroglu et al. 2009). In this research, the Cronbach's Alpha reliability coefficient of the functional remission scale was found to be 0.91.

The Morisky Adherence Scale

It was developed by Donald E. Morisky and in 1986 the validation study was carried out by Morisky DE, Green LW, and Levine DM. The scale consisted of four questions that measured drug adherence (Morisky et al. 1986). The questions were answered in the form of "yes / no". When all the questions were answered "no", the drug adherence was considered as high, when one or two questions were answered "yes", the drug adherence was considered as average and when three or four questions were answered "yes", the drug adherence was considered as low. It was an easy scale to be filled. In Turkey the validity and the reliability study was carried out by Yilmaz in 2004. In this research, the Cronbach's Alpha reliability coefficient of the Morisky medication adherence inventory was found to be 0.77.

The Drug Attitude Inventory

The drug attitude inventory consisted of 10 questions and was a scale type that has been widely used to determine the drug attitudes. It was the short version of DAI-30 (Drug Attitude Inventory-30 questions) the validity and the reliability of which was carried out by Hogan et al. (1983). There were 10 items on the scale. A patient who was compatible with the drug therapy was expected to mark 6 items as "right" and 4 items as "wrong". While each answer that represented adherence was being assessed as +1, the answers that represented non-adherence were assessed as -1. The results were expressed in the scores ranging from -10 to +10. The Cronbach's Alpha reliability coefficient of the drug attitude inventory was found to be 0.74.

Social and Independent Living Skills: The Community Re-entry Program

Social and Independent Living Skills: The Community Re-entry Program was developed by Liberman et al. in psychiatric rehabilitation program at the University of California, Los Angeles (Liberman et al. 1993; Liberman and Silbert 2005). It was a structured program that was prepared on the basis of behavioural theories and techniques. "Social and Independent Living Skills: The Community Re-entry Program" was a psycho-education-based program. The program was carried out with a group of 6-8 patients. A group of patients completed the program in approximately two weeks. Social and Independent Living Skills: The Community Re-entry Program consisted of six sessions, each of which lasted approximately 35 minutes.The content of the sessions was designed to cover the following: 1. The creation of a positive training environment, introducing the program. 2. The extent of being ready to be discharged from the hospital. 3. To evaluate the effects of drugs. 4. Evaluation of drug-related problems. 5. Recognize symptoms and to follow the messenger. 6. Develop emergency plans to prevent recurrence of the disease. Audio-visual presentation instruments

role-play and interactive methods were used for the training. The feedback was evaluated with the group before each session.

Procedure

The researchers who were to carry out the training participated in the psycho-education program course between 04.06.2009 and 06.06.2009 and completed it successfully obtaining certification. The approval was obtained from the patients who met the inclusion criteria. The duration of the disease, the drug adherence and the functionality of the patients were evaluated by the survey form, the Functional Remission Scale in Patients with Schizophrenia, Morisky Medication Adherence Scale and Drug Attitude Inventory. After the symptoms of the patients had subsided with drug therapy, a group of six patients was created and the psycho-education program was applied. The time table of a group was created considering the schedule of the clinic at least three or four times a week. When there was a new patient meeting the operational criteria, he was taken to the ongoing sessions and enabled to complete the training by joining the first session of the incoming group. Learning activities such as role playing, question-answer, repetition, case reading, checklists and assignments were applied in the groups. The whiteboard was used in the groups. The patients were informed by telephone or face to face interviews with monthly follow-ups and after 6 months from the training program they were evaluated by the Functional Remission Scale in Patients with Schizophrenia, Morisky Medication Adherence Scale and Drug Attitude Inventory again.

Data Analysis

The data were evaluated by the SPSS 17 software. The percentage distributions, the averages, The Cronbach's alpha and the paired t test were used in the evaluation of the data.

RESULTS

In Table 1, it was determined that the total point average of the functional remission scale of the patients with schizophrenia before participating in SILSCRP training was 52.10±13.76 and after the training it was 61.96±11.36 and the difference among the groups was statistically significant (p=0.000). The social and the independent living skills, the community re-entry training program increased the functionality and the drug adherence of the patients with schizophrenia.

In Table 2, it was determined that the total point average of the drug attitude inventory of

Table 1: The comparison of the functional remission scale scores before and after training (n=30)

	FRSS scale *Pre-test* *M± SD*	*FRSS scale* *Post-test* *M± SD*	*t*	*p*
Total	52.10± 13.76	61.96± 11.36	-4.4	0.000
Social functionality	19.6± 5.50	22.23± 4.07	-2.9	0.006
Daily living skills	16.6± 5.03	18.9± 3.63	-2.8	0.009
Health and treatment	10.46± 2.83	13.86± 5.83	-3.2	0.003
Occupational functionality	5.40± 1.99	6.96± 1.49	-5.4	0.000

Table 2: The comparison of the DAI and the MAS scores before and after training (n=30)

	Drug attitude inventory *Pre-test* *M± SD*	*Drug attitude inventory* *Post-test* *M± SD*	*t*	*p*
	4.26±4.71	7.00±3.55	-2.6	0.014
	Morisky adherence scale *Pre –test* *M± SD*	*Morisky adherence scale* *Post-test* *M± SD*	*t*	*p*
	6.13±1.40	7.26±1.04	-4.07	0.000

the patients with schizophrenia before participating in SILSCRP training was 4.26±4.71 and after training it was 7.00±3.55, the point average of the Morisky adherence scale was 6.13±1.40 and after training it was 7.26±1.04 and the difference among the groups was statistically significant (p=0.000). It was determined that psychoeducation was found to affect the functional recovery and the treatment compliance of the patients with schizophrenia positively.

DISCUSSION

As a result of the current research, psychoeducation was found to affect the functional recovery and the treatment compliance of the patients with schizophrenia positively.

This research also found that general functioning of the patients with schizophrenia was not very high, and especially the social functioning sub-scale was poor. In the paper by Emiroglu et al. (2009), both the general and the social functioning of the patients with schizophrenia was found to be higher than that of the current research. And also in the studies carried out abroad the total point of the functional remission was stated higher according to this research (Lancon et al. 2012; Roullion et al. 2013).

In the research, it was determined that the SILSCRP training applied to the patients with schizophrenia affected the functional remission of the patients positively. It was shown in various studies that the psychosocial skills training using the techniques of cognitive and behavioural therapy made an important contribution to the rehabilitation of schizophrenia (Deveci 2008; Granholm et al. 2005). The combined psychosocial approach applications applied by Dogan et al. to the patients with schizophrenia and their families in Sivas were determined to give positive results in the interpersonal relations, family relations, drug adherence and raising the quality of life (Dogan 2002). And also in the studies, the psycho-education programs and the social skills training were found to be effective in reducing the rates of the re-hospitalization of the patients, adherence to drug therapy controls and improving the general level of functionality and the management of the symptoms as well (Yurtsever et al. 2001; Yildiz et al. 2002; Duman 2006, 2007; Duman et al. 2011; Chien and Leung 2013; Chien and Lee 2013; Bilge et al. 2016)

In the research of patients' compliance with treatment was found to be moderate. It has been determined in the research results that the Social and the Independent Living Skills, the Community Re-Entry Program (SILSCRP) training given to the patients with schizophrenia had positive effects on the medication attitudes and compliance. It was shown with many studies that the psychoeducation group therapy improved the drug adherence of the patients (Emiroglu et al. 2009; Yurtsever et al. 2001; Uchino et al. 2012). Also, these results support "the Community Re-entry Program improves the functional remission and treatment adherence of the patients" hypothesis and the researchers' findings.

CONCLUSION

Based on the results of the research it was determined that as the functional remission level increased, the patients were able to receive the necessary precautions to protect their health, cope with the side effects of the treatment, develop their insights for the treatment and increase their treatment adherence. In the area of research, the functionality and especially the social functionality of the patients with schizophrenia were lower in proportion to the other regions and abroad. The social and independent living skills, the community re-entry training program increased the functionality and the drug adherence of the patients with schizophrenia. For these reasons, in particular in the patients with schizophrenia to improve functional recovery should be made permanent psycho-education work and rehabilitation program. Carrying out follow-up researches and concentrating on the rehabilitation studies in the patients with schizophrenia will be useful to examine the long-term effects of psycho-education group therapy. Assessment of the patients after the psycho-education is done in the first month of psycho-education, thus prospective follow up studies are needed for the assessment of the prospective results of the program.

THE LIMITATION OF THE STUDY

The control group could not be created due to the short duration of the research and the small number of patients with schizophrenia. The absence of the control group is a limitation of the research. One limitation of the present re-

search is that it was carried out at a single hospital, and this limitation should be borne in mind when considering the results. Clearly, the research should be repeated at other hospitals.

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