The Effect of Psychoeducation Based on the Transtheoretic Model on Healthy Lifestyle

Behaviors in Individuals with Schizophrenia: Randomized Controlled Trial

02.11.2020

MATERIALS AND METHODS ABOUT STUDY

Aim and design

This study is conducted in pretest-posttest randomized controlled experimental research type.

Setting and time

The study was conducted in a Community Mental Health Center (CMHC) in Hatay in Turkey between April 2019-November 2020.

Sample

The population of the study are the individuals with schizophrenia who registered in a CMHC and are under observation (N=230). The sample number is determined based on another similar study (Erbaba 2018) with power analysis. In the evaluation completed according to the healthy lifestyle behaviours score, the sample number needed to participate in the study was determined to be at least 42 (intervention group=21 - control group=21) in order for research results for Power: 0.80, β:0,20 and α:0,05 to have a meaningful effect. The data were collected from 82 individuals with schizophrenia, as 41 intervention and 41 control groups.

Criteria for the participation in the project was determined as meeting at least one below:

Between the ages 18 and 65

Being diagnosed with schizophrenia according to DSM-V

Being literate

Not having education and language problem that can block the interview

Being open to communication and cooperation

Being in one of the three stages of the TTM: contemplation, preparation and action

Randomization

In order to decrease the selection bias in the determination of intervention and control groups, three people who have no direct role in the study listed from 1 to 82 and intervention and control groups were formed using the simple random sampling method. The numbers to include in the sample were determined with the number generator www.random.org.

Measurements

Personal Information Form: This form prepared by the researcher using literature knowledge consists of total of 22 questions related to their personal features, their disorder's specifications and lifestyles of the individuals with schizophrenia in the study (Selçuk Tosun and Zincir 2016; Demirel Döngel and ark 2018; Erginer and Günüşen 2018; Gerçik 2018; Sungur et al. 2019; İpekçioğlu and Kök Kendirlioğlu 2019; Holt et al. 2019).

Behavioural Change stage Identification Form: It is formed using behavioural change phases of the TTM and based to the literature by the researcher in order to determine the behavioural chance stages of the patients in the fields of taking responsibility for own health, nutrition, physical exercise, spiritual development, interpersonal relationships and stress management (Ay and Temel 2008; Baysal 2013; Tosun 2015). In the TTM developed by psychologists James Prochaska and Carlo Diclemente (1982), it is stated that behavioural change is a process that develops stage by stage and a framework in the classification of the behaviour's stage (Van Nes and Sawatzky 2010). This study only focuses on the stages of change. Stages of change deal with the time dimension of the model and include five stages. The structure of the model consists of stages as pre-contemplation, contemplation, preparation, action, maintenance and termination (Nigg 2001; Prapavessis et al. 2004; Erol and Erdoğan 2007). These stages also explain the interests and the motivations of individuals towards change with time of intention, attitude and behavioural change (Kim et al. 2006).

Healthy Lifestyle Behaviours Scale (HLBS II): It was developed to measure behaviours of individuals that improve their well being associated with a healthy lifestyle by Walker, Sechrist and Pender (1987). The scale was reviewed in 1996 and renamed HLBS II. The scale consists of 52 items and six subfactors and it is a 4-point Likert type scale (never (1), sometimes (2), often (3), regularly (4)). The lowest and highest scores on the scale are 52 and 208 respectively. It is considered that individuals' healthy lifestyle behaviours increase with the increasing total score. According to the results of the study on validity and reliability of HLBS II and its subscales, conducted by Walker et al. (1995); Cronbach's Alpha is 0.94 in the whole scale and changes between 0.79-0.87 for six subscales. The Turkish adaptation of the HLBS II was performed by Bahar et al. (2008). As the result of the Turkish reliability and validity study of the scale; Cronbach's Alpha is 0.92 in the whole scale and it was found out to be 0.77 for the responsibility of health subscale; 0.79 for the physical activity subscale; 0.68 for the nutrition subscale; 0.79 for the spiritual development subscale; 0.80 for the interpersonal relationships subscale; 0.64 for the stress management subscale. As to this study, Cronbach' Alpha is determined to be 0.94 in the intervention group for the whole scale, and for the sub-dimensions, in pretest to be respectively 0.67, 0.87, 0.73, 0.81, 0.76 and 0.76 whereas in posttest to be respectively 0.71, 0.87, 0.71, 0.83, 0.78 and 0.74. As to the control group, it is determined to be 0.95 for the whole scale, and for the sub-dimensions, in pretest to be respectively 0.88, 0.88, 0.79, 0.85, 0.93 and 0.50 whereas in posttest to be respectively 0.86, 0.89, 0.77, 0.82, 0.92 and 0.61.

Research Process

The behavioural change identification form was applied to individuals with schizophrenia, who agreed to participate in the study, and their stage of the TTM was detected. The participants meeting the criteria in the participation stage (contemplation, preparation, action) were assigned to the intervention and control groups with the randomization. Pretests (personal information

form, behavioural change identification form, HLBS II) were applied to the intervention and control groups before the psychoeducation. In addition to the rehabilitation activities conducted in the CMHC, healthy lifestyle behaviours psychoeducation programme (HLBPP), based on the TTM, with 6 sessions (healthcare responsibility, nutrition, physical activity, spiritual development, interpersonal relationships, stress management) was applied to the intervention group for 6 weeks as three days in the weekdays and two sessions in a day.

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                    │ Assessed for eligibility (n=230)│
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                         │  Randomized (n= 82)  │
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│      Intervention Group       │   │         Control Group         │
│    Applying pretest (n=41)    │   │     Applying pretest (n=41)   │
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│ Applying Healthy Lifestyle    │   │        Phone Interview        │
│ Behaviours Psychoeducation    │   │                               │
│ Programme (n=41)              │   │           (n=41)              │
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│  Applying posttests (n=41)    │   │  Applying posttests (n=41)    │
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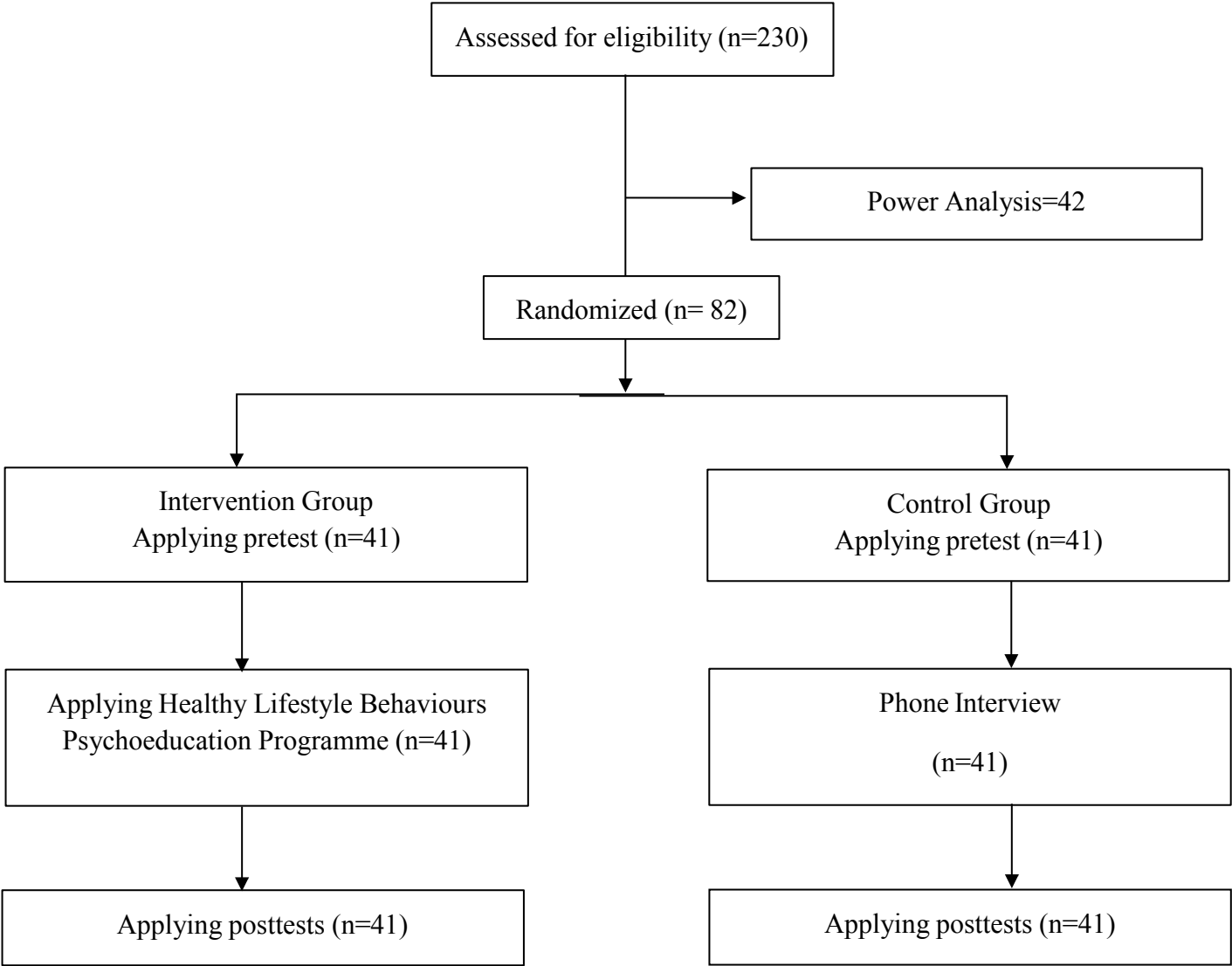
Fig 1. Flow Diagram

Psychoeducation was carried out by the researcher on the same day but within different time zones. Each psychoeducation session took 90-120 minutes with the breaks taken considering

the participants' mood. After completing six sessions, the behavioural change identification form and HLBS II were applied to the intervention group again. On the other hand, the control group continued their rehabilitation practices prepared for themselves in the CMHC. It was contacted with the control group three times, two face to face and one via phone. In the third and final meeting, when the intervention group's sessions are completed, the behavioural change identification form and HLBS II were applied again to the control group. All the participants remained in the study at the end of it. The study was completed with 41 individuals in the intervention group and 41 individuals in the control group (Figure 1).

Ethical Considerations

The permission for the use of HLBS II was granted by the researcher from those who conducted Turkish validity and reliability studies thorough email. Permission was received from Hatay Mustafa Kemal University Tayfur Ata Sökmen Faculty of Medicine Clinical Research Ethical Board (Date: 26.09.2019-Decree No. 06). Using this permission, an application was made to Hatay Provincial the Health Directorate and institution permission from Hatay State Hospital was obtained (Date: 23.10.2019). The individuals with schizophrenia in the study and their families were informed according to the Helsinki Declaration and written and verbal approval were collected.

Data analysis

SPSS v23.0, which is a statistical analysis programme, was used to evaluate the findings of the study. It was benefited from descriptive statistics such as frequency, percentage, arithmetic average, standard deviation, minimum and maximum during data analysis. Parametric tests were used for the data analysis. The chi-squared test was used for relation analysis of two different categorized variables whereas the t-test was used while comparing averages of two independent groups. To determine the alteration of individuals' behavioural change stages before and after receiving psychoeducation, the McNemar test was used. Analysis of covariance

(ANCOVA) while detecting the effect of the intervention study in the researches designed in the entrepreneurial pattern. In ANCOVA, to detect how big the effect of the independent variable on the dependent variable the eta squared (effect size) was calculated and the eta squared value (η2) was interpreted that it presents which parts of the change explain the total variant that the independent variable has on the dependent variable and it received a value between 0 and 1 (Büyüköztürk 2011; Pallant 2017).

Eta squared is interpreted as 0,01 as the minor effect, 0,06 as medium effect and 0,14 as large effect (Cohen 1992). All test results were evaluated in terms of $p < 0.05$ meaningfulness level.