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Effect of Psycho-education Enrichment on Family's Ability to Control Hallucinations in People with Schizophrenia:Pre-experimental Study

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ABSTRACT

Aims The family is a support system in the service system for schizophrenia patients. Family-based psychological training for people suffering from auditory hallucinations has not yet been implemented, and no attention has been paid to auditory hallucination nursing. This study aimed to determine the effect of psycho-education enrichment on the family's ability to control hallucinations in Schizophrenia patients.

Materials & Methods This study is a pre-experimental study with a one-group pre-test and post-test design. From a total of 1343 families of people suffering from auditory hallucinations, 30 people were selected by simple random sampling from Jambi Mental Hospital. The psycho-educational activity was conducted for three sessions of 90-120 minutes. All collected data were analyzed using the Wilcoxon test.

Findings The mean age of the study participants was 45.2±13.6 years. After the intervention, the mean scores of knowledge ($p<0.001$), attitude ($p<0.010$), and skill ($p<0.001$) of participants significantly increased in the post-test compared to the pre-test.

Conclusion Psycho-education interventions can improve the ability of families to control auditory hallucinations in family members with schizophrenia as part of nursing interventions.

Keywords Psychotherapy; Auditory Hallucinations; Family Support; Schizophrenia

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[1] Global epidemiology and ... [2] Comparison of auditory ... [3] Altering the course ... [4] Global economic burden ... [5] Hasil utama ... [6] Profil Kesehatan ... [7] Family members' perspective ... [8] Schizophrenia: impact ... [9] Self-management of unpleasant ... [10] Pengaruh Psikoedukasi Keluarga ... [11] Pengaruh Family Psychoeducation ... [12] Penerapan Family Psychoeducation ... [13] Effects of family-to-family ... [14] The current conceptualization ... [15] Negative symptoms of ... [16] Negative symptoms in ... [17] Family intervention ... [18] Family interventions for ... [19] Family psychoeducation for ... [20] Psychoeducation an effective ... [21] "Family matters": a systematic ... [22] A simple formula for the ... [23] A review of analysis ... [24] Effect of family psycho ... [25] Effect of psycho-educational ... [26] Effectiveness of the ... [27] Effect psychoeducation ...

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Introduction

Schizophrenia is a common mental disorder in the world population, with a prevalence of about 1% in all cultures, and is generally the same for both men and women [1]. About 38-57% of patients diagnosed with this disorder experience auditory hallucinations [2], and this percentage ranges from 64.3-84.3% [3] and 66.9-90.8% in seven countries [4].

Based on the National Basic Health Research (RISKESDAS), households with schizophrenia/psychosis in Indonesia were around seven families per Mile in 2018 compared to the results of RISKESDAS in 2013, which was 1.7 families per Mile [5]. The prevalence of mental disorders in Jambi Province is 0.9%. The highest rates were in Jambi City, with 3913 people, Merangin Regency, with 2.6%, Sungai Penuh City, with 2.3%, and Tanjung Jabung Barat Regency, with 2.3%. The lowest rates of severe mental disorders were in Sarolangun, Kerinci, Batanghari, and Tebo [6].

The family is a support system in the service system for schizophrenia patients. Families have to care for a family member who is seriously mentally ill, but families lack special training or education in management by professional nurses [7]. To overcome these problems, nurses need to provide mental health education about dealing with hallucinations experienced by patients. Mental health education is one of the standard nursing care services that nurses should provide to patients and their families [8].

The nursing interventions for patients experiencing hallucinations are rebuking, taking the medication regularly, chatting with other people, and doing scheduled activities [9-12]. Furthermore, strategies that can be employed by patients with auditory hallucinations include: developing awareness of the symptoms, talking to someone, listening to music, watching television, saying "stop" to these hallucinations, ignoring and disobeying them, using earplugs, managing anxiety, keeping busy, helping other people, taking medicine, and avoiding drugs and alcohol [13-16].

Currently, research on family psycho-education has become important in the nursing field. Family psycho-education could improve family function and knowledge and also modify the attitudes of caregivers [17-19]. None of above mentioned research has ever used the module in the psycho-education of people with auditory hallucination [20].

Nursing intervention has not been properly implemented for family use. In addition, the use of modules as teaching material to educate the families of people with auditory hallucinations has never been developed and implemented in nursing intervention [21]. Due to these problems, the use of modules in psycho-education enrichment in families of people with hallucinations must be developed, especially in Jambi. Therefore, this research aimed to identify the effect of psycho-education enrichment on the family's ability to help control auditory hallucinations in people with schizophrenia. The psycho-educational research provided by the researcher was in the form of a module on how to overcome hallucinations so that it was very different from previous research.

Materials and Methods

Trial design

This study is a pre-experimental study with a one-group pre-test and post-test design.

Participants

Information on all families of schizophrenic patients with auditory hallucinations was obtained from the record of the Alfa Ward at the Jambi Mental Hospital at the end of December 2018. A total of 30 families out of 1343 registered families were selected for this study after screening the families that met the inclusion criteria and were randomly assigned. The selection criteria were a person caring for the patient (16 hours per week), between 18 and 65 years old, and able to read and write Indonesian. A simple random sampling method was used. The selection of samples began by receiving informed consent from 82 families who were visited during the study (from December 2018 to February 2019). Then, 82 families were screened based on the inclusion criteria, and 54 families were selected as samples and agreed to participate in the study. At the end of the study, 30 families remained, and 24 families dropped out. Most dropout participants did not complete the entire set of interventions or completed only one session.

Randomization was initiated by data collection of the patient's family meeting the inclusion criteria. All prospective respondents randomly selected a number on the paper in the provided container. Then the researcher announced that all the respondents who got an even number would participate in this study. The CONSORT flow diagram is shown in Figure 1.

Sample size

Based on Slovin's formula [22], the sample size of 82 families with d=0.05 was calculated as 54 people. But at the end of the study, 24 samples dropped out, so the total sample at the end of this study was 30.

Intervention

This study measures the family's ability to control auditory hallucinations. The intervention that was given to these 30 families included psycho-education in the form of modules on ways to control hallucinations, such

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as rebuking hallucinations when patients are hallucinating, diverting attention to other things when patients are hallucinating, scheduling daily activities for patients, and taking medication regularly. This psycho-educational activity lasted three sessions, each time for 90 to 120 minutes. Participants' knowledge, attitudes, and skills were assessed before and after the three-day psycho-education intervention.

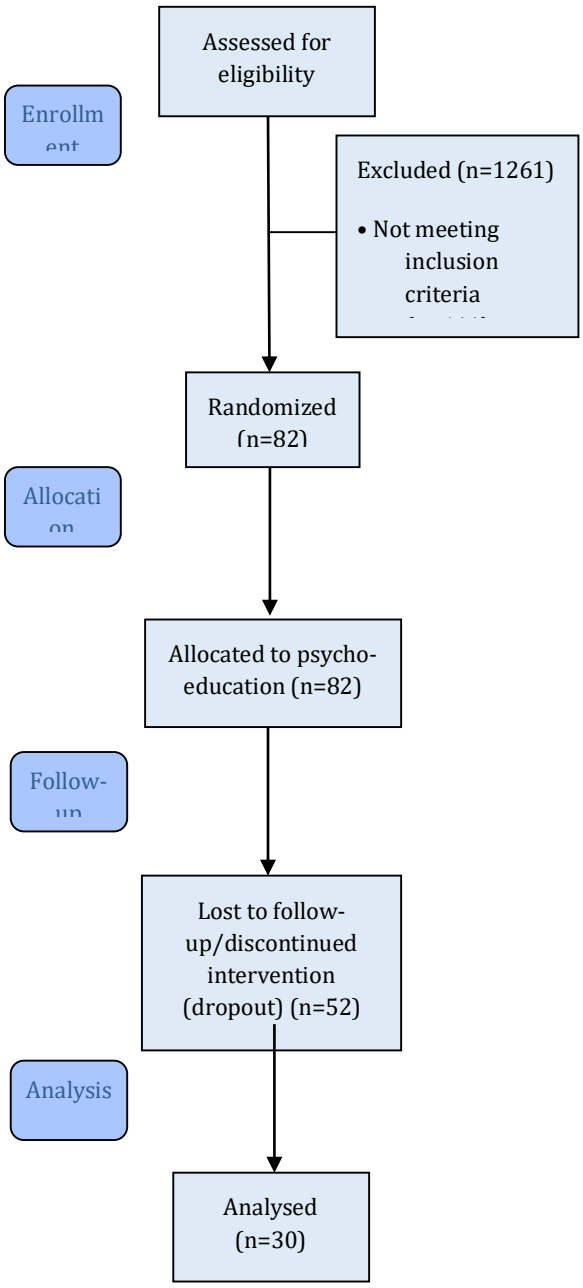


Figure 1) The CONSORT flow diagram

Tools

The dependent variable of the study was the ability of the family to help control hallucinations, including aspects of knowledge, attitudes, and skills, and the independent variable was psycho-educational enrichment. The family knowledge variable was measured using a Guttman questionnaire with 10 items. If the respondent answered correctly, he was given a score of 1, and for a wrong answer, he was given a score of 0. The total score ranged from 0 to 10. The family attitude variable was measured using a 10-question Likert questionnaire. Responses were scored as follows: strongly agree=4, agree=3, disagree=2, strongly disagree=1. The score of the participants was between 1-40. The skill variable was measured using a Likert scale consisting of 10 questions. If the respondent strongly agrees, a score of 4 was given, an agreed answer was given a score of 3, a disagree answer was given a score of 2, and a strongly disagree answer was given a score of 1. The total score ranged from 1 to 40. In collecting research data, we used two trained and blind enumerators.

Statistical analysis

Data were presented as numbers or percentages for categorical variables. Continuous data were expressed as the mean ± Standard Deviation (SD) or median with Interquartile Range (IQR). At first, the data normality test was carried out using the Shapiro-Wilk test. The data were analyzed using the Wilcoxon test because they were not normally distributed. The Wilcoxon test aims to test differences between paired data, comparisons between observations before and after the intervention, and knowing the effectiveness of a treatment [23]. This study only involved 1 study group without a control group to assess knowledge, attitudes, and skills variables; therefore, it was appropriate to use the Wilcoxon test. All tests with p-value <0.05 were considered significant. Statistical analysis was performed using SPSS 16.0 software.

Findings

The mean age of the study participants was 45.2±13.6 years. Most of the participants had elementary education (53.3%), and most family relationship was related to parents (53.3%). The frequency distribution of the respondents' characteristics is presented in Table 1.

Table 1) Frequency distribution of the respondents' characteristics (n=30)

Characteristics	Number	Percentage
Age (years)		
17-25	2	6.7
26-35	6	20.0
36-45	5	16.7
46-55	8	26.7
56-65	9	30.0
Gender		
Male	8	26.7
Female	22	73.3
Education level		
Elementary	16	53.3
Junior school	9	30.0
High school	5	16.7
Family relationship		
Parents	16	53.3
Children	3	10.0
Brothers/sisters	7	23.3
Spouse (husband/wife)	4	13.3

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After the intervention, the mean scores of knowledge (p<0.001), attitude (p<0.010), and skill (p<0.001) of participants significantly increased in the post-test compared to the pre-test (Table 2).

Table 2) Comparison of mean scores of knowledge, attitude, and skill of participants in pre-test and post-test

Variable	Mean±SD	Median (IRQ)	P value*
Knowledge			
Pre-test	4.87±1.25	4.5 (4-6)	0.001
Post-test	6.83±1.23	6 (6-7.75)	
Attitude			
Pre-test	10.63±1.87	11 (8.25-12)	0.010
Post-test	16.70±1.82	17 (16-19)	
Skill			
Pre-test	12.03±2.44	12 (11 - 14)	0.001
Post-test	16.00±3.14	16 (16-17.75)	

*Wilxocon test

Discussion

The analysis results proved that the psycho-educational enrichment intervention affects family knowledge concerning the treatment of auditory hallucinations in people with schizophrenia. Bharati *et al*. [24] found a significant increase in knowledge after giving family psycho-education. This study and previous studies illustrate that family psycho-education helps to increase patients' understanding of illness, especially hallucinations. Understanding hallucinations and the way of caring at home are critical information and a guide for families on how to care. Therefore, on every occasion, the family needs to get information about treating patients at home, even better if accompanied by a handbook that can be used as a guide and can be read if it fails to deal with the patient's hallucinatory behavior.

The results proved that the psycho-educational enrichment intervention affects family attitudes in treating hallucinations of people with schizophrenia. The results of this study are almost the same as those of Ahmed and Ghaith [25], which showed that psycho-education programs are effective in modifying the family attitudes of schizophrenic patients. Shiraishi *et al*. [26] also found that rejection was reduced after receiving psycho-education and social skills training. The results of this study are essential findings where nurses often complain of patient refusal, especially when patients are sent home to their families after undergoing several periods of treatment, even though the patient's condition has recovered and can be independent. However, the family's attitude often causes the patient to return to the psychiatric ward alone to ask for treatment because he feels rejected by his family at home. Therefore, the family psycho-education program, which is mainly devoted to the families of patients with hallucinations, needs to be carried out continuously in the ward, specifically in the mental clinic of the Jambi Regional General Hospital. It is part of an effort to help the whole family accept patients to live correctly in society. Besides that, psycho-education enrichment interventions with modules for families are expected to be used as guidelines for families on how to treat patients at home to help their recovery. The results showed that the psycho-educational enrichment intervention affected family skills in helping to control auditory hallucinations. Suhron [27] stated that there are differences in families' ability before and after giving family psycho-education in caring for people with schizophrenia in "Pasung". Although the study results have not focused on people with schizophrenia who experience hallucinations, the two previous studies explained that family psycho-education increases families' ability to care for people with schizophrenia.

In agreement with the previous studies, additional psycho-education materials affect the family's ability to control auditory hallucinations of people with schizophrenia. Changes in these abilities include knowledge, attitudes, and skills of families in caring for people with schizophrenia with particular problems of hallucinations. Therefore, these findings can be used as guidelines for nurses in the nursing ward and mental polyclinic of the Jambi Regional Mental Hospital in providing mental nursing care, especially for families and patients with auditory hallucinations. The success of nursing services also needs to be supported by the family because the family is the spearhead of the continuity of mental health services for patients in the family environment. For this reason, active family involvement from the beginning of care needs to be intensified so that the family can continue the strenuous efforts and successes that nurses have carried out. It leads to the continuation of the patient's recovery, which is expected to last a long time.

Limitations of the study

In addition to the very small number of participants, this study also has other limitations, namely that it was only conducted in one hospital, so it could not compare the characteristics of participants in influencing the acceptance of educational materials from researchers. Further research can be carried out with wider area coverage. To anticipate the drop out of participants, the next study should provide a detailed explanation of the implementation of the intervention.

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Conclusion

Psycho-education interventions can improve the ability of families to control auditory hallucinations in family members with schizophrenia as part of nursing interventions.

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Ethical Permission: No economic incentives were offered or provided for participation in this study. The study was performed in accordance with the ethical considerations of the Helsinki Declaration. This study obtained ethical feasibility under the Health Research Ethics Commission of the Ministry of Health, Jambi, and registration number: LB.02.06/2/158/2018.

Conflict of Interests: The authors declare that there is no conflict of interest in this research.

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