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Psychoeducational intervention on knowledge and perceptions of families of schizophrenic patients under “pasung”

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Abstract

Purpose: The number of pasung cases in West Sumatra in 2020 was still relatively high, totaling 122 people. Of the 19 city districts, Padang Pariaman district is the first with the highest prevalence of pasung mental cases, 24 people. In addition to psychopharmaceutical therapy, the management of schizophrenia requires psychosocial interventions such as family psychoeducation. Families have an important role in helping schizophrenia patients to realize the pasung-free program launched by the government. **Methods:** Pre-experimental study by one-group pre-test and post-test design conducted in September 2021-June 2022 involving 18 families of schizophrenia patients who were shackled in the Padang Pariaman Public Health Center area. Univariate data analysis is presented as a frequency distribution and bivariate analysis using paired sample t-test and Wilcoxon test. **Results:** The level of knowledge before the family psychoeducation intervention was poor (94.4%), and the level of knowledge after the family psychoeducation intervention was good (55.6%), the perception before the family psychoeducation intervention was poor (88, 9%) and the perception after family psychoeducation intervention is good (50.0%), there is an effect of psychoeducation intervention on the level of knowledge of families of schizophrenia patients who are shackled p=0.001 (<0.05), and there is an effect of psychoeducation intervention on the perception of families of schizophrenia patients who are shackled p=0.001 (<0.05). **Conclusion:** Family psychoeducation interventions are very helpful in increasing family knowledge and perceptions of schizophrenia disorders, and it is hoped that Puskesmas Agencies will be more proactive in providing family psychoeducation to reduce the number of cases of pasung in the puskesmas working area.

Keywords: patient's family; psychoeducational interventions; schizophrenia

INTRODUCTION

Mental health in Indonesia is a significant public health problem and must receive attention. Psychotic is a term used to describe a condition of severe mental disorder that's typically characterized by an impairment in assessing reality and disrupting daily life and work. The most common type of psychosis, Schizophrenia, is included in the top 10 diseases and ranks first in psychiatric disorders that cause disability

[1]. Schizophrenia is a severe brain disorder that lasts a lifetime. This disorder causes difficulty for the patient in comprehending the difference between real and unreal, thinking logically, and acting appropriately in social situations. Not only patients with schizophrenia suffer greatly from this disease, but also their family members [2].

Worldwide, according to the World Health Organization, in 2022, 24 million people had schizophrenia [3]. Based on *Riset Kesehatan Dasar,* in 2018, there has been an increase compared to 2013, an increase in the prevalence of households with People with Mental Disorders (ODGJ) in Indonesia. It reaches seven per 1000 population each year. Thus, it was estimated that there would be around 450 thousand severe ODGJ cases. In 2018, the proportion of people with schizophrenia who experience *"pasung"* or are shackled was 31.5% [4,5].

West Sumatra has the fourth highest prevalence in Indonesia for schizophrenic mental disorders, specifically 9.1 per mile, and the proportion of schizophrenic mental disorders occurs more frequently in rural areas, 1.15%, than in urban areas, 0.61% [5]. In West Sumatra in 2020, 122 family members had schizophrenia and were in shackling. Padang Pariaman Regency is one of the 19 regencies in West Sumatra and ranks first with the highest prevalence of schizophrenic mental disorder cases under shackles, precisely 24 family members [6].

Knowledge and perceptions of society and families still regard the disease as a disgrace if a family member has a mental disorder, even family members who still believe that schizophrenia is caused by irrational things such as possession by evil spirits, curses, and based on supernatural beliefs. If the family's knowledge is lacking, they'll have a wrong perception of the schizophrenia patient, and this can often result in the patient being ostracized, hidden, or even experiencing *"pasung"* or being shackled [7].

Pasung is a mental health problem in Indonesia, which indicates that patients with mental disorders have not received good and humane treatment. In 2010, the Ministry of Health of the Republic of Indonesia launched Indonesia's program to be free from *pasung* and asked all government sectors to firmly commit strongly to working with communities in the regions [8]. The target of the Indonesian Ministry of Health's Mental Health action plan for 2020 – 2024 was that the number of ODGJ who received service was 100% [9].

Most people with schizophrenia have frequent contact with their families. Therefore, the family must be involved in the treatment and care of their family [10]. In 1990, The Agency for Health Care Policy and Research and the National Institute of Mental Health recommended family psychoeducational interventions among other family treatments. Evidence from meta-analyses suggests that psychoeducation for schizophrenic patients and their families can reduce relapse rates and have positive effects on patients and families, such as reducing the burden on the family [2].

Interventions that last more than three months are more effective than short interventions. Psychoeducation is defined as a program of educating patients with mental illness regarding psychiatric symptoms, treatment management, and the prognosis of the disease [2]. However, it does not only provide information to patients and families; it is also a training method that focuses on encouraging insight and offers forms to control and improve functioning in schizophrenic patients [11]. Evidence from previous studies that found significant differences in knowledge between groups before and after family psychoeducation therapy shows that this therapy is effective in alleviating the burden on families in caring for schizophrenic patients [12].

The intervention provided is based on the type of family psychoeducation. The participants are families, with or without patients, in single or group format. Modalities are education, support, disease management, and problem-solving. The modality is the expression of family emotions and behaviors that affect the patient and family's needs for help, management, and coping with the disease. The intervention carried out in this study consisted of three stages; first conducting a joining session, which means that previously the subject was explained his participation in the study, given an explanation of his participation in the family psychoeducation program at the initial meeting, the level of knowledge and perceptions of family members towards schizophrenia was first assessed using a questionnaire. Second, an educational workshop was given by a psychiatrist at all health centers that have cases of schizophrenia in *pasung*. The third is an ongoing family psychoeducation session, which means that this ongoing psychoeducation session is conducted at least once a month for five months, conducted in conjunction with control at the health center.

Research like this has been done and found that family psychoeducation interventions are beneficial in increasing knowledge about schizophrenia, increasing caregiver empowerment, and indirectly reducing relapse rates in schizophrenia patients. However, it has never been done in West Sumatra, especially Pariaman, which has the highest prevalence in West Sumatra.

Changes in knowledge and perceptions of the family are very influential for the treatment, behavior, and actions of the family because the family has a vital role for schizophrenic patients by caring for the patient for years, which is not easy, and the family has a big responsibility. Therefore, it is necessary to research family members who care for schizophrenic patients, especially regarding family knowledge and perceptions, because this research had never been done in Padang Pariaman Regency, which has the highest prevalence of schizophrenia cases in shackles. Thus, researchers are interested in conducting family psychoeducational intervention research in the work area.

METHODS

This research is pre-experiment research with a one-group pretest and posttest design for one group of subjects. Data were collected using a questionnaire validated and verified by previous researchers. There are dependent variables, , knowledge and perceptions of family members. The knowledge variable uses a Guttman scale: bad if the respondent answers questions correctly 1-7 and good if the respondent answers questions correctly 8-11. The perception variable uses a Likert scale: bad if it scores 10-31 and good if it gets 32-40. In addition to administering questionnaires, direct observations were also made of subjects and schizophrenia patients who were shackled at the research location.

This research was conducted at several Padang Pariaman Health Centers that had cases of schizophrenia and were shackled from September 2021 to June 2022 and had passed the ethical review test of the Faculty of Medicine, Andalas University and the Padang Pariaman National and Political Unity (Kesbangpol).

The population and subjects of this study were family members of shackled schizophrenia patients who acted as caregivers (patient caregivers) in the Padang Pariaman Health Center area. Inclusion criteria are family members who play a role in caring for schizophrenic patients who have been diagnosed based on the Guidelines for the Classification and Diagnosis of Mental Disorders in Indonesia (PPDGJ- III) at the puskesmas and shackled, aged 18-60 years, willing and able to follow all psychoeducation sessions. Exclusion criteria were severe medical illness, history of previous psychiatric disorders, drug use, and family members who did not participate in psychoeducation until the end of the session. The sampling method in this study was non-probability sampling, which was purposive sampling. A sample size of 18 family members who met the criteria was obtained.

Families of schizophrenia patients who met the inclusion criteria were given informed consent to participate in family psychoeducation sessions. Family psychoeducation sessions included Joining Sessions, Educational workshops (and ongoing psychoeducation). In each joining session, tasks were carried out according to the family psychoeducation guidebook.

In the educational workshop, a one-day seminar was conducted by inviting all families who have patients with schizophrenia in *pasung*. The workshop materials included an explanation of the definition, causes, and treatment of schizophrenia, the impact of schizophrenia on the family, an explanation of family psychoeducation, and a discussion. This ongoing psychoeducation session is conducted at least once a month for five months.

These sessions are attempted in a multi-family group format where several family members are present, if not possible, in a single-family format. Activities undertaken at these sessions include identifying issues, solving socialization, and current, structured problems (defining the problem, providing solutions, discussing the advantages and disadvantages of each solution, selecting the best solution, and forming an action plan).

Data analysis using the Statistical Package for the Social Sciences (SPSS) using the paired sample t-test is said to have a significant difference if p <0.05 and previously tested the normality of the data first using the Saphiro-Wilk test (amount of data <50) if p>0.05 then the data is said to be normally distributed and if the data is not normal then use non-parametric statistical analysis.

RESULTS

Table 1 shows that of the 18 family members who cared for schizophrenic patients who were shackled in the Padang Pariaman Public Health Center Work Area, the age was mostly 46-60 years, specifically 13 samples (72.2%), the sex was primarily female, specifically 12 samples (66 .7%), the level of education was mostly Elementary School (SD), precisely 10 samples (55.6%), the occupation was mostly farmer, precisely ten samples (55.6%), and the relation to the patients was primarily siblings, 7 samples (38.9%).

Among the schizophrenic patients who were shackled, the age group was mostly 36-45, specifically 9 samples (50%). The sex group was primarily male, with precisely 13 samples (72.2%). The level of education was primarily elementary school, with 10 samples (55.6%).

Table 1. Characteristics of family members and schizophrenic patients

Characteristics	n (%)
Family members	
Age	
18-25 years	2 (11.1)
26-35 years	2 (11.1)
36-45 years	1 (5.6)
46-60 years	13 (72.2)
Sex	
Male	6 (33.3)
Female	12 (66.7)
Last education level	
None	1 (5.6)
Elementary school Junior High	10 (55.6)
School Senior High School	4 (22.2)
Occupation	3 (16.7)
Unemployed	6 (33.3)
Laborer	1 (5.6)
Trader	1 (5.6)
Farmer	10 (55.6)
Relation to the patient	
Child	1 (5.6)
Father	2 (11.1)
Mother	5 (27.8)
Close relatives	3 (16.7)
Siblings	7 (38.9)
Schizophrenic patients	
Age	
26-35 years	5 (27.8)
36-45 years	9 (50.0)
46-55 years	2 (11.1)
56-65 years	2 (11.1)
Sex	
Male	13 (72.2)
Female	5 (27.8)
Last education level	
None	1 (5.6)
Elementary school	10 (55.6)
Junior High School	4 (22.2)
Senior High School	3 (16.7)
Last occupation	
Unemployed	6 (33.3)
Laborer	5 (27.8)
Workshop employee	1 (5.6)
Restaurant Employee	1 (5.6)
Trader	1 (5.6)
State Electricity Company worker	1 (5.6)
Farmer	2 (11.1)
Tailor	1 (5.6)
History of treatment at a health facility	
Yes	18 (100)
History of treatment in a mental hospital	
Yes	17 (94.4)
None	1 (5.6)
Illness period	
6-10 years	2 (11.1)
11-15 years	5 (27.8)
16-20 years	5 (27.8)
21-25 years	5 (27.8)
36-40 years	1 (5.6)
History of similar disease in family	
Yes	6 (33.3)
None	12 (66.7)
Shackled/*Pasung*	18 (100)

The occupation was primarily unemployed; precisely 6 samples (33.3%) have been treated at health facilities, 18 samples (100.0%). Most have been treated at Mental Hospitals (RSJ), precisely 17 samples (94.4%), the illness period mainly was 11-15 years, 16-20 years, and 21-25 years, specifically 5 samples each (27.8%), the family history of the same disease mainly was not found, specifically in 12 samples (66.7%), and 18 samples (100.0%) were shackled.

Table 2 shows that the level of knowledge before being given the psychoeducational intervention was mostly bad, precisely 17 samples (94.4%), and after being given the psychoeducational intervention, it was mostly good, precisely 10 samples (55.6%). Based on the perceptions of the family, the perception before the psychoeducational intervention was mostly bad, precisely 16 samples (88.9%), and the perception after being given the psychoeducational intervention was equally good and bad, 9 samples each (50.0%).

Table 2. Frequency distribution of knowledge level and perception in families of schizophrenic patients before and after psychoeducational intervention

	n (%)	
	Before	**After**
Family knowledge level		
Good	1 (5.6)	10 (55.6)
Bad	17 (94.4)	8 (44.4)
Family perception		
Good	2 (11.1)	9 (50)
Bad	16 (88.9)	9 (50)

Table 3 shown that the statistical test results using the Wilcoxon test obtained a value of p= 0.0001 (p<0.05) meaning that there was an effect of psychoeducational interventions on the level of knowledge and based on the results of statistical tests using the paired sample t-test, obtained a value of p= 0.001 (p<0.05) meaning that there was an influence of psychoeducational interventions on the perceptions of families of schizophrenic patients who were shackled in the Working Area of the Padang Pariaman Public Health Center.

Table 3. The effect of psychoeducational interventions on the level of knowledge and perceptions of families

Treatment	N	Mean	Std. Dev	Min	Max	Sig.
Knowledge level						
Before	18	5.61	1.420	3	8	0.001
After	18	7.33	1.237	5	9	
Perception						
Before	18	28.22	3.264	23	34	0.001
After	18	32.61	3.415	26	37	

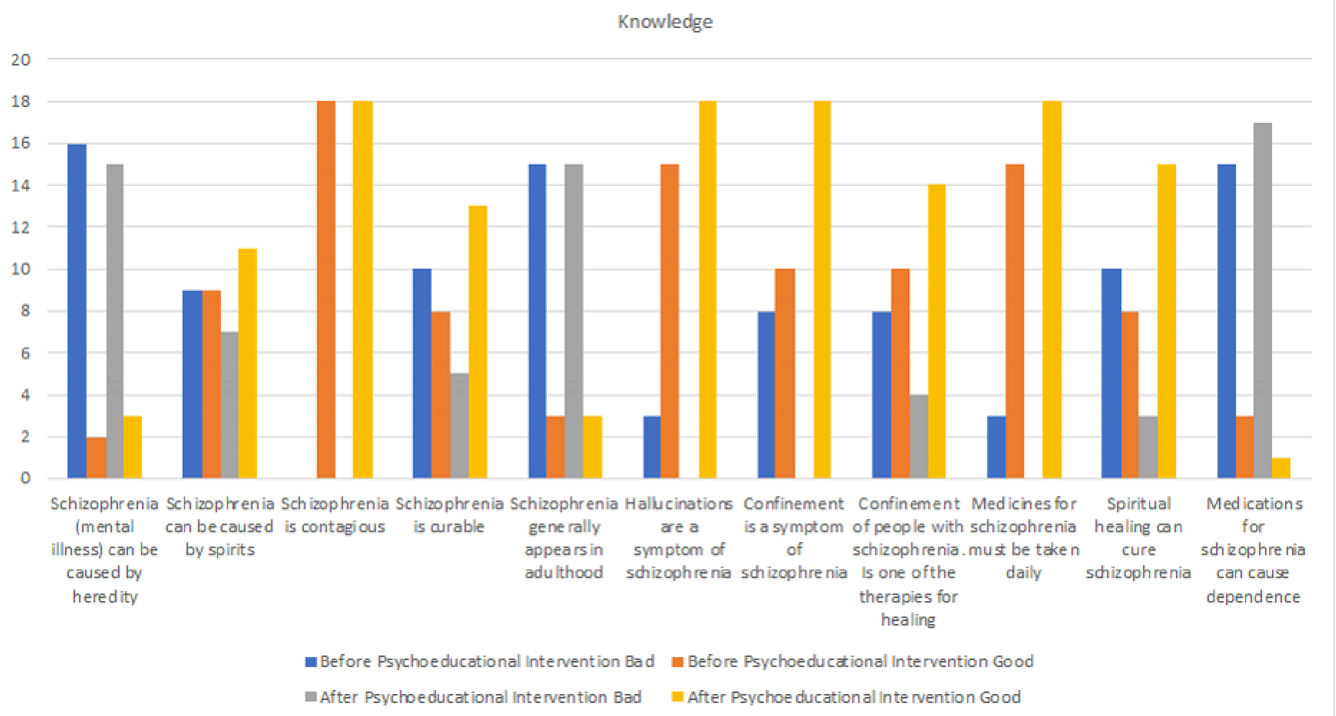

Figure 1. shows the questions regarding knowledge about schizophrenia. Questions that were still poor after the psychoeducation intervention were that schizophrenia (mental illness) can be hereditary, schizophrenia generally does not appear in adulthood, and medication for schizophrenia cannot cause dependence.

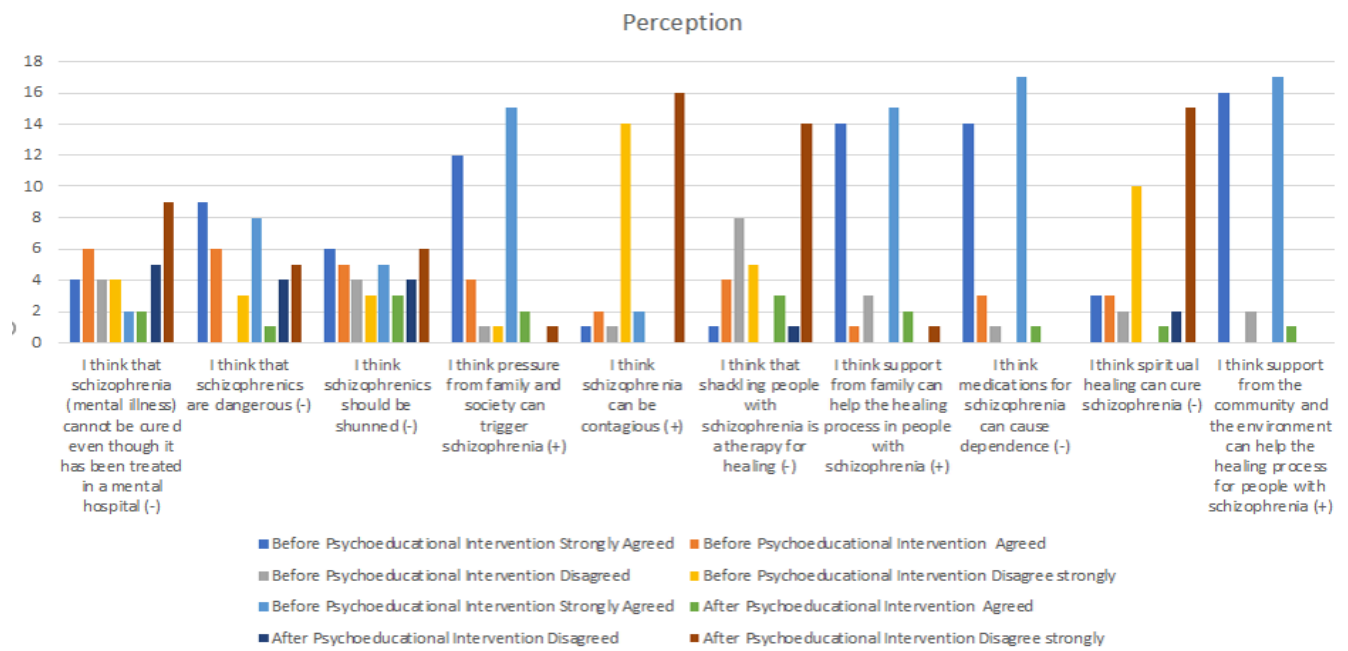

Figure 2. shows questions regarding perceptions of schizophrenia. Questions that are still bad after the psychoeducational intervention are that schizophrenia is dangerous, people with schizophrenia should be shunned, and confinement of people with schizophrenia is a healing therapy.

DISCUSSION

The prevalence of family members or respondents aged 46-60 years. According to Videbeck, age has a relationship with the decision to use mental disorder treatment. The older a person is, the higher the confidence to seek help at health facilities, especially in the family [13]. In contrast to research conducted by Protomo in 2020, it was found that the highest age of the patient's family was 26-35 years old, (23.9%) [14].

In this study, more women than men cared for patients, which aligns with other studies stating that

women are more patient and painstaking in caring for their sick family members while men are physically stronger [15]. The characteristics of respondents based on their last education were elementary school. Videbeck said several factors influence family perceptions of schizophrenia patients, such as education. Education has an impact on self-development, increasing the strata of family intelligence in caring for schizophrenic patients so that patients can return to their families and adapt to the environment [13].

According to Purwanti, employment correlates with providing family support to manage family members with schizophrenia. Families who do not have jobs certainly have more time to care for family members than families with jobs [16]. Most respondents' occupations are farmers. The results of interviews with respondents who care for patients are related to time management. For caring at home and working in the fields, he prepares food and drinks for patients before work. The characteristics of the most relationships with patients are siblings. The function of the family as the smallest unit in society is to maintain the health status of family members. Low-income family support provides 6 times the chance of relapse in schizophrenia patients [17].

In this study, the prevalence of schizophrenia patients was 36-45 years old. Young age is the peak of experiencing schizophrenia because, at a young age, there are environmental factors that affect a person's emotional development, while biological factors influence old age. The prevalence of shackled schizophrenia patients is more male than female. In line with Arif's research, the majority of patients are men who are shackled [18].

This is thought to be due to the pressure experienced by men being heavier than women [19]. The last education of most schizophrenia patients is elementary school; based on epidemiology, people who develop this disease at a young age are unlikely to obtain a high level of education [19]. Based on the results of the study, many schizophrenia patients did not work before getting sick, and all of them had received treatment at health facilities. However, one patient was never admitted to a Mental Hospital (RSJ) because, based on interviews with the family, they did not want to be away from the patient. It was found that the length of illness of patients in this study ranged from 5-25 years. Nurdianasari's research states that an illness of more than five years will cause more severe epiphytes due to the long course of the disease [20].

Their families shackled a total of 18 schizophrenia patients. Confinement in stocks is a treatment method that is still chosen by families in treating family members with mental disorders. Families usually use shackling to protect the patient and others from the patient's aggressive behavior, which can be dangerous and prevent the risk of suicide [21]. The results of interviews in this study show that families shackle patients because they consider it as a way for patients to recover from their symptoms, distance of residence and difficulty of access to hospitals, low family income, and the absence of a National Health Insurance Card (KIS). Health education about schizophrenia and misconceptions about schizophrenia, as well as the provision of timely and appropriate treatment, are needed.

The results of this study obtained from 18 family members of schizophrenia patients for the variable level of knowledge before being given the most psychoeducational interventions was poor, and the level of knowledge after being given the most psychoeducational interventions was good. The knowledge that was still poor after the intervention was about schizophrenia therapy; the patient's family still knew that drugs for schizophrenia could cause dependence, the definition of schizophrenia where the family still knew that schizophrenia (mental illness) could not be caused by heredity, and schizophrenia generally appeared in adulthood, the disturbance of spirits could cause schizophrenia. The family's perception is that schizophrenia is dangerous, schizophrenia needs to be avoided, and confinement is a healing therapy.

According to Notoatmodjo, knowledge can be influenced by many factors, one of which is the level of education. The higher a person's level of education, the better their knowledge. However, it must be emphasized that it does not mean that someone with a low education is also shallow knowledge. A person's knowledge about an object contains two positive and negative aspects; these two aspects will determine a person's attitude; the more positive aspects and objects are known, the more positive attitudes toward particular objects will arise [22]. This is following research conducted by Liza RG et al. in 2019, which states that family psychoeducation interventions are beneficial in increasing knowledge about schizophrenia and increasing caregiver empowerment, indirectly reducing the relapse rate of schizophrenia patients [23].

For the variable perception of family members before being given psychoeducational intervention, most of them were bad, and perceptions after being given psychoeducational intervention were as many as good and bad. Similar results were obtained by a study

in 2020, where the average family ability before psychoeducation was (53.61) and after psychoeducation increased to (68.30) [24]. Perceptions of these conditions can influence health-seeking behavior and response to treatment. Beliefs about mental illness being caused by supernatural forces may lead families to take mentally ill patients to traditional healers. Caregivers may seek herbal remedies and rush back to hospital facilities when it is too late. Medical intervention Medical intervention is an important component of management. Proper knowledge of schizophrenia encourages caregivers to seek clinical intervention [25]. Misunderstanding of the condition and management has resulted in patients suffering due to late diagnosis. Caregiver knowledge of mental health significantly influences patient prognosis [26].

However, higher research results found by Sasono et al. in 2017 showed that the cognitive, affective, and psychomotor abilities of families after treatment increased significantly ($p < 0.05$) [27]. Likewise, research by Wigati et al. in 2016 showed that the cognitive and psychomotor abilities of families after treatment increased significantly ($p < 0.05$) [28].

Based on the research obtained from 18 families of schizophrenia patients who were shackled in the Padang Pariaman Health Center Working Area, the results of statistical tests using the Wilcoxon test for the variable level of knowledge obtained a value of $p = 0.001$ ($p < 0.05$), meaning that there was an effect of psychoeducational intervention on the level of knowledge of the patient's family and for the perception variable, the results of statistical tests using paired sample t-test obtained a value of $p = 0.001$ ($p < 0.05$), meaning that there was an effect of psychoeducational intervention on the perception of families of schizophrenia patients who were shackled in the Padang Pariaman Health Center Working Area.

For 14 years, Ran et al. conducted research utilizing Cluster Randomized Control Trial (CRCT) data and, in 1994, took data from six cities in Xinjin District, Chengdu. Patients with schizophrenia were obtained (n = 326), and those who were still alive were around 238 (73.0%). Then, in 2018, it was found that the difference between the family psychoeducation intervention group had a significantly higher level of employability than the other two groups [29].

In contrast to the study conducted by Hasmila et al. in 2018, there was no significant difference in ability between before and after the intervention ($p>0.05$). However, the number of respondents with better cognitive and psychomotor abilities after the intervention increased [30].

After the psychoeducational intervention was completed, two patients were no longer shackled by their families. Based on family information, these patients were released from shackling because they had routinely taken medication and long-term injections every month by the puskesmas and could control their emotions. This means that psychoeducational interventions for families significantly impact their ability to care for patients. However, the results have not significantly reduced the number of shackling cases in Padang Pariaman District.

According to a previous study, a good family's ability to recognize the meaning, signs, symptoms, and treatment makes the family more aware of the symptoms shown by schizophrenic patients [31]. A case study 2016 stated that mental health nurses in Mataram City were implementing a passing-free program. However, it has yet to be implemented optimally for the working conditions experienced [18].

Family psychoeducation interventions help increase knowledge about schizophrenia and increase caregiver empowerment, indirectly reducing relapse rates in schizophrenia patients.

CONCLUSION

The level of knowledge before being given psychoeducational intervention was mostly poor, and after being given psychoeducational intervention was mostly good. Perceptions before being given psychoeducational interventions were mostly poor, and after being given psychoeducational interventions were mostly good. This means that there is an effect of providing psychoeducational interventions on the level of knowledge and perceptions of families of schizophrenia patients who are shackled in the working area of the Puskesmas in Padang Pariaman district. Family psychoeducation interventions are beneficial in increasing knowledge of schizophrenia and good perceptions of schizophrenia, indirectly reducing the rate of shackling of schizophrenic patients. The limitation of this study is that it did not assess other factors causing the high number of cases of pasung in Padang Pariaman Regency. There is a need for ongoing research and evaluation related to implementing a passing-free program, such as re-evaluating the assignment of responsibility for mental health programs at the relevant puskesmas.

REFERENCES

1. Keepers GA, Fochtmann LJ, Anzia JM, Benjamin S, Lyness JM, Mojtabai R, et al. The American Psychiatric Association practices guidelines for the treatment of patients with schizophrenia. American Journal of Psychiatry. 2020;177(9):868–72.
2. Song Y, Liu D, Chen Y HG. Using focus groups to design a psychoeducation program for patients with schizophrenia and their family members. International Journal of Clinical and Experimental Medicine. 2014;7(1):177–85.
3. WHO. Schizophrenia.10 January 2022. Available from: [Website].
4. Badan Penelitian dan Pengembangan Kesehatan. Riset Kesehatan Dasar. 2013. Available from: [Website]
5. Kementerian Kesehatan RI. Situasi Kesehatan Jiwa di Indonesia. InfoDATIN. 2019. p. 2–9.
6. Kemenkes RI 2018. Riset kesehatan dasar provinsi Sumatera Barat tahun 2018. Laporan Riskesdas Nasional 2018. 2018. 493 p.
7. Hawari Dadang. Skizofrenia Pendekatan Holistik (BPSS) Bio-Psiko-sosial-spiritual. 3rd ed. www.bpfkui.com; 2014. 1–5 p.
8. Kementerian Kesehatan Republik Indonesia. Menuju Indonesia Bebas Pasung. Kamis, 07 Oktober 2010. Available from: [Website]
9. Rencana Aksi Kegiatan (RAK) Direktorat P2 Masalah Kesehatan Jiwa dan Napza Tahun 2020-2024 [Internet]. 2020. Available from: [Website]
10. McFarlane WR. Family interventions for schizophrenia and the psychoses: a review. Family Process. 2016;X:460–82.
11. Alhadidi MMB, Lim Abdullah K, Yoong TL, Al Hadid L, Danaee M. A systematic review of randomized controlled psychoeducation interventions for patients diagnosed with schizophrenia. International Journal of Social Psychiatry. 2020;66(6):542–52.
12. Herminsih AR, Barlianto W, Kapti RE. Pengaruh terapi family psychoeducation (FPE) terhadap kecemasan dan beban keluarga dalam merawat anggota keluarga dengan skizofrenia di Kecamatan Bola Kabupaten Sikka, Nusa Tenggara Timur. Jurnal Kesehatan Mesencephalon. 2017;3(2):80–90.
13. Videbeck. Buku Ajar Keperawatan Jiwa. EGC; 2015.
14. Protomo FA, Putri IRR, Irfanudin M. Hubungan dukungan sosial dengan tingkat stres keluarga dalam merawat pasien skizofrenia di Wilayah Kerja Puskesmas Gamping 2 Kabupaten Sleman. BIMIKI (Berkala Ilmiah Mahasiswa Ilmu Keperawatan Indonesia). 2020;8(2):41–7.
15. Hayani L, Elita E, Hasanah O. Gambaran pengetahuan keluarga tentang cara merawat pasien halusinasi di rumah. Jurnal Online Mahasiswa Bidang Ilmu Keperawatan. 2014;1(1).
16. Purwanti. Masalah psikososial pasung pada pasien gangguan jiwa yang terjadi di masyarakat. Universitas Indonesia. 2015.
17. Di S, Layanan B, Daerah U. Hubungan keluarga pasien terhadap kekambuhan skizofrenia Di Badan Layanan Umum Daerah (BLUD) Rumah Sakit Jiwa Aceh. Jurnal Kedokteran Syiah Kuala. 2015;15(2):77–86.
18. Rahman A, Marchira RC, Rahmat I. Peran dan motivasi perawat kesehatan jiwa dalam program : studi kasus di Mataram. Berita Kedokteran Masyarakat. 2016;32(8):287–94.
19. Puspasari. Gambaran karakteristik pasien skizofrenia di Ruangan Mawar Rumah Sakit Jiwa Prof. Muhammad Ildrem Tahun 2019. 2014.
20. Nurdianasari V, Hendrawati, Widianti E. Gambaran sikap keluarga terhadap ODS (Orang Dengan Skizofrenia) di Desa Kertajaya Kecamatan Cibatu Kabupaten Garut. Jurnal Kesehatan Saelmakers PERDANA. 2021;4.
21. Minas H, Diatri H. Pasung: Physical restraint and confinement of the mentally ill in the community. International Journal of Mental Health Systems. 2008;2(1):8.
22. Notoatmodjo S. Promosi Kesehatan dan Ilmu Perilaku kesehatan. Jakarta: Rineka Cipta; 2014.
23. Liza RG, Loebis B, Camellia V. Efektivitas intervensi psikoedukasi keluarga terhadap kekambuhan pasien skizofrenia. Majalah Kedokteran Andalas. 2019 Sep 20;42(3):128.
24. Hardiyati, Pulungan ASZ, Ahmad M. Psikoedukasi mempengaruhi psikomotor keluarga dalam merawat klien skizofrenia. Jurnal Keperawatan Jiwa. 2020;8(4):521–8.
25. Anab E. Caregiver's knowledge and attitude regarding care of schizophrenia at Mathari Teaching and Referral Hospital, Kenya. American Journal of Psychiatry and Neuroscience. 2018;6(1):15.
26. Townsend. Psychiatric mental health nursing concepts of care in evidence-based practice [Internet]. 2015. p. 1009. Available from: [Website]
27. Sasono, T. N., & Rohmi F. Pengaruh psikoedukasi keluarga terhadap kemampuan keluarga dalam merawat penderita skizofrenia. The Indonesian Journal of Health Science. 2017;8:2.

28. Wigati R, Hidayat F, Khodijah. Pengaruh family psychoeducation therapy terhadap kemampuan keluarga merawat pasien skizofrenia dengan halusinasi di Kota Samarinda Kalimantan Timur. Bhamada Jurnal Ilmu dan Teknologi Kesehatan. 2016;05:1–140.
29. Ran MS, Chan CL, Ng SM, Guo LT XM. The effectiveness of psychoeducational family intervention for patients with schizophrenia in a 14-year follow-up study in a Chinese rural area. Psycholical Medicine. 2015 Jul;45(10):2197-204.
30. Sari H. Terapi psikoedukasi keluarga dalam merawat klien dengan schizofrenia di Rumah Sakit Jiwa Pemerintah Aceh (the effect of family psychoeducation therapy for the family ability in taking care patients with schizophrenia). Jurnal INJEC. 2014;1(Oktober):178–85.
31. Sulistyowati N. Hubungan pelaksanaan tugas kesehatan keluarga dengan kekambuhan skizofrenia di Desa Paringan Kecamatan Jenangan Kabupaten Ponorogo. Jurnal Keperawatan Universitas Airlangga. 2012.