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Family Resilience Model Escalating the Family Ability to Prevent Recurrent of Patient with Schizophrenia

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Abstract--*The presence of schizophrenia patients in the family system causes a various situation of stress. Families need the ability to withstand stress and problems during the care through resilience. This study aims to apply Family Resilience Model to improve the ability of the family to prevent recurrent of the patient with schizophrenia.Quasi-experiment design was employed 32 families who care schizophrenic patients at RSJ Menur Surabaya which obtained by simple random sampling. They were divided for 16 treatments and 16 controls. The independent variable was the family resilience model and the dependent variable was the family's ability to prevent recurrent of the patient with schizophrenia. Data were measured using questionnaires and analyzed using Wilcoxson Sign-Rank Test and Mann-Whitney Test (α <0.05).The family resilience model affects the ability of the family to prevent recurrent of the patient with schizophrenia (p = 0.000). Family resilience focuses on stimulating family enhancement through stress management so the family can rise up, growing stronger and doing better in giving support, accept the patient condition, provide the patient with activity and helping patient to solve the problem as the effort to prevent recurrent in the patient with schizophrenia.Family resilience model was able to increase the family capability in taking care of schizophrenia patients, especially to prevent the patients recurrently.*

Keywords--*Schizophrenia, family, resilience, prevent recurent, model, Indonesia, stres management,family resilience*

I. INTRODUCTION

Families who treat patients with Schizophrenia are required to be able to treat them well, although it is not easy. Families feel stressors that come from internal situations and conditions and the environment that can stimulate stress. Prolonged stress affects the ability of family resilience and decreases the ability to care which can cause recurrence in patientswith schizophrenia. Schizophrenia is a persistent and serious brain disease that results in psychotic behavior, difficulty thinking concretely, processing information, interpersonal relationships, and solving problems (Stuart & Sundeen, 2012). The prevalence of severe mental disorders including schizophrenia is 1.7 per 1000 population, more than 400,000 people suffer from severe mental disorders in Indonesia(Indonesian Ministery of Health, 2013). The incidence of schizophrenia in East Java was 0.22% while Surabaya was recorded at 0.2%. The incidence of schizophrenia is difficult to reduce due to a high recurrence rate.

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Recurrence is a symptom as before and resulted in patients having to be treated again(Andri, 2008). The recurrence rate of schizophrenia patients in Indonesia is 50-80% (Puspitasari, 2009), 57% within 3 years (Kartika, Amalia, & Isma, 2014) and 70-82% in the first five years (Amelia, 2013). Preliminary studies at the Menur Mental Hospital Surabaya, the number of inpatients was 5819 patients, 90% of them were patients diagnosed as schizophrenia, and 80% of them had a history of relapse. Interviews with 10 families who cures patients stated that the relapsed due to non-compliance with medication, non-compliance with control and also a lot of problems with other family members. Strange patient behavior, such as not independent, easily offended, irritable, a lot of silence makes the family unable to hold emotions and often has problems with patients. The inability of the family to control emotions and the many problems that arise due to patients makes the family experience stress and vent anger and continue to give criticism to patients (Akbar, 2008; Amaresha & Venkatasubramanian, 2012; Fadli & Mitra, 2013). This situation causes the patient to become uncomfortable and potentially cause a relapse. This fact shows that the family has not been able to care for family members who have schizophrenia. Families fail to create and modify conducive situations that support the recovery of the patient's condition while being treated at home (Kusumawardani, Yusuf, Fitryasari, Ni'mah, & Tristiana, 2019).

Family stress is largely determined by the perception of difficult situations faced and influencing the ability of resilience(Fitryasari, Nursalam, Yusuf, Hargono, & Chan, 2018). Families who care for patients with schizophrenia need help from health professionals, including nurses to modify family's perceptions of stressors, which were initially considered a threat, felt very heavy and faced alone into a challenge that makes families motivated together with all family members and is determined live life to treat the patients (Fitryasari, Yusuf, Dian, & Endang, 2018). Stress experienced by the family if it can be managed properly through a family resilience approach can create a safe and comfortable environment to help the patients. Resilience helps families to survive and rise up to determine how families take a stand during facing existing problems and remain able to care for family members (Lee, Ryu, & Kim, 2011; Sun, Buys, & Tatow, 2012).

The family resilience model is developed from the resilience theory(Lietz, Julien-Chhinn, Geiger, & Piel, 2016; McCubbin, Paterson, & Glynn, 1987; Walsh, 2016)with the perspective of Family-Centered Nursing (Friedman, 2003). Family resilience is formed through the stages of survival, adjustment, acceptance, growing stronger and helping others where the five stages are built with the strength of the family (Lietz et al., 2016). The resilience model focuses on the strength of the family to manage stress and stimulate family resilience while treating the patient with schizophrenia. The application model uses stages of family nursing care which consisting of assessment, problem identification, intervention, and implementation as well as evaluation to increase the ability of families to care for patient withschizophrenia. The survival phase describes the situation and activities undertaken by the family when they realize the fact that there is a family member who has Schizophrenia. The family will try to survive in this situation by building family attachment, morality, and spirituality. The family seeks to go through the situation in the family to continue to run normally despite experiencing stress in treating Schizophrenia patients.

The adjustment phase is passed by the family by making structural and functional changes by planning and taking decisions to solve various problems that exist so that they can live a life that is following the new situation

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and care for family members with schizophrenia. The acceptance stage is a situation where the family can accept the reality of the existence of a patient as part of the family system and seeks to implement a new situation that has been agreed upon as a new habit in the family. The growing stronger phase illustrates the ability of a family to be better and stronger after the family carries out a difficult process and find positive meaning during dealing with problems. The helping others stage shows the condition of families who have the desire and ability to provide social support to other families who also have the same problem, including mutual support within the patient with schizophrenia. Various types of positive support developed by the family resilience model are expected to increase the ability of families to care for Schizophrenia patients. This study aims to explain the influence of the family resilience model to improve the ability of families to prevent recurrence of a patient with schizophrenia.

II. METHODOLOGY

The research design used quasi-experiment. The study population was all families who had family members with schizophrenia and were treated at Surabaya Menur Mental Hospital in 2018. The sampling was taken by simple random sampling technique with inclusion criteria as the main caregiver of patients who should be diagnosed with schizophrenia at least three years(proved by medical records) and have experienced at least one recurrence, live together with the patient and have treated the patient for at least 1 year, can read and write, cooperative and available for home visits. The research sample was 32 respondents (16 for the treatment group and 16 controls group). The independent variable was the family resilience model and the dependent variable was the ability of the family in an effort recurrence prevention. The intervention was given to the treatment group through four meetings at the respondent's home within two months.

The research instrument for the family resilience model variable was a module that was developed based on the Family Centered-Nursing (Friedman, 2003)theory and the family resilience theory (Lietz, 2007). The application of the module is carried out for four parts, the first is the analysis of the family situation, including the assessment of family, patient, susceptibility and protective factors to obtain identification of family problems related to family stress and family resilience abilities. The second part is stress management intervention through reframing. The third part stimulates the ability of family resilience and the fourth part is the evaluation of obstacles and alternative solutions, hopes, and benefits of implementing interventions that have been carried out. The instrument for recurrence prevention variables using the modified questionnaire concept of recurrence prevention efforts according to (Stuart & Sundeen, 2012)consisted of 8 questions. the questionnaire was filled in through interviews by the respondents and measure by Likert scale, namely 1: not done 2: rarely done, 3: sometimes done, 4: often done and 5: always done. The score is interpreted based on the criteria used, which is good if a score of more than 35.6, mild with a score of 23-35.6 and a score of less if a value of less than 23.The data were collected as the pre-test and post-test values then analyzed using the Wilcoxson Sign-Rank Test and the Mann-Whitney Test ($\alpha < 0.05$).

Respondents involved in the research had received a written explanation regarding the purpose of research, procedures, rights, and obligations, benefits, and disadvantages during the study. Only participants who have given the informed consent involved in the study. This study has obtained ethical approval from the Ethical Committee of Menur Mental Hospital with the number 070/4732/305/2017 on June 9, 2017.

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III. RESULTS

3.1 Respondents characteristics

Research respondents were 32 families of patients who treated patientswith schizophrenia as describes in table 1.

Table 1. Distribution of Respondents Characteristics (Families) at Surabaya Menur Mental Hospital

Variable	Category	Intervention Group		Control Group	
		Frequency	Percentage(%)	Frequency	Percentage (%)
Age	26-35 years	2	12.5	2	12.5
	36-45 years	1	6.25	2	12.5
	46-55 years	9	56.25	5	31.25
	56-65 years	4	25	5	31.25
	>65 years	0	0	2	12.5
	Total	16	100	16	100
Education level	Elementary	4	25	4	25
	Junior High School	1	6.25	0	0
	Senior High School	6	37.5	8	50
	Collage	5	31.25	4	25
	Total	16	100	16	100
Salary	<Standart	3	18.75	2	12.5
	Standart-4 millions	3	18.75	1	6.25
	>4 millions	10	62.5	13	81.25
	Total	16	100	16	100
Family Structure	Father	1	6.25	2	12.5
	Mother	4	25	4	25
	Spouse	2	12.5	5	31.25
	Children	1	6.25	2	12.5
	Siblings	6	37.5	3	18.75
	Relations	2	12.5	0	0
	Total	16	100	16	100

The results of table 1 illustrate that respondents in the treatment and control groupsmajority are aged between the ages of 46-65 years, had education level studied atsenior high school and college, they had an income of more than four million rupiahs. Respondents in the treatment group were mostly siblings while in the control group they were couples (husband/wife).

The table 2 showed that the majority of respondents (patients with schizophrenia) in the treatment group were aged between 26 to 45 years old, while the control group was range of 26 to 65 years old. The majority of respondents in both groups were male, had been diagnosed as schizophrenic for more than 10 years and often had recurrences more than five times a year.

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Table 2. Distribution of Respondents (Patient) at Surabaya Menur Mental Hospital

Variable	Category	Intervention Group		Control group	
		Frequency	Percentage (%)	Frequency	Percentage (%)
Age	26-35 years	6	37,5	4	25
	36-45 years	5	31,25	4	25
	46-55 years	4	25	4	25
	56-65 years	1	6,25	4	25
	Total	16	100	16	100
Gender	Male	12	75	10	62,5
	Female	4	25	6	37,5
	Total	16	100	16	100
Illnes duration	>3-5 years	3	18,75	2	12,5
	>5-10 years	6	37,5	4	25
	>10 years	7	58,3	10	62,5
	Total	16	100	16	100
Requrency	1-3 times	2	12,5	1	6,25
	>3-5 times	6	37,5	4	25
	>5 times	8	50	11	68,75
	Total	16	100	16	100

3.2 Family Ability in Recurrence Prevention

Table 3. Table of Family Ability in Recurrence Prevention

Group	Pre-test				Post-Test			
	Good	Enough	Less	Total	Good	Enough	Less	Total
	f (%)	f(%)	f(%)	f(%)	f (%)	f(%)	f(%)	f(%)
Intervention								
Giving Support	1(63)	9(56,3)	6(37,5)	16(100)	16(100)	0(0)	0(0)	16(100)
Accept the patient	6(37,5)	9(56,3)	1(6,3)	16(100)	16(100)	0(0)	0(0)	16(100)
Involved in activities	0(0)	7(43,8)	9(56,3)	16(100)	1(6,3)	15(93,8)	0(0)	16(100)
Help to solve problem	0(0)	5(31,3)	11(68,8)	16(100)	5(31,3)	11(68,8)	0(0)	16(100)
Promote the quality of life	1(6,3)	9(56,3)	6(37,5)	16(100)	6(37,5)	10(62,5)	0(0)	16(100)
Control								
Giving Support	2(12,5)	8(50)	6(37,5)	16(100)	2(12,5)	14(87,5)	0(0)	16(100)
Accept the patient	11(68.8)	5(31,3)	0(0)	16(100)	11(68.8)	4(25)	1(6,3)	16(100)
Involved in activities	0(0)	11(68.8)	5(31,3)	16(100)	0(0)	9(56,3)	7(43,8)	16(100)
Help to solve the problem	1(6.3)	9(56,3)	6(37,5)	16(100)	3(18,8)	6(37,5)	7(43,8)	16(100)
Promote the quality of life	1(6.3)	6 (37.5)	9 (56.3)	16(100)	0(0)	9(56.3)	7(43.8)	16(100)

Based on table 3 it can be explained the ability of the family in the effort to prevent recurrence in both groups (pre-test)mostly families have enough ability to prevent the recurrence on all indicators. While in the post-test, the majority in the intervention group have good ability for indicator giving support and accept the patient.

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3.4 Effects of the Family Resilience Model on Recurrence Prevention

Table 4 Table of Effects of the Family Resilience Model on the Prevention of Recurrence

Mean ±SD		Δ Mean(%)	Mean ±SD		Δ Mean(%)	Mann-Whitney test (p)	
Intervention Group			Control group				
Pre	Post		Pre	Post		Pre-Pre	Post-Post
22.44±7.42	41.56±3.72	19.12(85.2%)	26.75±7.00	27.81±6.09	1.06(4%)	0.045	0.000
Wilcoxson Sign Rank Test							
p= 0.00			p= 0.19				

The results in table 4 can be explained that the Wilcoxson Sign-Rank Test showed if the intervention group experienced a significant increase ability to prevent the recurrence (p =0.00), while the control group did not experience an increase in ability (p=0.19).The results of the Mann-Whitney Test in both groups (post-test) obtained p = 0,000 (<0.05), it can explain if there is an effect of the family resilience model on recurrence prevention.

The family resilience model can improve the family's ability to prevent relapse in patientswith schizophrenia. Recurrence is a condition of patients who return to show initial symptoms. Recurrence disrupts daily activities and even requires hospitalization or outpatient care in health services (Dorland, 2010). The results showed that all schizophrenia patients had a relapse at least once a year. The high recurrence rate will eventually become a burden for the family, so that family awareness is needed to carry out efforts to prevent recurrence (Macgregor et al., 2015).

Efforts to prevent recurrence can be done by the family, through routine and regular treatment also need to be endeavored to create a conducive environment, accept the patient's condition, provide support, involve in family activities and help patients deal with severe life problems (Stuart & Sundeen, 2012). The results illustrate that family efforts to accept the patient's condition and improve the quality of life still need to be improved. Families still do not provide many opportunities for patients to do work that has a great responsibility, such as preparing family events together, working outside the home and planning activities now and in the future. Families experience a dilemma because they are still worried about the psychological condition of the patient if given a heavy responsibility can cause a recurrence. So that families tend to limit and choose the types of activities that can be carried out by patients.

The data shows that families help patients in solving the problems they face. Some patients who are stable and are recovering but do not have jobs, so the family helps by providing solutions to make money. Patients are given the confidence to do quite heavy work but remain in family control. For example, one family allows the patient to work as a tailor for making a napkin as a part of the cleaning tool at home which ordered by the shipping company, the patient is trained to take orders as requested, work on patterns, sew and count the bill to the customer. The family said that the patient felt happy with the work that suited his hobby, he loved sewing and became even more happy because he could get money from his work. The results showed there is a significant relationship between the involvement of mental patients in a work that is preferred with the improvement of psychosocial symptoms experienced(Hunter & Barry, 2012). The data illustrates that since the patient pursued work as a tailor, the patient's recurrence is reduced and certainly improves the quality of life of the patient and family.

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The results showed that the overall recurrence prevention effort by the family was in the sufficient category where the indicator of providing support was the highest. The family supports schizophrenia patients to do simple household chores and gives praise to the patient's success as a form of motivation. One of the interventions in the family resilience model is to increase family acceptance of the condition of schizophrenia patients (Lietz, 2016). Family acceptance can be done by stimulating the strength of the family, they build commitment in the family. Commitment as a form of a family agreement to support the patient's future is a form of family acceptance. The family understands the ability of the patient to have a type of activity, discussing with the patient related to the desires and willingness to undergo the activity and support all activities carried out by the patient. Admission of schizophrenic patients can be strengthened through good communication within the family (Lietz, 2016; Walsh, 1998). The difficulties and successes in family system for supporting patient activities are clearly and effectively communicated. Patients who undergo the activities that have been selected have an important involvement, the family appreciates the opinions expressed, help and assist patients in any difficulties encountered. Patients feel an increase in self-esteem because they can produce a work, even patients again feel the satisfaction of life as a normal human being. Good reception from the family makes the patient's life more quality and can reduce recurrence in patients.

IV. CONCLUSION

The family resilience model that is applied to families who treat schizophrenia patients as an intervention that focuses on stimulating increased family strength through stress management so that families can survive, rise, grow stronger and be better in recurrence prevention by fostering a conducive environment for patients.

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