Factors related to family's ability to care for schizophrenic patients

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Article Info

ABSTRACT

Schizophrenic patients in family members makes the family helpless and unable to care for them. Patient, family, social environment, and health service factors can affect the family's ability to care for schizophrenic patients. The aims of this study are to analyze factor predictors of the family's ability to care for schizophrenic patients. This study used a correlational study design. The sample of this study is 135 schizophrenic families in the outpatient clinic of Dr. Amino Gondohutomo Regional Psychiatric Hospital with purposive sampling. The instruments in this study are the questionnaire which developed and modified from the experience caregiving instrument (ECI), inner resource scale (SAS-I), mental health inventory (MHI), Berkeley Expressivity Questionnaire, Barthel Index, caregiving tasks in caring for an adult with mental illness scale (CTiCAMIS). Data were analyzed using a multiple regression test. The result shows the family's ability to care for schizophrenic patients predicted by the variables of family resources (p-value=0.019) and social support (p-value=0.0.32). Family resources as the strongest predictor of the family's ability to care for schizophrenic patients (B=0.242). It is necessary to develop integrated family empowerment interventions that increase and activate the family's inner resources.

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1. INTRODUCTION

There is 21 million schizophrenia worldwide reaching 0.24 cases per 1,000 population [1] with the relapse rate in the last three years continuing to increase from 28.0%, 43.0%, to 54.0% [2] A cross-sectional study of factors predicting relaps. Schizophrenia in Indonesia from 1.3 cases to 7 cases per 1,000 population in 2018 [3], in Central Java, has increased from 2.3% (2013) to 9% (2018) [4] and in Semarang City, Indonesia occupies the highest prevalence of 0.79 per 1,000 population in 2018 [5]. Based on medical record data at Dr. Amino Gondohutomo Regional Psychiatric Hospital found that in 2021 there were 765 patients with schizophrenia undergoing the treatment with a re-admission rate within 0 days was 19%. The family's ability to provide care for schizophrenic patients was found to be low. Schizophrenic families at Menur Regional Psychiatric Hospital can care for patients at a moderate level (49.6%) [6], while the family's ability to treat schizophrenia in the Naras Public Health Center working area in Padang is also poor at 46.1% [7]. The majority

of families experience fatigue and suffering [8]. Families can be a source of high emotional expression in the environment (p<0.05), in which 88% of families have poor knowledge about psychosis, and 97% of social and cultural value attributions [9].

Schizophrenic patients that occurs in family members brings its problems for the families who care for them. Schizophrenic patients require long treatment and recovery, so their supportive resources and families become helpless [10]. In addition, the burden of treatment costs, the frequency of relapse, and stigma are a burden and a stressor for the family [11], so the family sees parenting as a big problem. The family is helpless in dealing with situations and unsure about treating schizophrenia [6], [7]. Families feel unable to care for, and experience failure, helplessness, fatigue, and uncertainty [7]. Relapse in schizophrenic patients is highly distressing that posed a huge burden to the family [8]. As a result, families still take patients to spiritual medicine and shamans because they think the cause is evil from spirits, magic, curses and distrust [9], [12]. Families also lack access to mental health services so they are sometimes not treated [10]. and the family's experience of caring for schizophrenia is still considered negative [7], [10]. Families treat schizophrenia according to knowledge [11] and the main factors that cause insuficient family care for schizophrenia are not yet known.

The impact of the family's inability to care for schizophrenic patients, among others: increased treatment costs, longer treatment, increased family and patient burden, decreased quality of life and cognitive, disease severity and ineffective schizophrenic recovery services [13]. Families experience chronic stress [14], sleep problems, higher rates of depression, and lower quality of life [15]. In most cases, families also experience high emotional expression toward patients, increasing the risk of patient relapse [16].

The family's inability to care for schizophrenic patients can be caused by various factors, including first, patient factors, namely: the onset of schizophrenia and comorbidities [2]. Second, family factors in the form of education, knowledge, parenting history, socioeconomic, internal vulnerability, family-owned resources, family history of mental disorders, family emotional expression and cultural values [9], [17]. Third, social environment factors such as stigma, social networks and social support [9], [17]. Fourth, health service factors such as access, infrastructure and health workers [14], [18], [19]. Factors related to the family's ability to care for schizophrenic patients are essential to formulate appropriate family empowerment interventions as caregivers of family members in family health tasks. This study aims to analyze the predictor factor of the family's ability to care for schizophrenic patients.

2. RESEARCH METHOD

This research used correlational study design. Analysis of the study results was conducted on the patients factors, families, social environment and health services related to the families ability to care for schizophrenic patients. Data were taken by purposive sampling technique on 135 main family members from 135 patients who live in the same house with schizophrenia, provide schizophrenia care at home every day, experience caring for at least one year, aged 20-60 years and undergo routine control at the Dr. Amino Gondohutomo Regional Psychiatric Hospital.

This research instrument was developed and modified from the concept and adapted from several questionnaires. The original authors permit to use or modify the instruments. Furthermore, the 12 instruments developed by researchers were retested in validity and reliability test. The results are declared valid, on each statement item r count > r table (0.361) with a Cronbach alpha value > 0.60. The independent variables included patient factors consisting of a disease onset and a history of comorbidities check sheet. Family factors consisted of an education, a socioeconomic, a family history of mental disorders check sheet, a parenting experience questionnaire with experience caregiving instrument (ECI) [15]. ECI is a 8-item scale in response to a 4-point self-report measurement (1=Never to 4=Always) was found to be reliable in this study (α=0.934). A resource questionnaire with an inner resource scale (SAS-I) [20]. SAS-I is a 12-item scale in response to a 4-point self-report measurement (1=Never to 4=Always) was found to be reliable in this study (α=0.824). An internal vulnerability questionnaire with mental health inventory (MHI) [21]. MHI is a 3-item scale in response to a 4-point self-report measurement (1=Never to 4=Always) was found to be reliable in this study (α=0.835). A family emotional expression questionnaire with a Berkeley expressivity questionnaire from [22] is a 10-item scale in response to a 4-point self-report measurement (1=Never to 4=Always) was found to be reliable in this study (α=0.865) and a cultural values questionnaire according to the concept [9] is a 5-item scale in response to a 4-point self-report measurement (1=Never to 4=Always) was found to be reliable in this study (α=0.815). Social environmental factors consisted of a stigma questionnaire developed [23] is a 9-item scale in response to a 4-point self-report measurement (1=Never to 4=Always) was found to be reliable in this study (α=880), a social network check sheet developed from the concept [17] and a social support questionnaire developed from the concept of Friedman et al. [24] is a 10-item scale in response to a 4-point self-report measurement (1=Never to 4=Always) was found to be reliable in this study (α=0.923). The health service factors consisted of appropriate access and infrastructure questionnaire [25], they are 8-item scale in response to a 4-point self-

report measurement (1=Never to 4=Always) were found to be reliable in this study (α=0.814) and a health worker questionnaire adapted from family center care theory [26] is a 12-item scale in response to a 4-point self-report measurement (1=Never to 4=Always) was found to be reliable in this study (α=0.910). The dependent variable is the family's ability to care for schizophrenic patients, namely: The questionnaire for meeting the needs of daily activities (ADL) from the Barthel index [27] is a 10-item scale in response to a 4-point self-report measurement (1=Never to 4=Always) was found to be reliable in this study (α=0.912). Questionnaire to assist social interaction from the caregiving tasks in caring for an adult with mental illness scale (CTiCAMIS) developed by Fitryasari *et al.* [28] is a 5-item scale in response to a 4-point self-report measurement (1=Never to 4=Always) was found to be reliable in this study (α=0.777). Questionnaires help productive skills developed from concepts [29] is a 3-item scale in response to a 4-point self-report measurement (1=Never to 4=Always) was found to be reliable in this study (α=0.861).

Data was collected by enumerators in September 2022 at the outpatient clinic of Dr. Amino Gondohutomo Regional Psychiatric Hospital. Questionnaires were distributed to 135 respondents who met the inclusion criteria of the research sample. The data collection lasts in eight days, where each day an average of 15-20 respondents were obtained, which begins with an explanation of the research and the signing of an informed consent as a legal requirement for research ethics. Analysis was using SPSS 26th version [30] consisted of univariate and bivariate to describe research variables and test the correlation between research variables. Multiple Regression was used to see the factors that were most related to family's ability to care for schizophrenic patient.

The research has been approved by the Ethics Review Board at the health research ethics committee Universitas Airlangga number 2637-KEPK on September 8th, 2022 and Dr. Amino Gondohutomo Regional Psychiatric Hospital number 420/12375 on September 7th 2022.

3. RESULTS
3.1. Characteristics of respondents

Table 1 describes the respondent's general characteristics. The family caregiver is gender-balanced, middle-aged or productive, with sufficient education (Senior High School/Vocational High School), mainly works as a private employee, and has non private to care for schizophrenic patients. Family caregivers or informal caregivers are siblings then, followed by the mother and father.

Table 1. Characteristic of respondents

	Characteristics of respondents	f	%
Gender	Male	68	50.4
	Female	67	49.6
	Total	135	100.0
Age	Early adult (20-30 years old)	20	14.8
	Middle adult (31-55 years old)	69	51.1
	Pre-elderly (55-60 years)	46	34.1
	Total	135	100.0
Education	Not completed elementary school	1	.7
	Elementary school	28	20.7
	Junior high school	29	21.5
	Senior high school	52	38.5
	College	25	18.5
	Total	135	100.0
Occupation	Civil servant	6	4.4
	Pensionary	9	6.7
	Entrepreneur	24	17.8
	Private employee	51	37.8
	Housewife	31	23.0
	Labour	9	6.7
	Unemployee	5	3.7
	Total	135	100.0
Family structure	Father	22	16.3
	Mother	31	23.0
	Child	14	10.4
	Siblings	53	39.3
	Husband	8	5.9
	Wife	7	5.2
	Total	135	100.0
Social security	BPJS	129	95.6
	Public/Private	6	4.4
	Total	135	100.0

3.2. Variable description

Table 2 describes the proportion of research variables. Patient factors, namely: 38.5% of patients experienced disease onset >10 years and comorbidities 15.6% accompanied by anxiety disorders, 8.9% depression and 6.7% had a history of chronic disease. Family factors included education, there were 7% did not graduate from elementary school, family socio-economic 65.9% have income <regional minimum wage of Semarang City, 14.1% had a family history of mental disorders. The parenting experience variables were mostly 93.3% positive, 38.5% resources were in sufficient category, 80% did not experience internal vulnerability, 68.9% normal family emotional expression, and 23% cultural values were negative. Social environmental factors, including: 100% of families do not have a social network, 87.4% have low stigma and 48.1% have low social support. Health service factors include: 65.9% access, 33.3% infrastructure and 36.3% health workers are perceived as sufficient. The family's ability in caring for schizophrenic patients 53.3% is sufficient.

Table 2. Description of research variable

Dependent variable		f	%
Patient factor			
Disease onset	<5 Years	41	30.4
	5-10 Years	42	31.1
	>10 Years	52	38.5
Comorbidity	None	93	68.9
	Depression	12	8.9
	Pain/Chronic conditions	9	6.7
	Anxiety disorders	21	15.6
Family factor	Not completed elementary school	1	7.7
Education	Elementary school	28	20.7
	Junior high school	29	21.5
	Senior high school	52	38.5
	College	25	18.5
Socio-economic	<Regional minimum wage	89	65.9
	=Regional minimum wage	14	10.4
	>Regional minimum wage	32	23.7
Family history of mental disorders	There is a history	19	14.1
	None	116	85.9
Parenting experience	Negative	8	5.9
	Positive	126	93.3
Resource	Less	2	1.5
	Enough	52	38.5
	Good	81	60.0
Internal vulnerability	Very vulnerable	14	10.4
	Quite vulnerable	13	9.6
	None	108	80.0
Expression of family emotions	High	16	11.9
	Low	26	19.3
	Normal	93	68.9
Cultural value	Negative	31	23.0
	Positive	104	77.0
Social environmental factors			
Social networks	No social networks	135	100.0
Stigma	High	2	1.5
	Moderate	15	11.1
	Low	118	87.4
	Low	65	48.1
Social support	Moderate	54	40.0
	High	16	11.9
Health service factor			
Access	Less	10	7.4
	Enough	89	65.9
	Good	36	26.7
Infrastructure	Less	16	11.9
	Enough	45	33.3
	Good	74	54.8
Health workers	Less	10	7.4
	Enough	49	36.3
	Good	76	56.3
Independent variable			
Family's ability to care	Less	21	15.6
	Enough	72	53.3
	Good	42	31.1

3.3. Variable's correlation

The inter-correlation of the variables in this study tested using Pearson Correlation with correlation is significant at the 0.05 level (1-tailed). The variables are family ability, disease onset, comorbidity, education, sosioeconomic, family history, parenting experience, resource, internal vulnerability, expression of emotions, cultural values, stigma, social networks, social support, acces, infrastructure, and health workers. Furthermore, these variables were tested by multiple regression analysis. Variables of disease onset (p-value=0.160), comorbidity (p-value=0.196), education (p-value=0.314), socioeconomic (p-value=0.299), family history of mental disorders (p-value=0.409), parenting experience (p-val=0.471), internal vulnerability (p-value=0.058), cultural values (p-value=0.479), stigma (p-value=0.301), social networks (p-value=0.436) and access (p-value=0.094) have no relationship with the family's ability to care for schizophrenic patients. The testing results shows 5 research variables, resources (p-value=0.000), family emotional expression (p-value=0.025), social support (p-value=0.000), infrastructure (p-value=0.001) and health workers (p-value=0.000) have relationship with the family's ability to care for schizophrenic patients.

3.4. Predictors of the family's ability to care for schizophrenic patients

Table 3 describes the highest strength in family resources (p-value=.019; Beta=0.242) and social support (p-value=0.032; Beta=0.199) which will increase the family's ability to care for schizophrenic patients. All independent variables affected the family's ability to care for schizophrenic patients by 24.8% (R^2=0.248). The biggest variable as a predictor of the family's ability to care for patients in Family Resources (Beta=0.242).

Table 3. Regression of the family's ablity to care for schizophrenic patients on resources, family emotional expression, social support, infrastructure and health workers

Independent variables	Dependent variables: The family's' ability to care for schizophrenic patients	
	Beta	p-value
Resources	.242	.019
Expression of emotions	-.043	.623
Social support	.199	.032
Infrastructure	.053	.567
Health workers	.167	.096
R^2=0.248 Adjusted R^2=0.219; (p-value=0.000)		

3.5. Regression equation model of the family's ability to care for schizophrenic patients

Table 4 Regression equation model of the family's ability to care for schizophrenic patients on resources, family emotional expression, social support, infrastructure, and health workers. Based on Table 4 researchers describes the regression equation model of family care ability to schizophrenic patients. The regression equation is formulated from constant values and coefficients on the variables of resources and social support. The following is the regression equation:

Table 4. Regression equation model of the family's ability to care for schizophrenic patients on resources, family emotional expression, social support, infrastructure, and health workers

Independent variables	Dependent variables: The families' ability to care for schizophrenic patients	
	B	Std. Error
(Constant)	15.011	6.902
Resources	.463	.195
Expression of emotions	-.101	.205
Social support	.324	.150
Infrastructure	.110	.192
Health workers	.229	.137

$$Y\ (The\ family's\ ability\ to\ care\ for\ schizophrenic\ patients) = 15.011 + 0.463\ X1\ (Resource) + 0.324\ X2\ (Social\ support)$$

A positive constant value=15.011 indicates a positive influence on the resources and social support variables. If the resources variable increases by one unit, the family's ability to care for schizophrenic patients will increases by 0.463 (46.3%). If the social support variable increases by one unit, the family's ability to care for schizophrenic patients increases by 0.324 (32.4%).

4. DISCUSSION

The family's ability to care for schizophrenic patients can be predicted by factors of resources, social support, emotional expression of the family, infrastructure, and health workers. The strongest predictor factor was the resources owned by the family which was 57.5%. The study results align with research [31] where the family resource mediates the big impact of schizophrenia on caregiving burdens. The lower family resource is associated with a higher level of caregiving burdens.

The study found that families have various resources, including the majority being well educated (38.5%), as private employees (37.8%), 65% are still productive age (20-55 years), use non private insurance (95.6%) and rely on main family members as caregivers, namely siblings (39.3%) followed by Mother and Father. This is reinforced by the theory that to treat schizophrenic patients, the family will activate existing resources and create new resources [7], [32]. The main family members' involvement as caregivers shows that one of the family resources is the family structure. Families regulate their values, communication patterns and roles to carry out the care function properly [33]. These results are in line with research in India, where parenting is carried out by the main family and is considered their moral obligation [34].

Families also need resources that come from external sources, such as social support from the environment, whether given by extended families and neighbours, mental health cadres and civil servants such as RT/RW. The social support provided such as helping families refer patients when relapse, treatment information that can be accessed by families, and facilitating schizophrenic patients to get along, be accepted in the environment and be involved in community activities according to their abilities. Positive social support and family resources can be a family strength to care for schizophrenic patients at home. So that it makes the family get useful strength to deal with parenting problems [11], which is expected to improve the family's ability to care for schizophrenic patients.

The study findings also showed that there was a relationship between the emotional expression of the family, infrastructure and health workers with the family's ability to care for schizophrenic patients, although the three variables were not predictors. Emotional expression is a feeling that is shown by the family when caring for the patient, if the family is indifferent or expresses negative emotions, it will certainly affect the familiy's ability to care for the patient. The theory explains that families who show high emotional expression will tend to avoid patients and make projections, so they do not provide care assistance to patients with schizophrenia according to the roles and duties of family health [20]. This is in line with the research results [9] that schizophrenic patients who live in a family environment that has high emotional expression will be at risk of relapse due to not getting optimal care from their family.

The facilities and infrastructure available in hospitals and health workers that support families to provide good care for schizophrenic patients will be a source for families in increasing their ability to care for patients by accessing local health services. Families get the strength to deal with parenting problems through mental health services that are accessible, effective referral channels for families, adequate infrastructure, and health workers who involve families in providing care through family empowerment [14]. Furthermore, activating existing resources and creating new resources [16], [34] make the family grow and actively use the resources they have to care for sick family members. This is supported by research [35], [36] that there is a relationship between primary health services and the family role in chronic diseases that require long-term care.

The study limititation is that the respondent who happens to accompany the patient for routine check-ups to the Outpatient Polyclinic, someone who has more time than the caregiver who has been taking care of the patient at home. This causes researchers to have limited access to resources and social support owned by families to care for patients. The family's ability to care for schizophrenic patients is influenced by many factors and in this study, it was found that one of the internal factors of the family is the resources they have and external factors in the form of social support from the community to treat schizophrenic patients. The introduction, exploration and activation of family resources are needed so that families realize their potential abilities and strengths to care for schizophrenic patients. Nurses can develop an intervention so that families can independently find strength, activate new resources, and inner resources to go through an integrated family empowerment program, this strengthens the theory of integrative empowerment [17]. Families are not only provided with knowledge, training and coping skills but also appreciate the meaning of positive parenting as a family's inner resource for caring the schizophrenic patients.

5. CONCLUSION

The family's ability to care for schizophrenic patients is determined by many factors, both internal and external. The family's ability can be predicted by resources and social support. However, the strongest predictor factor is the resources owned by the family. Community mental health nurses need to develop an integrated family empowerment intervention that focuses on increasing the knowledge, caring skills, and inner resources to care for schizophrenic patients.

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