

The economic burden management of family caregivers of schizophrenia patients in the Tidal Flood Area

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Abstract

Family caregivers of Schizophrenia patients have an important role in carrying out Schizophrenia treatment. However, Schizophrenia family caregivers in carrying out their duties feel a heavy burden. Especially for family caregivers of Schizophrenia who live in flooded areas, the economic burden in the treatment of Schizophrenia is felt to be quite high. Economic burden management training is a solution for family caregivers with Schizophrenia which can help the families economic stability in managing family income and expenses, so that the families economic resources can be sufficient in carrying out Schizophrenia treatment. The purpose of this study is to determine the effect of economic burden management on the self-efficacy of family caregivers of Schizophrenia patients. The study used a quasi-experiment with control group with the number of respondents in each group was 43 respondents taken by purposive sampling. The intervention group was given economic burden management training by regulating the income and utilization of family economic resources. Data collection used a self-efficacy questionnaire on family caregivers. Data analysis using an independent t-test obtained the result that economic burden management in family caregivers of Schizophrenia patients had an effect on self-efficacy ($p=0.001$). The increase in economic efficacy after being given economic burden management training is supported by increasing in family caregiver knowledge and skills in managing family economic resources as an indicator of self-competence. The adequacy of family caregiver knowledge and skills leads to a positive self-perception so as to increase self-confidence in caring for Schizophrenia patients.

Keywords

Economic burden management, Family caregiver, Schizophrenia, Self-efficacy, Tidal flood

Introduction

Schizophrenia is a condition characterized by severe and long-lasting mental disorders. In 2019 schizophrenia reached 20 million worldwide. In Indonesia in 2018 schizophrenia reached 1.8 per 1000 population [1]. The high prevalence of schizophrenia and its severe

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symptoms make schizophrenia a non-communicable disease that must receive attention in its management. The signs experienced in patients with schizophrenia include distortion of thoughts, impairment of perception, emotions, and behavior. Even the most schizophrenic patients experience violent behavior that can endanger themselves and others [2]. The violent behavior experienced by patients with schizophrenia reaches 0.8% [3]. The severity of the symptoms experienced by patients with schizophrenia requires support in their care and treatment.

One of the supports in the care and treatment of schizophrenia can be provided by the family. Families can act as informal caregivers who provide home care and medication assistance while the patient is at home. Families who become informal caregivers for other family members who experience schizophrenia are then referred to as schizophrenia family caregivers. Family caregivers of schizophrenia as the main and closest support system in caring for schizophrenia have burdens and stress [3].

The burden experienced by family caregivers of schizophrenia is divided into objective and subjective burden. Objective burdens include the emergence of problems in the family, restrictions on social activities, the emergence of discrimination and stigma, and financial difficulties. Subjective burdens include the emergence of psychological problems while caring for schizophrenic patients such as anxiety, boredom, frustration, helplessness, and hopelessness. Both burdens are interrelated [4]. However, the severity of the burden felt by each family caregiver of schizophrenia varies depending on certain conditions.

One condition that can add to the burden of family caregivers of schizophrenia is tidal flooding. Family caregivers who care for schizophrenia patients in tidal flood areas experience limited social access due to persistent tidal flooding. This limited social access includes access to work, access to social relations with neighbors, access to mobilization, and even access to health services is also disrupted. Family caregivers and patients when experiencing tidal floods prefer to stay at home with limited activities [5]. The basic needs of family caregivers and patients such as clean water, healthy food, and safe and comfortable housing that are not met during tidal flood exposure can also cause physical and psychosocial health disruption [6]. Unmet needs of patients and families result in anxiety, depression, and increased use of maladaptive coping in decision-making to overcome the problems that occur. Family harmony and cohesiveness are also disrupted due to flooding [7]. Tidal flooding causes an increase in the burden and difficulties faced by family caregivers in caring for schizophrenia in tidal floods.

The difficulties experienced by family caregivers have an impact on reducing the ability of family caregivers to care for schizophrenia. The results of the study found that the ability of families to care for schizophrenia is very important and contributes to preventing relapse, preventing the return of schizophrenia patients from being hospitalized, improving family function, and reducing burden [8]. Another study states that the ability of family caregivers in caring for schizophrenia is generally optimal in the

very good category, but in carrying out family duties in caring for schizophrenia there are still families who cannot make decisions in overcoming problems caring for schizophrenia and modifying the environment [9]. Family caregivers should be able to provide a comfortable environment by establishing good communication, providing support to schizophrenia, and managing family caregiver emotions [10]. Problems experienced by family caregivers can affect their ability to provide care for patients with schizophrenia.

The importance of caring for patients with schizophrenia in order to improve the quality of life of patients requires the support of schizophrenia family caregivers. Schizophrenia family caregivers who care for schizophrenia patients have an important role in the care and treatment of schizophrenia. However, schizophrenia family caregivers experience a heavy burden in carrying out their duties. Especially for schizophrenia family caregivers who live in tidal flood areas, the economic burden of schizophrenia care is quite high. Based on this, to overcome the problem, research is needed to provide economic burden management in family economic arrangements in increasing the adequacy of economic resources in caring for schizophrenia patients in the tidal flood area. The purpose of this study is to determine the effect of economic burden management on the self-efficacy of family caregivers of Schizophrenia patients.

Method

This study used a quasi-experimental research design with control group. The intervention given in this study is the provision of economic burden management training to family caregivers of schizophrenia in the intervention group. The control group was not given any intervention. The Economic burden management training is carried out for one month with classroom training and independent practice for managing outgoing economic resources by managing income and expenditure using a priority system. However, both groups were measured pre and post according to the dependent variable, namely self-efficacy. The study was conducted in March-April 2024 in Pekalongan Regency and Pekalongan City. The population in this study is families as caregivers of schizophrenia patients who live in tidal flood areas. The sampling technique used in this study was purposive sampling. The sample was determined based on the criteria and interests of this study. The inclusion criteria in sampling are caregivers of patients with a diagnosis of schizophrenia, family caregivers willing to be given care for four weeks, can maintain the interaction process, and can read and write. The data collection tools used demographic data and self-efficacy questionnaires. The self-efficacy questionnaire consists of statements of the elements that make up a person's self-efficacy. The questionnaire used was the Pratama & Widodo (2017) [11] family caregiver self-efficacy questionnaire which consisted of 18 statements using a Likert scale of 1-4, namely 1 = Very unsure, 2 = Not sure, 3 = Sure, and 4 = Very sure. Determination of the score by summing the score of each statement according to the Likert scale. The score range is between 18 and 72, which means that the higher the

score, the better the respondent's self-efficacy. This questionnaire has been tested for validity and reliability and all questions in it are declared valid (r value $> r$ table = 0.463 - 0.659) and reliable (Cronbach alpha value = 0.843). Data were analyzed using central tendency and independent t-test.

Results

Research has been conducted on family caregivers of patients with schizophrenia. The results of the research are shown in **Table 1**. This study was conducted on female schizophrenia family caregivers more than male schizophrenia family caregivers in both the control and intervention groups. Schizophrenia family caregivers in both the control and intervention groups. More than 50% of family caregivers of schizophrenia have a history of elementary school education. Most of the family caregivers of schizophrenia have a busy work schedule every day.

both in the control and intervention groups. Based on the condition of schizophrenia patients, family caregivers Schizophrenia cared for patients with schizophrenia with a relapse rate that was still high in both groups, namely reaching more than 50%. The treatment history of schizophrenia patients had almost the same number of patients in both groups. Schizophrenia patients who dropped out of treatment and regular treatment in both groups.

Table 1. Characteristics of family caregivers of schizophrenia in the tidal flood area based on gender, education, occupation, history of patient relapse, and previous patient treatment (n1=43; n2=43)

Characteristics Variables		Control Group		Intervention Group		p-value
		n	%	n	%	
Gender	Male	17	39.5	13	30.2	0.365
	Female	26	60.5	30	69.8	
Education	Not In School	1	2.3	1	2.3	0.989
	Elementary	24	55.8	24	55.8	
	Junior High School	12	27.9	11	25.6	
	High School	6	14	7	16.3	
	College	0	0	0	0	
Occupation	Not Working	17	39.5	20	46.5	0.514
	Working	26	60.5	23	53.5	
Patient Recurrence History	Never Relapsed	18	41.9	21	48.8	0.387
	Ever Relapsed	25	58.1	22	51.2	
Previous Patient Treatment	Discontinued Medication	21	48.8	22	51.2	0.829
	Regularly Medicated	22	51.2	21	48.8	

The results of the independent t-test in **Table 2** show that there is a difference in the mean values of self-efficacy and resilience in the control and intervention groups of 13.14 and 22.79, respectively. It is 95% certain that the difference in the mean self-efficacy scores of the intervention and control groups ranges from 10.56 to 15.72. The results of the analysis showed that there was a significant difference in self-efficacy after the study between the control and intervention groups with a p value of 0.0001 (<0.05).

Table 2. Differences in self-efficacy after intervention (n1=43; n2=43)

Variable	Group	Mean	Mean Gap	Std. Error	p-value	95% CI
Self-efficacy	Control	49,70	-13,14	1,29	0,0001	-15,72 -10,56
	Intervention	62,84				

Discussion

Family caregivers caring for patients with schizophrenia in tidal flood areas are more female than male. Family caregivers who are female are more numerous, and the majority have more time to care for patients compared to men. This is due to the social role of men who have to work to earn a living to support the family so that the average family caregiver for patients with chronic diseases is female [12]. The role of women as housewives who must take care of the family including sick family members [13]. Similarly, a previous study found that the majority of family caregivers of people with schizophrenia were women, reaching 62% [14]. The majority of caregiver roles are carried out by women due to cultural factors.

The low education of family caregivers of schizophrenia in this study is in line with previous research which states that schizophrenia family caregivers mostly graduated from elementary school [13]. The level of education is an important factor in determining a person's ease of receiving and understanding information, access to information, and access to health services. Difficulties in accessing information and services are a burden for family caregivers.

Low education can increase the burden experienced by family caregivers [13]. Supported by other studies that the burden of care occurs in family caregivers with low education [15]. Stress and burden are prone to occur in family caregivers with low education due to limited implementation of knowledge about stress and burden management and efforts to improve the quality of life of family caregivers with schizophrenia [16]. The level of education of family caregivers, apart from being related to the level of acceptance and processing of information about caring for patients with schizophrenia at home, is also related to the burden due to limited family economic resources related to education level. Low education has limited access to employment.

Employment is a source of support in the care of patients with schizophrenia. More than half of the family caregivers in this study were working. As in previous studies, 51.2% of family caregivers of schizophrenia remained employed [13]. Work is important for family caregivers because it is a financial and social resource that affects the quality of care and quality of life of schizophrenia patients and family caregivers [17]. Family caregivers who do not work are at risk of feeling a heavy economic burden compared to family caregivers who work [16]. Similarly, in this study, although income is still below the standard income, working family caregivers have the comfort of having a job as a source of family economy.

Schizophrenia patients living in tidal flood areas have more than partially relapsed. The relapse experienced by schizophrenia patients in this study is in line with previous

research which states that the relapse of schizophrenia patients is caused by drug withdrawal [18]. Schizophrenia patients experience saturation taking medication and due to unpleasant side effects so that patients do not continue taking medication [18]. Relapse of schizophrenia patients also occurs due to poor family caregiver care patterns such as high emotional expression and non-accepting attitudes [19]. Schizophrenia patients in this study are the same as in previous studies that the relapse experienced because patients do not want to take medication and result in uncontrolled behavior and frequent rehospitalization.

The patient's treatment history is closely related to the relapse experienced by the patient, especially patients who experience drug withdrawal. Patients in this study found that some patients experienced drug withdrawal. Similarly, a previous study stated that as many as 56.2% of Schizophrenia clients who experienced relapse 76.6% were due to drug withdrawal [18]. Schizophrenia patients who adhere to treatment have regularity taking medication as recommended by the doctor and successfully complete a regular, complete, and uninterrupted treatment program [20]. Treatment of schizophrenia patients in this study was partly irregular due to the side effects experienced and limited access to information about treatment.

Conclusion and Recommendation

There is an effect of economic burden management on the value of self-efficacy between before and after the implementation of the psychosocial adaptation model of mental nursing for family caregivers who care for patients with schizophrenia in the tidal flood area. This condition is caused by the intervention group getting a gradual implementation of training that increases the knowledge, attitudes, and skills of family caregivers of schizophrenia patients so that they have the ability to increase self-efficacy. Family caregivers in caring for patients with schizophrenia in tidal flood areas must actively access their resources, seek sources of social support, increase self-awareness of the importance of burden control for overall health, and increase motivation to plan for the care of patients with schizophrenia.

References

- [1] Kemenkes, "Laporan Riskesdas 2018 Nasional.pdf," *Lembaga Penerbit Balitbangkes*. p. hal 156, 2018.
- [2] T. L. Benson, P. Brugger, and S. Park, "Bodily self-disturbance in schizophrenia-spectrum populations: Introducing the Benson et al. Body Disturbances Inventory (B-BODI)," *PsyCh J.*, vol. 8, no. 1, pp. 110–121, 2019, doi: 10.1002/pchj.280.
- [3] J. Pardede, "Beban Keluarga Terkait Koping Saat Merawat Pasien Halusinasi," *J. Ilmu Keperawatan*, vol. 3, no. November, pp. 445–452, 2020, doi: 10.32584/jikj.v3i4.671.
- [4] L. M. Mantovani, R. Ferretjans, I. M. Marçal, A. M. Oliveira, F. C. Guimarães, and J. V. Salgado, "Sobrecarga familiar na esquizofrenia: A influência da idade de início e dos sintomas negativos," *Trends Psychiatry Psychother.*, vol. 38, no. 2, pp. 96–99, 2016, doi: 10.1590/2237-6089-2015-0082.
- [5] N. S. Pratikno and W. Handayani, "PENGARUH GENANGAN BANJIR ROB TERHADAP DINAMIKA SOSIAL EKONOMI MASYARAKAT KELURAHAN BANDARHARJO, SEMARANG Nita Septiani Pratikno 1 dan Wiwandari Handayani 2 1," *J. Tek. Pwk*, vol. 3, no. 2, pp. 312–318, 2014, [Online]. Available: <https://ejournal3.undip.ac.id/index.php/pwk/article/view/5070>
- [6] N. Khasanah and A. Nurrahima, "Upaya Pemeliharaan Kesehatan Pada Korban Banjir Rob," *J. Ilmu*

- Keperawatan Komunitas, vol. 2, no. 2, p. 15, 2019, doi: 10.32584/jikk.v2i2.410.
- [7] A. Werritty, D. Houston, T. Ball, and A. Black, "in Scotland Environment Group," no. January, 2007.
 - [8] J. M. Purba and W. Sutharangsee, "Family caregiver's competencies of patient with schizophrenia: A concept analysis," *Malaysian J. Nurs.*, vol. 6, no. 1, pp. 26–30, 2014.
 - [9] W. Kusumawardani, A. Yusuf, R. Fitryasari, L. Ni'mah, and R. D. Tristiana, "Family burden effect on the ability in taking care of schizophrenia patient," *Indian J. Public Heal. Res. Dev.*, vol. 10, no. 8, pp. 2654–2659, 2019, doi: 10.5958/0976-5506.2019.02269.1.
 - [10] J. Fry, *Family health*, vol. 74, no. 2. 1959. doi: 10.1016/S0033-3506(59)80093-7.
 - [11] B. D. Pratama and A. Widodo, "Hubungan Pengetahuan dengan Efikasi Diri pada Caregiver Keluarga Pasien Gangguan Jiwa di RSJD Dr. RM. Soedjarwadi," *J. Kesehat.*, vol. 10, no. 2, pp. 13–22, 2017, doi: 10.23917/jk.v10i2.5524.
 - [12] N. Sharma, S. Chakrabarti, and S. Grover, "Gender differences in caregiving among family - caregivers of people with mental illnesses," *World J. Psychiatry*, vol. 6, no. 1, p. 7, 2016, doi: 10.5498/wjp.v6.i1.7.
 - [13] F. Yudin and C. F. Agustina, "Beban pelaku rawat orang dengan skizofrenia di Kabupaten Sidoarjo," *Jr. Med. J.*, vol. 1, no. 5, pp. 544–551, 2023.
 - [14] L. Ayudia, A. G. P. Siswadi, and F. D. Purba, "Kualitas Hidup Family Caregiver Pasien Orang Dengan Skizofrenia (Ods)," *Philanthr. J. Psychol.*, vol. 4, no. 2, p. 128, 2020, doi: 10.26623/philanthropy.v4i2.2777.
 - [15] N. M. Meilani, N. Ketut, S. Diniari, and N. K. S. Diniari, "Beban Perawatan Pada Caregiver Penderita Skizofreniadi Poliklinik Rawat Jalanrumah Sakit Jiwa Provinsi Bali," *E-Jurnal Med.*, vol. https://oj, no. 2, p. 2019, 2019, [Online]. Available: file:///C:/Users/Lenovo/Downloads/48438-205-135253-1-10-20200103.pdf%0Ahttps://ojs.unud.ac.id/index.php/eum/article/view/48438
 - [16] Y. Candra Alim, M. Tiyas Anggraini, and N. Anggraeni Noviasari, "Analisis Faktor yang Berhubungan dengan Beban Family Caregiver dalam Mengasuh Pasien Skizofrenia," *JKJ Persat. Perawat Nas. Indones.*, vol. 11, no. 2, pp. 361–368, 2023.
 - [17] P. Kartika, F. A. Nauli, and M. Rustam, "Hubungan Antara Beban dan Kualitas Hidup Caregiver Penderita Skizofrenia," *Ejournal.Unib.Ac.Id*, vol. 2, no. 7, pp. 169–175, 2022, [Online]. Available: https://ejournal.unib.ac.id/JurnalVokasiKeperawatan/article/view/26076
 - [18] G. K. Dewi, "Pengalaman Caregiver dalam Merawat Klien Skizofrenia di Kota Sungai Penuh," *J. Endur.*, vol. 3, no. 1, p. 200, 2018, doi: 10.22216/jen.v3i1.2852.
 - [19] A. Ellepola and C. A. Abayaweera, "Expressed emotion, medication adherence and association with disease prognosis in patients with schizophrenia at Teaching Hospital, Anuradhapura," *Sri Lanka J. Psychiatry*, vol. 11, no. 1, pp. 20–25, 2020, doi: 10.4038/sljpsyc.v11i1.8225.
 - [20] E. Siringoringo and Haerati, "Faktor-Faktor Penyebab Kekambuhan Pada Pasien Skizofrenia Di Poliklinik Jiwa Rsud H. Andi Sulthan Dg. Radja Kabupaten Bulukumba," *J. Kesehat. Panrita Husada*, vol. 3, no. 1, pp. 24–40, 2019, doi: 10.37362/jkph.v3i1.8.