

Influence of Protective and Risk Factors on Resilience among Family Caregivers of Schizophrenia Patients

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ABSTRACT

Background: Developing resilience among family caregivers of schizophrenia patients is challenging. Families must be able to identify risk factors and manage them to achieve a dynamic family situation and have the ability to survive while caring for schizophrenia patients. Protective factors interact with risk factors and create strength for families to be resilient in caring for people with schizophrenia.

Purpose: This study aimed to examine the influence of protective and risk factors on resilience among family caregivers of schizophrenia patients.

Methods: The research used is an explanatory observational study conducted in January-March 2023 in Malang Regency, Indonesia. 125 families caregivers were obtained by purposive sampling. The instruments used were personal characteristics, protective factors according to indicators consisting of the Mc Master Family Assessment Device, Multidimensional Scale of Perceived Social Support and risk factors according to indicators consisting of the Family Stigma Stress Scale, Zarit Burden Interview, and Family Distress Index. The family resilience using the Walsh family resilience questionnaire. Analysis the influence of variable using path analysis with the help of SMART PLS software version 4.

Results: T-statistics showed that there was an influence of family protective ($p = 0.016$) and family risk factors ($p=0.003$) on family caregivers' resilience.

Conclusions: Protective and risk factors of families with schizophrenia are the main resources in developing family caregivers' resilience. To promote family health and effective adaptation to the schizophrenia long-term care, it is critical to improve family protective factors such as family functioning and social support and minimize family risk factors such as social stigma in schizophrenic families.

Keywords: family, protective factors, resilience, risk factors, schizophrenia

Received March 10, 2025; Revised May 12, 2025; Accepted July 3, 2025

DOI: <https://doi.org/10.30994/jnp.v8i4.862>



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BACKGROUND

Schizophrenia is a chronic mental disorder characterized by distortions in thinking, perception, emotion, language and behavior as well as the inability to make interpersonal relationships with other people in time, place and environment. It is often associated with personal, social, and work function (Townsend & Morgan, 2018; World Health Organization, 2022). The Basic Health Research reports 2018 shows that the prevalence of schizophrenia or psychotic disease in Indonesia is 6.7 per 1000 households (Kemenkes RI, 2018). Schizophrenia affects approximately 24 million people or 1 in 300 people (0.32%) worldwide, this rate is 1 in 222 people (0.45%) among adults (WHO, 2022).

According to data from the World Health Organization (WHO), people with schizophrenia have a 2 to 3 times higher risk of dying earlier than the general population (Laursen et al., 2014;). In a study it was stated that relapse occurred in about 20% of schizophrenic patients (Laursen et al., 2014) while another study stated that around 15% or 20 people out of 132 people with schizophrenia had a relapse (Cohen et al., 2023). Relapse in schizophrenia is also caused by a lack of family support during treatment (Maramis et al., 2021; Sariah et al., 2014). Families often show fear and anxiety when interacting with people who have schizophrenia (Lestari et al., 2021) Families show negative emotions, provide continuous criticism, and do not provide a comfortable and safe environment for people with schizophrenia (Akbar, 2008; Amaresha & Venkatasubramanian, 2012; Fitryasari et al., 2021).

Family resilience is a dynamic process between risk factors and protective factors (Patterson, 2002a). Resilience can be a mediator of family stressors because it enables families to control stress and maintain their own and their families' health (Karimirad et al., 2018). Risk factors can drive negative outcomes in families, whereas protective factors help reduce negative outcomes (Mackay, 2003). Protective factors interact with risk factors and generate strength for families to overcome adversity (Lietz, 2007). Growing the family caregivers's resilience is not an easy task. Families must be able to identify risk factors and manage them to achieve a dynamic family situation and have the ability to survive when treating schizophrenic patients. Families need help from health professionals, such as psychiatric nurses, to identify and manage family risk factors. Much research on family resilience has been carried out, but that research is more focused on indicators of family resilience (Fitryasari et al., 2021; Fitryasari, Yusuf, Nursalam, et al., 2018; Ganella et al., 2018; Karimirad et al., 2018) and very little research has explored the factors that influence and foster resilience. Families often feel that the family interventions provided have not met expectations because they actually need long-term solutions (Attepe Ozden & Tuncay, 2018) with the hope that the family will still be able to survive and rise to the crises experienced while caring for schizophrenic patients.

Risk factors are events that trigger stress in the family (Becvar, 2013). Families of schizophrenic sufferers, while caring for schizophrenic sufferers, face a series of stressors throughout their lives. Events that are considered stressors can often have a negative impact on them. The family is typically the group most impacted by the mental illness. Previous research in India reported that family members who cared for relatives who reported suffering from schizophrenia experienced a high burden (Kuchhal et al., 2019). During this time, families who care for the burden are quite large in relation to finances, family relationships, and their own well-being and health (Gupta, Isherwood, Jones, & Van Impe, 2015; Kumar, Suresha, Thirthalli, Arunachala, & Gangadhar, 2015). Apart from that, they also complained of physical fatigue because they were constantly trying to balance the patient (Fitryasari et al., 2021).

Protective factors are internal and external resources and abilities that help a family overcome difficulties (Mandleco, 2000). Internal protective factors include personal traits that are useful when people overcome difficulties in their lives. External protective factors, on the other hand, are supports that exist in a person's environment and include things such as relationships with neighbors, friends, and religious organizations (Gilligan, 2004). It is very important for families with schizophrenia to increase these protective factors so that they can optimize the resources they have to support the care of schizophrenia sufferers. This research is expected to complement the existing theory, namely the family resilience process proposed by Lietz (Lietz & Becvar, 2013) which explains that the resilience process is influenced by protective factors as a source of family strength such as social support, a sense of humor, and flexibility (Becvar, 2013; Lietz & Strength, 2011).

Based on the description above, research was conducted on "the influence of protective and risk factors on resilience among family caregivers of schizophrenia patients".

OBJECTIVE

This study aims to examine the influence of protective and risk factors on resilience among family caregivers of schizophrenia patients.

METHODS

The research used is an explanatory observational study conducted in January-March 2023 in Malang Regency, Indonesia. The research participants were family caregivers of schizophrenia patients who were registered on the list of mental disorders in the Malang District Health Service working area. The sampling technique is purposive sampling. A total of 240 patients are registered as recipients of mental health services, along with their families, who are directly responsible for them. The inclusion criteria of the respondents were: 1) family members who mainly care for schizophrenic patients who live at home based on statements directly from the family, 2) aged 18 to 60 years, 3) able to communicate with schizophrenic patients, and 4) able to read and write. The research carried out is voluntary and family caregiver who met the criteria and willing to participate in this study was given informed consent form to be signed.

Dependent variable in this research is family caregivers' resilience; the independent variables are family risk factors and family protective factors.

Data were collected using a personal characteristics questionnaire, the protective factors questionnaire refers to the indicators used, namely family function and social support. Items included on the personal characteristics questionnaire were age, sex, caring period, education, and type of works. The family functioning questionnaire was adopted from McMaster Family Assessment Device (FAD) (Fogarty, 2009), and social support was adopted from the Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet et al., 1988). The risk factors questionnaire refers to the indicators used, namely family stigma and family burden. The family stigma was adopted from the family Stigma Stress Scale (FSSS) (Chang et al., 2019), family burden was adopted from the Zarit Burden Interview (ZBI- 22) (Zarit et al., 1985), and The family resilience using the Walsh family resilience questionnaire. Items included on the personal characteristics questionnaire were age, sex, caring period, education, and type of works. The family function questionnaire developed by Fogarty (2009) consisted of eight questions with a Likert scale of never, sometimes, not sure, often and always. The social support questionnaire developed by Zimet et al., (1988) consisting of eight questions with a Likert scale of never, sometimes, not sure, often, and always. The family stigma questionnaire was developed by Chang et al. (2019) consisting of five questions with a Likert scale of never, sometimes, not sure, often, and always. The burden questionnaire

was developed by Zarit et al. (1985) consisting of eight questions with a Likert scale of never, sometimes, not sure, often, and always. Researchers carried out modifications to the protective factors, risk and resilience factors instruments according to the context required in the research. Modifications were made to the original language of the instrument, which previously used English and was translated into Indonesian. Instrumental translation is carried out by translators who are experts in English grammar and have a diploma or competence in English translation. The results of the instruments that have been translated are then tested for validity and reliability. The results of the validity of the instrument are a p value ≤ 0.05 and reliability with values of family function (0.664), social support (0.852), family stigma (0.831), family burden (0.892), and family resilience (0.988).

The research was carried out after obtaining permission from the Malang District Health Service as the research setting. Researchers conduct research after subjects are willing and sign informed consent for research voluntarily.

Descriptive statistics have been used to analyze the personal characteristics of the respondents. Categorical variables are described using frequencies and percentages. The data used in the variables of protective factors, risk factors, and resilience of family caregivers are ordinal scales. Path analysis used in this research aims to determine the influence of protective factors and family risk factors on family caregiver's resilience. The p-value is ≤ 0.05 . The data were analyzed using SMART PLS Version 4 to prove the effect of the variables.

This research has received ethical permission from the Ethics Committee of the Faculty of Nursing, Airlangga University with number "Ethical Approval" No: 2740-KEPK Surabaya-January, 11 2023. All participants signed written informed consent before participating in the study and they could withdraw at any stage of the study. This research is voluntary

RESULTS

Table 1. Frequency Distribution of Personal Characteristics Family Caregivers of schizophrenia In Malang Distric (n=125)

Characteristic	n	%
Age		
18-25 years old	7	5.6%
26-35 years old	6	4.8%
36-45 years old	38	30.4%
46-55 years old	59	47.2%
56-60 years old	16	12.0%
Total	125	100%
Sex		
Man	69	55.2%
Woman	56	44.8%
Total	125	100%
Caring Periode		
1-3 years	14	11.2%
4-6 years	41	32.8%
7-10 years	70	56.0%
Total	125	100%
Education		
Not school	9	7.2%

Characteristic	n	%
Elementary	52	41.6%
Middle High School	29	23.2%
High School	31	24.8%
University graduate	4	3.2%
Total	125	100%
Type of Work		
Not working	41	32.8%
government employees	4	3.2%
Farmer	51	40.8%
self-employed	29	23.2%
Total	125	100%

Table 1 shows that the highest proportion of families with schizophrenia were aged 46-55 years (47.2%), the highest gender was male (55.2%), the maximum length of treatment was 7-10 years or more (56%), the most education is elementary school (41.6%), the largest occupation is farmer (40.8%)

Table 2. Frequency Distribution of protective factor, risk factor and family resilience among family caregivers of schizophrenia patients (n=125)

Variable	Indicator	Category	Frequency (f)	Percentage (%)
protective factor	Family function	Low	66	52.8
		Moderate	21	16.8
		High	38	30.4
	Social support	Low	64	51.2
		Moderate	31	24.8
		High	30	24
risk factor	Family stigma	Low	34	27.2
		Moderate	14	11.2
		High	77	61.6
	Family burden	Low	12	9.6
		Moderate	26	20.8
		High	87	69.6
	Family stress	Low	6	4.8
		Moderate	33	26.4
		High	86	68.8
family resilience	Spirituality	Low	63	50.4
		Moderate	22	17.6
		High	40	32.0
	Receiving spiritual support	Low	64	51.2
		Moderate	27	21.6
		High	34	27.2
	Spiritual inisiatif	Low	68	54.4
		Moderate	7	5.6
		High	50	40.0
	Spiritual creatifity	Low	65	52.0
		Moderate	38	30.4
		High	22	17.6

Variable	Indicator	Category	Frequency (f)	Percentage (%)
protective factor	Family function	Low	66	52.8
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	Social support	Low	64	51.2
		Moderate	31	24.8
		High	30	24
risk factor	Family stigma	Low	34	27.2
		Moderate	14	11.2
		High	77	61.6
	Family burden	Low	12	9.6
		Moderate	26	20.8
		High	87	69.6
	Family stress	Low	6	4.8
		Moderate	33	26.4
		High	86	68.8
	Spiritual comitmen	Low	63	50.4
		Moderate	17	13.6
		High	45	36.0
	Insight	Low	85	68.0
		Moderate	3	2.4
		High	37	29.6
	Communication	Low	63	50.4
		Moderate	32	25.6
		High	30	24.0
	Spiritual coping behaviour	Low	74	59.2
		Moderate	3	2.4
		High	48	38.4
	Providing spiritual support	Low	65	51.2
		Moderate	28	22.4
		High	33	26.4

Based on Table 2, the results show that the majority of family protective factor was low, majority of risk factor was high. The majority of familiy resilience according of indicators were low.

Table 3. The influence of protective and risk factors on resilience among family caregivers of schizophrenia patients

Influence	Path coefficient	P Values
Family protective factors to family resilience	0.223	0.016
Family risk factors to family resilience	0.247	0.003

Table 3 explains that Family protective factors influence family resilience with a p-value of 0.016. Family risk factors influence family resilience with a p-value of 0.003. In addition, as the resulting coefficient value is positive (0.223) (0.247), it can be interpreted

that higher protective value will improve family caregiver's resilience and the better the family risk factors, the greater the family's resilience.

DISCUSSION

The research results showed that protective and risk factors significantly influence on resilience among family caregivers of schizophrenia patients. Family protective factors consist of indicators of family function and social support. The results of this study are in line with previous studies which stated that protective factors are a potential source for increasing family caregiver's resilience, this is because protective factors are able to reduce negative outcomes in families (Mackay, 2003). The results of other studies in line state that family resilience is a dynamic concept that arises due to the interaction between risk and family protective factors (Patterson, 2002b). Research data shows that most family functions are low. This may be due to the family's ignorance in carrying out their roles or duties in caring for the patient. Apart from that, the family also experiences many difficulties in interacting with the sufferer, not understanding the sufferer's wishes, which in the end becomes a trigger factor for stress and excessive burden felt by the family. In a study, it was stated that caring for a family member with schizophrenia made the family experience mostly negative experiences (Lippi, 2016). Apart from that, families who care for people with schizophrenia are also at risk of experiencing physical and mental health problems that affect family functioning. The dynamics and magnitude of the conflict or crisis experienced during caregiving are often related to family function, because basically the ability to carry out family duties and functions is an important strength for the family to become a resilient family. Research data shows that protective factors in the form of social support are significant for family resilience. This study is in line with previous studies which stated that social support is a mediator in family resilience (Stanley & Balakrishnan, 2022). The research results showed that most social support was low. This can be caused by the social structure of the family where neighbors and family friends almost become part of the family. Families burdened by family members with mental disorders need more emotional, financial, and instrumental support to ensure healthy functioning. Researchers found that families with family members suffering from schizophrenia are at risk of experiencing network contraction and condensation, and often feel dissatisfied with the social support they receive (Sawant & Jethwani, 2010). In one study, it was stated that family resilience was associated with improved psychosocial functioning (Wambua et al., 2020a). Providing better social support and understanding family functions for people with schizophrenia will help strengthen the family as a unit, so that the family can provide better care for sufferers. Apart from that, social support is also very important in helping families mobilize their psychological resources so as to enable them to face emotional problems or face stressful life situations so that they become resilient families.

The results of this study showed that the highest number of families who served as caregivers for schizophrenic patients were in the late adult age range. Other research shows that families with caregivers with chronic illnesses have an average age of adulthood (Sorayyanezhad et al., 2022). Also, in a study conducted in India, it was stated that the average family who became caregivers of schizophrenics was in the age range of 34.9 (Stanley & Balakrishnan, 2022). Another study that is consistent with this study, namely research conducted in Surabaya, Indonesia, shows that the average caregiver who cares for schizophrenics is in the late adult age range (Fitryasari et al., 2021).

The results of this study indicate that the resilience level of families with schizophrenia based on the nine indicators used shows the majority of low resilience results. Stanley and Balakrishnan (2022) found that as many as 29.3% of families have low

resilience. Also other studies that are consistent with this study reported low family resilience (Sorayyaneshad et al., 2022). In this study, the indicator of spiritual commitment was identified as the highest resilience indicator and the spiritual initiative, insight and spiritual coping behavior were identified as the lowest indicators. Spiritual initiative is the ability possessed by the family to make the first step or awareness in trying to do something, in this case is to be able to be resilient. Meanwhile, the spiritual insight is the ability to understand or to use knowledge to face or rise from problems based on one's spiritual beliefs or understanding and the coping behavior such as the active involvement in religious activities. This low insight is due to the fact that most of the caregivers are late adults, thus allowing families to tend to focus more on meeting the needs of daily life. Other studies also state that caregivers who treat chronic illnesses are also in late adulthood (Saffari et al., 2018). In studies that support this research, it is stated that spiritual coping is able to mediate stress felt by families (Saffari et al., 2018).

Family caregivers of schizophrenia patients have dependence and limitations in recognizing their resources; this is because families often experience feelings of stress, hopelessness, and boredom so they cannot think clearly to recognize their own strengths. In another study, it is stated that forms of stressful behavior shown by families are often reflected in behaviors such as feelings of fear and anxiety in interactions (Lestari et al., 2021), unable to control emotions, providing continuous criticism to patients and unable to modify an environment that is comfortable and safe for patient (Akbar, 2008; Amaresha & Venkatasubramanian, 2012; Fitryasari et al., 2021). The results of this study are also supported by previous study reported schizophrenic patients are very dependent on the family, which also triggers stress felt by the family (Renwick et al., 2023).

The results of this research showed that there is a significant influence of protective factors on family risk and family resilience. This finding is congruent with previous study stated that low resilience is often found in families with low family functioning (Wambua et al., 2020b). Family protective factors consist of family functions and social support. Family functioning, particularly among primary family caregivers for schizophrenic patients, is a global issue that poses many challenges (Hsiao et al., 2023; Renwick et al., 2023). In fact, this family function is one of the strengths owned by the family to maintain the quality of life so that it can provide the best care for people with schizophrenia. Family functioning is associated with the mental health and physical health of the family (Meng et al., 2021). it is necessary to study further and provide intervention for factors that hinder the formation of family function properly, such as the burden on the family. It is stated in the literature that the burden of long-term care experienced by families with schizophrenia could interfere with the function of family caregivers (Rajai et al., 2021; Suryani et al., 2019). Social support given to the family is often associated with higher family social functions (van der Kop, 2018). This study also relevant with previous studies stated that there is a significant correlation between social support and the burden on family caregivers for schizophrenic patients (Sustrami Yusuf, Fitryasari, Efendi et al., 2023).

In this study, the family risk factors also covered family stigma. This family stigma is a feeling felt by the family when family member suffers from schizophrenia. This family stigma greatly impacts the wishes and behavior of the family in caring for the sufferers. Highly internalized stigma affects the quality of life and family parenting capacity, and internalized stigma has a negative relationship with expectations and a positive relationship with passive coping (Guan et al., 2020). This stigma is part of the environmental factors that affect the burden of family care (Sustrami, et al., 2023) with relatively high load tendencies (Ebrahim et al., 2020). This stigma is also one of the factors that affect family resilience (Fernandes et al., 2021). Also other study are consistent about stigma being a family risk

factor, It was stated that stigma is a significant factor in family distress with schizophrenia (Guan et al., 2021). So it is very important to increase family capacity to clarify health problems encountered, resolve family behavior effectively and minimize risk factors (Mashudi & Yusuf, 2021).

The results also show that there is a significant effect of protective factors and family risk factors on the family caregivers' resilience. So it is very important to manage all risk factors to increase family resilience (Fitryasari et al., 2018) and effective interventions to increase family resilience (Sorayyanezhad et al., 2022). The increase in protective and risk factors is important because people with schizophrenia need long-term support in their daily lives and it is important to support their long-term recovery and functioning. (Barbara et al., 2021).

The strengths of this quantitative study is the relatively large number of respondents. Another strength is that this explanatory design is the first study to examine the influence of risk factors, protective factors, and family resilience in Indonesian context. However, the cross-sectional approach and single setting applied in this study also make this study only applicable in the limited context of time and less-likely generable for other context. A limitation in this research is the possibility that there are other factors that influence family caregiver's resilience, namely spiritual factors and health service factors that can overcome the negative impacts caused by risk factors.

CONCLUSION

The findings of this study indicate that protective factors and family risk have an effect on the family caregiver's resilience. To promote family caregiver's health and effective adaptation to the schizophrenia patients' long-term care, it is critical to improve family protective factors such as family functioning and social support and reduce family risk factors such as stigma in schizophrenic families. In addition, designing effective interventions to increase family caregivers' resilience seems necessary. The implication of this research is that it is important to provide information to health workers to increase or support internal and external protective factors and reduce family risk factors so as to help families achieve a state of resilience. Family-centered interventions with a focus on improving risk factors and increasing protective factors such as family psychoeducation are highly recommended.

REFERENCES

- Akbar, M. (2008). *Schizophrenia: psikosis (mental illness)*. Jakarta: Balai Pustaka.
- Amaresha, A. C., & Venkatasubramanian, G. (2012). Expressed emotion in schizophrenia: an overview. *Indian Journal of Psychological Medicine*, 34(1), 12–20.
- Attepe Özden, S., & Tuncay, T. (2018). The experiences of Turkish families caring for individuals with Schizophrenia: A qualitative inquiry. *International Journal of Social Psychiatry*, 64(5), 497–505. <https://doi.org/10.1177/0020764018779090>.
- Barbara, S., Barabácssy, Á., Buksa, K., Laszlovszky, I., Dombi, Z. B., Németh, G., & Falkai, P. (2021). The burden of caring for someone with schizophrenia: A cross country report from Bulgaria, the Czech Republic, Hungary and Russia. *Psychiatria Hungarica : A Magyar Pszichiatriai Tarsasag Tudományos Folyóirata*, 36(4), 546–556.
- Becvar, D. S. (2013). *Handbook of Family Resilience*. *Handbook of Family Resilience*. <https://doi.org/10.1007/978-1-4614-3917-2>.
- Chang, C. C., Su, J. A., Chang, K. C., Lin, C. Y., Koschorke, M., Rüsch, N., & Thornicroft, G. (2019). Development of the Family Stigma Stress Scale (FSSS) for Detecting Stigma Stress in Caregivers of People With Mental Illness. *Evaluation and the Health*

- Professions, 42(2), 148–168. <https://doi.org/10.1177/0163278717745658>.
- Cohen, A., Naslund, J. A., Chang, S., Nagendra, S., Bhan, A., Rozatkar, A., Thirthalli, J., Bondre, A., Tugnawat, D., Reddy, P. V., Dutt, S., Choudhary, S., Chand, P. K., Patel, V., Keshavan, M., Joshi, D., Mehta, U. M., & Torous, J. (2023). Relapse prediction in schizophrenia with smartphone digital phenotyping during COVID-19: a prospective, three-site, two-country, longitudinal study. *Schizophrenia*, 9(1), 1–8. <https://doi.org/10.1038/s41537-023-00332-5>.
- Ebrahim, O. S., Al-Attar, G. S. T., Gabra, R. H., & Osman, D. M. M. (2020). Stigma and burden of mental illness and their correlates among family caregivers of mentally ill patients. *Journal of the Egyptian Public Health Association*, 95(1). <https://doi.org/10.1186/s42506-020-00059-6>.
- Fernandes, J. B., Fernandes, S. B., Almeida, A. S., & Cunningham, R. C. (2021). Barriers to Family Resilience in Caregivers of People Who Have Schizophrenia. *Journal of Nursing Scholarship*, 53(4), 393–399. <https://doi.org/10.1111/jnu.12651>.
- Fitryasari, R., Nursalam, N., Yusuf, A., Hargono, R., Lin, E. C. L., & Tristiana, R. D. (2021). Development of a family resiliency model to care of patients with schizophrenia. *Scandinavian Journal of Caring Sciences*, 35(2), 642–649. <https://doi.org/10.1111/scs.12886>.
- Fitryasari, R., Yusuf, A., Dian, R., & Endang, H. (2018). International Journal of Nursing Sciences Family members ' perspective of family Resilience ' s risk factors in taking care of schizophrenia patients. *International Journal of Nursing Sciences*, 5(3), 255–261. <https://doi.org/10.1016/j.ijnss.2018.06.002>.
- Fitryasari, R., Yusuf, A., Nursalam, Tristiana, R. D., & Nihayati, H. E. (2018). Family members' perspective of family Resilience's risk factors in taking care of schizophrenia patients. *International Journal of Nursing Sciences*, 5(3), 255–261. <https://doi.org/10.1016/j.ijnss.2018.06.002>.
- Fogarty, C. T. (2009). Evaluating and Treating Families. *The Primary Care Companion to The Journal of Clinical Psychiatry*, 11(4), 176. <https://doi.org/10.4088/pcc.08bk00770>
- Ganella, E. P., Seguin, C., Bartholomeusz, C. F., Whittle, S., Bousman, C., Wannan, C. M. J., Di Biase, M. A., Phassouliotis, C., Everall, I., Pantelis, C., & Zalesky, A. (2018). Risk and resilience brain networks in treatment-resistant schizophrenia. *Schizophrenia Research*, 193, 284–292. <https://doi.org/10.1016/j.schres.2017.07.014>.
- Gilligan, R. (2004). Promoting resilience in child and family social work: Issues for social work practice, education and policy. *Social Work Education*, 23(1), 93–104.
- Guan, Z., Huang, C., Wiley, J. A., Sun, M., Bai, X., & Tang, S. (2020). Internalized stigma and its correlates among family caregivers of patients diagnosed with schizophrenia in Changsha, Hunan, China. *Journal of Psychiatric and Mental Health Nursing*, 27(3), 224–236. <https://doi.org/10.1111/jpm.12571>.
- Guan, Z., Wang, Y., Lam, L., Cross, W., Wiley, J. A., Huang, C., Bai, X., Sun, M., & Tang, S. (2021). Severity of illness and distress in caregivers of patients with schizophrenia: Do internalized stigma and caregiving burden mediate the relationship? *Journal of Advanced Nursing*, 77(3), 1258–1270. <https://doi.org/10.1111/jan.14648>.
- Hsiao, C.-Y., Hsieh, M.-H., Chung, F.-C., Chiu, S.-C., Chang, C.-W., & Tsai, Y.-F. (2023). Changes in family functioning among primary family caregivers of patients with schizophrenia. *Journal of Nursing Scholarship: An Official Publication of Sigma Theta Tau International Honor Society of Nursing*. <https://doi.org/10.1111/jnu.12887>.
- Karimirad, M. R., Seyedfatemi, N., Noghani, F., Dehkordi, A. H., & Barasteh, S. (2018). The relationship between resilience and quality of life in family caregivers of patients with mental disorders. *Journal of Clinical and Diagnostic Research*, 12(11), 10–13.

- <https://doi.org/10.7860/JCDR/2018/29369.12239>.
- Kemenkes RI. (2018). Hasil Riset Kesehatan Dasar Tahun 2018. Kementrian Kesehatan RI, 53(9), 1689–1699.
- Kuchhal, A. K., Kuchhal, A., Arya, V., Pardal, P. K., Sharma, C. S., & Sharma, M. (2019). A study of psychological stress and burden on caregivers of schizophrenic patients.
- Laursen, T. M., Nordentoft, M., & Mortensen, P. B. (2014). Excess early mortality in schizophrenia. *Annual Review of Clinical Psychology*, 10(December), 425–448. <https://doi.org/10.1146/annurev-clinpsy-032813-153657>.
- Lestari, R., Yusuf, A., Hargono, R., Setyawan, F. E. B., Hidayah, R., & Ahsan, A. (2021). Adapting to People With Schizophrenia: A Phenomenological Study on a Rural Society in Indonesia. *Indian Journal of Psychological Medicine*, 43(1), 31–37. <https://doi.org/10.1177/0253717620926847>.
- Lietz, C. A. (2007). Uncovering stories of family resilience: A mixed methods study of resilient families, part 2. *Families in Society*, 88(1), 147–155. <https://doi.org/10.1606/1044-3894.3602>.
- Lietz, C. A., & Strength, M. (2011). Stories of successful reunification: A narrative study of family resilience in child welfare. *Families in Society*, 92(2), 203–210. <https://doi.org/10.1606/1044-3894.4102>.
- Lippi, G. (2016). Schizophrenia in a member of the family: Burden, expressed emotion and addressing the needs of the whole family. *South African Journal of Psychiatry*, 22(1). <https://doi.org/10.4102/sajpsy psychiatry.v22i1.922>.
- Mackay, R. (2003). Family resilience and good child outcomes: An overview of the research literature. *Social Policy Journal of New Zealand*, 98–118.
- Mandleco, B. L. (2000). An organizational framework for conceptualizing resilience in children. *Journal of Child and Adolescent Psychiatric Nursing*, 13(3), 99–112.
- Maramis, M. M., Sofyan Almahdy, M., Atika, A., Bagus Jaya Lesmana, C., & Gerick Pantouw, J. (2021). The biopsychosocial-spiritual factors influencing relapse of patients with schizophrenia. *International Journal of Social Psychiatry*, 002076402110656. <https://doi.org/10.1177/00207640211065678>.
- Mashudi, S., & Yusuf, A. (2021). Family Coping Strategies to Improve the Health of Family Members Living with Schizophrenia. *Jurnal Ners*, 16(1), 67–73. <https://doi.org/10.20473/jn.v16i1.24527>.
- Meng, N., Chen, J., Cao, B., Wang, F., Xie, X., & Li, X. (2021). Focusing on quality of life in the family caregivers of patients with schizophrenia from the perspective of family functioning. 5(November 2020).
- Patterson, J. M. (2002a). Integrating family resilience and family stress theory. *Journal of Marriage and Family*, 64(2), 349–360.
- Patterson, J. M. (2002b). Understanding family resilience. *Journal of Clinical Psychology*, 58(3), 233–246. <https://doi.org/10.1002/jclp.10019>.
- Rajai, N., Lami, B., Pishgooie, A. H., Habibi, H., & Alavizerang, F. (2021). Evaluating the Effect of Peer-Assisted Education on the Functioning in Family Caregivers of Patients with Schizophrenia: A Clinical Trial Study. *Korean Journal of Family Medicine*, 42(5), 356–362. <https://doi.org/10.4082/kjfm.20.0098>.
- Renwick, L., Susanti, H., Brooks, H., Keliat, B. anna, Bradshaw, T., Bee, P., & Lovell, K. (2023). Culturally adapted family intervention for people with schizophrenia in Indonesia (FUSION): a development and feasibility study protocol. *Pilot and Feasibility Studies*, 9(1), 1–11. <https://doi.org/10.1186/s40814-023-01280-8>.
- Rocchi, S., Ghidelli, C., Burro, R., Vitacca, M., Scalvini, S., Della Vedova, A. M., Roselli, G., Ramponi, J. P., & Bertolotti, G. (2017). The Walsh family resilience

- questionnaire: The Italian version. *Neuropsychiatric Disease and Treatment*, 13, 2987–2999. <https://doi.org/10.2147/NDT.S147315>.
- Saffari, M., Koenig, H. G., O'Garro, K. N., & Pakpour, A. H. (2018). Mediating effect of spiritual coping strategies and family stigma stress on caregiving burden and mental health in caregivers of persons with dementia. *Dementia*. <https://doi.org/10.1177/1471301218798082>.
- Sariah, A. E., Outwater, A. H., & Malima, K. I. Y. (2014). Risk and protective factors for relapse among Individuals with Schizophrenia: A Qualitative Study in Dar es Salaam, Tanzania. *BMC Psychiatry*, 14(1), 1–12. <https://doi.org/10.1186/s12888-014-0240-9>.
- Sawant, N. S., & Jethwani, K. S. (2010). Understanding family functioning and social support in unremitting schizophrenia: A study in India. *Indian Journal of Psychiatry*, 52(2), 145–149. <https://doi.org/10.4103/0019-5545.64593>.
- Sorayyanezhad, A., Nikpeyma, N., Nazari, S., Sharifi, F., & Sarkhani, N. (2022). The relationship of caregiver strain with resilience and hardiness in family caregivers of older adults with chronic disease: a cross-sectional study. *BMC Nursing*, 21(1), 1–8. <https://doi.org/10.1186/s12912-022-00966-3>.
- Stanley, S., & Balakrishnan, S. (2022). Family Caregiving in Schizophrenia: do stress, social support and resilience influence life satisfaction? - A quantitative study from India. *Social Work in Mental Health*, 00(00), 1–19. <https://doi.org/10.1080/15332985.2022.2070051>.
- Suryani, Ningsih, E. W., & Nur'aeni, A. (2019). Knowledge, perception, and burden of family in treating patients with schizophrenia who experience relapse. *Belitung Nursing Journal*, 5(4), 162–168. <https://doi.org/10.33546/bnj.683>.
- Sustrami, D., Yusuf, A., Fitryasari, R., Efendi, F., & Aysha, R. F. (2023). Relationship between social support and family caregiver burden in schizophrenia patients. *Journal of the Pakistan Medical Association*, 73(2), S42–S45. <https://doi.org/10.47391/JPMA.Ind-S2-10>.
- Sustrami, D., Yusuf, A., Fitryasari, R., Suhardiningsih, A. V. S., & Arifin, H. (2023). Determinants of Burden in Family Caregivers of Individuals With Schizophrenia: A Systematic Review. *Journal of Psychosocial Nursing and Mental Health Services*, 61(2), 38–43. <https://doi.org/10.3928/02793695-20220804-02>.
- Townsend, M. C., & Morgan, K. I. (2018). Psychiatric mental health nursing: Concepts of care in evidence-based practice. *Psychiatric Mental Health Nursing: Concepts of Care in Evidence-Based Practice*.
- van der Kop, M. L., et al. (2018). Social Identities of Persons with Schizophrenia and Social Functioning: Individual and Family Caregiver Perspectives Vanesa. *Physiology & Behavior*, 176(5), 139–148. <https://doi.org/10.1097/NMD.0000000000001327>.
- Wambua, G. N., Kilian, S., Ntlantsana, V., & Chiliza, B. (2020a). The association between resilience and psychosocial functioning in schizophrenia: A systematic review and meta-analysis. *Psychiatry Research*, 293(June), 113374. <https://doi.org/10.1016/j.psychres.2020.113374>.
- Wambua, G. N., Kilian, S., Ntlantsana, V., & Chiliza, B. (2020b). The association between resilience and psychosocial functioning in schizophrenia: A systematic review and meta-analysis. *Psychiatry Research*, 293. <https://doi.org/10.1016/j.psychres.2020.113374>.
- World Health Organization. (2022). Schizophrenia. <https://www.who.int/news-room/fact-sheets/detail/schizophrenia>.
- Zarit, S., Orr, N. K., & Zarit, J. M. (1985). The hidden victims of Alzheimer's disease:

Families under stress. NYU press.

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, 52(1), 30–41.
https://doi.org/10.1207/s15327752jpa5201_2.