



Association Between Family Support and Relapse among Patients with Schizophrenia

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Abstract

Background: Relapse in schizophrenia contributes to rehospitalization, functional deterioration, and caregiver burden. Although families are central to community care, evidence from Maluku on family support and relapse is limited. **Objective:** To examine the association between family support reported by family respondents and relapse among patients with schizophrenia at the Regional Specialized Hospital (RSKD) of Maluku Province, Indonesia. **Methods:** This cross-sectional study was conducted in October 2024. Forty adult family respondents were recruited purposively during the predefined study period (planned sample, 72). Family support was assessed with a 24-item questionnaire covering emotional, informational, instrumental, and appraisal support. Patient relapse was reported by the family respondent for the preceding 12 months and defined as symptom recurrence requiring hospital treatment; more than two episodes was classified as high relapse. Fisher's exact test was used for the 2 x 2 analysis. **Results:** Thirty-four respondents (85.0%) were classified as providing good family support and six (15.0%) as providing poor support. Twenty-six patients (65.0%) had high relapse and 14 (35.0%) had low relapse. Counterintuitively, high relapse occurred in 25 of 34 patients in the good-support group and 1 of 6 in the poor-support group (two-sided Fisher's exact test, $p = 0.014$; OR = 13.89, 95% CI: 1.42-135.55). **Conclusion:** Family-support category was associated with the patient's retrospectively reported relapse classification, but the unexpected direction, small sample, wide confidence interval, and cross-sectional design preclude a causal interpretation. Greater support may be a response to more severe or recurrent illness.

Keywords: family support; relapse; schizophrenia; mental health nursing; family

1. Introduction

Schizophrenia is a severe mental disorder characterized by disturbances in thinking, perception, emotion, and behavior that may impair social functioning and create long-term care needs. Approximately 23 million people worldwide live with schizophrenia. In Indonesia, national health survey data continue to indicate a substantial household burden. RSKD Maluku Province recorded 257 schizophrenia inpatient records and 5,614 outpatient visits in 2023; these service-use counts describe hospital activity and should not be interpreted as the number of relapses (World Health Organization, 2025; Health Development Policy Agency, 2024; RSKD Medical Records, 2023).

Relapse is the re-emergence or worsening of symptoms after improvement and may require unplanned hospital treatment or rehospitalization. Its determinants are multifactorial and include medication adherence, illness duration and severity, treatment regimen, substance use, comorbidity, life stressors, access to services, continuity of care, and the family environment (Nurisa, 2019; Cahaya et al., 2022).

Family support encompasses emotional, informational, instrumental, and appraisal components. Family members may help with medication use, recognize early symptom changes, facilitate access to services, and support daily activities. International evidence indicates that structured family interventions can reduce relapse, although effects vary by intervention and context (Rodolico et al., 2022; Kim & Park, 2023). In low- and middle-income countries, family-based interventions show promising but heterogeneous results, with many studies at high risk of bias (Morillo et al., 2022). Family climate also matters: high expressed emotion predicts relapse, showing that the quality of interaction cannot be captured fully by a broad support score (Ma et al., 2021). Indonesian

studies remain inconsistent: Rohmayanti et al. (2023) reported an association, whereas Siallagan et al. (2023) did not.

Despite this international literature, evidence specific to Maluku is limited. Local service patterns, family caregiving arrangements, geography, and continuity of specialist care may shape both support and relapse. This study therefore examined the association between family support reported by family respondents and relapse among patients with schizophrenia at RSKD Maluku Province.

2. Materials and Methods

2.1 Study design, setting, and period

A quantitative analytical study with a cross-sectional design was conducted at the Regional Specialized Hospital (RSKD) of Maluku Province in October 2024.

2.2 Population and sample

The study population comprised family members of patients with a clinical diagnosis of schizophrenia who received care at RSKD Maluku Province; the reference population was 257 families. The source sample-size calculation indicated a target of 72 respondents. Purposive sampling was used throughout the predefined October 2024 data-collection period, and all 40 eligible family respondents identified and consenting during that period were enrolled. Recruitment ended when the predefined period closed, before the target sample was reached. The retained recruitment record did not document the number approached or declining participation, so a response rate could not be calculated. Eligible respondents were adult family members who accompanied or assisted a patient with schizophrenia, could communicate in Indonesian, had sufficient knowledge of the patient's care and hospital-treated relapse history in the preceding year, and provided written consent. Relationship to the patient, designation as primary caregiver, caregiving duration, co-residence, caregiver burden, and frequency of contact were not recorded.

2.3 Measures

Family-respondent characteristics included age, education, occupation, and marital status. Family support was assessed with a 24-item Indonesian-language questionnaire adapted from a Friedman-based framework and covering emotional, informational, instrumental, and appraisal support. Items were rated from 1 (never) to 4 (always), giving a total score of 24-96; higher scores indicated greater support. Following the source scoring framework, 76-100% of the maximum score (73-96) was classified as good support; lower scores were combined as poor support for the binary analysis. Item-level data and formal cross-cultural adaptation records were not retained, so internal consistency could not be re-estimated in this sample. Relapse belonged to the patient and was reported by the family respondent for the preceding 12 months using one item adapted from Yunirawati (2021). A relapse episode was defined as recurrence or worsening of schizophrenia symptoms that resulted in return for hospital treatment or rehospitalization. More than two episodes was classified as high relapse and two or fewer as low relapse. Family reports were not independently verified against medical records.

2.4 Data collection and statistical analysis

After institutional permission was obtained, eligible respondents received study information and provided written informed consent. Respondents completed the questionnaire in approximately 5-10 minutes; forms were checked for completeness before coding and entry. Categorical variables were summarized with frequencies and percentages. Because the retained analytic dataset contained the dichotomized support and relapse variables rather than item or domain scores, continuous, ordinal, and domain-specific analyses were not possible. The association was examined in a 2 x 2 table. Fisher's exact test was used because of small expected counts, with $\alpha = 0.05$. An odds ratio (OR) and 95% confidence interval (CI) described the magnitude and precision of the association.

2.5 Ethical considerations

The study was approved by the Health Research Ethics Committee of STIKES Pasapua Ambon (No. 015/KEPK-STIKESPA/EC/2023). All respondents provided written informed consent. Anonymity, voluntary participation, and confidentiality were maintained throughout data collection and reporting.

3. Results

Table 1. Sociodemographic Characteristics of Family Respondents (n = 40)

Characteristic	n	%
Age		
Age 26-35 years	16	40.0
Age 36-45 years	22	55.0
Age 46-55 years	2	5.0
Education		
Junior high school	13	32.5
Senior high school	18	45.0
Bachelor's degree	9	22.5
Occupation		
Not employed	17	42.5
Self-employed	14	35.0
Farmer/Fisher*	9	22.5
Marital Status		
Unmarried	8	20.0
Married	32	80.0

Table 1 presents the sociodemographic characteristics of the 40 respondents. More than half of the respondents were aged 36–45 years (55.0%), followed by those aged 26–35 years (40.0%), while only 5.0% were aged 46–55 years. Regarding educational attainment, the largest proportion had completed senior high school (45.0%), followed by junior high school (32.5%) and a bachelor's degree (22.5%). In terms of occupation, 42.5% of respondents were not employed, 35.0% were self-employed, and 22.5% worked as farmers or fishers. Most respondents were married (80.0%), whereas 20.0% were unmarried. Overall, the respondents were predominantly middle-aged, had a senior high school education, were not employed, and were married.

Table 2. Distribution of family support and relapse (n=40)

Variable	n	%
Good family support	34	85.0
Poor family support	6	15.0
High relapse	26	65.0
Low relapse	14	35.0

As shown in Table 2, the majority of respondents reported good family support (85.0%), while only 15.0% reported poor family support. Regarding relapse, 65.0% of patients were classified as having a high relapse level, whereas 35.0% were classified as having a low relapse level. These findings indicate that although most patients received good family support, a substantial proportion still experienced a high level of relapse.

Table 3. Association between Family Support and Patient Relapse Classification (n = 40)

Family support	High relapse n (%)	Low relapse n (%)	Total	p-value
Good	25 (73.5)	9 (26.5)	34	0.014
Poor	1 (16.7)	5 (83.3)	6	
Total	26 (65.0)	14 (35.0)	40	

Fisher's Exact Test, two-sided. OR=13.89; 95% CI: 1.42-135.55.

Among respondents classified as having good family support, 25 of 34 patients (73.5%) had high relapse and 9 (26.5%) had low relapse. Among those with poor family support, 1 of 6 patients (16.7%) had high relapse and 5 (83.3%) had low relapse. Fisher's Exact Test indicated a statistically significant association ($p=0.014$). The estimated odds of high relapse were 13.89 times higher in the good-support group than in the poor-support group (95% CI: 1.42-135.55). This estimate must be interpreted cautiously because of the small cell counts, wide confidence interval, and cross-sectional design. (Table 3)

4. Discussion

Most family respondents (85.0%) were classified as providing good support, while 65.0% of patients were classified as having high relapse. These concurrent findings show that a favorable composite support category did not correspond to a lower prevalence of retrospectively reported relapse in this sample.

The unexpected direction is the central finding: high relapse was more common in the good-support group than in the poor-support group. This should not be interpreted as evidence that support increases relapse. The most plausible explanation is temporal ambiguity or reverse causality—families may intensify emotional, informational, instrumental, and appraisal support after recurrent relapse or in response to greater illness severity. The cross-sectional assessment cannot establish whether support preceded relapse.

The finding differs from evidence on structured family interventions. Network and conventional meta-analyses have reported benefits of family interventions for relapse and other patient or caregiver outcomes (Rodolico et al., 2022; Kim & Park, 2023). A review from low- and middle-income countries likewise found promising outcomes but substantial heterogeneity and a high risk of bias in many studies (Morillo et al., 2022). These intervention effects cannot be equated with the present observational association between a broad support score and past-year relapse. Moreover, expressed emotion—including criticism, hostility, and emotional overinvolvement is associated with relapse but was not measured here (Ma et al., 2021).

Residual confounding is also likely. Medication adherence, illness duration and severity, treatment regimen, previous hospitalization, substance use, comorbidity, continuity of care, and access to services may influence both the support a family provides and the likelihood of relapse. Interventions involving families can support adherence, but adherence remains a multifactorial behavior and was not measured in this study (Cahaya et al., 2022).

The OR of 13.89 (95% CI: 1.42-135.55) should therefore be read only as a measure of this sample's cross-sectional association. The broad CI reflects the small sample and sparse cells and is compatible with a wide range of effect sizes. A larger longitudinal study with prespecified covariates is needed to determine temporal sequence and estimate any independent association.

Strengths and limitations

This study provides local evidence from a specialist mental health setting in Maluku. Several limitations are important. First, only 40 of the planned 72 respondents were recruited during the fixed study period; the shortfall reduced precision and statistical power, as reflected by the wide CI, and the absence of approach and refusal counts prevents calculation of a response rate. Second, purposive sampling at one hospital limits generalizability. Third, relapse was recalled by family respondents through a single item, was not independently verified against records, and may be affected by recall or classification bias. Fourth, the support and relapse measures were dichotomized, losing information; item-, domain-, and continuous-score data were unavailable. Current-sample reliability could not be estimated, and records of formal cross-cultural adaptation were not retained. Fifth, caregiver relationship, primary-caregiver status, co-residence, caregiving duration, burden, and contact frequency were not collected. Finally, major clinical and service-related confounders were unmeasured, and the cross-sectional design precludes temporal or causal inference.

Implications for Mental Health Nursing

The results do not show that increasing support will reduce relapse, nor that good support causes relapse. Mental health nurses may nevertheless assess family needs and patterns of interaction as part of discharge and follow-up care, while integrating family education with medication-adherence assessment, early-warning-sign monitoring, therapeutic communication, and continuity of clinical care. Prospective evaluation is required before attributing changes in relapse to family support.

5. Conclusions

In this small cross-sectional sample from RSKD Maluku Province, family-support category was associated with the patient's retrospectively reported relapse classification. The direction was counterintuitive: high relapse was more frequent in the good-support group. The finding may reflect reactive support, unmeasured illness severity or other confounding, and substantial imprecision rather than a causal effect. Longitudinal studies should retain continuous and domain-level support scores, verify relapse from clinical records, characterize caregivers, and adjust for adherence, illness history, treatment, substance use, comorbidity, and continuity of care.

Conflict of Interest

The authors declare no conflicts of interest.

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