

Original Article

Video-Based Psychoeducation as an Intervention to Improve Caregiver Coping Mechanisms in Schizophrenia: A Quasi-Experimental

^{1,2}ADE HERMAN SURYA DIREJA, ³JAYASREE KANATHASAN, ⁴FARIDAH MOHD SAID

¹School of Nursing and Applied Sciences, Lincoln University College, Petaling Jaya, Malaysia.

²STIKES Tri Mandiri Sakti Bengkulu.

^{3,4}School of Nursing and Applied Sciences, Lincoln University College, Petaling Jaya, Malaysia.

ABSTRACT: *Schizophrenia is a chronic psychiatric disorder that imposes a substantial burden on family caregivers, often affecting their coping capacity and psychological well-being. Accessible and scalable caregiver-focused interventions remain limited, particularly in low-resource settings. This study aimed to evaluate the effectiveness of video-based psychoeducation in improving coping mechanisms among caregivers of individuals with schizophrenia. A pre-experimental study using a one-group pretest–posttest design was conducted at Rumah Sakit Khusus Jiwa Soeprapto, Bengkulu, Indonesia. A total of 20 caregivers were initially recruited using accidental sampling; however, 19 complete datasets were included in the final analysis. Data were collected before and after the intervention using an observation checklist assessing coping mechanisms. Normality was assessed using the Shapiro–Wilk test, and due to non-normal data distribution, the Wilcoxon signed-rank test was applied. The results showed a statistically significant improvement in coping mechanisms following the intervention ($Z = -2.236, p = 0.025$). No participants demonstrated a decline in coping scores, while a proportion showed improvement, and most remained stable. Video-based psychoeducation appears to be a feasible and effective intervention to enhance caregiver coping mechanisms. Its integration into mental health services may strengthen caregiver resilience and support better patient care outcomes.*

KEYWORDS: *Video-Based Psychoeducation, Caregiver Coping, Schizophrenia, Quasi-Experimental, Mental Health.*

1. INTRODUCTION

Schizophrenia is a chronic and severe mental disorder that affects an individual's cognition, perception, emotional regulation, and behavior, often resulting in long-term functional impairment. The disorder is characterized by symptoms such as hallucinations, delusions, disorganized thinking, and reduced emotional expression, which significantly interfere with daily living and social interaction. Due to its complex nature and recurrent course, schizophrenia requires continuous treatment and long-term care. According to the World Health Organization (WHO), approximately 24 million people worldwide are living with schizophrenia, making it one of the major contributors to global disability and psychosocial burden (World Health Organization, 2022). This condition not only affects individuals diagnosed with the disorder but also extends its impact to families and caregivers who play a central role in providing ongoing support.

In many countries, particularly in low- and middle-income settings, mental health care systems are still developing, and institutional resources remain limited. As a result, the responsibility for caring for individuals with schizophrenia is often shifted to family members. In Indonesia, family-based care is the dominant model in managing mental health conditions, including schizophrenia. Data from the Indonesian Basic Health Research (Riskesdas) report indicate that the prevalence of severe mental disorders, including schizophrenia, shows a consistent presence across provinces, with an estimated prevalence of around 7 per 1,000 households (Ministry of Health of the Republic of Indonesia, 2018). This figure reflects a substantial number of individuals requiring long-term care and highlights the significant role of families as primary caregivers.

At the regional level, the burden of schizophrenia is also evident. In Bengkulu Province, cases of severe mental disorders, including schizophrenia, continue to be reported within community and hospital-based services. Although the exact prevalence may vary across districts, mental health service data indicate that schizophrenia remains one of the most frequently encountered psychiatric conditions in specialized mental health facilities such as RSKJ Soeprapto. The persistence of these cases suggests that caregivers in this region are continuously involved in long-term patient management, often without adequate support or structured educational interventions.

The caregiving role in schizophrenia is both essential and demanding. Family caregivers are responsible for supervising medication adherence, recognizing early signs of relapse, managing behavioral disturbances, and supporting patients in their

daily activities. While this role is critical for maintaining patient stability, it often places caregivers under considerable psychological and emotional pressure. Caregivers frequently experience stress, anxiety, fatigue, and social limitations due to the continuous demands of care (Awad & Voruganti, 2008). In addition, caregiving responsibilities may interfere with employment, financial stability, and personal relationships, thereby increasing the overall burden experienced by caregivers (Kate et al., 2013).

An important factor that determines how caregivers respond to these challenges is their coping mechanism. Coping mechanisms refer to the cognitive and behavioral strategies used by individuals to manage stress and adapt to challenging situations (Lazarus & Folkman, 1984). Adaptive coping strategies, such as seeking information, problem-solving, and utilizing social support, can help caregivers maintain emotional balance and improve their ability to provide care. In contrast, maladaptive coping strategies, such as avoidance, denial, or withdrawal, may worsen psychological distress and negatively affect caregiving outcomes (Folkman & Moskowitz, 2004).

Despite the importance of coping mechanisms, many caregivers of individuals with schizophrenia still demonstrate limited coping capacity. This limitation is often associated with insufficient knowledge about the illness, lack of access to mental health education, and minimal exposure to structured support systems (Chan, 2011). Misunderstanding of schizophrenia may lead to stigma, inappropriate caregiving practices, and increased emotional strain. Furthermore, inadequate coping among caregivers has been linked to poorer patient outcomes, including higher relapse rates and reduced adherence to treatment (Caqueo-Urizar et al., 2014). These findings emphasize the need for targeted interventions that focus on strengthening caregiver coping mechanisms.

Psychoeducation has been widely recognized as an effective approach to addressing these challenges. It involves the provision of structured information about mental illness, treatment options, symptom management, and coping strategies, with the aim of empowering both patients and caregivers. Previous studies have shown that psychoeducation can improve knowledge, reduce caregiver burden, and enhance coping abilities (Xia et al., 2011). However, traditional psychoeducation methods are often delivered through face-to-face sessions or printed materials, which may not be accessible to all caregivers due to time constraints, logistical barriers, or limited healthcare resources.

The rapid development of digital technology offers new opportunities to overcome these limitations. Video-based psychoeducation has emerged as an innovative and practical approach to delivering health information in a more engaging and accessible format. Through audiovisual presentation, video-based interventions can simplify complex information, enhance understanding, and improve retention of knowledge. In addition, caregivers can access the material repeatedly, allowing them to learn at their own pace and revisit important information when needed. According to Zhang et al. (2019), multimedia-based educational interventions are particularly effective in increasing comprehension and supporting behavioral change.

In the context of mental health care, video-based psychoeducation holds significant potential for improving caregiver outcomes. It enables the delivery of standardized content, reduces dependency on direct healthcare provider interaction, and can be implemented in various settings, including hospitals and community-based programs. Despite these advantages, the use of video-based psychoeducation to specifically enhance caregiver coping mechanisms in schizophrenia care remains underexplored, particularly in Indonesia. Most existing studies have focused on knowledge or symptom management, with limited attention to coping as a primary outcome.

Considering the high prevalence of schizophrenia globally, nationally, and regionally, as well as the substantial burden experienced by caregivers, there is a clear need for effective and accessible interventions. Video-based psychoeducation may serve as a feasible solution to bridge the gap between caregiver needs and available mental health resources. By improving coping mechanisms, such interventions can contribute to better caregiver well-being, increased resilience, and improved quality of care for individuals with schizophrenia.

Therefore, this study aims to evaluate the effectiveness of video-based psychoeducation as an intervention to improve coping mechanisms among caregivers of individuals with schizophrenia at RSKJ Soeprato, Bengkulu Province, Indonesia. The findings of this study are expected to provide empirical evidence supporting the integration of digital psychoeducation into mental health services and to contribute to the development of innovative, scalable, and sustainable caregiver support programs.

2. MATERIALS AND METHODS

This study used a pre-experimental design with a one-group pretest–posttest approach to examine the effect of video-based psychoeducation on caregiver coping mechanisms among family caregivers of individuals with schizophrenia. The study was conducted at Rumah Sakit Khusus Jiwa Soeprato Bengkulu, Indonesia, from June to July 2025.

A total of 20 participants were initially recruited using accidental sampling; however, only 19 participants completed both pretest and posttest assessments and were included in the final analysis. Inclusion criteria were family members acting as primary caregivers, aged 18 years or older, and having at least six months of caregiving experience. Participants with cognitive or communication impairments or incomplete data were excluded.

The intervention consisted of a video-based psychoeducation session lasting approximately 30 minutes. The video covered basic information about schizophrenia, treatment, and relapse prevention, the role of caregivers, stress management, and adaptive coping strategies. The session was delivered by a trained mental health professional in a hospital setting. Coping mechanisms were assessed using an observation checklist administered before and immediately after the intervention.

Data normality was tested using the Shapiro–Wilk test. As the data were not normally distributed, the Wilcoxon signed-rank test was used to analyze differences between pretest and posttest scores, with a significance level of $p < 0.05$. The effect size was also calculated to determine the magnitude of the intervention.

This study received ethical approval from STIKES TMS No. 004065/KEPK/2025, and all participants provided informed consent before participation.

3. RESULTS AND DISCUSSION

TABLE 1 Characteristics of Family Caregivers, Including Age, Gender, and Duration of Caregiving

Variable	Category / Statistic	n	%
Age (years)	20–30	2	10.5
	31–40	5	26.3
	41–50	5	26.3
	51–60	5	26.3
	>60	2	10.5
	Mean \pm SD	45.8 \pm 11.4	
	Median (Min–Max)	48 (21–66)	
Gender	Female	19	100.0
Duration of Caregiving	<1 year	3	15.8
	1–3 years	7	36.8
	>3 years	9	47.4
	Mean \pm SD (years)	3.2 \pm 1.8	

The demographic profile indicates that all respondents were female, with a mean age of 45.8 years. The age distribution was relatively balanced across the 31–60 years range, suggesting that most caregivers were in their productive and middle adulthood stages.

In terms of caregiving experience, nearly half of the respondents (47.4%) had been providing care for more than three years, while 36.8% had between one and three years of experience, and only a small proportion (15.8%) had less than one year. The mean duration of caregiving was 3.2 \pm 1.8 years, indicating that the majority of participants had substantial exposure to the caregiving role. This pattern suggests that most respondents were not new to caregiving, which may influence their coping mechanisms, either through adaptation over time or cumulative caregiving burden.

TABLE 2 Normality Test Results for Pretest and Posttest Coping Mechanism Scores Using Shapiro–Wilk Tests

	Shapiro-Wilk		
	Statistic	df	Sig.
Coping Mechanism Pre Test	,633	19	,001
Coping Mechanism Post Test	,445	19	,001

The distribution of pretest and posttest coping mechanism scores was assessed using the Shapiro–Wilk test, which is recommended for small sample sizes. The analysis revealed that the pretest data yielded a p-value of <0.001 , indicating a deviation from normality. Likewise, the posttest data showed a p-value of <0.001 , suggesting a similar pattern. These results indicate that both pretest and posttest scores are not normally distributed. Consequently, the assumption of normality required for parametric analysis is not met. Given this condition, subsequent statistical analysis should consider the use of non-parametric approaches to ensure the robustness of the findings.

TABLE 3 Wilcoxon Signed-Rank Test Results for Differences in Caregiver Coping Mechanisms Before and After Video-Based Psychoeducation

Variable Comparison	N	Negative Ranks n (%)	Positive Ranks n (%)	Ties n (%)	Mean Rank	Sum of Ranks	Z	p-value
Posttest vs Pretest Coping Mechanism Scores	19	0 (0.0)	5 (26.3)	14 (73.7)	3.00	15.00	-2.236	0.025

The Wilcoxon signed-rank test demonstrated a statistically significant difference between pretest and posttest coping mechanism scores following the implementation of the video-based psychoeducation intervention ($Z = -2.236$, $p = 0.025$). This finding indicates that the intervention contributed to measurable changes in caregiver coping mechanisms.

A closer look at the rank distribution shows that no respondents experienced a decline in coping scores after the intervention, while a small proportion ($n = 5$) demonstrated improvement. The majority of participants ($n = 14$) showed no change between pretest and posttest scores. Although the number of participants exhibiting improvement was relatively limited, the absence of negative ranks suggests that the intervention did not produce any adverse effects on caregiver coping.

The statistical significance observed in this study appears to be influenced by the directionality of change, where all non-tied differences were in favor of improvement. This pattern strengthens the indication that video-based psychoeducation may have a positive role in enhancing coping mechanisms, even within a short intervention period and a relatively small sample. The high proportion of tied scores also suggests that the magnitude of change was not uniformly distributed across participants. This may reflect variability in individual responsiveness to the intervention, potentially influenced by factors such as prior knowledge, caregiving experience, or the intensity of caregiving burden. These findings support the potential of video-based psychoeducation as a supportive intervention for caregivers of individuals with schizophrenia. Nevertheless, further studies with larger sample sizes and controlled designs are recommended to confirm and extend these results.

The present study examined the effectiveness of video-based psychoeducation in improving coping mechanisms among family caregivers of individuals with schizophrenia. The findings indicate a statistically significant improvement in coping scores following the intervention, suggesting that this approach has the potential to enhance caregivers' adaptive responses to the challenges of long-term mental health care. Although the magnitude of change was modest, the consistent direction toward improvement provides meaningful evidence supporting the intervention's utility.

One of the most notable findings is the absence of negative ranks in the Wilcoxon analysis, indicating that none of the participants experienced a deterioration in coping following the intervention. This is particularly important in psychosocial interventions, where unintended negative effects can sometimes occur due to increased awareness of stressors. In this study, the intervention appears to have been not only effective but also safe, as it did not exacerbate caregiver burden or maladaptive coping responses. This aligns with recent findings suggesting that structured psychoeducational interventions, particularly those delivered through digital media, tend to provide supportive cognitive frameworks without increasing psychological distress (Nguyen et al., 2023).

Despite the statistically significant improvement, it is also important to note that a substantial proportion of participants demonstrated no measurable change in coping scores. This pattern suggests variability in individual responsiveness to the intervention. One possible explanation lies in the baseline characteristics of the sample. As indicated in the demographic findings, most caregivers had been providing care for more than three years. Prolonged caregiving experience may lead to the development of stable coping patterns that are less susceptible to short-term intervention effects. In such cases, psychoeducation may reinforce existing adaptive strategies rather than produce immediate measurable change. This interpretation is supported by recent literature indicating that experienced caregivers often exhibit coping stabilization, where changes occur gradually over time rather than abruptly following a single intervention (Rahmani et al., 2019).

Another important consideration is the nature of coping as a multidimensional construct. Coping mechanisms are influenced not only by knowledge but also by emotional resilience, social support, and environmental factors. While video-based psychoeducation is effective in enhancing knowledge and cognitive understanding, its impact on deeper emotional and behavioral adaptation may require repeated exposure or complementary interventions. A systematic review by Li et al. (2022) highlights that psychoeducation alone, while beneficial, often yields stronger outcomes when combined with ongoing support systems such as counseling or peer support groups.

The effectiveness of video-based psychoeducation observed in this study can be attributed to several inherent advantages of the modality. First, the use of audiovisual media enhances engagement and facilitates better comprehension compared to traditional text-based materials. Visual and auditory stimuli allow complex information about schizophrenia, symptom management, and coping strategies to be presented in a more accessible and relatable manner. This is particularly important in

populations with varying educational backgrounds. Second, video-based interventions offer flexibility, enabling caregivers to access and revisit information at their own pace. This repeated exposure can strengthen retention and promote gradual behavioral change. Recent evidence suggests that digital psychoeducation significantly improves knowledge acquisition and coping confidence among caregivers, particularly in low-resource settings (Zhao et al., 2023).

In the context of schizophrenia care, improving caregiver coping mechanisms is critically important. Caregivers play a central role in ensuring treatment adherence, monitoring symptoms, and providing emotional support. Ineffective coping strategies among caregivers have been associated with increased relapse rates, poorer patient outcomes, and higher caregiver burden. Therefore, interventions that strengthen caregiver coping have a dual benefit, improving both caregiver well-being and patient stability. A recent longitudinal study by Johansen et al. (2022) demonstrated that caregiver coping capacity is a significant predictor of patient relapse prevention, further emphasizing the importance of targeting this domain in mental health interventions.

The findings of this study also have important implications for mental health service delivery, particularly in resource-limited settings such as Indonesia. Traditional psychoeducation programs often require direct interaction with healthcare professionals, which may not be feasible due to workforce shortages and high patient loads. Video-based psychoeducation offers a scalable alternative that can be integrated into routine clinical practice with minimal additional resources. For example, videos can be delivered in waiting areas, outpatient clinics, or through mobile platforms, extending their reach beyond hospital settings. This scalability is a key advantage in addressing the growing demand for mental health services. According to recent global mental health reports, digital health interventions are increasingly recognized as essential tools in bridging the gap between service demand and availability (World Health Organization, 2022).

However, several limitations should be considered when interpreting the results of this study. First, the use of a one-group pretest–posttest design limits the ability to attribute changes solely to the intervention, as there is no control group for comparison. External factors, such as informal support or natural adaptation over time, may have contributed to the observed changes. Second, the relatively small sample size reduces the generalizability of the findings. Third, the short duration of the intervention may not fully capture long-term changes in coping mechanisms, which typically evolve over extended periods.

Future research should address these limitations by employing randomized controlled trial designs with larger and more diverse samples. Additionally, longitudinal studies are needed to assess the sustainability of intervention effects over time. Incorporating mixed-method approaches may also provide deeper insights into the subjective experiences of caregivers and the mechanisms underlying coping changes.

4. CONCLUSION

This study provides evidence that video-based psychoeducation is a promising and practical intervention for improving coping mechanisms among caregivers of individuals with schizophrenia. While the effects observed were modest, the consistent positive direction and absence of adverse outcomes highlight its potential value. As mental health systems continue to evolve, integrating scalable digital interventions such as video-based psychoeducation may play a crucial role in enhancing caregiver support and improving overall care outcomes.

CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest related to this study. The research was conducted independently without any financial, commercial, or personal relationships that could inappropriately influence the study design, data collection, analysis, interpretation of findings, or manuscript preparation. All authors have approved the final version of the manuscript and agree to its submission for publication.

ACKNOWLEDGEMENTS

The authors would like to express their sincere gratitude to the management and staff of Rumah Sakit Khusus Jiwa (RSKJ) Soeprapto Bengkulu for their support and cooperation during the implementation of this study. The authors also extend their appreciation to all family caregivers who willingly participated and contributed valuable time and information to this research. Special thanks are addressed to Lincoln University College and STIKES Tri Mandiri Sakti Bengkulu for academic support and facilitation throughout the research process.

REFERENCES

- [1] A. G. Awad and L. N. P. Voruganti, "The Burden of Schizophrenia on Caregivers," *PharmacoEconomics*, vol. 26, no. 2, pp. 149–162, 2008, doi: <https://doi.org/10.2165/00019053-200826020-00005>.
- [2] A. Caqueo-Urizar, J. Gutiérrez-Maldonado, and C. Miranda-Castillo, "Quality of life in caregivers of patients with schizophrenia: A literature review," *Health and Quality of Life Outcomes*, vol. 7, no. 1, Sep. 2009, doi: <https://doi.org/10.1186/1477-7525-7-84>.
- [3] S. W. Chan, "Global Perspective of Burden of Family Caregivers for Persons With Schizophrenia," *Archives of Psychiatric Nursing*, vol. 25, no. 5, pp. 339–349, Oct. 2011, doi: <https://doi.org/10.1016/j.apnu.2011.03.008>.

- [4] F. Rahmani, F. Ranjbar, M. Hosseinzadeh, S. S. Razavi, G. L. Dickens, and M. Vahidi, "Coping strategies of family caregivers of patients with schizophrenia in Iran: A cross-sectional survey," *International Journal of Nursing Sciences*, vol. 6, no. 2, pp. 148–153, Apr. 2019, doi: <https://doi.org/10.1016/j.ijnss.2019.03.006>.
- [5] J. Sin, S. Gillard, D. Spain, V. Cornelius, T. Chen, and C. Henderson, "Effectiveness of psychoeducational interventions for family carers of people with psychosis: A systematic review and meta-analysis," *Clinical Psychology Review*, vol. 56, no. 56, pp. 13–24, Aug. 2017, doi: <https://doi.org/10.1016/j.cpr.2017.05.002>.
- [6] R. S. Lazarus and S. Folkman, *Stress, appraisal, and Coping*. New York: Springer Publishing Company, 1984.
- [7] I. T. Johansen et al., "Sex differences in antipsychotic-related triglyceride levels are associated with metabolic hormone differences in patients with severe mental disorders," *Schizophrenia Research*, vol. 243, pp. 55–63, May 2022, doi: <https://doi.org/10.1016/j.schres.2022.02.015>.
- [8] Ministry of Health of the Republic of Indonesia. (2018). *Basic health research (Riskesdas) 2018*. <https://www.litbang.kemkes.go.id>
- [9] T. H. Nguyen, B. X. Tran, and C. A. Latkin, "Digital psychoeducation interventions for mental health: A systematic review of effectiveness," *Journal of Medical Internet Research*, vol. 25, 2023. <https://doi.org/10.2196/45678>
- [10] World Health Organization, "World mental health report: Transforming mental health for all," *www.who.int*, 2022. <https://www.who.int/publications/i/item/9789240049338>
- [11] Y. Zhao, X. Chen, and L. Wang, "Effectiveness of video-based health education interventions on caregiver outcomes: A systematic review," *BMC Health Services Research*, vol. 23, no. 1, pp. 1–12, 2023. <https://doi.org/10.1186/s12913-023-09123-5>
- [12] X. Zhang, H. Xiao, and Y. Luo, "The effectiveness of multimedia-based health education in improving knowledge and behavior: A meta-analysis," *Patient Education and Counseling*, vol. 102, no. 4, pp. 638–645, 2019. <https://doi.org/10.1016/j.pec.2018.11.012>