



**EFFECTIVENESS OF TELENURSING AS PSYCHOEDUCATION ON FAMILY BURDEN AND KNOWLEDGE LEVEL ON SCHIZOPHRENIA PATIENT: A LITERATURE REVIEW**

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**ABSTRACT**

Schizophrenia patients often experience significant challenges in daily functioning, leading to dependence on caregivers and imposing a substantial burden on families. This literature review aims to examine the effectiveness of telenursing-based psychoeducation in improving family knowledge and reducing family burden in the care of schizophrenia patients. A comprehensive literature review was conducted, analyzing 15 articles published between August 2014 and August 2024. Articles were sourced from Google Scholar and PubMed for English-language studies, and Google Scholar for Indonesian-language studies. The PRISMA framework and PICO methodology guided the selection and analysis of relevant studies. The findings from the 15 selected articles demonstrate that telenursing-based psychoeducation effectively reduces family burden and enhances caregivers' knowledge in managing schizophrenia patients. Various approaches, including telenursing interventions, technology-based applications, and traditional psychoeducation methods, provide significant benefits and can be integrated into mental health care practices. The successful implementation of telenursing-based psychoeducation requires active commitment, resilience, and collaboration from both nurses and family members involved in the care of schizophrenia patients.

Keywords: family; knowledge; psychoeducation; schizophrenia; telenursing

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**INTRODUCTION**

According to (Sadock et al. 2014) schizophrenia is a severe mental illness with a chronic history that is characterized by delusions, hallucinations, incoherent speech, and negative symptoms such as emotional flatness and alogia. The (WHO 2020) reported that there were 21 million cases of schizophrenia worldwide. With a population of about 200 million, the prevalence of schizophrenia in Indonesia is predicted to be between 0.3% and 1%, or 2 million persons, in 2020. The provinces of Bali and DI Yogyakarta have the highest prevalence. Gianyar Regency in Bali Province has the highest frequency at 25.6%, Jembrana Regency has the lowest prevalence at 2.4%, and Bangli Regency has the lowest prevalence at 17.0%, or 5,813 persons.(Kemenkes 2018).

Schizophrenia patients typically face substantial challenges in their everyday functioning, which makes them dependent on others for support and assistance in satisfying their basic needs—particularly family members or other close relatives (Fitrikasari, Kadarman, and Sarjana 2012). Although schizophrenia does not directly cause death in its victims, its effects can be severe and a financial, psychological, and physical burden on patients and their families. This is because individuals with schizophrenia often have worse quality of life and lower productivity (Karimah and Damaiyanti 2021). According to (Herminsih, Barlianto, and Kapti 2017), family burden refers to the suffering that family members' presence causes to their families. Because schizophrenia therapy is long-term, fruitless, and requires families to pay for all living and medical expenses, it can be argued that it is costly (Pandjaitan and

Rahmasari 2020). According to Suryenti's (2017) study, 53.7% of respondents reported having a significant family burden (Suryenti 2017). Heavy family burdens were indicated by 56.3% of families, according to (Gusdiansyah, Keliat, and Erwina 2020) According to (Zahra and Sutejo 2019) there was a high percentage (54.9%) burden of schizophrenia family members.

One of the key elements in the recovery of individuals with mental illnesses is the role of the family (Handayani et al. 2016). According to (Hjg and Yundari 2018) research, the role of the family in providing care for individuals with schizophrenia is associated with the knowledge component. The study's findings indicate that the majority of households had adequate information. The findings of this study are consistent with those of Pawitri's (2020) study at the Mental Polyclinic of the Bali Provincial Mental Hospital, where 98 individuals (52.1%) were classified as having sufficient family knowledge regarding caring for patients with schizophrenia. A different study (Pribadi, Yansuri, and Maulana 2019) found that just 51.3% of the families of people with schizophrenia had adequate understanding. One component of a family mental health treatment program is family psychoeducation, which uses therapeutic communication to impart knowledge and instruction. According to Brady et al., (2017), the primary objectives of family psychoeducation are to lessen emotional expressiveness within the family, prevent relapse, and assist patient recovery. In this day and age of digitalization and rapid technological advancement, nurses must take an active part in and contribute to the creation of new technologies. Telenursing is one way to do this.

Nurses can give nursing care to clients remotely through telenursing, which is a technology that allows them to do so via phone, Zoom, SMS, WhatsApp, and smart phones . Alfriyani's (2023) research revealed that psychoeducation-based tele-health aids patients and nurses by making psychoeducational interventions more accessible. Yliluoma & Palonen (2020) reported different findings, indicating that tele nurses' telephone interactions with patients and family members did not go well. Psychoeducation can be conducted via telenursing using current advances, in addition to in-person instruction. Often, telenursing is utilized to get around the problem of families being unable to visit the mental hospital in person. The researcher is looking for and reviewing several sources of literature about psychoeducation on family burden and the degree of family knowledge in caring for patients with schizophrenia, especially those based on telenursing, based on the background description provided above. It is anticipated that offering psychoeducation based on telenursing will enhance families' comprehension and involvement in the care of individuals with schizophrenia. The aim of this review is to to ascertain the impact of psychoeducation based on telenursing on family knowledge and burden when it comes to treating patients with schizophrenia.

## **METHOD**

As part of a literature study, data collection was carried out, starting with the processing of written materials, reading and recording, and gathering library data. The subjects covered in published manuscripts or relevant journals served as the data sources. The methodology for this investigation was a literature review. Article questions are compiled using the PICO (Population, Intervention, Comparison, Outcome) structure. P stands for families of schizophrenia patients; I for telenursing-based psychoeducation; C for not applicable; and O for family burden and family knowledge level make up the PICO technique. In August 2024, a literature search was carried out. The information is not from direct observation; rather, it is secondary data, which is information gleaned from the findings of earlier research. Articles from national and international periodicals with a predetermined theme served as the secondary data sources. The English and Indonesian literature searches were conducted using PubMed and Google Scholar as the two article databases for the English literature,

respectively. The Google Scholar database was utilized for the articles written in Indonesian. (1) articles discussing psychoeducation on family burden and or family knowledge in caring for schizophrenia patients; (2) articles discussing the effectivity of telenursing-based psychoeducation in treating schizophrenia patients; (3) articles published in both English and Indonesian; (4) the year of publication of the articles used from August 2014 to August 2024; (5) research articles with observational research designs; (6) articles available with abstracts; and (7) articles are available in full text form, these were the inclusion criteria for searching literature sources for this study. In the meanwhile, studies that were structured as meta-analyses, scoping reviews, or literature reviews were excluded. The keywords that were used were "psychoeducation" AND "family burden" AND "family knowledge" AND "schizophrenia", and also "telenursing" AND "psychoeducation" AND "schizophrenia" for English publications. While utilizing the keywords in Indonesian articles were "telenursing" DAN "Psikoedukasi" DAN "beban keluarga" DAN "pengetahuan keluarga" DAN "skizofrenia".

In the first phase of the article search (identification), three data sources were used: two English-language databases (Google Scholar and PubMed) and one Indonesian-language database (Google Scholar). A total of 171 articles were identified, comprising 113 articles from Google Scholar in English, 31 articles from Google Scholar in Indonesian, and 27 articles from PubMed. During the initial screening process, one duplicate article was removed, leaving 170 articles. The subsequent screening phase involved evaluating the article titles, the availability of abstracts, and the relevance of abstract content to the research topic. Articles that did not meet the predefined criteria were excluded. As a result, 127 articles were eliminated, and 43 articles with titles that met the criteria were identified. The next step was the "eligibility" process, where the remaining articles were reviewed based on specific criteria: articles published within the last ten years (August 2014–August 2024), availability as free full-text articles, a focus on telenursing and psychoeducation concerning family burden and/or family knowledge of schizophrenia patients, and the exclusion of articles in the form of scoping reviews, systematic reviews, and meta-analyses. After applying these criteria, 19 of the 43 articles were excluded, resulting in 24 eligible articles. In the final phase, referred to as "included," the remaining articles were re-evaluated to ensure they fully met the inclusion and exclusion criteria and aligned with the objectives of this scoping study. As a result, 15 articles were selected for inclusion. The results of the article selection process are summarized in the flowchart below (Figure 1).

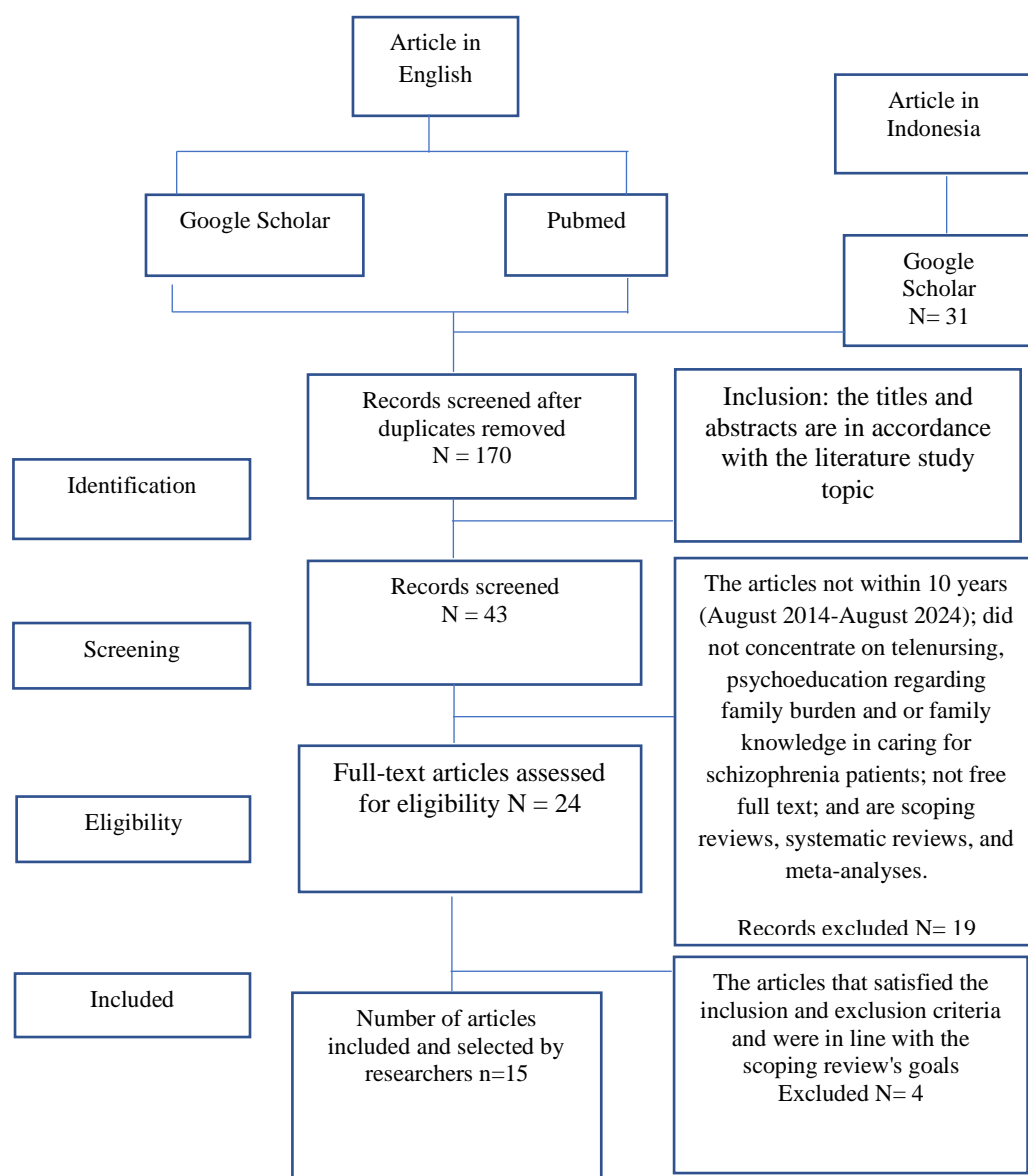


Figure 1. PRISMA-based flow diagram

## RESULT

Table 1  
Summary of the telenursing, and its effectiveness of psychoeducation on family burden and family knowledge level on schizophrenia patient

Author, Year, Title, & Aim	Research Design, Sample, Variables, Instruments, & Analysis	Results and Conclusion
(Tessier et al. 2024)  Title: Family psychoeducation to improve outcome in caregivers and patients with schizophrenia: a randomized	Purpose: to assess how effectively a short family psychoeducation program works in terms of decreasing the likelihood of a patient relapsing, enhancing medication compliance, as well as reducing caregiver burden, depression and increasing knowledge of the illness. Research Design: randomized single-blind controlled trial adopted two arms parallel groups design. Sample: A total of 25 dyads of patients and family primary caregivers were recruited between December 2014 and December 2019 Analysis: For continuous variables, an independent t-test was employed when the normality assumption	Result: The mean age of the 25 patients was 33.3 years (SD = 9.7), and the mean illness duration was 7.48 years (SD = 7.1). The mean age of the 25 caregivers that were included was 50.6 years (SD = 14.0). Eleven (44.0%) were single, 12 (48.0%) were married, and twenty-one (84.0%) were female. At the 12-month follow-up, the family psychoeducation intervention was found to have a substantial impact on patients' likelihood of relapse ( $p = 0.014$ ). Regarding drug adherence, nothing changed. The intervention improved caregivers' understanding of schizophrenia ( $p=0.024$ ), decreased their sadness

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clinical trial	was upheld. If not, the Mann- Whitney U test was run. If required, a Fisher's exact test or a chi-squared test were used to compare the categorical data. In each randomized group, longitudinal repeated measures of the caregivers' scales (baseline, 3 and 6 months) were analyzed using either the Friedman test (for non-normal distributed data) or the repeated measures ANOVA (for normal distributed data). A post-hoc analysis was then conducted using the Wilcoxon signed-rank test with Benjamini-Hochberg correction. The statistical significance level was set at 5%, and all p values were two-sided. IBM SPSS statistics, version 26.0, was used to conduct statistical analyses.	(p = 0.019), and lessened their burden (p = 0.031). There was a statistically significant difference in the therapeutic relationship (p=0.035) according to analyses for repeated measures. Conclusion: The brief psychoeducation program, which consists of six sessions spread over 1.5 months, has been proven to be beneficial in improving outcomes for patients (like preventing relapse) and caregivers (like burden, sadness, and knowledge) in the context of normal treatment, as supported by prior research. It is anticipated that this program will be simple to implement in the community given its brief duration.
(Zentner et al. 2023)  Title: Supporting patients by family education in psychotic illness: a longitudinal pre-post study protocol	Purpose: to investigate how a psychoeducational intervention for family caregivers of young adults suffering from psychosis affects the burden on the family and the stabilization of service users. Research Design: A longitudinal quantitative study with a pre-post design with a non-equivalent control group. Sample: 111 family carers will be recruited for the intervention and measures will be taken from family carer participants and their matched young adult service users. Analysis: Functional index analysis (primary outcomes) and Service utilisation data (secondary outcomes) using Linear mixed models	Result: The utilization of health utilisation data from two non-equivalent control groups enhances our confidence in the program's long-term impact on the load on the public health system. Second, although the focus of this protocol is on young adult service utilisation and family caregiver and service user functional indices, it is feasible that other outcome variables (such as the clinician's attitude towards family engagement) are also impacted by this intervention. However, our primary focus is on evaluating the effectiveness of a program in an ecologically sound system based on family functional outcomes within a real-world setting. Conclusion: Our protocol describes a workable and ecologically valid methodology to assess a skills- and knowledge-based psychoeducational intervention for family caregivers of young adults with psychosis using both carer and service user measurement outcomes over a 2-year period, despite the difficulty of conducting high-quality family-centered research in this population.
(YU et al. 2020)  Title: Assessing a WeChat-Based Integrative Family Intervention (WIFI) for Schizophrenia: Protocol for a Stepped-Wedge Cluster Randomized Trial	Purpose: to provide a method for evaluating an integrated family intervention (WIFI) based on WeChat that can help families caring their family with schizophrenia. Research Design: This study uses a pragmatic stepped-wedge design to evaluate both the effectiveness and implementation strategy of the WIFI program. We will conduct a multicentre prospective controlled trial, using a stepped-wedge design, comparing the WIFI program integrated into the Reward Policy (intervention group) and the Reward Policy alone (control group) in family caregiving among people living with schizophrenia. Sample: 240 families of people living with schizophrenia from 12 communities affiliated to Changsha Psychiatric Hospital through the "686 Program." Analysis: mixed-methods analysis for both qualitative and quantitative data collected during each step of the WIFI program. For qualitative data, a grounded theory approach and immersion-crystallization process were used. For quantitative data, for two-group comparisons, the Student t test or nonparametric test will be conducted for continuous variables, while the chi-square test or Fisher exact test will be conducted for categorical variables.	Result: Compared to interventions aimed at individuals living with schizophrenia or caregivers alone, the WIFI program recruits the entire family as the intervention target, which may result in more far-reaching positive effects. Secondly, the program is based on WeChat, the most popular social media platform in China, which is accessible, affordable, feasible, and cost-effective. Thirdly, the program offers the most comprehensive intervention by integrating the three internationally recognized essential elements of family intervention: psychoeducation, peer support, and private/professional support. Fourth, compared to a conventional randomized cluster trial, the stepped-wedge design generates more solid and reliable scientific evidence, which has statistical advantages as well as ethical benefits because it guarantees that all participants receive the intervention. Fifth, a medical team consisting of mental nurses and clinical psychiatrists implements the WIFI program, collecting data and carrying out interventions. Conclusion: In summary, this ground-breaking research will aid in the creation of a more economical and empirically supported family management approach for individuals with schizophrenia in the community. One of the first studies to design and evaluate a mHealth

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		intervention based on WeChat to assist family caregivers for individuals with schizophrenia in China is the one being suggested. If the intervention is proven to be successful, it may be included into the nation's present policy to assist family caregivers. Other populations with chronic and incapacitating conditions could potentially benefit from the adaptation of the strategy.
(Brunette et al. 2016)  Title: Coordinated Technology-Delivered Treatment to Prevent Rehospitalization in Schizophrenia: A Novel Model of Care	Purpose: The purpose and methodology of the Health Technology Program (HTP) relapse prevention program, along with each of its components, are explained below. Next, we talk about the necessity for more research as well as the possible advantages and disadvantages of using technology to help in treatment.	Result: The component of HTP <ul style="list-style-type: none"> <li>- Technology-Enhanced Relapse Prevention</li> <li>- Smartphone Intervention for Schizophrenia</li> <li>- Computerized CBTp</li> <li>- The Daily Support Website</li> <li>- Prescriber Decision Support System</li> </ul> Using a Web-based program that gathers data from clients at each visit, HTP offers in-person relapse prevention planning that guides the use of customized, technology-based treatment based on cognitive-behavioral therapy for psychosis, family psychoeducation for schizophrenia, and prescriber decision support. Treatments based on technology are administered via computers and smartphones. Conclusion: With the high prevalence of poorly managed schizophrenia and the scarcity of resources for treating these patients, technology-enabled treatment could be a cost-effective and easily accessible substitute for traditional methods. The high rates of mobile device usage and enthusiasm in using personal technology to facilitate mental health services demonstrate that people, even those with schizophrenia, have incorporated technology into their daily lives. This suggests that such approaches may be appealing. HTP interventions were designed with special characteristics for individuals with cognitive impairments in order to allay worries that persons with schizophrenia might not be able to use technology-facilitated interventions.
(Lemetyinen et al. 2018)  Title: Co-production and evaluation of an e-learning resource to improve African-Caribbean families' knowledge about schizophrenia and engagement with services: a pilot randomised controlled trial protocol	Purpose: to find out if an e-learning resource, to increase awareness of psychoses that was co-produced with African-Caribbean stakeholders will be acceptable to this population on a cultural level. Research Design: A pilot study utilizing a randomised controlled trial design aimed at evaluating the viability of developing and implementing a new online learning tool to enhance African-Caribbean families' understanding and perspectives on schizophrenia Sample: Forty individuals, at least 16 years old, will be sought for to serve as controls or to get the intervention. They will either self-refer or be referred by means of inpatient and wellbeing programs, forums for families and caregivers, statutory community mental health teams, and non-governmental organizations (NGOs) in the volunteer sector. Analysis: Quantitative: Using parametric or non-parametric tests as needed, we will look at univariate associations of the outcome measures. As appropriate based on the data, we will use paired measures, such as a t test or the Wilcoxon paired-samples test, to undertake exploratory assessments of change during the intervention. Qualitative: Data management and analysis will be	Result: This pilot study is unusual in that it assesses the viability and acceptability of an innovative, culturally-relevant e-learning intervention aimed at enhancing African-Caribbean families' understanding and attitudes regarding schizophrenia and psychosis. To the best of the authors' knowledge, it is also the only psychoeducational intervention co-produced with African-Caribbean stakeholders for schizophrenia spectrum illnesses. In this pilot study, the viability of enlisting and keeping volunteers from an ethnic community that is among the least likely to obtain psychoeducation and most likely to be diagnosed with schizophrenia spectrum disorders will be investigated. Conclusion: In order to provide insights into the intervention's future development and a more comprehensive trial examining its cost and clinical effectiveness, we will also evaluate the viability of gathering pertinent outcome data. Crucially, we will assess African-Caribbean families' opinions on the acceptability, accessibility, and usefulness of the intervention. This is significant because the community views itself as "seldom heard" as opposed to "hard-to-reach," as is frequently described.

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	supported using NVivo (version 11). With assistance from the senior author, a specialist in qualitative and mixed methodologies, the Research Project Manager (RPM) will oversee and carry out the coding and analysis.	
(Thimmajja and Rathinasamy 2019)  Title: Effectiveness of psycho-education on knowledge regarding schizophrenia and caregivers' burden among caregivers of patients with schizophrenia – a randomized controlled trial	Purpose: to determine the effectiveness of psychoeducation in raising caregivers' understanding of schizophrenia and lessening their burden. Research Design: A randomized controlled trial was used to assess the effectiveness of psycho-education among caregivers of patients with schizophrenia Sample: 350 caregivers were randomly assigned to study (n = 175) and control groups (n = 175). Both the group subjects were initially assessed for knowledge and burden. The study group caregivers participated in one or two psycho-education sessions with routine nursing care. Control group subjects received routine care in the hospital. Post-intervention assessment was done at the end of one-month and three-month intervals. Analysis: The intervention effect was tested statistically by using inferential statistical tests, i.e. chi-square, t-test and ANOVA.	Result: Pre-test mean knowledge scores for caregivers in the study group were mean = 22.93, SD = 17.03. At the one-month and three-month follow-ups, the mean improved to mean = 85.90, SD = 9.51, and mean = 97.94, SD = 4.41. Statistically significant at the 0.01 level, this improvement was observed in comparison to caregivers in the control group. The mean burden ratings of the study group caregivers decreased from the pre-test mean of 82.37, SD = 10.40 to the one-month follow-up mean of 49.13, SD = 8.28, and the three-month follow-up mean of 40.86, SD = 6.27. Statistically significant at the 0.01 level, this improvement was observed in comparison to caregivers in the control group. Conclusion: Caregivers in the study group demonstrated increased knowledge acquisition and decreased care load. The results of this study demonstrated the value of psychoeducational interventions in lessening the care burden on caregivers of patients with schizophrenia and were also found to be beneficial in providing their family members with appropriate information.
(Verma et al. 2019)  Title: Family psychoeducation with caregivers of schizophrenia patients: Impact on perceived quality of life	Purpose: to evaluate the impact of a family psychoeducational intervention on the perceived quality of life of those who care for individuals with schizophrenia. Research Design: Experimental study. Sample: Through the use of purposive sampling, thirty caregivers for male patients with schizophrenia were chosen in total. Two groups of patients were created: an experimental group and a control group. The caregivers in the experimental group received a twice-monthly family psychoeducation intervention for a duration of six months. Analysis: IBM, USA) SPSS version 16.0 was used to tabulate and evaluate the data that had been gathered. The group data was compared using the independent sample t-test or the Chi-square test, if applicable. At a significance level of less than 0.05, statistical analyses were conducted.	Result: The majority of the carers were men, married, and over 40. Compared to caregivers in the control group, who did not get this kind of intervention, caregivers in the experimental group showed a substantial improvement in their overall quality of life scores after receiving family psychoeducation. Conclusion: In our therapeutic population, family psychoeducation is both practical and beneficial.
(Elsina et al. 2023)  Title: Empowering Health Cadres in Family Psychoeducation Reduce the Subjective Burden of Mentally Disordered Families	Purpose: to ascertain the impact of family psychoeducation and health cadres' strategy on burden management in assisting families in overcoming the perceived hardship of caring for clients with mental disorders. Research design: case report Sample: studies on households with a single member suffering from a mental illness. Family psychoeducation was the intervention provided to the family; it took place over the course of six sessions and involved community leaders and health cadres.	Result: Family psychoeducation sessions that incorporate the roles of community leaders and cadres in burden management can lessen the load on families. Conclusion: Family burden management—which involves community leaders and health cadres—can lessen the family's perceived responsibility for providing care for a member with a mental illness.
Budiono et al., (2021)	Purpose: This 12-week study compared psychoeducation-enriched care for family members	Result: Pre- and post-evaluation showed substantial favorable effects in the intervention

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<p>Title: Psychoeducation Improved Illness Perception and Expressed Emotion of Family Caregivers of Patients with Schizophrenia</p>	<p>with traditional mental healthcare for schizophrenia in Indonesia, looking at both patient and family characteristics.</p> <p>Research design and Sample: Sixty-four family members who matched the predetermined criteria were chosen through social media, seminars and gatherings, hospital visits, and other online Indonesian community forums. Every member of the family served as the primary caregiver for a single patient diagnosed with schizophrenia. Participants from families were randomized into one of two groups (intervention or control); staff members gave each group identical amounts of one-on-one time and attention, but the control group did not receive the intervention's unique psychoeducational component.</p> <p>Analysis: A <math>2 \times 2</math> factorial design was used in this study, and so a repeated measures ANOVA (RM-ANOVA) was applied with independent variables of pre/post and control/intervention to examine the effectiveness of intervention for caregivers' or family members' illness perception and expressed emotion and patients' medication adherence. In addition to a classical univariate approach, this study utilized partial least squares path modeling (PLS-PM) to construct cause-and-effect models.</p>	<p>group for family members' stated emotion (OR(ave) = 0.39) and impression of sickness (F(ave) = 124.85; d(ave) = 2.72). These findings were in contrast to the control group. If the patients' family members were in the intervention group, there was a substantial favorable effect on medication adherence (F(1, 62) = 21.54; <math>p &lt; 0.001</math>, d(intervention) = 1.31). Low expressed emotion in family members was found to be positively connected with high medication adherence in patients (<math>\beta = -0.718</math>; <math>p &lt; 0.001</math>), according to partial least-squares path modeling. In a heterogeneous Indonesian population, this study offers proof of the advantages family psychoeducation has for schizophrenia patients and their families.</p> <p>Conclusion: This study validates the original hypothesis, which states that a 12-week psychoeducation program for family members of people with schizophrenia increases the patients' adherence to their treatment plan, decreases their exhibited emotion, and improves their understanding. This holds significant ramifications for Indonesia's mental health care system.</p>
<p>Suharsono et al., (2023)</p> <p>Title: The effectiveness of nursing psychoeducation toward family burden and quality life on caregiver of people with schizophrenia in the community</p>	<p>Purpose: to ascertain the impact of nurse psychoeducation on family, workloads, and quality of life among community caregivers for patients with schizophrenia.</p> <p>Research Design and Sample: using a total of 100 respondents, this study employed repeated measurement using a pre-test and post-test group control design. For seven sessions, the treatment group received weekly nurse psychoeducation. The general linear model (GLM) was also employed to examine the outcome.</p> <p>Analysis: After the data were collected, descriptive analysis was used to do univariate analysis and observe the properties of each variable under study. Moreover, the impact of nurse psychoeducation on family burden and quality of life was assessed using the general linear model statistical test.</p>	<p>Result: This study indicated that the average family load in the treatment and control groups was 49.02 and 46.28, respectively, prior to the nurse psychoeducation intervention. After therapy, this dropped to 38.24 and 37.56 in the first and fourth weeks. In the first week, the control group's score was 44.86, and in the fourth, it was 45.62. With a <math>p</math> value <math>&lt; 0.001</math>, the psychoeducation reduced the stress on the family. Additionally, this study demonstrated that the average caregiver quality of life was 75.72 and 74.24 in the therapy prior to the nurse psychoeducation intervention. It rose to 91.22 in the first week following therapy and 92.54 in the fourth week following treatment. As a result, the intervention significantly raised the quality of life for caregivers (<math>p &lt; 0.001</math>).</p> <p>Conclusion: Caregivers' quality of life can be enhanced and family stresses can be effectively reduced with the help of nursing psychoeducation.</p>
<p>Uslu et al., (2019)</p> <p>Title: A telenursing practice for care of people with schizophrenia: Telephone intervention problem solving</p>	<p>Purpose: to introduce psychiatric nurses with Telephone intervention problem solving (TIPS) and provide guidance on its application.</p> <p>Beebe created the Telephone Intervention Problem Solving (TIPS) to help patients with schizophrenia with a variety of everyday issues, provide them with coping mechanisms, remind them to apply these mechanisms, and assess the success of these coping strategies. TIPS is a telenursing technique that uses a problem-solving approach and is based on the theory of planned behavior. It is carried out through weekly phone calls.</p>	<p>Result: Experiments on the subject have demonstrated that TIPS increases the amount of time that individuals with schizophrenia are able to live in the community and decreases the number of days and procedures associated with being readmitted to the hospital. Additionally, it has been discovered that this approach lessens the intensity of mental symptoms and enhances adherence to prescription psychiatric medications.</p> <p>Conclusion: TIPS is a technique that helps patients with schizophrenia find solutions to the challenges they face on a daily basis. By using the procedure, it also provides psychiatric nurses with a standardized care alternative. These findings suggest that more experimental studies assessing TIPS's efficacy should be conducted, and that researcher nurses should advise doctors of the findings. The benefits of TIPS applications</p>



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		and their transfer to the clinic should also be explained to director nurses, who make the decisions for the clinics. Studies that will give information about the use of TIPS should also include clinician nurses.
Wulandari et al., (2021)  Title: Implementation of Online Family Psychoeducation in Families with Social Isolation during the Covid-19 Pandemic	Purpose: to describe the benefits of Family Psychoeducation (FPE) and how it was implemented online for families experiencing social isolation during the pandemic.  A case report design is used in this research methodology. The case studied concerns Mr. J's social isolation due to his schizophrenia. The employed analytical method is descriptive.	Result: The case report's findings demonstrate that four online sessions using Google Meet and WhatsApp video call technology were used for FPE. Adequate digital literacy and strong network connectivity are also required. During the epidemic, online FPE is a time- and money-efficient way to prevent being exposed to Covid-19. It also works well to lessen family stress and obligations by improving family knowledge and skills in caring for individuals with mental problems.  Conclusion: During the pandemic, health professionals should provide online FPE to families with mental health disorders.
Spaniel et al., (2015) [  Title: Psychiatrist's adherence: a new factor in relapse prevention of schizophrenia. A randomized controlled study on relapse control through telemedicine system	Purpose: to assess the program's ability to lower hospitalization rates over the course of the multi-center, 18-month, open-label, parallel, randomized controlled study.  Research Design: randomized control trial Sample: Outpatients with schizophrenia or schizoaffective disorder were randomized to the active (n = 74) or control group (n = 72). In the active arm, investigators increased the antipsychotic dose upon occurrence of prodrome announced by the system.  Analysis: In order to assess differences in the clinical and demographic features of the two groups, unpaired t-tests, chi-square tests for categorical data, and Mann-Whitney tests for continuous variables were employed. The Kaplan-Meier survival analysis was used in the intention-to-treat study to estimate the cumulative chance of not needing to be hospitalized as a result of a relapse, and log-rank statistics were used to compare this variable. Risk ratios and an overall risk difference were computed at the end of the study using 95% confidence intervals (CIs).	Result: This 18-month multi-centre parallel randomized controlled, open label, trial with telemedicine relapse prevention programme ITAREPS (The Information Technology Aided Relapse Prevention Programme in Schizophrenia) failed to show superiority of maintenance plus prodrome-based targeted medication strategy over treatment as usual. The study, marked by low investigator's adherence, confirmed that absence of pharmacological intervention at early stage of prodrome, critically influenced the risk of relapse. This and previous randomized controlled trials with telemedicine programme ITAREPS suggested that substantial improvement in relapse prevention in schizophrenia is likely to be unattainable under current clinical settings.  Result: In order to avoid schizophrenia in the future, it will be necessary to intervene quickly to administer medication when subclinical prodromal symptoms arise that are not noticeable in patients receiving standard outpatient care. Research using ITAREPS indicated that combining visiting nurse services with telemedicine relapse prevention systems could be a workable way to meet such needs.
Mueser et al., (2022)  Title: Telehealth-Based Psychoeducation for Caregivers: The Family Intervention in Recent-Onset Schizophrenia Treatment Study	Purpose: The goal of the Family Intervention in Recent-Onset Schizophrenia Treatment (FIRST) study is to compare the impact of usual care (UC) versus telehealth-based, caregiver-focused, study-provided psychoeducation on patient treatment failure (TF).  Research Design: randomized controlled trial involving patients with schizophrenia spectrum disorders and their caregivers. Additionally, the effect of psychoeducation provided by the study on caregiver burden is examined. Sample: the study included 148 pairs of participants, of which 96 (64.9%) were patients and 94 (63.5%) were caregivers who finished the 12-month follow-up.  Analysis: The mean cumulative function for recurrent events and Kaplan-Meier (for time to the first event) analyses were performed for overall TF.	Result: The psychoeducation group in the study had a mean of 7.7 (SD 5.9) sessions. There were no differences in patient outcomes (rates of TF: 70% vs. 67%; P=.90) or caregiver burden measures (evaluation of caregiver distress and physical and mental health) between the psychoeducation and UC groups that were part of the trial. In contrast to patients who got oral antipsychotics at all time points, post hoc analysis showed that patients who took paliperidone palmitate had reduced relapse rates. Despite not meeting the primary end result, the FIRST trial yielded important insights that will guide future telehealth-based, caregiver-focused FP therapies. The FIRST research's results might have been impacted by a lack of psychoeducation provided by the study, an emphasis on caregiver-only intervention, enrollment issues, and poor coordination between the caregiver and treatment team.

Author, Year, Title, & Aim	Research Design, Sample, Variables, Instruments, & Analysis	Results and Conclusion
		Conclusion: The FIRST study's key findings point to the possible significance of fostering adequate caregiver engagement, facilitating communication about treatment plans between patients, family members, and clinicians, and fostering a strong rapport between clinicians who provide psychoeducation to the caregiver and patient treatment team.
Ackerman et al., (2023)  Title: The impact of the integration of telemedicine in a community psychiatry Outpatient program during Covid-19	Purpose: to characterize the effects of a community psychiatric program's switch to telemedicine service during the Covid-19 outbreak.  Research Design: In this retrospective study, hospitalization and no-show rates were compared before and after telemedicine services were implemented, and patient satisfaction with the services was assessed.  Sample: Forty-nine patients agreed to complete the telephone survey. Most of the program's patients suffer from a severe, ongoing mental disorder. Thirty percent have a primary psychotic illness (schizophrenia, 21 percent, or schizoaffective disorder, 9%), and sixty percent have a primary diagnosis of an affective disorder (major depressive disorder, 40 percent, and bipolar affective disorder, I and II, 20 percent).	Result: The majority of patients liked doing telepsychiatry visits and 29 of the 49 patients (74%) reported that they would like to continue visits via telemedicine once the pandemic was over. We found no significant difference in the monthly hospitalization rate. The majority of patients surveyed liked using telemedicine and most preferred it to in-person visits. Patients identified convenience of telemedicine as a major benefit to this format and lack of privacy as a drawback.  Conclusion: Telemedicine is an acceptable form of service delivery among this patient population. It decreased no show rates and did not increase hospitalizations. The use of this service delivery model could enhance the patient experience, but consideration should be given to how and when it is used.

## DISCUSSION

### *The Importance of Family Psychoeducation*

The devastating mental illness known as schizophrenia has a protracted course and is characterized by delusions, hallucinations, incomprehensible speech, and negative symptoms such emotional flatness and alogia . Schizophrenia places a heavy burden on those who suffer from it as well as their family. Family caregivers frequently endure elevated levels of discomfort, anxiety, and melancholy as a result of the difficulties in attending to the multifaceted needs of their loved ones. Researchers have looked into a range of therapies targeted at lessening the stress faced by family caregivers, with a focus on psychoeducation. Psychoeducation is the process of educating family members about schizophrenia, including its symptoms, treatments, and coping techniques. It has been demonstrated that this approach works effectively for raising family knowledge, lessening the load on caregivers, and enhancing the general wellbeing of the patient and family.

### *Impact of Psychoeducational Programs*

According to the diverse literature gathered, family psychoeducation programs significantly improve the quality of life for families caring for patients with schizophrenia by enhancing caregiver/family knowledge, lessening the caregiving load, and improving family dynamics. The effectiveness of family psychoeducation therapies in preventing relapse and enhancing patient and caregiver outcomes in terms of knowledge, unhappiness, and burden was demonstrated by Tessier et al., in 2023 [21]. Although there are difficulties in putting high-quality research into practice in the population of this study, a study by Zentner et al., (2023) demonstrated that skills- and knowledge-based psychoeducation programs have significant long-term benefits on the burden on the public health system.

Thimmajja & Rathinasamy's (2019) psychoeducation dramatically boosted knowledge and decreased the care load for caregivers of patients with schizophrenia . This theory is supported by a number of additional researches. Additionally, family psychoeducation has been shown

by Verma et al., (2019) to be useful and successful in increasing the quality of life for caregivers of patients receiving therapy for schizophrenia. Research by Suharsono et al., (2023) found that nursing psychoeducation is effective in improving caregivers' quality of life and reducing family stress, and Budiono et al., (2021) reported that psychoeducation has been shown to be useful in increasing family knowledge, reducing emotional expression, and supporting patient compliance with treatment. Community leaders and cadres may be involved in psychoeducation programs. As demonstrated by the study by Elšina et al., (2023), the involvement of cadres and community leaders in family burden management has the potential to lessen family hardship when caring for patients with mental disorders.

Because it helps lessen melancholy, treatment-related stress, and associated costs, it is crucial to lessen the load that families bear when caring for their loved ones. In order for family psychoeducation programs to help caregivers of schizophrenia patients offer their families the attention they need and lessen their strain, regular treatment should also be provided. This is consistent with other research findings that show psychoeducational therapies are beneficial in lowering re-hospitalization rates, raising family awareness of schizophrenia, and lessening the load of caring for their loved ones.

### ***Telenursing Based Psychoeducation***

Telenursing can meet mental health care needs. Telepsychiatry is typically used when primary psychiatric health care does not have the necessary time. In order to fulfill the requirements of family caregivers for psychoeducation, telenursing—that is, delivering nursing care via telecommunication technology—has become more and more popular in recent years. According to Brunette et al., (2016), a Web-based approach that uses technology in the treatment of patients with schizophrenia provides prescriber decision support as well as direct planning for relapse prevention. The demands of patients have increased, and nurses who do not adopt the nursing paradigm of telenursing—which is based on the idea of being more cost- and time-efficient—will fall behind in the twenty-first century. Telenursing was made possible by the advancement of information technology. As a result, nurses must be able to provide long-distance care using telenursing method. In order to enhance family knowledge and abilities during the pandemic, Wulandari et al., (2021) discovered that online family psychoeducation (FPE) utilizing Google Meet and WhatsApp video conferencing technology is a time- and money-saving strategy. The focus of telenursing, telemonitoring, and telehealth is mostly on intervention through emotional support and education. It is imperative that patients and their families understand how to take care of sick family members without needing to visit the hospital. Thus, telenursing will solve their issue thanks to its feature.

Numerous telenursing techniques have been created in an attempt to provide families with psychoeducation. Uslu et al., (2019) Telephone Intervention Problem Solving (TIPS) experiment is one of them. TIPS is a telenursing approach that decreases hospitalizations and improves medication adherence in individuals with schizophrenia [31]. The Information Technology Aided Relapse Prevention Program in Schizophrenia, or ITAREPS, is a telemedicine approach that has been found by Spaniel et al., (2015) to be ineffective in demonstrating the superiority of a targeted treatment strategy based on prodromal plus maintenance over standard care. In order to avoid relapse during the prodromal period, prompt intervention is required. One potential option could be to combine telemedicine relapse prevention system with visiting nurse services.

Muesser et al., (2022) found that the Family Intervention in Recent-Onset Schizophrenia Treatment (FIRST) program demonstrated the importance of caregiver involvement and effective communication between patients, families, and physicians in the provision of care.

This finding also relates to telehealth-based psychoeducation in general. Additionally, Ackerman (2023) discovered that the vast majority of patients polled expressed satisfaction with telemedicine and that they preferred it to in-person consultations. With advantages for enhancing patient experience, telemedicine is a recognized alternative in the provision of mental health services. The WeChat-Based Integrative Family Intervention (WIFI) program was created by Yu et al., in 2020. By incorporating the entire family, the WeChat-integrated WIFI initiative had widespread positive impacts. The program produced strong empirical evidence and was founded on psychoeducation, peer support, and professional support. The mHealth program based on WeChat has the potential to be a cost-effective and empirical method for treating schizophrenia patients in the family. If successful, this intervention might be included into state family support programs. Lemetyinen et al., (2018) conducted an experiment to assess the acceptability and feasibility of an online learning intervention that is culturally suitable for African-Caribbean families. This is another study. The results of this study will be crucial in creating effective psychoeducational interventions that are culturally appropriate for families that are sometimes hard to reach in psychoeducational research.

Technology has permeated people's daily lives, including those with schizophrenia, as demonstrated by their high rates of mobile device use and their interest in using personal technology to facilitate mental health services, suggesting that such an approach may be appealing. In order for telenursing-based psychoeducation to be successful, nurses and families involved in the program must show a strong sense of dedication, fortitude, and drive to see it through to the end. The nurse will also stop if the patient and family decide to do so, which will result in less than ideal psychoeducational outcomes.

## CONCLUSION

In general, numerous research studies have demonstrated the efficacy of telenursing-based psychoeducation in mitigating family strain and enhancing caregivers' expertise in managing patients with schizophrenia. Different approaches, including telenursing, technology-based apps, and traditional psychoeducation, have significant advantages and can be incorporated into different mental health care environments.

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