

ARTICLE INFORMATION

Received: November, 02, 2023

Revised: December, 04, 2023

Available online: December, 05, 2023

at : <http://ejournalmalahayati.ac.id/index.php/nursing/index>

Auditory hallucinations in schizophrenia: Psychoeducation among caregivers to help patients develop effective coping strategies

Daryanto^{1*}, Mohammad Syukri¹, Sri Martini², Sri Endriyani², Mila Triana Sari³

¹Jurusan Keperawatan Politeknik Kesehatan Kementerian Kesehatan Jambi

²Jurusan Keperawatan Politeknik Kesehatan Kementerian Kesehatan, Palembang

³Sekolah Tinggi Ilmu Kesehatan Baiturrahim Jambi

Corresponding author: *E-mail: daryanto2766@gmail.com

Abstract

Background: Hallucinations are common symptoms experienced by patients with schizophrenia. These hallucinations pose difficulties in control, becoming a burden for caregivers providing care. Meanwhile, psychoeducation utilizing modules and videos to treat auditory hallucinations has not been previously implemented. Psychoeducation is beneficial in managing caregiver burden, yet the psychoeducation content hasn't been specific to auditory hallucinations.

Purpose: To determine the influence of psychoeducation using modules and videos to help patients develop effective coping strategies, and burden among caregivers

Method: A quantitative study with a pre-experimental design using a pre-test and post-test approach. This research was conducted to measure caregiver burden before and after the intervention. The intervention involved providing psychoeducation using modules and videos for caring for auditory hallucinations, while the control group received psychoeducation using only modules. The study was conducted at the outpatient clinic of Jambi Regional Mental Hospital from July to September 2023.

Results: There was a significant difference in caregiver burden (p-value 0.000) in the intervention group before and after treatment. There was a significant difference in caregiver burden (p-value 0.000) in the control group before and after treatment. There was no significant difference in caregiver burden (p-value 0.161) between the intervention and control groups one month after the intervention.

Conclusion: Psychoeducation with modules and videos can reduce caregiver burden in schizophrenia patients. Psychiatric nurses should educate caregivers using modules and videos for caring for auditory hallucinations as part of reducing the caregiving burden.

Suggestion: Healthcare professionals should also provide psychoeducation using auditory hallucination care modules and videos to caregivers on managing the caregiving burden for individuals with schizophrenia experiencing auditory hallucinations. Caregivers are encouraged to understand the module book and video on auditory hallucination care as a form of continued care at home for individuals with schizophrenia experiencing auditory hallucinations.

Keywords: Family Burden; Hallucination; Schizophrenia; Video.

INTRODUCTION

Hallucination is a common symptom experienced by patients with schizophrenia. Hallucinations that occur in patients make it difficult to control, thus becoming a burden for caregivers who take care of them. Meanwhile, caregivers have limited access to care information due to financial limitations, transportation constraints, and their ability to provide care. If this continues, it will impact the patient's recovery process (Siregar, Rahmadiyah, & Siregar, 2021).

Caregivers of schizophrenia patients are more likely to experience sleep difficulties, insomnia, pain, and anxiety compared to other caregivers (Gupta, Isherwood, Jones, & Van Impe, 2015). Therefore, nurses play an important role in providing education to caregivers, expected to serve as an extension of nursing care at home. Caregivers hold the most significant responsibility in patient care (Yimam, Soboka, Getachew, Alemu, Ahmed, Tesfaye, & Necho, 2022).

The prevalence rate of schizophrenia is approximately 1.1% of the global population above 18 years old, totaling 51 million individuals. This includes 6 to 12 million in China, 3 to 8.7 million in India, 2.2 million in the US, 285,000 in Australia, over 80,000 in Canada, and more than 250,000 diagnosed cases in the UK (Batra, Saoji, Batra, & Batra, 2018)

Psychoeducational interventions for schizophrenia patients are more focused on medication use, while the potential of caregivers is not addressed, despite them being a crucial support system in mental health care. Age, education, and financial constraints are barriers to providing psychoeducation. Nurses need to innovate in educating caregivers using effective learning media. In this case, the media used focuses on caring for auditory hallucinations through modules and videos, but its application to patient caregivers remains very limited. Psychoeducation Therapy (PET) has proven to reduce caregiver burden in schizophrenia patients and mood disorders, decrease patient symptoms, and significantly reduce caregiver burden after one month of intervention (Dewi, Daulima, & Wardani, 2019).

One positive symptom of schizophrenia is hallucination, with approximately 59% of schizophrenia patients experiencing auditory hallucinations. Hallucinations experienced by schizophrenia patients create a burden for caregivers, both subjectively and objectively. This research shows a significant positive correlation between resilience level and quality of life. Conversely, caregiver burden negatively correlates with resilience and quality of life (Ahmed & Ghaith, 2018).

Psychoeducational training has an effect on reducing caregiver burden scores. Meanwhile, objective caregiver burden in schizophrenia patients amounts to 95% experiencing moderate or severe burden. Psychoeducational research has an effect on reducing caregiver burden in schizophrenia patients. Psychoeducation is conducted, some using films and modules, but it's not specific to the care of auditory hallucinations (Araujo & Pedroso, 2019; Begam & Baruah, 2020).

PET provides an overview of several interventions given to schizophrenia patients and their caregivers. This structured psychotherapeutic intervention was initially developed with the primary goal of reducing the number of schizophrenia patients (Harvey, 2018). Psychoeducation for adults with mental disorders is aimed at expanding patients' and caregivers' knowledge about the disease and its treatment, empowering caregivers, and providing them with tools that support self-care and adaptive caregiver functions (Lyman, Braude, George, Dougherty, Daniels, Ghose, & Delphin-Rittmon, 2014).

This research aims to analyze the effect of modules and videos for hallucination care on caregiver burden in individuals with schizophrenia in the intervention group compared to the control group. This involves identifying caregiver burden before and after using modules and videos for hallucination care in both the intervention and control groups.

Daryanto^{1*}, Mohammad Syukri¹, Sri Martini², Sri Endriyani², Mila Triana Sari³

¹Departemen Keperawatan Politeknik Kesehatan Departemen Kesehatan, Jambi

²Departemen Keperawatan Politeknik Kesehatan Departemen Kesehatan, Palembang

³Sekolah Tinggi Ilmu Kesehatan Baiturrahim Jambi

Corresponding author: *E-mail: daryanto2766@gmail.com

RESEARCH METHOD

The research utilized a quantitative method with a pre-experimental design employing a pre-test and post-test approach. It aimed to measure caregiver burden before and after the intervention. The intervention involved providing psychoeducation using modules and videos for caring for auditory hallucinations, while the control group received psychoeducation using only modules.

This study was conducted at the outpatient clinic of Jambi Regional Mental Hospital from July to September 2023. The population in this study comprised caregivers of schizophrenia patients experiencing hallucinations undergoing outpatient treatment. Participants were randomly selected using a lottery system based on their arrival numbers, resulting in a total sample size of 84 participants, divided into 42 for the intervention group and 42 for the control group. Participants were selected based on inclusion criteria, including being caregivers of schizophrenia patients experiencing pronounced hallucination symptoms, dedicating more time to patient care (16 hours/week), aged between 18 and 65 years, and capable of reading and writing in Indonesian.

The instrument used was a questionnaire consisting of statements about participants' attitudes regarding subjective and objective burden using the ZBIS (Zarit Burden Interview Scale) measured before and 4 weeks after the final psychoeducation session. This questionnaire comprised 22 items. The response scale ranged from 1 = Never, 2 = Rarely, 3 = Often, to 4 = Almost Always. The total value for the caregiver burden variable was categorized into 1 –

20 (no burden), 21 – 40 (mild burden), 41 – 60 (moderate burden), and 61 – 88 (severe burden).

For the intervention group, the material was delivered over 8 psychoeducation sessions, and the questionnaire lasted for 60-90 minutes over an 8-week period. The questionnaire included 10 statements aimed at increasing self-awareness of symptoms, stopping thoughts or memories, deep breathing relaxation, covering or plugging ears, listening to music via a headset, enjoying entertainment on TV/radio followed by simulation sessions, and exercises. The response scale ranged from 1 = Poor, 2 = Fair, 3 = Good, to 4 = Very Good. The total value for the caregiver burden variable was categorized into 1 – 10 (Poor), 11 – 20 (Fair), 21 – 30 (Good), and 31 – 40 (Very Good).

The statistical analysis technique employed was univariate analysis for data normality and bivariate analysis to observe differences or the influence of caregiver burden before and after the intervention. Dependent t-tests were used to analyze pre and post-treatment differences, while independent t-tests were used to analyze homogeneity or similarity as well as differences in caregiver burden between both groups before and after treatment.

To determine the statistical significance of the results, a significance level of 95% was used, meaning if the p-value < $\alpha = 0.05$, the result was considered significant, indicating rejection of H_0 (null hypothesis) or an influence. Conversely, if the p-value > $\alpha=0.05$, the result was deemed not significant, signifying the failure to reject H_0 or no significant influence.

Daryanto^{1*}, Mohammad Syukri¹, Sri Martini², Sri Endriyani², Mila Triana Sari³

¹Departemen Keperawatan Politeknik Kesehatan Departemen Kesehatan, Jambi

²Departemen Keperawatan Politeknik Kesehatan Departemen Kesehatan, Palembang

³Sekolah Tinggi Ilmu Kesehatan Baiturrahim Jambi

Corresponding author: *E-mail: daryanto2766@gmail.com

RESEARCH RESULTS

Table 1. Distribution of Demographic Characteristics (N=84)

Variable	Intervention (n=42)	Control (n=42)
Gender (n/%)		
Male	18/42.9	16/38.1
Female	24/57.1	26/61.9
Education (n/%)		
Elementary School	11/26.2	7/16.7
Junior High	5/11.9	8/19.0
Senior High	18/42.9	16/38.1
Bachelor	8/19.0	11/26.2
Employment Status (n/%)		
Unemployed	17/40.5	18/42.9
Employed	25/59.5	24/57.1
Marital Status (n/%)		
Unmarried	9/21.5	11/26.2
Widowed	3/7.1	4/9.5
Married	30/71.4	27/64.3
Ethnicity (n/%)		
Jambi Malay	15/35.7	15/35.7
West Sumatran	4/9.5	5/11.9
Javanese	17/40.5	17/40.5
Others	6/14.3	5/11.9
Caregiver's Relationship (n/%)		
Parents (Father/mother)	13/30.9	16/38.1
Biological child	11/26.2	9/21.4
Sibling	11/26.2	13/31.0
Spouse (Husband/wife)	7/16.7	4/9.5

The distribution of demographic characteristics shows that among male caregivers in the intervention group, there were 18 participants, accounting for 42.9%, and in the control group, there were 16 individuals, representing 38.1%. On the other hand, among female caregivers in the intervention group, there were 24 individuals, making

up 57.1%, and in the control group, there were 26 individuals, making up 61.9%.

Regarding educational levels, caregivers with an elementary school education in the intervention group were 11 participants, amounting to 26.2%, while in the control group, there were 7 individuals, accounting for 16.7%. Those with a junior high

Daryanto^{1*}, Mohammad Syukri¹, Sri Martini², Sri Endriyani², Mila Triana Sari³

¹Departemen Keperawatan Politeknik Kesehatan Departemen Kesehatan, Jambi

²Departemen Keperawatan Politeknik Kesehatan Departemen Kesehatan, Palembang

³Sekolah Tinggi Ilmu Kesehatan Baiturrahim Jambi

Corresponding author: *E-mail: daryanto2766@gmail.com

Auditory hallucinations in schizophrenia: Psychoeducation among caregivers to help patients develop effective coping strategies

school education in the intervention group were 5 participants, making up 11.9%, and in the control group, there were 8 individuals, representing 19.0%. For caregivers with a high school diploma or vocational school education, there were 18 participants in the intervention group, constituting 42.9%, and 16 individuals in the control group, representing 38.1%. As for caregivers with a bachelor's degree, there were 8 participants in the intervention group, accounting for 19.0%, and 11 individuals in the control group, making up 26.2%.

In terms of occupational status, unemployed caregivers in the intervention group were 17 participants, representing 40.5%, and in the control group, there were 18 individuals, accounting for 42.9%. Employed caregivers were 25 participants in the intervention group, making up 59.5%, and 24 individuals in the control group, constituting 57.1%.

Furthermore, regarding marital status, unmarried caregivers in the intervention group were 9 participants, amounting to 21.5%, and in the control group, there were 11 individuals, making up 26.2%. Widowed caregivers in the intervention group were 3 participants, representing 7.1%, and in the control group, there were 4 individuals, accounting for 9.5%. Married caregivers were 30 participants in the intervention group, constituting 71.4%, and 27 individuals in the control group, making up 64.3%.

Ethnicity-wise, caregivers of Jambi Malay ethnicity in the intervention group were 15 participants, accounting for 35.7%, and in the control group, there were 15 individuals, representing 35.7%. For those of West Sumatra ethnicity in the intervention group, there were 4 participants, amounting to 9.5%, and 5 individuals in the control group, making up 11.9%. Javanese ethnicity caregivers in the intervention group were 17 participants, constituting 40.5%, and 17 individuals in the control group, accounting for 40.5%. Whereas, caregivers of other ethnicities in the intervention group were 6 participants, representing 14.3%, and 5 individuals in the control group, making up 11.9%.

In terms of the relationship to the patient, caregivers who were parents (father/mother) in the intervention group were 13 participants, accounting for 30.9%, and in the control group, there were 16 individuals, making up 38.1%. Biological child caregivers in the intervention group were 11 participants, representing 26.2%, and 9 individuals in the control group, accounting for 21.4%. Sibling caregivers in the intervention group were 11 participants, constituting 26.2%, and 13 individuals in the control group, making up 31.0%. Meanwhile, caregivers who were spouses (husband/wife) in the intervention group were 7 participants, amounting to 16.7%, and in the control group, there were 4 individuals, representing 9.5%.

Table 2. The Effectiveness of Psychoeducation Among Caregivers (N=84)

Variable	Result	95% CI	p-value
Age (Mean ±SD) (Range)(Year)			
Intervention Group	(38.69±12.07)(18-63)	34.93–42.45	
Control Group	(39.64±14.13)(17-65)	35.24–44.05	
Duration (Mean ±SD) (Range)(Hours)			
Intervention Group	(7.26±2.77)(4-12)	6.40–8.13	
Control Group	(7.88±3.16)(2-12)	6.90–8.87	
Caregiver Burden (Mean ±SD) (Range)			
Pre-test			
Intervention Group	(57.69±10.30)(38-80)	54.48–60.90	0.200
Control Group	(56.50±8.18)(44-75)	53.95–59.05	0.200

Daryanto^{1*}, Mohammad Syukri¹, Sri Martini², Sri Endriyani², Mila Triana Sari³

¹Departemen Keperawatan Politeknik Kesehatan Departemen Kesehatan, Jambi

²Departemen Keperawatan Politeknik Kesehatan Departemen Kesehatan, Palembang

³Sekolah Tinggi Ilmu Kesehatan Baiturrahim Jambi

Corresponding author: *E-mail: daryanto2766@gmail.com

Post-test			
Intervention Group	(49.64±9.69)(30-70)	46.62–52.66	0.200
Control Group	(52.38±7.95)(36–76)	49.90–54.86	0.120

Based on Table 2, it is depicted that the average age of caregivers in the intervention group is 38.69 years and in the control group is 39.64 years. The average duration of caregiving in the intervention group is 7.26 hours and in the control group is 7.88 hours per day. The Kolmogorov-Smirnov values for the pre-test measurement of caregiver burden in the intervention group show a p-value of 0.200, and in the control group, it's also 0.200, where these values are $p > 0.05$. The absence of differences in the average values of caregiver burden indicates a normal distribution. As for the post-test measurement of caregiver burden, in the intervention group, the p-value is 0.200 and in the control group, it's 0.120, where these values are $p > 0.05$. This means there are no differences in the average values of caregiver burden, indicating a normal distribution.

Table 3. The Comparison of Caregiver Burden Homogeneity (N=84)

Variable	Levene Statistic	df1	df2	Sig.
The influence of_Pre-test_EE1	0.033	1	82	0.856
The influence of_Pre-test_BB1	1.721	1	82	0.193
The influence of_Post-test_EE2	1.024	1	82	0.314
The influence of_Post-test_BB2	2.916	1	82	0.091

Based on the homogeneity test results for emotional expression in the pre-test measurement, a p-value of 0.856 was obtained, and for caregiver burden, the p-value was 0.193. This indicates that the emotional expression and caregiver burden variables in both the intervention and control groups have similar variance or homogeneity, making them suitable for a dependent t-test. Meanwhile, for the homogeneity of emotional expression in the post-test measurement, a p-value of 0.314 was obtained, and for caregiver burden, the p-value was 0.091. This indicates that the emotional expression between the intervention and control groups has similar variance or homogeneity, making it suitable for a dependent t-test.

Table 4. Dependent and Independent t-Test (N=84)

Caregiver Burden	Dependent		p-value	Independent		p-value
	Mean±SD	SE 95%CI		Mean±SD	ONE 95% C	
Pre-test						
Intervention	57.69±10.30	1.590	0.000	57.69±10.30	1.590	0.559
Control	56.50±8.18	1.263		56.50±8.18	1.263	
Post-test						
Intervention	49.64±9.69	1.496	0.000	49.64±9.69	1.496	0.161
Control	52.38±7.95	1.127		52.38±7.95	1.127	

The results of the dependent t-test indicate that the caregiver burden in the intervention group, both in the pre-test and post-test measurements, obtained a p-value of 0.000. This signifies a significant difference in caregiver burden before and after the intervention. Similarly, the caregiver burden in the control group, in both the pre-test

Daryanto^{1*}, Mohammad Syukri¹, Sri Martini², Sri Endriyani², Mila Triana Sari³

¹Departemen Keperawatan Politeknik Kesehatan Departemen Kesehatan, Jambi

²Departemen Keperawatan Politeknik Kesehatan Departemen Kesehatan, Palembang

³Sekolah Tinggi Ilmu Kesehatan Baiturrahim Jambi

Corresponding author: *E-mail: daryanto2766@gmail.com

and post-test measurements, obtained a p-value of 0.000, indicating a significant difference before and after the intervention.

The results of the independent t-test yielded a p-value of 0.559, where the p-value > 0.05, signifying no significant difference in caregiver burden between the intervention group (Module and Video) and the control group (Module) in the pre-test measurement. Meanwhile, the results of the post-test t-test obtained a p-value of 0.161, where the p-value > 0.05, indicating no significant difference in caregiver burden between the intervention group (Module and Video) and the control group (Module) in the post-test measurement.

DISCUSSION

The research results provide an overview of the characteristics of caregivers from the intervention and control groups. The average age of caregivers in the intervention and control groups is 38.69 years and 39.64 years. Data from various studies shows the average age as 53.53 years, 46.44 years, with 32.5% aged between 56-65 years, and an average of 56 years (Gupta et al., 2015; Dewi et al., 2019; Zanetti, Vedana, Pereira, Marques, da Silva, Martin, & Gherardi-Donato, 2019). Additionally, the majority of caregivers are female, accounting for 57.1% and 61.9%. Other research data reports percentages of 72.2%, 55.6%, 59.6%, 71.8%, 71%, 59.4%, and 68.8%. These findings, along with previous research, confirm that 51.37-72.2% of caregivers are female, signifying that women are the primary caregivers for schizophrenia patients (Gupta et al., 2015; Dewi et al., 2019; Wan & Wong, 2019; Sime, Mohammed, Kebede, Kidane, Negash, Adamu, & Gashaw, 2023; Wang, Chen, & Yang, 2017).

Regarding education, a significant portion has completed high school, around 41.9% and 38.1%. Other research data shows 30.6% and 36.1% did not complete elementary education, 65% and 65.97% did not complete education up to high school, and 47% completed high school. These findings confirm that caregivers with a high school education are almost similar to two other places and contrast with two studies where education was elementary or lower (Gupta et al., 2015; Dewi et al., 2019; Wan & Wong, 2019).

Regarding employment status, the majority are employed, accounting for 59.5% and 57.1%. Other researchers report a 57.64% employment rate and a 49.3% non-working/retired rate. Additionally, some research indicates low-income working status at 69.4% and 55.4%. This confirms that more than

half of the caregivers are working and have low income (Gupta et al., 2015; Dewi et al., 2019; Wan & Wong, 2019). Marital status indicates that the majority of caregivers are married, at 71.4% and 64.3%. Other research reports 62.83% married, and 89.1% ethnicity indicates 40.5% are Javanese (Dewi et al., 2019; Wang et al., 2017).

Regarding caregiver relationships, parents (father/mother) account for 31% and 38.1%. Other research reports higher percentages at 41.7%, 58.3%, 78.3%, and 41.8%. Parents (father and mother) are crucial in the patient care process. This study found that around 71.4% of caregivers take turns caring for the patient (Gupta et al., 2015; Wang et al., 2017; Wan & Wong, 2019). The duration of caregiving is 7-8 hours and 36.5% more than 9 hours every day. So far, this research does not mention the caregiver's approach. Considering that patients generally live with caregivers, care may be provided in shifts (Zanetti et al., 2019).

This study found that in the intervention group, the average caregiver burden before (57.69) and after treatment (49.64) decreased by 8.05 points, while in the control group, it decreased from before (56.50) to after (52.38), a decrease of 4.12 points. Besides the score reduction, the use of auditory hallucination care modules and videos in the intervention group affected the caregiver burden of schizophrenia patients (p-value 0.000), as did the control group, also influencing the caregiver burden of schizophrenia patients (p-value 0.000).

These research findings are consistent with the significant effect of psychoeducation in reducing caregiver burden for diseases, as measured using the BAS (Burden Assessment Schedule) in the intervention group (Batra, Saoji, Batra, & Batra,

Daryanto^{1*}, Mohammad Syukri¹, Sri Martini², Sri Endriyani², Mila Triana Sari³

¹Departemen Keperawatan Politeknik Kesehatan Departemen Kesehatan, Jambi

²Departemen Keperawatan Politeknik Kesehatan Departemen Kesehatan, Palembang

³Sekolah Tinggi Ilmu Kesehatan Baiturrahim Jambi

Corresponding author: *E-mail: daryanto2766@gmail.com

Auditory hallucinations in schizophrenia: Psychoeducation among caregivers to help patients develop effective coping strategies

2018). Psychoeducation significantly reduces the burden score by 3.57, decreasing the highly burdensome caregivers compared to the control group (Lyman et al., 2014). Psychoeducation generally reduces caregiver burden for patients, and psychoeducation using auditory hallucination care modules and videos reduces caregiving burden for schizophrenia patients with auditory hallucinations.

In this research, psychoeducation was conducted using auditory hallucination care module media and videos. The results prove a decrease in the burden after receiving auditory hallucination care modules and videos. This result is also relevant, as patient positive and negative symptoms are related to caregiver burden (Rusmimpong, Daryanto, & Damayantie, 2016). One of the positive symptoms of schizophrenia patients is hallucinations. This confirms the importance of psychoeducation provided to caregivers, as it helps understand how to care for patients experiencing auditory hallucinations. This capability indirectly impacts caregivers in managing patient care burdens.

Approximately 95% of schizophrenia patient relatives report moderate or severe objective burdens. One out of every four patient-relative reports experiencing severe objective burdens (Ramírez, Palacio, Vargas, Díaz-Zuluaga, Duica, Berruecos, & López-Jaramillo, 2017). Most caregivers of patients report significant life burdens, including economic burdens, daily household chores, limited social communication, and psychological stress (Chen, Zhao, Tang, Jin, Liu, Zhao, & Lu, 2019). In contrast, caregivers of patients who are restrained report mild (48%) and moderate (43%) burdens (Kusumawardani, Yusuf, Ni'mah, & Tristiana, 2019). Patient restraint directly limits movement or activities and the patient's behavior, generally challenging for caregivers to control. This might make caregivers feel less disturbed by patient behavior, leading to a perception of lighter burdens. However, restraint is not the best long-term solution for patient care, as it worsens the patient's condition overall.

Psychoeducation using auditory hallucination care modules and videos is a good solution to help caregivers care for patients, a method that has not

been applied before. Mental health nurses can use these modules and videos to address psychoeducation issues for caregivers that have been previously overlooked (Hermingsih, Barlianto, & Kapti, 2017). Nurses often face communication barriers in providing education to caregivers because patients are seldom visited. Therefore, auditory hallucination care modules and videos are expected to be a solution to bridge this long-standing gap. Additionally, based on observation and interviews, some caregivers with high emotional expression report inadequacy and despair in dealing with patient behavior. Based on this, it can be concluded that caregivers of patients experience suffering and endure very heavy burdens. Therefore, psychoeducation needs to provide training and guidance on managing auditory hallucination caregiver burdens.

The use of auditory hallucination care modules and videos as psychoeducation media for caregivers of schizophrenia patients with auditory hallucinations has been proven to affect the burden of schizophrenia patient caregivers, both in the intervention group (module and video) and the control group (module). This is evidenced by the decrease in average scores before and after the treatment (Budiono, Kantono, Kristianto, Avanti, & Herawati, 2021). The average score in the intervention group before treatment was 57.69, which decreased to 49.64 after the treatment (module and video) was provided, experiencing a reduction of 8.05. Meanwhile, in the control group (auditory hallucination care module), the previous average score of 56.50 decreased to 52.38, a reduction of 4.12. This means that in the intervention group with modules and videos, there was an almost twofold reduction in scores compared to using the module alone.

Previous research, consistent but not precisely the same, demonstrated that implementing caregiver interventions including six sessions of psychoeducation over 2-3 months, employing brainstorming, case sketches, role-playing, and video clips, significantly reduced caregiver emotional expression (Shetty, Math, Marimuthu, & Rawat, 2023). Caregiver psychoeducation applied materials

Daryanto^{1*}, Mohammad Syukri¹, Sri Martini², Sri Endriyani², Mila Triana Sari³

¹Departemen Keperawatan Politeknik Kesehatan Departemen Kesehatan, Jambi

²Departemen Keperawatan Politeknik Kesehatan Departemen Kesehatan, Palembang

³Sekolah Tinggi Ilmu Kesehatan Baiturrahim Jambi

Corresponding author: *E-mail: daryanto2766@gmail.com

Auditory hallucinations in schizophrenia: Psychoeducation among caregivers to help patients develop effective coping strategies

related to schizophrenia, whereas in this study, the focus of the materials in the modules and videos was more specific, targeting auditory hallucination care (Addiba & Choiriyah, 2020).

Psychoeducation for caregivers using auditory hallucination care module media and videos impacted the burden of schizophrenia patient caregivers both before and after treatment in both the intervention and control groups. However, the research results couldn't detect any influence or difference in caregiver burden between the intervention and control groups after 1 month post-treatment. Psychoeducation research is often conducted over longer durations like 6 months, 1 year, and 2 years. Indeed, one month is a short time to observe significant changes that are expected to occur in the long term.

CONCLUSION

Providing psychoeducation to caregivers in the form of modules and videos can reduce the burden on schizophrenia patients' caregivers. Modules and videos on auditory hallucination care are one way to lessen the burden on caregivers in caring for patients.

SUGGESTION

Healthcare professionals should also provide psychoeducation to caregivers using modules on auditory hallucination care and videos about dealing with schizophrenia patients experiencing hallucinations. Caregivers are expected to understand the module book and video on auditory hallucination care as a form of ongoing home care for patients with schizophrenia experiencing auditory hallucinations..

REFERENCES

Addiba, A., & Choiriyah, Z. (2020). Hubungan Beban dengan Kemampuan Pengasuh Merawat Activity Of Daily Living (ADL) Pasien Skizofrenia: Relationship between Load and Family Ability to Care for Activity Of Daily Living (ADL) in Schizophrenia Patients. *Journal of Holistics and Health Sciences (JHHS)*, 2(2), 13-21.

Ahmed, H. A. A. E., & Ghaith, R. F. A. H. (2018). Effect of psycho-educational program on families' perception of burden and attitudes toward mental illness among caregivers of patients with schizophrenia. *Egyptian Nursing Journal*, 15(3), 331.

Araujo, A. D. S., & Pedroso, T. G. (2019). The relationship between expressed emotion and sociodemographic variables, early stress and stress symptoms in informal caregivers of people with mental disorders. *Cadernos Brasileiros de Terapia Ocupacional*, 27, 743-753.

Batra, B. S., Saoji, A. M., Batra, S., & Batra, D. S. (2018). Effect of family psycho education on knowledge, quality of life, expressed emotions, burden of disease and coping among caregivers of patients with schizophrenia. *IOSR J. Dent. Med. Sci*, 17, 59-73.

Begam, B., & Baruah, A. (2020). Effectiveness of Psychoeducation on Expressed Emotion of Family Members and as Perceived by the Patient with Schizophrenia. *Psychiatry*, 23(1), 21-6.

Budiono, W., Kantono, K., Kristianto, F. C., Avanti, C., & Herawati, F. (2021). Psychoeducation improved illness perception and expressed emotion of family caregivers of patients with schizophrenia. *International Journal of Environmental Research and Public Health*, 18(14), 7522.

Chen, L., Zhao, Y., Tang, J., Jin, G., Liu, Y., Zhao, X., & Lu, X. (2019). The burden, support and needs of primary family caregivers of people experiencing schizophrenia in Beijing communities: a qualitative study. *BMC psychiatry*, 19, 1-10.

Dewi, A. R., Daulima, N. H. C., & Wardani, I. Y. (2019). Managing family burden through combined family psychoeducation and care decision without pasung therapies. *Enfermeria clinica*, 29, 76-80.

Daryanto^{1*}, Mohammad Syukri¹, Sri Martini², Sri Endriyani², Mila Triana Sari³

¹Departemen Keperawatan Politeknik Kesehatan Departemen Kesehatan, Jambi

²Departemen Keperawatan Politeknik Kesehatan Departemen Kesehatan, Palembang

³Sekolah Tinggi Ilmu Kesehatan Baiturrahim Jambi

Corresponding author: *E-mail: daryanto2766@gmail.com

Auditory hallucinations in schizophrenia: Psychoeducation among caregivers to help patients develop effective coping strategies

- Gupta, S., Isherwood, G., Jones, K., & Van Impe, K. (2015). Assessing health status in informal schizophrenia caregivers compared with health status in non-caregivers and caregivers of other conditions. *BMC psychiatry*, 15(1), 1-11.
- Harvey, C. (2018). Family psychoeducation for people living with schizophrenia and their families. *BJPsych Advances*, 24(1), 9-19.
- Hermingsih, A. R., Barlianto, W., & Kapti, R. E. (2017). Pengaruh terapi family psychoeducation (FPE) terhadap kecemasan dan beban pengasuh dalam merawat anggota pengasuh dengan skizofrenia di kecamatan bola kabupaten sikka, nusa tenggara timur. *Jurnal Kesehatan Mesencephalon*, 3(2).
- Kusumawardani, W., Yusuf, A., Ni'mah, L., & Tristiana, D. (2019). Family Burden Effect on the Ability in Taking Care of Schizophrenia Patient. *Indian Journal of Public Health Research & Development*, 10(8).
- Lyman, D. R., Braude, L., George, P., Dougherty, R. H., Daniels, A. S., Ghose, S. S., & Delphin-Rittmon, M. E. (2014). Consumer and family psychoeducation: Assessing the evidence. *Psychiatric Services*, 65(4), 416-428.
- Ramírez, A., Palacio, J. D., Vargas, C., Díaz-Zuluaga, A. M., Duica, K., Berruecos, Y. A., & López-Jaramillo, C. (2017). Expressed emotions, burden and family functioning in schizophrenic and bipolar I patients of a multimodal intervention programme: PRISMA. *Revista Colombiana de Psiquiatría*, 46(1), 2-11.
- Rusmimpong, R., Daryanto, D., & Damayantie, N. (2016). Family Burden of Schizophrenia Patient who Check at Psychiatric Polyclinic of Psychiatric Hospital of Jambi Province. *Jurnal Ners dan Kebidanan*, 3(1), 42-45.
- Shetty, K. V., Math, S. B., Marimuthu, P., & Rawat, V. S. (2023). Family intervention for expressed emotion in schizophrenia: Indian context. *Indian Journal of Psychiatry*, 65(4), 453.
- Sime, Y., Mohammed, M., Kebede, D., Kidane, M., Negash, M., Adamu, Y., & Gashaw, A. (2023). Expressed emotion and associated factors among care givers of schizophrenia patient attending mental health service in Dilla University Referral Hospital, Dilla, Southern Ethiopia, 2022.
- Siregar, I., Rahmadiyah, F., & Siregar, A. F. Q. (2021). Therapeutic communication strategies in nursing process of angry, anxious, and fearful schizophrenic patients. *British Journal of Nursing Studies*, 1(1), 13-19.
- Wan, K. F., & Wong, M. M. (2019). Stress and burden faced by family caregivers of people with schizophrenia and early psychosis in Hong Kong. *Internal Medicine Journal*, 49, 9-15.
- Wang, X., Chen, Q., & Yang, M. (2017). Effect of caregivers' expressed emotion on the care burden and rehospitalization rate of schizophrenia. *Patient preference and adherence*, 1505-1511.
- Yimam, B., Soboka, M., Getachew, Y., Alemu, B., Ahmed, G., Tesfaye, E., & Necho, M. (2022). Expressed emotion of caregivers among schizophrenic patients visiting Jimma University Medical Center Psychiatry Outpatient Unit, Southwest Ethiopia. *Annals of General Psychiatry*, 21(1), 1-10.
- Zanetti, A. C. G., Vedana, K. G. G., Pereira, C. C. M., de Azevedo Marques, J. M., da Silva, A. H. S., Martin, I. D. S., & Gherardi-Donato, E. C. D. S. (2019). Expressed emotion and socio-demographic and clinical factors in families of Brazilian patients with schizophrenia. *International Journal of Social Psychiatry*, 65(1), 56-63.

Daryanto^{1*}, Mohammad Syukri¹, Sri Martini², Sri Endriyani², Mila Triana Sari³

¹Departemen Keperawatan Politeknik Kesehatan Departemen Kesehatan, Jambi

²Departemen Keperawatan Politeknik Kesehatan Departemen Kesehatan, Palembang

³Sekolah Tinggi Ilmu Kesehatan Baiturrahim Jambi

Corresponding author: *E-mail: daryanto2766@gmail.com