

# How Psychoeducational Intervention Effects on Burden in Caregivers of Schizophrenia: A Systematic Literature Review

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## ABSTRACT

This systematic literature review investigates the effectiveness of psychoeducational intervention on the burden of caregivers of people with schizophrenia. Schizophrenia is a severe, prolonged, and disabling mental disorder that requires a caregiver to care for it. Often the caregiver does not have sufficient knowledge because they must be willing to treat from the onset of the disorder. Caregivers experience various challenges when caring for people with schizophrenia which creates a feeling of burden and impacts on the caregiver and people with schizophrenia themselves. Psychoeducation intervention is carried out with the aim of increasing knowledge and information might reduce the burden on the caregiver. Sources of data obtained from PubMed, ProQuest, ScienceDirect, and Psych INFO. Inclusion Criteria: research studies using the RCT approach; studies in burden of schizophrenia caregiver; studies with psychoeducational interventions. Appraisal studies use the MMAT Critical Appraisal, and the synthesis method uses PICO modifications. The result of this study shows Psychoeducational Interventions had a significant effect on reducing burden of caregiver. Psychoeducational intervention has a significant influence in reducing burden of caregiver so that it can be applied as an effort to improve the quality of life of caregivers and patients.

**Keywords:** *Psychoeducational intervention, Burden, Caregiver, Schizophrenia*

## 1. INTRODUCTION

Schizophrenia according to the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-V) is an abnormality in one or more of five domains, namely delusions, hallucinations, disorganized speech (irregular speech), disorganized or catatonic behavior, the presence of symptoms negative [1]. Because of the symptoms they experience, people with schizophrenia often behave strangely, they cannot carry out their daily activities, they also experience relapses and often threaten themselves and those around them whose effects are prolonged and disabling [2]; [3]. Therefore, people with schizophrenia need other people to take care and help them in carrying out their lives. The Indonesian government stipulates the Mental Health Law no. 18 of 2014 to regulate individuals who are responsible for caring for people with schizophrenia, namely wives or husbands, parents, children, or siblings who are at least 17 years old, or guardians or guardians and authorized officials in accordance with applicable laws. In general, family members who are in charge are called caregivers, they take over most of the care for people with schizophrenia. There are two types of caregivers, formal and informal. Formal caregivers are individuals who are part of a service system such as a hospital that is paid or voluntary. While informal caregivers are

individuals who help and care for people with schizophrenia who are responsible for the needs and spend most of their time together without being paid or receiving economic levies [4]. In this study, researchers focused on informal caregivers who are members of the family.

The primary caregivers are families who are responsible for the care of people with schizophrenia, helping them to complete tasks related to various areas of care, ranging from physical and emotional support (e.g., adherence to medication), socioeconomic aspects (e.g., social integration, work problems), or activities of daily life (ADL) [5]. Caregiver takes on the role of companion and nurse. Caregiver as a companion plays a role ready to listen to every complaint and subjective impact of people with schizophrenia. While in the task of caring for the caregiver, giving medicine, for eating and bathing as well as other objective impacts. Caring for people with schizophrenia is not an easy thing for the caregiver because they often behave rudely and unusually, has poor hygiene, and even conflicts with people around them. Plus, family caregivers are generally not equipped with sufficient knowledge to treat people with schizophrenia because they must be caregivers starting from the onset of illness experienced by their family members. Informal caregivers or family caregivers are not prepared when it comes to caring for and assisting people with schizophrenia. Only about 40% of caregivers get

information or knowledge from health workers about how to adapt to people with mental disorders, even though education to families about mental disorders will increase adherence to treatment and prevent recurrence [6].

Caring for people with schizophrenia causes physical and psychological burdens as well as economic and social impacts [7] and even has an impact on people with schizophrenia because it can cause relapse [8]. This complex situation is defined as a caregiver burden, namely a negative psychological condition experienced by caregivers caused by difficulties in caring for people with schizophrenia, these difficulties include physical, psychological, social, and economic conditions [8];[9]. Burden of caregivers is divided into objective and subjective. Burden objective refers to the consequences of caregiver duties on household activities, economic resources, health, and time. While the subjective burden includes negative assessments of circumstances such as feelings of loss, guilt, shame, and anger [6]. The feelings of guilt experienced by caregivers are related to a lack of knowledge about the disorders experienced by their family members who experience schizophrenia, because caregivers may think that they caused their family to experience schizophrenia [10].

One of the factors that influence psychological well-being is the way individuals interpret their life experiences. Individuals can interpret the situation they face in a positive or negative way. In this case, mental health will be able to be achieved by individuals who are able to optimize the positive elements that exist within themselves. Therefore, it is important to design comprehensive treatment and care that includes interventions for caregivers to reduce the negative impact of caring for people with schizophrenia [5]. There are several pharmacological interventions that are suggested to be given to patients to reduce the burden on caregivers. In addition, there are non-pharmacological interventions or psychotherapy that are used to reduce the burden on caregivers such as counseling interventions, mutual support, social support interventions and psychoeducational interventions [11].

One of the methods or interventions used to assist caregivers in treating people with schizophrenia is psychoeducational intervention. Anderson et al. [10] suggested psychoeducational intervention is an approach used to support and educate families in overcoming and dealing with family members who experience schizophrenia. By teaching family about the information of schizophrenia, it can help them to know and learn what family members as caregivers can do to assist patients. Psychoeducational interventions are carried out on individuals, families, and groups with the aim of educating participants about significant challenges in life, helping participants develop sources of support and social support in dealing with these challenges, and developing coping skills to deal with these challenges [15]. Psychoeducation is provided in

a professional manner integrating psychotherapeutic and educational interventions [12].

One example of a psychoeducational intervention carried out in Indonesia was carried out with 30 caregivers who were family and members of the Indonesian Schizophrenia Care Community (KPSI), the intervention session was carried out in 4 meetings using multimedia by trained facilitators, carried out in group form at RSUP Dr. Sardjito. The results of the intervention stated that psychoeducation about schizophrenia can increase knowledge and reduce caregiver stigma against schizophrenia disorders [6]

Furthermore, there are studies conducted in Indonesia that clearly show that psychoeducational interventions have a positive impact on the burden of caregivers compared to those who receive basic care [6]. Caregivers who receive psychoeducational intervention programs no longer experience a heavy burden because psychoeducation programs can be useful for patients and caregivers, psychoeducation provides information about illness and how to overcome it, to provide emotional support to caregivers and can apply coping and stress management strategies [14]. However, there are also studies which state that there is no significant difference between psychoeducational interventions on the burden of schizophrenia caregivers. Research conducted by McDonnell et al. [13] showed that there was no significant reduction of psychoeducational intervention on caregiver burden. According to this study, psychoeducational interventions did not significantly reduce the burden on caregivers because of the long duration of illness (10 years) of people with schizophrenia which allowed caregivers to have a long time to adjust to pressure in caring for and to learn coping skills.

Based on several research results that have been described above, there are differences in results or inconsistencies in the results of the effectiveness of psychoeducation on the burden of caregivers for people with schizophrenia. A systematic review was conducted to see whether and how effective the previous research on psychoeducational interventions on the burden of caregivers for people with schizophrenia was. The process of searching for research articles is carried out using databases such as ScienceDirect, ProQuest, PubMed, and Psych INFO. Articles that meet the inclusion criteria will then be analyzed in the form of a narrative synthesis. Therefore, this study was conducted to describe the effectiveness of psychoeducational interventions on the burden of caregivers for people with schizophrenia using a systematic literature review method.

## 2. METHOD

### 2.1. Design

This research is a systematic literature research, study by collecting data or sources related to a particular topic. SLR is a literature review method that is shown to answer a question, based on the integration of the findings of previous studies, includes the process of searching and identifying all literature relevant to the topic of the review, critical assessment of the literature and synthesis of findings from all the literature reviewed [17]. SLR systematically seeks, assesses, and integrates research findings that address topics of interest. Developed and commonly used in health and clinical intervention effectiveness.

### 2.2. Participants

The subjects in this study were literature articles on the topic of burden, caregiver for schizophrenia, psychoeducational intervention. In selecting samples for further study, inclusion and exclusion criteria will be determined based on the PICO (Population, Intervention, Comparison, Outcome). The first inclusion criteria is a Randomized Controlled Trial (RCT) study, the second inclusion criteria is that the participants in the article are caregivers of people with schizophrenia without being limited by gender and age, the third inclusion criteria are articles that use psychoeducational interventions, the fourth criterion is the intervention used for the burden variable. (burden), the fifth criterion is that articles are limited to Indonesian and English only.

### 2.3. Procedure

Boyle, et. al. [17] concluded that there are seven steps in systematic literature review research. The first step in this systematic literature review research is to define a review question that will serve as a guide for the next steps. The purpose of this research question is to make a hypothesis and develop a review title. The title must be very descriptive, and it is indicated in the title that the research conducted is a systematic literature review. In this study, the review question asked was "is psychoeducational intervention effective in reducing the burden on caregivers of people with schizophrenia?". Thus, from the review question, the resulting title is the effectiveness of psychoeducational interventions on the burden of caregivers for people with schizophrenia: a systematic literature review.

The second step is to determine the inclusion and exclusion criteria developed from the review questions, used as a guide to determine whether the articles identified search strategies. The inclusion and exclusion criteria were determined based on the Population, Intervention, Comparison, Outcome (PICO) set by Cochrane. The first inclusion criteria are an RCT study, the second criterion is that the participants in the article are caregivers for people with schizophrenia, the third inclusion criteria are articles that use psychoeducational interventions, the fourth criterion is the intervention used for the burden variable (burden), the fifth criterion is that articles are limited to

language only. Indonesian and English. The keywords used in this research are (((psychoeducat\* intervention) OR (psycho-educat\* intervention)) AND (burden)) AND (caregiver)) AND (schizophren\*). Journal articles that have been found have titles and abstracts that match the inclusion criteria, namely the period of the journal, language, subject, type of journal and its variables. While the research exclusion criteria were not full text, languages other than English and Indonesian and variables other than psychoeducational intervention for the burden on caregivers of people with schizophrenia.

The third step is determining the search strategy. The search for scientific articles in this research was conducted online through several local and international based sites such as ScienceDirect, PubMed, ProQuest, and Psych INFO. Search results will be counted and recorded. The second step is to identify journals by issuing the same or duplicate journals. Then screening is done by filtering the title and abstract. Accepted journals are journals and their abstracts are appropriate. Meanwhile, those that do not fit are removed. Journals that have gone through the screening stage are re-elected based on pre-determined inclusion and exclusion criteria. The author uses Rayyan software to record all the articles that will be used.

The fourth step is select studies (choose articles). In this study, the researchers chose articles that matched the criteria previously set. At this stage the researcher records all the research reviewed so that no data is lost. The fifth step is data extraction. The appropriate journal articles that will be accepted are the author, year of publication, age and number of participants, research methods, measuring instruments used to measure burden, number and duration of each session and the results obtained from the intervention. The review process is usually carried out by at least 2 authors to create inter-rater reliability, to avoid errors in data entry. However, in this review, the review process is only carried out by 1 author. The sixth step is to assess the quality of the research. According to Cochrane, it would be better if the research used was randomized controlled trials (RCT). The seventh step is to analyze and interpret the results. All data were analyzed and interpreted and then summarized the findings of the review and made further recommendations [17].

Based on the search results on PubMed, ProQuest, ScienceDirect, and Psych INFO conducted online with the keywords psychoeducat\* intervention, burden, caregiver and schizophrenia, 1542 articles were found. Then screening of titles and abstracts to 80 articles. Articles that were excluded because they were duplicate or inappropriate articles were 11 articles. Then the full-text access of the entire article was carried out to see if it matched the criteria of 69 articles. There were 55 articles that did not meet the inclusion criteria. A total of 14 articles were included in this review. The journals obtained will be summarized in

the form of research descriptions, methods and results and conclusions.

### **3. RESULT**

The results of a review conducted in 14 journals stated that psychoeducation interventions were effective in reducing the burden on caregivers. This is based on the data, namely the overall results of the articles reviewed show that psychoeducation interventions can significantly reduce the burden on caregivers, namely 11 articles or 79%. Meanwhile, the journals that do not show significant results are 3 articles or 21%. The following is a description of the results of each article and to answer this research question whether psychoeducational interventions are effective in reducing the burden on caregivers.

**Table 1. Results of Article Analysis (Methods, Burden Measurement Tools, Participants, Interventions, Intervention Results, Other Measurement Results).**

<i>No.</i>	<i>Article</i>	<i>Methods</i>	<i>Measurements used for burden</i>	<i>Participants and conditions</i>	<i>Intervention: Duration, Follow up</i>	<i>Design, Comparison</i>	<i>Intervention Result</i>	<i>Results of other measurements</i>
1.	Martin et al. (2016)	Randomized Controlled Trial (RCT)	Zarit Burden Interview	- 223 caregivers - 76% female - Mean age: 60 years	- Group - 21 hours / 12 weeks - 4 months follow-up	TAU	There is a significant reduction in caregiver burden.	There was a decrease in depressive symptoms related to parenting tasks.
2.	Shiraishi et al. (2019)	RCT	Japanese version of the Zarit burden interview short version (J-ZBI_8)	74 caregivers 82.2% female Mean age: 58 years,	- Group - 105 minutes every 2 weeks in an 8-week period - 1 month follow-up	TAU	There is no significant change in caregiver burden	
3.	Sharif, Shaygan, & Mani, (2012)	RCT	Family burden questionnaire	70 caregivers Majority of Mothers Mean age: 51 years.	- Group - 15 hours/5 weeks - 1 month follow-up	TAU	There is a significant reduction in caregiver burden.	There is a correlation between the symptoms of schizophrenia and the burden on family caregivers.
4.	Hasan, Callaghan, & Lymn (2015)	RCT	Family burden interview scale (FBIS)	121 caregivers 76% female Mean age 48 years	- Text based with telephone support - 146 hours / 12 weeks - 3 months follow-up	TAU	There is a significant reduction in caregiver burden.	There is an increase in the quality of life for caregivers. There is an increase in knowledge scores.
5.	Navidian, Kermansaravi, & Rigi (2012)	RCT	Zarit burden interview (ZBI)	- 50 caregivers	- Group - 8 hours/5 weeks - 3 months follow-up	TAU	There is a significant reduction in caregiver burden.	There is an increase in the quality of life for caregivers and patients.
6.	Khoshknab et al. (2013)	RCT	Family Burden Interview Schedule (FBIS)	- 71 caregivers - 93% female - Mean age: 54 years old	- Group - 8 hours/5 weeks - 1 month follow-up	TAU	There is a significant reduction in caregiver burden.	-
7.	Chan et al. (2009)	RCT	Family Burden Interview Schedule (FBIS)	- 73 caregivers - Majority of women - 1 professional nurse.	- Group - 20 hours/12 weeks - Based on EPPIC psychoeducational working party framework. - 6, 12 months follow-up	Waitlist	There is a significant reduction in caregiver burden.	There is an increase in caregiver's perception of self-efficacy and satisfaction with social support.
8.	Kulhara et al. (2009)	RCT	Family Burden Interview Schedule (FBIS)	- 76 caregivers - 25% female - Mean age: 47 years old	- Family individual sessions - 9 hours / 40 weeks	TAU	There is no reduction (modification) of	There is an increase in the perception of support among caregivers, and greater

								burden on caregivers.	on satisfaction with the treatment received.	
9.	Magliano et al., (2006)	RCT	Family Problems Questionnaire (FPQ)	-	71 caregivers	-	Group - 18 sessions/6 months - 6 months follow-up	Waitlist	There is a significant reduction in caregiver burden.	There was a significant improvement in social relations with relatives. There is an improvement in the perception of professional support.
10.	Chien, Chan, & Thompson (2006)	RCT	Family Burden Interview Schedule (FBIS)	-	96 caregivers - 31% female - Mean age: 42 years old	-	Group - 25 hours/ 26 weeks - 6, 12, 18 months follow-up	TAU Mutual Support	There is a significant reduction in caregiver burden.	Mutual support also consistently improves burden  Psychoeducation groups show improvement in service users' functioning
11.	Chien & Wong (2007)	RCT	Family Burden Interview Schedule (FBIS)	-	84 caregivers - 67% female - Mean age: 41 years old - Mental health nurse	-	Group - 36 hours/ 36 weeks - 12 months follow-up	TAU	There is a significant reduction in caregiver burden.	There is an increase in caregiver functioning (communication and caregiver behavior towards people with schizophrenia)
12.	Cheng & Chan (2005)	RCT	Family Burden Interview Schedule (FBIS)	-	64 caregivers - 63% female - 1 experienced mental health nurse.	-	group - 20 hour/ 12 weeks	TAU	There is a significant reduction in caregiver burden.	There is an increase in self-efficacy and social support.
13.	McDonnell et al. (2003)	RCT	Family Burden Interview Schedule	-	84 caregivers	-	group - 2 years	TAU	There is no significant reduction in caregiver burden	-
14.	Gutierrez-Maldonado & Caqueo-Urizar (2007)	RCT	Zarit Caregiver Burden Scale	-	45 caregivers - 76% female - Mean age: 54 years old - Psychiatrists and psychologists	-	Group - 27 hours/ 18 weeks - 3 psychologists	TAU	There is a significant decrease in caregiver burden	There is a decrease in behavioral scores.

Overall, this systematic literature review study consists of 14 articles with a randomized controlled trial (RCT) design. All studies are published in English. The total studies included in this review were published between 2003 and 2019. The studies were conducted in various countries ranging from Chile (14), USA (13), Hong Kong (12,11,10,7), Italy (9), India (10) Iran (6,5,3), Jordan (4), Japan (2), and Spain (1) Portugal (1). The number of population or participants who participated in the research articles reviewed was 1202 caregivers, the majority of whom were women and a mother, in addition, children or siblings were also involved in several studies. The sample sizes in the participating studies varied widely; the smallest study was 45 caregivers conducted in Chile, while the largest study was a study conducted in two countries, namely Spain and Portugal which included 223 caregivers with a mean age of 41-60 years.

The intervention used in each article reviewed used a psychoeducational intervention. From a total of 14 articles, 12 articles intervened in the form of groups (1-2.5-7.9-14), 1 article intervened in individual sessions (8) and 1 article intervened using text based with telephone support (4). Regarding the delivery format for the intervention, this study uses 3 categories: individual sessions, where the therapist meets with the caregiver for intervention; groups, caregivers participate in interventions with other caregivers in the form of groups; and text-based with telephone support, where caregivers receive interventions in the form of booklets and follow-up by telephone.

Most studies used routine care or treatment as usual (TAU) as a comparison to evaluate the effectiveness of psychoeducational interventions (studies 1-6,8,11,12,13,14). There is also a comparison with the waiting group (waitlist) as a comparison (study 7,9). In addition, there is one study that uses a three-arm RCT design that compares the effectiveness of psychoeducational interventions with mutual support and TAU (study 10). Studies using TAU as a comparison show that there is a decrease in burden and a significant difference in the group receiving psychoeducational intervention compared to the TAU group (study 1,3-6,10-12,14). Meanwhile, the study with the comparison of the waitlist (study 7&9) showed that there was a significant difference in the intervention group compared to the waitlist. Study 10 showed that there was a significant reduction in burden in the psychoeducational intervention group. However, apart from psychoeducation, the mutual support group also saw a significant reduction in burden. While in the TAU group there was no significant change.

The results of the studies in this study vary. Outcomes are divided into primary or secondary outcomes. The primary result that became the answer from the research was a decrease in caregiver burden. Of the total 14 studies, 11 studies reported that there was a significant reduction in the burden of carriers with the provision of psychoeducational interventions (articles 1,3-7,9-12,14). While the other 3 studies reported no significant changes (articles 2,8,13).

In studies that have proven the effectiveness of psychoeducational interventions on burden caregivers, most interventions are administered in groups, only 1 study uses booklets (text-based with telephone calls). The average intervention lasted for 5 to 36 weeks with a duration of 8 to 146 hours. Follow-up was carried out from 1 month to 18 months. There were 2 studies that carried out two to three follow-ups (articles 7,10).

The duration of the intervention varied from 5 weeks to 2 years. In general, the intervention lasted between 5, 12, 36 weeks with sessions once a week or every two weeks. Furthermore, follow-up was carried out from 1 month to 18 months. There were several studies that carried out two to three follow-ups at 6 & 12 months (article 7) and at 6, 12 & 18 months (article 10). In addition, there were 3 studies that did not follow up (articles 8, 12, 13), two of which (articles 8 and 13) reported no significant reduction in caregiver burden.

The outcome of the burden of caregiver is measured in various ways using different measuring instruments. The most widely used measuring tools are the Family Burden Interview Schedule (FBIS) (articles 16,7,8,10-13), Zarit Burden Interview (article 5), Japanese version of the Zarit Burden Interview Short version (J-ZBI\_8) (article 2), Zarit Caregiver Burden Scale (article 14), Family Problem Questionnaire (FPQ), and Family Burden Questionnaire (article 2).

Psychoeducational intervention programs from studies that are effective in reducing the burden generally have psychoeducational content consisting of schizophrenia education (etiology, prognosis, drugs), communication skills, coping strategies, prevention of relapse and suicide.

In studies that failed in reducing the burden significantly (articles 2,8,13) using certain psychoeducational intervention models such as the Standard Model of Family Psychoeducation (SM-FPE) (article 2), a structured psychoeducational manual compiled by researchers (article 8), and Multiple Family Group Treatment (MFGT) which was tested to reduce the burden on caregivers. In the SM-FPE study (article 2) the lack of effectiveness in the integrated outcomes of caregivers in recent-onset patients because anxiety and depression were higher than the burden of care and expressed emotions. In another study (article 8) the recurrence rate in patients did not decrease, and this may be the reason why the burden did not decrease significantly. While in the MFGT study (article 13) as described above, the main function of MFGT itself is to overcome disorders in patients, not for caregivers, and this study also states that due to the long duration of care, which is an average of about 10 years, caregivers have adapted to stress and to learn coping skills. In addition, the duration of psychoeducation is 10 hours in 8 weeks with meetings every 2 weeks (article 2), then 9 hours in 40 weeks (article 8) and 2 years (2 months in the first year and once a month in the second year). In addition, 2 of these 3 studies did not follow up.

Other results found in this review are the impact of psychoeducation on knowledge of schizophrenia (article 4), quality of life (articles 4&5),

social and professional support (articles 7,8,9,12), caregiver functioning (articles 11,12), satisfaction with treatment and service users' functioning (article 8.10), depressive symptoms (article 1), self-efficacy (article 7.12), predictor of burden (article 12), correlation between symptoms of schizophrenia and burden (article 2), in patients with symptom severity, recurrence, and hospitalization (articles 4,2,8).

Based on all reviewed studies, psychoeducational interventions have the same main content, namely about schizophrenia and the problems faced while caring for people with schizophrenia. Most programs include information on psychosis, coping and coping strategies in treatment. Coping strategies help caregivers to communicate well and solve problems effectively in caring for people with schizophrenia. Coping strategies that are generally used are communication skills, problem solving skills and social resources.

#### **4. DISCUSSION**

This systematic literature review aims to synthesize data on the effectiveness of psychoeducational interventions to reduce the burden on caregivers of people with schizophrenia. This discussion will be divided into 4 parts, namely Population, Intervention, Comparison, Outcome. First, regarding the population. The overall population of this study amounted to 1202 caregivers. The sample sizes in the participating studies varied widely; the smallest study was 45 caregivers conducted in Chile, while the largest study was conducted in two countries, namely Spain and Portugal which included 223 caregivers with a mean age of 41-60 years. Most caregivers in this study were women and mothers. In addition to the nature of women being to nurture and care for, women more often take responsibility for caring for individuals who experience illness or disorders, women experience more burdens than men which result in the low quality of life of female caregivers [18]. Second, the intervention used in this study is psychoeducation. Based on all reviewed studies, psychoeducational interventions have the same main content, namely knowledge about schizophrenia (etiology, prognosis, treatment), problems encountered during treating people with schizophrenia, ways to cope and coping strategies in treatment. Coping strategies help caregivers to communicate well and solve problems effectively in treating people with schizophrenia. Coping strategies that are generally used are communication skills, problem solving skills and social resources.

Psychoeducation includes skills to deal with bad behavior. When caregivers experience negative emotions, they are taught cognitive strategies to reshape these negative responses, they are also taught strategies to promote healthy behavior, emphasizing how important it is for caregivers to take care of themselves because their ability to care for others is highly dependent on their well-being. Strategies taught in psychoeducation allow caregivers to change their perspective on problems. Help them realize their inner strength and reduce their tendency to stress.

Psychoeducation also needs to teach relaxation methods that can be used for psychoeducation, including how to live better with schizophrenia and have a meaningful life.

This is in accordance with what was stated by Anderson, Reiss, & Hogarty [10] that psychoeducation has 4 essential components, namely providing direction to patients about the disease, problem solving training, communication training, and self-assertiveness training. Key information needs to be conveyed to the client consisting of facts related to the disorder and its treatment such as the term "schizophrenia", symptoms (negative and positive), source of symptoms, treatment and side effects, stress and coping methods, relapse prevention measures and suicide. In addition, it is necessary to discuss emotional topics related to the disorder [19].

The third is comparison or comparison. Based on the study conducted, the comparisons used for psychoeducational interventions are treatment as usual (TAU), waitlist, and support. The study using TAU as a comparison showed that there was a decrease in burden and a significant difference in the group receiving psychoeducational intervention compared to the TAU group (articles 1,3-6,10-12,14). While the study with a comparison of the waitlist (articles 7&9) showed that there was a significant difference in the intervention group compared to the waitlist. Study 10 showed that there was a significant reduction in burden in the psychoeducation intervention group and a significant difference when compared to mutual support and TAU. With the knowledge received from psychoeducational interventions, caregivers have acquired new nursing skills and can overcome disruptive behavior and caregivers become more confident to cope and deal with the behavior.

Fourth is outcomes. The results of this systematic literature review study indicate that there is a significant positive change in caregiver burden. Based on a review of 14 studies with randomized controlled trial (RCT) designs, 11 studies stated that there was a significant reduction in caregiver burden using psychoeducational interventions. While 3 studies reported no significant reduction. For this reason, the authors conclude that psychoeducational interventions are effective in reducing caregiver burden.

Psychoeducation is designed to support and educate caregivers (families) who are dealing directly with people with schizophrenia, it is hoped that with the education they receive, caregivers can better understand and reduce the perceived burden [10]. In accordance with previous research which stated that there was a significant reduction in burden experienced by caregivers who participated in the psychoeducation group, and the results were maintained throughout the study period [20]; [21]; [22].

The effectiveness of psychoeducational interventions in reducing the burden can be seen from the decrease in the burden score as measured by measuring instruments. In addition, effectiveness can be detected from several variables such as increasing knowledge of schizophrenia (article 4), improving quality of life (articles 4 & 5), satisfaction with social

support, and improving perceptions of professional support (articles 7,8,9,12), increasing caregiver function (article 11,12), reducing symptoms of depression (article 1), and increasing self-efficacy (article 7,12).

Decreased symptoms of depression, increased self-efficacy, increased quality of life is associated with a decrease in the subjective burden on caregivers. Considering that subjective burden refers to the feelings or psychological reactions experienced by caregivers in caring for people with schizophrenia [23]. While the function of the caregiver, social support, professional support is related to the objective burden on the caregiver. Burden objectives are clear, real, and observable consequences for individuals in caring for people with schizophrenia such as changes in household aspects and practical problems such as disturbances in the household, constraints in the social environment, work and financial problems [23].

Psychoeducational interventions provide information about schizophrenia disorders and their treatment as well as provide several strategies for dealing with the disorder [4]. Plus, Sin [24] which states that the effectiveness of psychoeducation depends on caregivers' knowledge about schizophrenia itself, their cognitive assessment of events that occur in care, how they interpret the burden and how to use the correct coping to deal with certain situations. Furthermore, regarding the duration of the intervention and the time of contact in each study, it varied widely in the effective studies. The average intervention lasted for 5 to 36 weeks with a duration of 8 to 146 hours. Follow-up was carried out from 1 month to 18 months. There were 2 studies that performed two to three follow-ups (7,10). Future studies can conduct a meta-analysis to examine the duration of the intervention and how long the follow-up is most effective in reducing burden.

Based on studies that show psychoeducational interventions are effective in reducing the burden on caregivers, they intervene in the form of groups. Being in a caregiver group allows caregivers to exchange experiences, share problems or pressures they experience [24]. Psychoeducation in groups strengthens caregivers to share experiences, knowledge, and skills in caring with other caregivers. When caregivers can share their experiences with other caregivers, caregivers feel it reduces their sense of isolation and increases support for one another [25].

In this study, in addition to reducing the burden on caregivers and other variables described above, the results of psychoeducational interventions also significantly reduced patient variables such as patient severity, symptoms, and recurrence. Which is a factor that causes a burden on the caregiver. Rafiyah et al. [2] stated that the level of education, coping abilities, gender, severity of illness, level of patient disability, symptoms experienced by patients (especially negative symptoms) are factors that cause the burden experienced by caregivers. By decreasing the severity, symptoms, and recurrence as well as increasing knowledge, it can help caregivers to deal

with the disorders and they care more effectively, and the burden will be reduced [26].

In studies that failed in reducing the burden significantly (articles 2,8,13) using certain psychoeducational intervention models such as the Standard Model of Family Psychoeducation (SM-FPE) (article 2), a structured psychoeducational manual compiled by researchers (article 8), and Multiple Family Group Treatment (MFGT) which was tested to reduce the burden on caregivers. In the SM-FPE study (article 2), a study was conducted on caregivers of recent-onset patients, anxiety and depression were higher than the burden of care, so the intervention was less successful. In another study (article 8) the recurrence rate in patients did not decrease, and this may be the reason why the burden did not decrease significantly.

Meanwhile, in the MFGT study (article 13) as described above, the main function of MFGT itself is to treat disorders in patients, not for caregivers, and this study also states that psychoeducation is less effective in reducing the burden due to the long duration of care, which is an average of about 10 years, caregivers have adapted to the pressure and to learn coping skills. However, the time spent with the caregiver is one of the factors that causes the burden on the caregiver [2]. There are differences in the results of research in this regard, for that it is necessary to review again regarding psychoeducational interventions, the duration of treatment with burdens. It can be assumed that the characteristics of the patients and the intervention model are the reasons why the psychoeducational intervention was less effective in these three studies. In addition, the duration of psychoeducation is 10 hours in 8 weeks with meetings every 2 weeks (article 2), then 9 hours in 40 weeks (article 8) and 2 years (2 months in the first year and once a month in the second year). In addition, 2 of these 3 studies did not follow up (study 8&13). It is suspected that longer programs with fewer sessions result in fewer contact hours, may be the reason why psychoeducational interventions are less effective. Psychoeducation should be a routine intervention for caregivers of mental patients. Delivering correct and scientific knowledge to family members can have a big impact on caregivers, patients, and the community.

## **5. CONCLUSION**

Based on the description and findings of the study and its discussion, it can be concluded that psychoeducational interventions are effective in reducing the burden on caregivers of people with schizophrenia. This is based on the findings of 11 studies that showed significant results from psychoeducational interventions on the burden and 3 studies that showed insignificant results. Further results show that psychoeducation in the group is effective in reducing the burden, because in the caregiver group they can share experiences and information so that they do not feel isolated and can support each other.

Then, most caregivers who take on the role of caring for their family members who experience disorders are women. And the framework of psychoeducation that is important to note consists of knowledge of schizophrenia (etiology, prognosis, treatment), things that are faced during treating people with schizophrenia, how to cope and coping strategies in treatment. The effectiveness of psychoeducation can be detected from a decrease in the burden score and from several variables related to the burden such as knowledge of schizophrenia, increased quality of life, satisfaction with social support, and improved perceptions of professional support, increased caregiver function, decreased symptoms of depression, and increased self-efficacy.

## 6. LIMITATIONS AND SUGGESTIONS

For further research that uses a systematic literature review, it is possible to conduct a review with two or more people so that there is interrater reliability, avoid subjective bias and avoid errors in data entry. Then it may be necessary to conduct a meta-analysis to examine the duration and follow-up of psychoeducational interventions on caregiver burden. For systematic literature review research that uses psychoeducational interventions, other variables other than burden can be used. Variables that may have an impact on caregivers and patients themselves such as caregiver function and caregiver's quality of life, self-efficacy, caregiver's trait. And can also intervene on other caregivers (e.g., terminal illness or other psychological disorders) other than schizophrenic caregivers. Considering that there is a possibility that the burden will also be felt on other caregivers.

Further research also needs to examine the content of psychoeducation, what content is most effective in reducing the burden. Considering that the psychoeducational interventions in the articles reviewed have the same main content, namely knowledge about schizophrenia and the problems faced during treating people with schizophrenia, the coping strategies used are communication skills and problem-solving skills as well as social resources. Based on several studies in this study, it shows that psychoeducation also has an impact on people with schizophrenia (reducing symptoms and relapses), it is recommended to provide psychoeducational interventions for people with schizophrenia. For caregivers and families, based on the results of research, a decreased burden will increase the self-efficacy and quality of life of the caregiver. It is proven that burden reduction can be done by using psychoeducational interventions. Thus, caregivers are advised to seek or participate in intervention programs if available. For psychologists, practitioners, counselors, and people in charge of the community, psychoeducational intervention can be one of the most effective intervention options and in dealing with the burden on caregivers and improving care for people with schizophrenia.

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