Psychosocial Adaptation in Dealing with Psychosocial Problems on Family Caregivers of Schizophrenic Patients: *A Systematic Review*

Adaptasi Psikososial dalam Mengatasi Masalah Psikososial pada *Family Caregiver* Pasien Skizofrenia: *A Systematic Review*

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ABSTRACT

Schizophrenia is a serious mental disorder that requires long-term care and treatment. The treatment requires caregivers who may come from the family. A caregiver's daily tasks can be overwhelming, leading to psychosocial problems. This study aims to identify the effectiveness of psychosocial adaptation interventions in overcoming psychosocial problems in family caregivers of schizophrenic patients. This study used a systematic review approach. The literature search was sourced from five databases: Wiley Online Library, ScienceDirect, ProQuest, EMBASE, and Sage Journals. The keywords used were family caregiver, schizophrenia patient, psychosocial adaptation, and psychosocial problem. The results of a literature search obtained 448 articles then were screened with the criteria of articles published in 2018-2023, open access, full-text articles, original articles with a randomized controlled trial study design, discussing psychosocial adaptation interventions and psychosocial problems in schizophrenic family caregivers, and English. The

results of the article screening obtained six articles, and critical appraisal was carried out using the JBI Critical Appraisal Checklist for Randomized Controlled Trials. All of them were included in grade A (> 90%). Based on the results, psychosocial adaptation interventions effectively dealt with family caregivers' psychosocial problems, including signs of depression, anxiety, stress, self-stigma, psychological burden, emotions, feelings of worthlessness, and powerlessness. Therefore, psychosocial adaptation interventions for schizophrenia family caregivers could be conducted comprehensively by telephone or spiritual approach, involving direct contact with patients, families, and communities. With optimal involvement by family caregivers by focusing on positive aspects and goals that the family caregiver wants to achieve, the role of accompanying the care and treatment of schizophrenic patients can be achieved.

Keywords: Family Caregivers; Psychosocial Problems; Schizophrenia; Systematic Review

ABSTRAK

Skizofrenia merupakan salah satu penyakit gangguan jiwa berat yang membutuhkan perawatan dan pengobatan jangka panjang. Perawatan dan pengobatan skizofrenia membutuhkan caregiver yang berasal dari keluarga. Tugas sebagai caregiver membuat family caregiver dapat mengalami masalah psikososial yang harus ditangani. Penelitian ini bertujuan mengidentifikasi efektifitas intervensi adaptasi psikososial dalam mengatasi masalah psikososial pada family caregiver pasien skizofrenia. Penelitian ini menggunakan pendekatan systematic review. Pencarian literatur bersumber dari lima database yaitu Wiley Online Library, ScienceDirect, ProQuest, EMBASE, dan Sage Journals. Kata kunci yang digunaka adalah family caregiver, schizophrenia patient, psychosocial adaptation, dan psychosocial problem. Hasil pencarian literatur diperoleh 448 artikel kemudian dilakukan skrining dengan kriteria artikel yang terbit pada 2018-2023, open access, artikel full-text, original artikel dengan randomized controlled trial study design, membahas tentang intervensi adaptasi psikososial dan masalah psikososial pada family caregiver skizofrenia, dan bahasa inggris. Hasil skrining artikel diperoleh enam artikel dan dilakukan critical appraisal dengan menggunakan JBI Critical Appraisal Checklist for Randomized Controlled Trials dan seluruhnya termasuk di dalam grade A (>90%). Diperoleh hasil bahwa intervensi adaptasi psikososial efektif mengatasi masalah psikososial family caregiver diantaranya tanda gejala depresi, ansietas, dan stress, self-stigma, beban psikologis, emosi, perasaan tidak berharga, dan ketidakberdayaa. Oleh karena itu, pelaksanaan intervensi adaptasi psikososial pada family caregiver skizofrenia dapat dilakukan secara komprehensif baik melalui telepon, pendekatan spiritual, melibatkan kontak langsung dengan pasien, keluarga, dan masyarakat dengan keterlibatan optimal oleh family caregiver, dan dilakukan dengan berfokus pada aspek positif dan tujuan yang ingin capai oleh family caregiver dalam menjalankan peran mendapingi perawatan dan pengobatan pasien skizofrenia.

Kata kunci: Caregiver Keluarga; Masalah Psikososial; Skizofrenia; Systematic Review

INTRODUCTION

Mental disorders are conditions of psychological dysfunction experienced by individuals related to the distress experienced (Stuart, 2013). Mental disorders globally reach 300 million diagnosed with depression, bipolar, dementia and schizophrenia (World Health Organization, 2022). Mental disorder cases in Indonesia increased in 2018 per 1000 households. There are 7 households with severe mental disorders (Riskesdas, 2018). Symptoms that appear in mental disorders are hallucinations, illusions, delusions, and disturbances in thought processes, thinking abilities, and behavior. One of the most common forms of mental disorders is schizophrenia.

Schizophrenia is a clinical condition characterized by cognitive, perceptual, and emotional changes that lead to changes in social behavior and personal functioning (Kaplan, H.I. Sadock, 2010; Mendes Braga et al., 2015). One-third of schizophrenia has occurred in developing countries of all countries in the world. Twenty million people experience schizophrenia worldwide (*World Health Organization*, 2019). In the United States, 1.1% of the population, or around 2.8 million adults, had schizophrenia in 2020 (*World Health Organization*, 2020). In Asia, the prevalence of schizophrenia in East, South and Southeast Asia reached 8 million people, 4 million people and 2 million people (Charlson et al., 2018). The prevalence of schizophrenia in Indonesia has increased to 7% per 1000 households compared to 2013 of 1.7% (Riskesdas, 2018). The high prevalence and increasing number of schizophrenia cases demand special attention in treatment management.

Long schizophrenia treatments may cause psychosocial problems for caregivers. Schizophrenia caregivers, in general, may be part of a family member known. The uncertain condition of schizophrenia makes family caregivers feel excessively stressed and burdened. Previous research explained that family caregivers needed special time to care for schizophrenia at home, with 71.2% of family caregivers providing an average of five hours of daily care. Longer care for it aligns with a higher stress level (Darwin P, 2013) because schizophrenic patients at home become a stressor for family caregivers (Zahid, M.A.; Ohaeri, 2013).

Other research found that the impact of caring for schizophrenia at home can make family caregivers experience stress and burdens, which include mental, social, and economic burdens (Suryaningrum & Wardani, 2013). The increasing burden felt by family caregivers creates conflict with schizophrenic patients due to the inability to care for them and the patient's condition. These conditions make family caregivers feel anxious, lack socialization, and disrupt sleep patterns daily (Wan & Wong, 2019). The high level of psychosocial problems experienced by family caregivers requires efforts to manage these problems through appropriate coping strategies and adaptation of family caregivers to the conditions they experience.

Coping strategies commonly used by family caregivers are seeking support from religion, social workers, community services, and therapy from health workers (Wan & Wong, 2019). However, apart from coping strategies, psychosocial adaptation skills are also important for family caregivers. The process of psychosocial adaptation can occur when a change occurs, then proceed to adapt, is maintained, forms continuity, interacts, and exerts influence (Rodgers, B., 2000). However, in processes related to health problems, psychosocial adaptation occurs when individuals experience life changes related to health problems, demanding changes in roles and lifestyle. Previous research explained that psychosocial adaptability is related to family caregivers' quality of life and life satisfaction (Londono, Y. & McMillan, D.E., 2015). There is a need to strengthen psychosocial adaptation abilities in schizophrenic family caregivers.

Psychosocial adaptation of family caregivers is crucial in helping family caregivers survive and form resilience (Mathé, 2013). The resilience of family caregivers affects the ability to deal with stress and the burden of family caregivers in caring for schizophrenic patients (Zauszniewski et al., 2010). Low resilience is caused by inadequate knowledge, social stigma, stress, poor relationships and communication, and blaming behavior (Fernandes, J.B. et al., 2021). Family caregivers survive by adapting physically and psychologically to the stress and discomfort experienced (Mathé, 2013).

Based on the background above, the researcher is interested in conducting a systematic review to identify the effectiveness of psychosocial adaptation interventions in overcoming psychosocial problems in family caregivers of schizophrenic patients.

METHOD

This study used a systematic review approach with the PICO framework to formulate research questions. The research question in this systematic review is how effective is the intervention of psychosocial adaptation to psychosocial problems in family caregivers of schizophrenia? The researcher conducted a literature search on five databases: Wiley Online Library, ScienceDirect, ProQuest, EMBASE, and Sage Journals, using the keywords family caregiver, schizophrenia patient, psychosocial adaptation, and psychosocial problem. The literature search obtained 448 articles, as presented in Table 2. The obtained articles were screened with the inclusion criteria of articles published in 2018-2023, open access, full-text articles, original articles with a randomized controlled

trial study design, discussing interventions for psychosocial adaptation and psychosocial problems in schizophrenia family caregivers, and English.

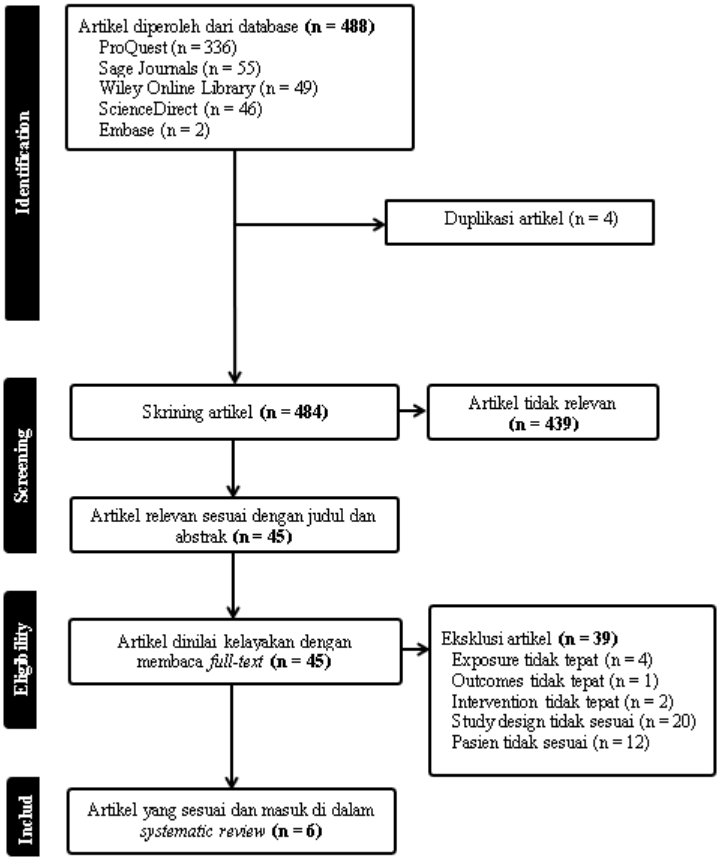
Table 1
PICO Framework

P *(Population)*	**I *(Intervention)***	**C *(Compare)***	**O *(outcome)***
Family Caregiver of Schizophrenia patient	*Psychosocial adaptation*	*No comparison or other intervention*	*Psychosocial Problem*

Table 2
Keywords in determining relevant resources and results

Database	**Keywords**	**Results**
Wiley Online Library	*'Family Caregiver' AND 'Schizophrenia patient' AND 'Psychosocial adaptation' AND 'Psychosocial Problem'*	49
ScienceDirect	*'Family Caregiver' AND 'Schizophrenia patient' AND 'Psychosocial adaptation' AND 'Psychosocial Problem'*	46
ProQuest	*(('Family Caregiver') AND ('Schizophrenia patient')) AND ('Psychosocial adaptation') AND ('Psychosocial Problem')*	336
EMBASE	*('family caregiver'/exp OR 'family caregiver' OR (('family'/exp OR family) AND ('caregiver'/exp OR caregiver))) AND ('schizophrenia patient' OR (('schizophrenia'/exp OR schizophrenia) AND ('patient'/exp OR patient))) AND ('psychosocial adaptation'/exp OR 'psychosocial adaptation' OR (('psychosocial'/exp OR psychosocial) AND ('adaptation'/exp OR adaptation))) AND ('psychosocial problem'/exp OR 'psychosocial problem' OR (('psychosocial'/exp OR psychosocial) AND problem))*	2
Sage Journals	*'Family Caregiver' AND 'Schizophrenia patient' AND 'Psychosocial adaptation' AND 'Psychosocial Problem'*	55

The researcher used covidence.org to screen articles. The process of screening articles up to finding articles for a systematic review is documented in the PRISMA flowchart, as shown in Figure 1. The final results of screening articles based on title, abstract, and inclusion criteria obtained six articles that met as literature in this systematic review. The six articles obtained were then subjected to critical appraisal using the JBI Critical Appraisal Checklist for Randomized Controlled Trials (Barker TH; Stone JC; Sears K; Klugar M; Tufanaru C; Leonardi-Bee J; Aromataris E; Munn Z, 2023) the results obtained were that all articles were in grade A category (3 articles met the 100% YES answer criteria and 3 articles met the 96.15% YES answer criteria). The researcher then extracted data (Table 4) from the six met articles.



Picture 1. PRISMA flowchart

Table 3

JBI Critical Appraisal Checklist for Randomized Controlled Trials (Barker TH; Stone JC; Sears K; Klugar M; Tufanaru C; Leonardi-Bee J; Aromataris E; Munn Z, 2023)

No	JBI Critical Appraisal Checklist for Randomized Controlled Trials	Articles					
		Zhang et al.,2023	Vazquez et al.,2020	Khosravi et al., 2022	Ran et al.,2022	Zoladl et al., 2020	Behrouian et al., 2021
1	Was true randomization used for assignment of participants to treatment groups?	Yes	Yes	Yes	Yes	Yes	Yes
2	Was allocation to treatment groups concealed?	Yes	Yes	No	Yes	Yes	No
3	Were treatment groups similar at the baseline?	Yes	Yes	Yes	Yes	Yes	Yes
4	Were participants blind to treatment assignment?	Yes	Yes	Yes	Yes	Yes	Yes
5	Were those delivering the treatment blind to treatment assignment?	Yes	Yes	Yes	Yes	No	Yes
6	Were treatment groups treated identically other than the intervention of interest?	Yes	Yes	Yes	Yes	Yes	Yes
7	Were outcome assessors blind to treatment assignment?	Yes	Yes	Yes	Yes	Yes	Yes
8	Were outcomes measured in the same way for treatment groups?	Yes	Yes	Yes	Yes	Yes	Yes
9	Were outcomes measured in a reliable way?	Yes	Yes	Yes	Yes	Yes	Yes
10	Was follow up complete and if not, were differences between groups in terms of their follow up adequately described and analysed?	Yes	Yes	Yes	Yes	Yes	Yes
11	Were participants analysed in the groups to which they were randomized?	Yes	Yes	Yes	Yes	Yes	Yes
12	Was appropriate statistical analysis used?	Yes	Yes	Yes	Yes	Yes	Yes

13	Was the trial design appropriate and any deviations from the standard RCT design (individual randomization, parallel groups) accounted for in the conduct and analysis of the trial?	Yes	Yes	Yes	Yes	Yes	Yes
	Total	26	26	25	26	25	25
	%	100	100	96,15	100	96,15	96,15
	Arti**cle**	A1	A3	A4	A2	A6	A5

Y*es* = 2; *Unclear* = 1; *No*=

Table 4
Mapping of screening and extraction data

Code	Title/ Author/ Year	Country	Objective	Methodology	Sample/ Sampling/ Sample Size	Psychosocial Problems	Data Collection (Intervention and Control)	Result
A1	The Effects of a Mindfulness-Based Family Psychoeducation Intervention for the Caregivers of Young Adults with First-Episode Psychosis: A Randomized Controlled Trial/ Zhang et al.,2023	Hongkong	This study examined the effectiveness of mindfulness-based family psychoeducation for caregivers and patients.	Randomized controlled trial	Caregiver patient with the first episode of psychosis (including schizophrenia)/ Convenience sampling method (174 respondents) followed by randomization/ 65 respondents	Caregiver psychosocial burden, stigma, stress, depression, anxiety	Intervention with a control group. The intervention group was given psychosocial adaptation therapy: the Mindfulness-based family psychoeducation (MBFPE) program and the control group was given the Family Psychoeducation (FPE) program. Pre-post tests were measured before and after the action and compared the results in the two groups.	A short psychoeducation program did not reduce the burden and mental health outcomes of individual caregivers who had a first episode of psychotic attacks (including schizophrenia).
A2	Effectiveness of enhancing contact model on reducing the stigma of mental illness among family caregivers of persons with schizophrenia in rural China: A cluster randomized controlled trial/ Ran et al.,2022	China	This study aims to test whether the ECM intervention was more effective than the PFI or treatment as usual (TAU) group in reducing the stigma of affiliation in FCPWS in the near (post-intervention), mid-term (3-month follow-up) and long-term (9-month follow-up) months) follow-up in rural China.	Randomized controlled trial	Caregivers from families with schizophrenia/ Convenience sampling method (269 respondents) continued with randomization/ 253 respondents.	Self-stigma caregiver	Consisting of three groups. Intervention compared with two control groups. The intervention group was given psychosocial adaptation therapy: Enhancing Contact Model (ECM), control group 1 was given Psychoeducational Family Intervention (PFI), and control group 2 was given standard care. Pre-post-tests were measured before and after the action and compared the results in the three groups. Having a follow-up at 3 months and 9 months.	There were differences in caregiver self-stigma in the intervention group and the control group, where the intervention group significantly reduced caregiver self-stigma. However, there was no difference in caregiver self-stigma in the ECM and PFI groups.
A3	Analysis of the Components of a Cognitive-Behavioral Intervention for the prevention of depression Administered via Conference Call to Nonprofessional Caregivers: A	Spain	This study aims to evaluate the effectiveness of cognitive-behavioral intervention for preventing depression administered via conference calls to caregivers who	Randomized controlled trial	Informal caregivers (including schizophrenia caregivers) / Convenience sampling method (603 respondents) followed by randomization / 219 respondents	Signs and symptoms of depression	Consisting of three groups. Intervention compared with two control groups. The intervention group was given psychosocial adaptation therapy: A cognitive-behavioral conference call intervention (CBCC). Control group 1 was given A behavioral-activation conference call intervention (BACC), and control	There was a significant difference in depressive symptoms in the CBCC and CG (control) groups, t= 6.96, $p<0.001$, d=1.16, 95% CI (0.82–1.50), and a significant difference in depressive symptoms in the BACC and CG groups (control), t=7.72, $p<0.001$,

Code	Title/ Author/ Year	Country	Objective	Methodology	Sample/ Sampling/ Sample Size	Psychosocial Problems	Data Collection (Intervention and Control)	Result
	Randomized Controlled Trial/ Vazquez et al.,2020		experienced depressive symptoms.				group 2 was given standard care. Pre-post-tests were measured before and after the action and compared the results in the three groups.	d=1.29, 95% CI (0.95–1.63). There was no difference between the CBCC and BACC groups, t=-0.76, p=1.000, d=-1.13, 95% CI (-0.4, M0,21).
A4	The Effect of a Spirituality-Based Program on Stress, Anxiety and Depression of Caregivers of Patients with Mental Disorders in Iran/ Khosravi et al., 2022	Iran	This study aims to investigate the effect of a spirituality-based program on the stress, anxiety, and depression of caregivers of patients with mental disorders.	Randomized controlled trial	Caregivers from family members who have mental disorders (including schizophrenia)/ Convenience sampling method followed by randomization in determining the intervention and control groups/ 60 respondents	Depression, anxiety, and stress	Intervention with a control group. The intervention group was given psychosocial adaptation therapy: A spirituality-based educational intervention. The control group was not given any action. Pre-post-tests were measured before and after the action and compared the results in the two groups.	There were differences in depression, anxiety, and stress in the intervention and control groups.
A5	The effect of the emotion regulation training on the resilience of caregivers of patients with schizophrenia: a parallel randomized controlled trial/ Behrouian et al., 2021	Iran	This study aims to determine the effect of a Spirituality-Based Program on stress, anxiety, and depression in caregivers of people with a mental health condition.	Randomized controlled trial	Schizophrenic family caregivers / Convenience sampling method followed by randomization / 70 respondents	Emotions, feelings of worthlessness , helplessness	Intervention with a control group. The intervention group was given psychosocial adaptation therapy: Emotion regulation training, and the control group was not given any action. Pre-post-tests were measured before and after the action and compared the results in the two groups.	There was no significant difference between the two groups.
A6	Applying Collaborative Care Model on Intensive Caregiver Burden and Resilient Family Caregivers of Patients with Mental Disorders: A Randomized Controlled Trial/ Zoladl et al., 2020	Iran	This study aims to determine the participatory care model's effect on caregiver burden and resilience in patients with mental disorders.	Randomized controlled trial	Family caregivers of patients with mental disorders (including schizophrenia) / Convenience sampling method then followed by randomization / 241 respondents.	Caregiver psychological burden	Intervention with a control group. The intervention group was given psychosocial adaptation therapy: Participatory care model intervention. The control group was not given any action. Pre-post tests were measured before and after the action and compared the results in the two groups.	There were significant differences in the burden experienced by caregivers between the control and intervention groups. The psychological burden felt by caregivers in the intervention group was lower than that in the control group.

RESULTS AND DISCUSSION

1. Characteristics of the article

The articles used in this systematic review were published in the 2020-2023 range, and 50% originate from Iran. All articles were randomized controlled trial studies with each psychosocial adaptation intervention adapted to the psychosocial problems faced by schizophrenia caregivers. Table 5 is an overview of the characteristics of the articles included in the systematic review.

Table 5
Overview of the characteristics of the articles

Characteristics of articles	Number	%
Years of Publication		
2020	2	33
2021	1	17
2022	2	33
2023	1	17
Data Collection Place		
Iran	3	50
Hongkong	1	16,67
Spain	1	16,67
China	1	16,67
Design of Studies		
Randomised controlled trial	6	100
Sampling Technique		
Convenience sampling method continued with randomization	6	100
Nursing intervention: Psychosocial adaptation in experiment group		
Mindfulness-based family psychoeducation (MBFPE) program	1	17
A cognitive-behavioral conference call intervention (CBCC)	1	17
The spirituality-based educational intervention	1	17
Enhancing Contact Model (ECM) intervention	1	17
Participatory care model intervention	1	17
The emotion regulation training	1	17
Nursing intervention: Psychosocial adaptation in control group		
Intervensi standar	2	33
Tidak ada perlakuan	4	67

2. Characteristics of respondents in the article

In six studies, 898 schizophrenia caregivers who were informal caregivers from family members joined. In both the control and intervention groups, the average age of the respondents was in the late adult age group. The majority were women, had an upper secondary education level, were married, and were not/not yet working. Table 6 is an overview of the characteristics of schizophrenia caregivers from six studies.

Table 6
Overview of respondents: family caregiver of schizophrenia

No	Characteristics	Groups	Articles						
			Zhang et al.,2023	Ran et al.,2022	Vazquez et al.,2020	Khosravi et al., 2022	Behrouian et al., 2021	Zoladi et al., 2020	Mean/ number
1	**Ages**								
	Mean	Experiment	NA	59,8	54,8	41,1	46,68	33,95	47,27
		Control	NA	60,75	53,55	36,8	42,34	34,85	45,66
2	**Long of Care**								
	Mean	Experiment	NA	NA	13,9	NA	NA	1,04	7,47

		Control	NA	NA	12,34	NA	NA	1	6,67
3	**Sex**								
	Men	Experiment	7	48	7	14	NA	58	838
		Control	7	85	13	13	NA	54	
	Women	Experiment	26	42	62	16	NA	69	
		Control	25	78	137	17	NA	60	
	Total	Experiment	33	90	69	30	0	127	
		Control	32	163	150	30	0	114	
4	**Education level**								
	Elementary school	Experiment	6	NA	44	12	14	7	655
		Control	3	NA	106	10	14	7	
	Middle to Upper	Experiment	27	NA	25	18	21	120	
		Control	29	NA	44	20	21	107	
	Total	Experiment	33	0	69	30	35	127	
		Control	32	0	150	30	35	114	
5	**Marital States**								
	Married	Experiment	21	78	51	23	24	NA	667
		Control	25	133	106	17	23	NA	
	Others*	Experiment	12	12	18	7	11	NA	
		Control	7	30	44	13	12	NA	
	Total	Experiment	33	90	69	30	35	0	
		Control	32	163	150	30	35	0	
6	**Job States**								
	Working	Experiment	14	73	11	8	21	58	898
		Control	13	107	35	10	16	56	
	No/Not Yet Working	Experiment	19	17	58	22	14	69	
		Control	19	56	115	20	19	58	
	Total	Experiment	33	90	69	20	35	127	
		Control	32	163	150	30	35	114	

NA = Not Available

*not married yet, not married, divorced, widow/widower due to spouse's death.

3. Test the effectiveness of psychosocial adaptation interventions

The analysis in the six studies showed that psychoeducation, in a nutshell, could not reduce caregiver psychosocial problems, but other psychosocial adaptation interventions, such as A cognitive-behavioral conference call intervention (CBCC), A spirituality-based educational intervention, Enhancing Contact Model (ECM) intervention, the Participatory care model intervention, and emotion regulation training were significantly effective in overcoming caregiver psychosocial problems, including self-stigma, signs and symptoms of depression, anxiety, stress, psychosocial burden, emotions, feelings of worthlessness, and helplessness as presented in Table 7.

Table 7

Test of the effectiveness of psychosocial adaptation interventions for psychosocial problems schizophrenia family caregivers

Code	Author/ Year	Psychosocial problesm	Psychosocial adaptation interventions	Results
A1	Zhang et al.,2023	Caregiver psychosocial burden, stigma, stress, depression, anxiety	Mindfulness-based family psychoeducation (MBFPE) program	A short psychoeducation program did not reduce the burden and mental health outcomes of individual caregivers who had a first episode of psychotic attacks (including schizophrenia).
A2	Ran et al.,2022	Self-stigma caregiver	Enhancing Contact Model (ECM)	There were differences in caregiver self-stigma in the intervention group and the control group, where the intervention group significantly reduced caregiver self-stigma.

				However, there was no difference in caregiver self-stigma in the ECM and PFI groups.
A3	Vazquez et al.,2020	Signs and symptoms of depression	A cognitive-behavioral conference call intervention (CBCC)	There was a significant difference in depressive symptoms in the CBCC and CG (control) groups, t= 6.96, p<0.001, d=1.16, 95% CI (0.82–1.50), and a significant difference in depressive symptoms in the BACC and CG groups (control), t=7.72, p<0.001, d=1.29, 95% CI (0.95–1.63). There was no difference between the CBCC and BACC groups, t=-0.76, p=1.000, d=-1.13, 95% CI (-0.4, M0,21).
A4	Khosravi et al., 2022	Depression, anxiety, and stress	The spirituality-based educational intervention	There were differences in depression, anxiety, and stress in the intervention and control groups
A5	Behrouian et al., 2021	Emotions, feelings of worthlessness, helplessness	The emotion regulation training	The emotion regulation training can reduce emotions but there is no significant difference between two groups
A6	Zoladl et al., 2020	Caregiver psychological burden	Participatory care model intervention	There were significant differences in the burden experienced by caregivers between the control and intervention groups. The psychological burden felt by caregivers in the intervention group was lower than that in the control group.

Schizophrenic patients require long-term care and regular uninterrupted medication. Therefore, caregivers are needed to accompany schizophrenia in carrying out care and treatment. Besides hospital care and treatment, schizophrenia requires care and treatment at home with caregiver assistance and support (Guan et al., 2016; Jagannathan et al., 2014). One of the ideal caregivers in assisting in treating schizophrenia patients is the family caregiver. As in the six articles reviewed, caregivers are informal caregivers from family members, totaling 898 family caregivers.

Family caregivers require support in doing their roles from health workers so that they are ready and trained in caring for patients at home and can deal with psychosocial problems that arise as a result of caring for schizophrenic patients at home (Stanley et al., 2017; Vermeulen et al., 2015; Winahyu & Hemchayat, 2015; Zeng et al., 2017). The roles of the family caregiver include providing direct care, assistance with daily activities, emotional and social support, and helping financially and meeting the daily needs of schizophrenic patients (Kamil, Saher Hoda, Velligan, 2019). From this role, family caregivers with schizophrenia are prone to experiencing psychosocial problems. Family caregivers with schizophrenia experience high psychosocial problems compared to family caregivers who care for patients with other chronic illnesses (Gupta et al., 2015; Stanley et al., 2017). These psychosocial problems include stress, psychological burden, frustration, feelings of anger, anxiety, and depression (Kamil, Saher Hoda, Velligan, 2019). This review showed that family caregivers experience self-stigma, signs and symptoms of depression, anxiety, stress, psychosocial burdens, emotions, feelings of worthlessness, and powerlessness.

Some family caregivers can adapt to these psychosocial problems, while others cannot (Ntsayagae et al., 2013). Therefore, schizophrenia family caregivers need optimal support to adapt to the psychosocial problems they experience. Among the aspects that can help family caregivers to adapt to psychosocial problems are stress management and improving the skills of family caregivers in finding sources of support (Kamil, Saher Hoda, Velligan, 2019).

A review of the six articles found that interventions that can improve psychosocial adaptation skills and overcome family caregiver psychosocial problems are adapted to the psychosocial problems they experience. These psychosocial adaptation interventions include the Mindfulness-based family psychoeducation (MBFPE) program to address the psychosocial burden of caregivers, stigma, stress, depression, and anxiety (Zhang et al., 2023). A cognitive-behavioral conference call intervention (CBCC) to treat caregiver signs of depressive symptoms (Vázquez et al., 2020). The spirituality-based educational intervention to overcome depression, anxiety, and stress caregivers (Khosravi et al., 2022). Enhancing Contact Model (ECM) intervention to overcome caregiver self-stigma (Ran et al., 2022). Participatory care model intervention to overcome the psychological burden of caregivers (Zoladl et al., 2020). The emotion regulation training to overcome emotions, feelings of worthlessness, and caregiver helplessness (Behrouian et al., 2021). However, not all these psychosocial adaptation interventions can address psychosocial problems due to patient and family caregiver factors themselves.

Psychosocial adaptation in overcoming family caregiver psychosocial problems is related to identifying factors related to the psychosocial problem. Previous research explained that the psychosocial problems of family caregivers with schizophrenia are increasingly related to the characteristics of the patients themselves, where the patient is male (Souza et al., 2017), younger than family caregivers, diagnosed quite badly (Yu et al., 2017), repeated hospitalizations (Yazıcı et al., 2016), and long-term illness (Siddiqui & Khalid, 2019). Meanwhile, the psychosocial problems experienced by family caregivers are increasingly related to the characteristics of the family caregivers themselves, including those who are older than the patient (Souza et al., 2017; Yazıcı et al., 2016), female (Opoku-Boateng et al., 2017; Yu et al., 2017), low economic status (Siddiqui & Khalid, 2019; Yazıcı et al., 2016), and having other dependents besides schizophrenic patients at home (Souza et al., 2017; Yu et al., 2017). Thus, the characteristics of the patient and the family caregiver are related to the psychosocial problems experienced by the family caregiver with schizophrenia.

A review of the six articles found that in both the intervention and control groups, the average age of the respondents was in the late adult age group. The majority were women and did not/had not worked. This finding follows previous research that the patient is older than the patient, the family caregiver is female and has a low social status which is identified with an unemployed status which increases the psychosocial problems experienced (Opoku-Boateng et al., 2017; Siddiqui & Khalid, 2019; Souza et al., 2017; Yazıcı et al., 2016; Yu et al., 2017).

Schizophrenia family caregivers can improve psychosocial adaptation in overcoming psychosocial problems experienced with psychosocial adaptation interventions, according to the results of this review. Psychosocial problems in the form of signs of depressive symptoms are effectively reduced by psychosocial adaptation interventions with A cognitive-behavioral conference call intervention (CBCC) (Vázquez et al., 2020). Providing telephone interventions facilitates family caregivers to reach healthcare providers easily without being limited by distance, time, and energy. Implementation of therapy that is easy and can be done at any time optimizes the benefits of therapy in reducing symptoms of depression. In addition, symptoms of depression, anxiety, and stress experienced by family caregivers also effectively decreased when given The spirituality-based educational intervention (Khosravi et al., 2022). Spiritual-based intervention approaches such as gratitude and prayer can provide positive experiences for schizophrenia family caregivers, such as accepting life experiences as positive aspects and part of life that must be lived to be enjoyed as part of gratitude.

Other psychosocial adaptation interventions state that the Enhancing Contact Model (ECM) intervention is effective in dealing with caregiver self-stigma (Ran et al., 2022), and the Participatory care model intervention is effective in dealing with the psychological burden of caregivers (Zoladl et

al., 2020). Psychological and self-load -family caregivers feel stigma because the social support received is low (Korkmaz & Küçük, 2016). The ECM psychosocial adaptation intervention invites family caregivers to direct contact with schizophrenia patients, neighbors around the house, and the wider community so that family caregivers can optimally receive social support (Ran et al., 2022). The participatory care model focuses on providing interventions to family caregivers trained to apply adaptive coping strategies, improve communication and problem-solving abilities, and care for patients (Zoladl et al., 2020).

Another psychosocial adaptation intervention that is part of stress management is emotion regulation training which has proven effective for dealing with emotions, feelings of worthlessness, and caregiver helplessness (Behrouian et al., 2021). This intervention invites family caregivers to adapt to the psychosocial problems they experience by focusing on positive and enjoyable things about themselves, planning goals to be achieved, carrying out positive self-evaluations, making modifications due to evaluations, and making efforts to overcome problems effectively adaptive. This psychosocial adaptation intervention can increase self-awareness and control the psychosocial problems encountered in treating schizophrenic patients by re-focusing on what has been planned and the positive aspects they have.

A review of the six articles found that psychosocial adaptation interventions in overcoming the psychosocial problems of schizophrenia family caregivers can be combined according to the psychosocial problems encountered. Implementation can be facilitated by telephone, with a spiritual approach, involving direct contact with patients, families and the community, prioritizing increased direct involvement of family caregivers and focusing on positive aspects and goals the family caregiver wants to achieve. Thus, the family caregiver can still assist in treating schizophrenia patients in a healthy condition and avoid psychosocial problems.

CONCLUSIONS AND SUGGESTIONS

Psychosocial adaptation interventions in a cognitive-behavioral conference call intervention (CBCC) effectively treat caregiver signs of depression. The spirituality-based educational intervention effectively treats depression, anxiety, and caregiver stress. Enhancing Contact Model (ECM) intervention is effective in addressing caregiver self-stigma, Participatory care model intervention is effective in dealing with the psychological burden of caregivers, and emotion regulation training is effective in dealing with emotions, feelings of worthlessness, and helplessness of family caregivers. Therefore, psychosocial adaptation interventions for schizophrenia family caregivers can be facilitated by telephone, with a spiritual approach, involving direct contact with patients, families, and the community, prioritizing increasing the direct involvement of family caregivers, and carried out by focusing on the positive aspects and goals achieved by the family caregiver. Thus, the family caregiver can still assist in treating schizophrenia patients in healthy conditions and avoid psychosocial problems.

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