The Effect of Psycho-education Program on Resilience in the Caregivers of Clients with Bipolar Disorder

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Primary research

Keywords: Psychoeducation, Resilience, Caregivers, Bipolar Disorder

Posted Date: September 10th, 2020

DOI: https://doi.org/10.21203/rs.3.rs-62247/v1

Abstract

BACKGROUND: Resilience in family refers to the flexible and developed behavioral pattern in the caregivers of clients with mental disorders that face challenges during the caring process. The aim of this study was to investigate the effect of psychoeducation program on resilience in the caregivers of clients with bipolar disorder.

METHODS: This is a quasi-experimental study with a control and an experimental group. The participants of the study were 64 caregivers of clients with bipolar disorder in Sanandaj. The experimental group received the intervention for 4 weeks. The control group did not receive any intervention. The instrument of this study included a demographic questionnaire and a Connor-Davidson (CD-RISC) Resilience Scale. The data analysis was performed using descriptive statistics (frequency, percentage, mean and standard deviation) and inferential statistics (independent t-test, paired t-test and repeated measures analysis of variance) using SPSS-22 software.

RESULTS: The results showed that there is no difference between the experimental and control groups in terms of the distribution of contextual variables. There was no statistically significant difference between the mean and standard deviation of the resilience score before the intervention in the control group and in the experimental group ($P = 0.059$). However, after the intervention, the difference was statistically significant ($P <0.001$) and showed an increase in the experimental group.

CONCLUSION: This Quasi-experimental study indicates that psychoeducation is an effective way for the resilience in the caregivers of clients with bipolar disorder and it can be promote resilience in the caregivers.

Background

Bipolar disorder is a common psychiatric disorder in the 21st century (Michalak et al., 2011; D. J. Miklowitz & Chung, 2016). Globally, about 45 million people suffer from this disorder (James et al., 2018). This disorder has a significant impact on the quality of life and various social, professional, and cognitive aspects of a person (Michalak et al., 2011; D. J. Miklowitz & Chung, 2016), and not only causes anxiety and stress for the person, but also brings about severe turmoil in the caregivers (Shamsaei, Cheraghi, & Esmaeilli, 2015). Studies show that the incidence of bipolar disorder in a family member is significantly associated with the burnout and stress level of the caregiver (Chan & Mak, 2014; Livingston, 2012). The significant support of families for their ill members changes the roles of family members, and increases tension and stress among them (Kaakinen, Coehlo, Gedaly-Duff, & Harmon Hanson, 2010). Accordingly, caregivers can overcome the stress of caring for a client with mental illness, when they are resilient (Zauszniewski, Bekhet, & Suresky, 2010).

Resilience refers to the dynamic process of positive adaptation to unpleasant experiences. It means skills and abilities that enable a person to adapt to the difficulties, problems and challenges of life (Haghranjbar, Kakavand, Borjali, & Bermas, 2011). Studies indicate that resilience helps families to cope with crises (Saunders, 2003; Zauszniewski et al., 2010). Resilience in the caregivers of clients with bipolar disorders is a two-way concept; on the one hand, the caregiver overcomes the difficulties and challenges of the caring process, and on the other, by promoting their mental health, they will be able to take effective measures to cope with the problems ahead (Zauszniewski et al., 2010).

Studies have shown that the resilience and coping skills training programs provide effective outcomes if combined with medication for clients and their caregivers (Chang et al., 2018; Chang, Yen, Jang, Su, & Lin, 2017).

Other literatures findings also suggest that the protective factors such as social support and psychoeducation programs reduce the risk factors in caregivers, promote resilience, and create new opportunities for them (Smith-Osborne, 2007; Zauszniewski et al., 2010).

Psychoeducation uses a systematic and structured approach in order to raise knowledge and change the attitude of families about the nature of the disease as well as the way to treat it, consequently increasing effective relationship and problem solving skills. Regarding the existing conditions, the therapist can teach one family alone or several families as a group (Girma et al., 2014). Since nurses are in the best position to provide assistance to clients with mental disorders and their families (Kaakinen et al., 2010), they can implement the psychoeducation to improve the mental health of the patients with mental disorders and their caregivers (Glynn, Cohen, & Niv, 2007; Kaakinen et al., 2010; Macleod, Elliott, & Brown, 2011).

In recent decades, families have had a key and important role in treatment, prevention of recurrence, and rehabilitation of clients with bipolar disorder. In addition, mental health nurses also have an important and valuable position in all stages of treatment, training, and support for clients and their families. Hence, the researchers of the present study as psychiatric nurses decided to conduct a study to investigate the effect of psychoeducation on resilience in the caregivers of clients with bipolar disorder.

Methods

The present study is a quasi-experimental study and the population of the study consisted of all caregivers of clients with bipolar disorder who referred to Ghods Psychiatric Hospital in Sanandaj in 2019. The sample size was measured, according to the study of Seyedfatemi et al. (Seyedfatemi2, Ahmadzad Asl, Bahrami, & Haghani, 2019), and taking into account the error propagation ($\alpha = 0.05$), test power ($\beta = 0.9$) and the probability of a 10% dropout for the samples and with using the following equation, 32 person in each group was considered.

$$n = \frac{\left(Z_{1-\alpha/2} + Z_{1-\beta}\right)^2 \sigma^2}{(\mu_1 - \mu_2)^2}$$

Conditions for caregivers to enter the study included the age of 18 and above as well as the Consent of the client's treating physician. The condition for the caregiver included spending the most caring time for the client, lack of mental retardation, lack of drug and alcohol consumption, minimum age of 18 and the maximum of 65 years, lack of vision and hearing impairment, and complete satisfaction to participate in the research. The exclusion criteria were withdrawal from further research and non-participation in at least two sessions of the training program.

The data collection tool consisted of two questionnaires. The first questionnaire was the demographic characteristics of the subjects, including age, gender, marital status, education, occupation, economic status, the number of family members, caregiver-client relationship, history of the patient's disease, family history of the disease and the number of times the patient was hospitalized. The second questionnaire was the Connor-Davidson Recovery Questionnaire (CD-RISC).

The Connor-Davidson Resilience Questionnaire consists of 25 items designed by Connor and Davidson in 2003 to measure the strength to overcome threat and pressure (Connor & Davidson, 2003). There is a 10-item version of the Connor-Davidson questionnaire that was extracted from the 25-item questionnaire, and this study was used the 10-item questionnaire to measure resilience. To answer the questionnaire, the participants had to choose from the 5-point Likert scale (not correct at all (zero), rarely correct (1), sometimes correct (2), often correct (3) and completely correct (4)) and the range of scores was between 0 to 40. Finally, the total score earned by each individual determined his/her resilience, meaning that the higher the score the more the resilience (Seyedfatemi2 et al., 2019).

Many studies have confirmed the validity and reliability of this questionnaire (Campbell-Sills & Stein, 2007; Keyhani, Taghvaei, Rajabi, & Amirpour, 2015; Seyedfatemi2 et al., 2019). However, to ensure the reliability of the questionnaire, the researcher administered it to fifteen caregivers of clients who were not part of the research community. They had similar characteristics to this population, and via employing the internal consistency method, the calculated Cronbach's alpha coefficient for this questionnaire was 0.86, which indicates the optimal reliability for this tool.

After receiving the code of ethic (IR.MUK.REC.1398.15), Sampling was performed for two months. After explaining the objectives of the study, ensuring the confidentiality of information, and attracting the participation of caregivers, a written consent was taken from the participants. Besides, the researcher reminded the participants that there would be no obligation for them to participate in the research.

Because the selection of the control and experimental groups was done simultaneously from one medical center, first the control group and then the experimental group were examined, so that the data collection would not be biased. Both groups completed the demographic and resilience questionnaires in two intervals. The pre-test was administered at the beginning of the research and the post-test was administered immediately after the training.

The psychological training for the experimental group was performed for 4 weeks in a session of 45 to 60 minutes per week. The training sessions were held in groups of 4 to 5 participants, several times a week, according to the request and conditions of the caregiver via a group discussion and in a question-and-answer form. At the end of the intervention, the post-test was administered for the experimental group. There was no intervention in the control group; however, after giving the post-test to the experimental group, in order to comply with the ethical standards, the educational content that was provided for the experimental group was also presented to the control group.

The implementation of the psychological training program, the number of sessions, and the general framework of the educational content were as follows:

The first session started with the introduction of the researcher and the members of the group. Then, the researcher stated the purpose of the psychological training sessions for the caregivers. Next, the researcher asked each of them to give a brief explanation of the bipolar disorder to find out how much the caregivers have known of the disorder. The researcher, then, discussed the prevalence of the disease, common symptoms, underlying causes, its treatments, and the way to care for the client, and finally introduced some famous and successful people with bipolar disorder to the participants.

The second session started by reviewing the previous session and then the following question was asked from the caregivers; "How do you deal with stressful life situations such as aggression and irritability of the client under your care?" Then, each of the caregivers, expressing their experiences of dealing with the situation, discussed with each other. The researcher, getting acquainted with how the caregivers would deal with stressful and difficult living conditions, referred to the concept of resilience and asked them to express their views on the concept and ways to improve it. After summarizing the participants' opinions, the researcher finally explained the concept of resilience and the strategies to improve it for the participants of the meeting.

The third session began with a review of resilience and the strategies to improve it, outlined in the previous session, and then the following question was raised: "What methods or skills do you use to overcome problems in your life?" Then, they discussed life skills and their proper use in difficult living conditions in order to live better.

The fourth session was dedicated to reviewing the topics of the previous three sessions and the valuable comments and suggestions of caregivers in this regard.

The topics discussed in the psychological training sessions were presented in the form of a pamphlet in order to help resolving ambiguities for the caregivers, considering the discourse of question and answer throughout the sessions. Table 1 also briefly shows the number of sessions and the titles of the educational content for each session.

Table 1
psychoeducation program provided for 4 weeks

Training Sessions	Educational Content
Week 1	• Severe mental disorders, signs and symptoms • Pharmacological and non-pharmacological treatments • Caregiving related plans, and familiarity with the concept of care burden
Week 2	• Reducing care burden and increasing health by emphasizing on the ability of "self-awareness" • Reducing care burden and increasing health by emphasizing on the ability of "problem solving"
Week 3	• Reducing care burden and increasing health by emphasizing on the ability of "stress management" • Reducing care burden and increasing health by emphasizing on the ability of "anger control"
Week 4	• Reducing care burden and increasing health by emphasizing on the ability of "effective communication" • Reducing care burden and increasing health by emphasizing on the ability of "positive thinking"

The data analysis was performed using descriptive statistics (frequency, percentage, mean and standard deviation) and inferential statistics (independent t-test, paired t-test and analysis of variance with repeated

measures) using SPSS-22.

Results

Overall, 64 caregivers of clients with bipolar disorder in two control and experimental groups were included in the present study. The characteristics of these caregivers are listed in Table 2. The findings of the study showed that the mean age of the participants was 41.10 ± 48.16 years. Most of the caregivers were women (54.7%), married (73.4%), Graduated from high school (31.3%), self-employed (28.1%) and an average economic level (64.1%). The largest number of caregivers was the spouses of the clients (29.7%) and the majority of the samples (62.5%) did not have a family history of the disease. The average number of family member was 2.91 ± 0.85, the average history of the client's disease was 4.61 ± 2.97 years, and the mean number of hospitalizations was 4.67 ± 3.23 (Table 2).

According to Table 3, the mean score of the pre-test for resilience in the two control and experimental groups was 22.65 ± 5.80 and 23.44 ± 5.61, respectively, which showed that the two groups had no statistically significant difference (P = 0.059). However, the mean score of the post-test of resilience in the control group was 23.19 ± 6.12, and in the experimental group was 33.97 ± 3.36, which showed a statistically significant difference (P < 0.001).

The comparison of the resilience scores in the pre-test and post-test stages, in each group separately, shows that the resilience scores in the pre-test and post-test stages in the control group were not statistically significant (P = 0.11), while there was a statistically significant difference in the post-test stage compared to the pre-test in the experimental group (P < 0.001) (Table 4).

Discussion

The aim of the present study was to investigate the effect of psychoeducation program on resilience in the caregivers of clients with bipolar disorder. For this purpose, meetings were held to provide the psychoeducation program to the caregivers. The effect of this training on their resilience was examined immediately after the intervention. The comparison of the mean score of resilience in the control group did not change statistically in the pre-test and post-test stages; while in the experimental group, a significant statistical difference was observed comparing the mean resilience score in the two stages of pre-test and post-test, which indicated the effectiveness of psychoeducation program in increasing the caregivers' resilience of client with bipolar disorder.

In a similar study in Iran, Seyedfatemi et al. (2019) conducted a quasi-experimental study and examined the effect of psychoeducation on resilience in the caregivers of clients with severe mental disorders. Following the post-test and 4 weeks after that, the researchers found out that resilience of the caregivers in the experimental group had improved and the increase in the resilience level in the second post-test phase emphasized the effectiveness of the psychoeducation in improving the resilience level of the caregivers (Seyedfatemi2 et al., 2019). In addition, Taghavilarijani et al. (2019) examined the effect of group psychoeducation on resilience of families of schizophrenic patients, and showed the effectiveness of psychoeducation in improving the resilience of families (Taghavilarijani, noghani, & danandehfard, 2019).

Other studies have been conducted to investigate the effect of educational interventions on resilience of other patients' caregivers. Almasi et al., (2016) investigated the effectiveness of stress management training on the

resilience of mothers of children with disabilities. The results of the study showed an increase in the resilience of mothers in the experimental group after 8 sessions of training (Almasi et al., 2016). In another study, Sadeqi et al. (2016) examined the effect of teaching a healthy family model on the resilience of mothers of children with autism spectrum disorder. The results showed that the resilience of mothers in the experimental group increased after the intervention, compared to the condition before the intervention (Sadeqi, Ghadampour, & Esmaeili, 2015). Naemi (2015) investigated the effect of family-centered education on the mental health and resilience of women with addicted spouses and the results showed that the educational intervention for 8 weeks was effective for the subjects and their mental health, and their resilience improved as well (NAEMI, 2015). In the present study, psychoeducation increased the resilience level of the samples in the experimental group. Thus, the results obtained from this study are consistent with the results of the above-mentioned studies, which indicate the improvement of the resilience level of the samples under investigation.

Ozkan et al. (2013), Fallahi Khoshknab et al. (2014), and Martin-Carrasco et al. (2016), in their studies examined the effect of psychological training on the caregivers of clients with schizophrenia, and showed that psychoeducation is effective in reducing the care burden of the caregivers (Fallahi Khoshknab, Sheikhona, Rahgouy, Rahgozar, & Sodagari, 2014; Martin-Carrasco et al., 2016; Ozkan, Erdem, Demirel Ozsoy, & Zararsiz, 2013). Therefore, the results of this study are consistent with the present study; while the results of Omranifard et al. (2014) study which showed an increase in the overall performance and quality of patients' life, but did not have a significant impact on the quality of life of their families which required more attention (Omranifard et al., 2014), is not consistent with the results of the present study.

Studies have shown that the unfamiliarity of clients and their caregivers with bipolar disorder, as well as the course and treatment of this disease, leads to misconceptions about this disorder and consequently would not help clients follow the treatment process of the disease (F. Colom et al., 2000; Vieta & Colom, 2004). Findings of other studies indicate that family interventions (Clarkin, Carpenter, Hull, Wilner, & Glick, 1998; David J. Miklowitz et al., 2000; Reinares, Colom, Martínez-Arán, Benabarre, & Vieta, 2002; Reinares et al., 2004) and the psychoeducation strategies (Francesco Colom et al., 2003; F. Colom et al., 2004; Gonzalez-Pinto et al., 2004; David J. Miklowitz, George, Richards, Simoneau, & Suddath, 2003) have a great impact on improving the knowledge and awareness of caregivers and clients with bipolar disorder. Accordingly, studies conducted by Miklowitz et al. (2000), Reinares et al. (2002), and Reinares et al. (2004) on the caregivers of clients with bipolar disorder have shown that the level of knowledge and awareness of caregivers of clients with bipolar disorder significantly increased after the implementation of the psychoeducation program compared to the condition before the intervention (David J. Miklowitz et al., 2000; Reinares et al., 2002; Reinares et al., 2004).

Other studies in the field of psychoeducation provided some recommendations for the clients and their caregivers, such as providing information about the disease, emotional support for the family and clients, ways to prevent drug and alcohol use, teaching methods to reduce anxiety and insomnia, and ultimately interventions to prevent suicide (Frank et al., 1999; Lam et al., 2000; Lam et al., 2003; Patelis-Siotis et al., 2001). Thus, this research has confirmed that the educational content in psychoeducation is effective in improving the resilience of caregivers. To achieve such a result, it is necessary to provide the required training in this context.

One of the limitations of this study is the short duration of the psychoeducation program, because it seems that the long-term training and continuous follow-up are effective in improving the quality of the intervention. Despite

the above limitations, the findings of this study provided important empirical evidence on the effect of psychoeducation on resilience in the caregivers of clients with bipolar disorder in Iran.

Conclusions

The importance of resilience for caregivers of clients with psychiatric disorders becomes more apparent, especially when people face critical and stressful situations (both while caring for the client and in daily life), and need to deal with these conditions. It seems that achieving and promoting this feature is effective in improving the general health of individuals. Thus, based on the findings of this study, it can be said that one of the ways to improve the resilience of caregivers of clients with bipolar disorder is to implement a psychoeducation program. Therefore, it is suggested to pay more attention to psychoeducation as one of the ways to promote resilience in the caregivers of clients with psychiatric disorders.

Declarations

* Ethics approval and consent to participate

1) Ethics approval and consent by Sannandaj University of Medical Sciences

2) Code of ethic (IR.MUK.REC.1398.15)

* Consent for publication

The Consent form is available.

* Availability of data and material

* Competing interests

The authors declare that they have no competing interests.

* Funding

Sanandaj University Medical Sciences supported this research.

* Authors' contributions

T Kh and R B conceived the study and determined the methodology. All two authors collected and analyzed the data. T K took the lead in writing and organizing the manuscript. R B did intervention in research paper. All two authors reviewed the final manuscript before submitting for publication.

* Acknowledgements

Not applicable

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Tables

Table 2: Demographic characteristics of the samples

Demographic characteristics of the caregivers			Control group	Intervention group	All caregivers	P-value
Age(mean ± standard deviation)			40.10±91.88	42.9±6.53	41.10±48.16	.65
Gender	Male		14 (43/8 %)	15 (46/9 %)	29 (45/3 %)	0/80
	Female		18 (56/3 %)	17 (53/%1)	35 (54/7 %)	
Marital status	Single		9 (28/1 %)	6 (18/8 %)	15 (23/4 %)	0/77
	Married		22 (68/8 %)	25 (78/1 %)	47 (73/4 %)	
	Widow		1 (3/1 %)	1 (3/1 %)	2 (3/2 %)	
Job	Housewife		8 (25 %)	8 (25 %)	16 (25 %)	0/56
	Self- employment		10 (31/3 %)	8 (25 %)	18 (28/1 %)	
	Employee		2 (6/3 %)	6 (18/86 %)	8 (12/5 %)	
	Worker		5 (15/6 %)	7 (21/9 %)	12 (18/8 %)	
	Unemployed		5 (15/6 %)	2 (6/3 %)	7 (10/9 %)	
	Retired		2 (6/3 %)	1 (3/1 %)	3 (4/7 %)	
Education	Illiterate		3 (9/4 %)	2 (6/3 %)	5 (7/8 %)	0/58
	Preliminary		7 (21/9 %)	4 (12/5 %)	11 (17/2 %)	
	Junior school		5 (15/6 %)	10 (31/3 %)	15 (23/4 %)	
	High School graduate		9 (28/1 %)	11 (34/4 %)	20 (31/3 %)	
	Bachelor's degree and higher		8 (25 %)	5 (15/6 %)	13 (20/3 %)	
Economic statue	Weak		8 (25 %)	7 (21/9 %)	15 (23/4 %)	>0/99
	Average		20 (62/5 %)	21 (65/6 %)	41 (64/1 %)	
	Rich		4 (12/5 %)	4 (12/5 %)	8 (12/5 %)	
Number of family members			2/0±72/96	3/0±09/69	2/0±91/85	0/08
Relationship of the caregiver with the client		Father	3 (9/4 %)	4 (12/5 %)	7 (10/9 %)	0/24
		Mother	7 (21/9 %)	2 (6/3 %)	9 (14/1 %)	
		Sister	2 (6/3 %)	7 (21/9 %)	9 (14/1 %)	
		Brother	2 (6/3 %)	4 (12/5 %)	6 (9/4 %)	
		Spouse	9 (28/1 %)	10 (31/3 %)	19 (29/7 %)	
		Offspring	8 (25 %)	4 (12/5 %)	12 (18/8 %)	
		Others	1 (3/1 %)	1 (3/1 %)	2 (3/1 %)	
History of the disease (per year)			4/3±94/11	4/2±28/84	4/2±61/97	0/39
Number of hospitalizations (mean ± standard deviation)			4/3±86/29	4/3±47/21	4/3±67/23	0/57
Family history of the disease	Yes		14 (43/8 %)	10 (31/3 %)	24 (37/5 %)	0/30
	No		18 (56/3 %)	22 (68/8 %)	40 (62/5 %)	

Table 3: Comparison of resilience scores before and after the intervention in the two groups

Resilience	Group	Mean ± standard deviation	Value of test statistics	Degrees of freedom	p-value
Pretest	Control	22/65±5/80	0/55	62	0/59
	Experimental	23/44±5/61			
Posttest	Control	23/19±6/12	8/73	48	<0/001
	Experimental	33/97±3/36			

Table 4: Comparison of the mean resilience scores of the pre-test and post-test in the control and experimental groups

Group	Difference mean	Standard deviation	Test statistic value	Degree of freedom	p-value
Control	0/53	1/85	1/63	31	0/11
Experimental	10/53	3/76	15/85	31	<0/001