



## THE EFFECT OF COPING STRATEGIES TRAINING ON THE BURDEN AMONG THE FAMILY CAREGIVERS OF PEOPLE WITH CHRONIC MENTAL DISORDERS

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### ABSTRACT

**Background:** Studies have shown that family caregivers of people with chronic mental disorders experience high levels of burden.

**Objective:** The present study was conducted to examine the effect of coping strategies training on the burden among the family caregivers of people with chronic mental disorders.

**Materials and Methods:** This study is a "non-randomized clinical trial" conducted on 94 caregivers of people with chronic mental disorders. The samples were recruited by convenience sampling method and the eligible ones were put in the intervention and control groups. The data collection tools were demographics questionnaire and Zarit Burden Interview (ZBI). The coping strategies were taught in eight 90 minute sessions, during 8 consecutive weeks (once a week) for 2 months in groups. The obtained data were analyzed using descriptive and inferential statistics by SPSS 20.

**Results:** The caregivers were mostly female (62.7%) aged between 35 and 55 years. More than 80% of the study subjects were married. Most study subjects in both groups were housewives. In the intervention group, the mean caregivers burden before and two months after start the intervention showed significant difference. In the intervention group, the mean caregivers burden significantly decreased two months after the start intervention, but it has increased in the control group ( $P < 0.001$ ).

**Conclusions:** The findings of this study showed that coping strategies training can be effective on decreasing burden. Therefore it is recommend that the managers of educative medical centers to encourage employees for training of caregivers. So that a step be taken towards reducing the burden of family caregivers of people with chronic mental disorders.

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### Introduction

Chronic mental disorders adversely affect the emotions, thoughts, perceptions and behavior of an individual. Chronic mental disorders negatively impact the lives of not only the patients, but also their families and cause them to experience stress. As a result of the stress they experience, caregivers of patients with chronic mental disorders are found to have a high prevalence of depressive symptoms and anxiety [1]. Globally, it is estimated that 450 million people are affected by mental disorders at any one time [2]. The incidence of mental disorder has been reported 6% in Iran. Based on 75 million population of Iran,

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around 450,000 people suffer from mental disorders in our country [3]. More than 60% of the clients are discharged from mental institutions return to their own families [4].

Caring for someone with a mental disorder can affect the dynamics of a family. It takes up most of the carers' time and energy. The family's responsibility in providing care for people with mental disorders has increased in the past three decades. This has been mainly due to a trend towards community care and the deinstitutionalization of psychiatric patients [5]. The caregivers have to encounter sudden family circumstances, financial difficulties, and fatal events related to their loved one's care. The more challenging the needs of mentally ill, the more difficult and hectic the caregiver's role might be. Often the caregivers have to work hard. They did not have enough free time to spend in leisure activities, with friends, handling personal matters, eventually resulting in stress [6]. Being a caregiver is something that cannot be chosen or planned. Therefore, adapting to this new situation occurs after the situation has emerged. The course of this role is defined and can be changed during the course of the disorder [7]. Based on the evidence, family caregivers have limited data, resources and supports at hand to be prepared for such a new role [8]. In general, it is the immediate family or close relatives of the patient who take on the responsibility of caring for individuals with chronic mental disorders. Individuals with chronic mental disorders generally live with their families. The role of the caregiver is a difficult and unpredictable experience that requires effort and toil, while also causing emotional and economic burdens [9].

The concept of burden in the caregiver situation may contain many dimensions contributing to a caregiver's feeling of distress, including inability to cope [10]. The burden can be objective or subjective. Objective burden is defined as the observable, concrete costs to the family that result from the disease. Subjective burden includes individual evaluations of the situation and the emotional problems that arise due to patients' disturbing behavior [9]. The experience of a burden is as a high level of stress that caregivers encounter because of caregiving for an ill family member. Stress is a response of the individuals to various stressors that occur in their daily life, particularly threaten their coping abilities, and ultimately individual perceives himself/herself to be not capable enough to manage these situations [6]. Coping strategies adopted by caregivers are likely to be affected by their burden and distress [11]. Poor coping resources and reduced levels of social support have been shown to result in increased caregiver burden [12]. Over-burdened caregivers employ less effective coping strategies, report more frequent physical and mental health problems and use services more often [2].

Coping is the process of adaptation to a stressful situation. How caregivers subjectively evaluate their circumstances influences the decisions they make about providing care, seeking assistance, and continuing in the caregiving role. Caregivers would be better equipped if they had more effective ways of coping with stress, and effective coping strategies can manage caregivers' roles in terms of minimizing the effects on their mood and general well-being [10]. Improving the effective coping strategies results in decrease the care pressure and ultimately, promotion of caregivers' physical and mental health [13].

Caregivers need knowledge and support to cope with caregiving burden and anger. Psychiatric nurses can develop coping strategies for caregivers in order to reduce their caregiving burdens and anger [9]. Psychoeducational interventions include enhancing caregivers' skills, planning their activities, reorganizing the environment, and enhancing support systems and are usually delivered by nurses. The nurse, who plays a key role in counseling and education, can provide psychoeducational interventions, which, in turn, will help to reduce the burden on caregivers and improve self-efficacy and adaptive coping methods [14]. Health-care professionals can help caregivers enhance their coping skills, support existing skills, and facilitate the development of new ones. Further development of interventions focused on caregivers' coping strategies may be beneficial in reducing caregiver burden. Therefore, coping is an important target for clinical intervention [10]. The aim of this study was to assess The effect of coping strategies training on the burden among the family caregivers of People with chronic mental disorders.

## **Materials and Methods**

### **Study design and participants**

This study was a non-randomized clinical trial. This trial has been recorded at Clinical Trials Registry site (No.IRCT2015120925450N1) and verified by Iran University of Medical Science Ethics Committee holding the code IR.IUMS.REC, 1394.9211196214 on 12 October, 2015. It was conducted on caregivers of people with chronic mental disorder referred to Shahid Yahyanejad and Ayatollah Rouhani educational and medical centers and clinics in Babol, Iran from December 2015 to April 2016. The inclusion criteria were as follows: caregivers' ages ranged 18-60 years, able to read and write, have healthy vision and hearing, lack prior training on coping strategies, lack chronic physical and mental diagnosed disease during their caring service, no substance abuse or dependency disorder, not being in critical conditions in the past 6 months in care (severe stress, the death of immediate family member, and be responsible of caring only one physical or mental patient, also the patients' diagnoses be passed at least one year.

The exclusion criteria included being reluctant to continue receiving training and participating in the study, not participating in 2 sessions out of 8 training sessions, contributing in the similar training sessions concurrently.

To determine the required sample size with the confidence level of 95% and the power analysis of 80%, and with assuming effectiveness of coping strategies training on the burden in family caregivers of people with chronic mental disorder. The sample size for each group was calculated as 47 caregivers.

#### Data collection

In this study, the demographics questionnaire along with Zarit Burden Interview (ZBI) (filled in by the study samples) were used as the data collection tool.

Zarit Burden interview includes 22 items on care burden evaluating the care burden incurred on the caregiver due to caring the patient. This scale was developed by Zarit et al. in 1980 to determine the degree of social and economic burden on a caregiver. This instrument contains 22 questions. Each question receives a response from positive to negative (never to always). This scale is filled in by interviewing the patient's family members and for answering each question, the scores as Never(0), Sometimes (1), Often(3) and Always (4) are assigned. The sum of the scores acquired by each caregiver defines their care burden. The score lower than 30 is ranked as mild care burden, 31-60 as average and up to 80 as severe. The min and max scores of each caregiver are 0-88 and the higher score signifies higher care burden and vice versa (15). So that the original version's reliability coefficient has been reported as 70% by re-test and alpha-Cronbach internal consistency as 91 % (16). The content validity of educational booklet and demographic questionnaire was confirmed by 10 nursing professors of Iran University of Medical Sciences, Tehran, Iran.

The data were collected in two stages as before and 8 weeks after starting the intervention. In the control group, the same routine has been implemented. The sampling has been convenient and the eligible ones have been put in the intervention and control groups (47 subjects in the intervention group and 47 in the control group). At the time of study (from December 2015 to April 2016), the caregivers of the patients referring on odd dates to Babol based Medical Science University Clinics of Shahid Yahyanejad and Ayatollah Rouhani Centers were put in the control group and those referring on the even dates were put in the intervention group.

#### Intervention

In this research, by coping strategies we mean a structured program consisting of 8 training sessions with certain objectives held for 2 months, during eight weeks (once/week) and each session consisting of 90 minutes as groups consisting of 10 subjects in the intervention group. Each session starts with explanation of content objectives presented by lecture and slides (20 minutes), then a group discussion (50 minutes) and finally the presented materials will be summarized (20 minutes).

The coping strategies training program is based on a training booklet prepared and codified by the researcher after surveying the papers and library studies. In order to verify the content, it was handed to some faculty members of the School of Nursing and Midwifery, Iran University of Medical Science. The contents of the sessions are as follows: the first session, familiarity with the training contents, training program and objective explanation; the second session, explanation of psychiatric disorders schizophrenia and bipolar disorder and what are their symptoms; The third session: causes and signs of the stress as well as its effects on our life; The fourth session: coping with stress, the effective and efficient strategies in dealing with stress; The fifth session, the methods to cope with stress; the sixth session, other methods to cope with stress; the seventh session, social relation skills practice, how to get through the patient and solve the related crises, train problem solution, seek support from the mental health team; the eight session, conclusion and review of previous sessions. At the end of the sessions, the training manual is handed to the participants.

#### Data Analysis

The data were analyzed by descriptive and inferential tests by SPSS version 20. For data analysis, descriptive statistics (frequency, percentage, mean and standard deviation) and inferential statistics to determine significance (Chi-Square, T-Test and t couple and Exact Fisher test) were used.

#### Results

In this study, the obtained data extracted out of 94 study samples, including 47 in the control group and 47 in the intervention group were analyzed. More than 80% of the study subjects were married. Most of them in both groups were housewives. The study subjects' demographics revealed no significant difference between two groups (Table 1). The majority of the patients in the two groups suffered from bipolar disorder.

The mean scores of the "burden" were compared between 2 groups. Based on Table 2 No significant statistical difference was found between two groups 'baseline mean caregivers' burden scores before the intervention (P-value=0.005). However, the mean caregivers' burden in the intervention group was reduced, and the two groups were significantly different at the end of the study (P < 0.001) and in the control group, these variations was increased (Tables 2).

More than half of the subjects in the two groups have gained average care burden (Tables 3).

Table 1. Distribution of the Two Groups' Demographic Variables

Variable	Group		Test result
	Control	intervention	
Age, year			0.193*
< 35	13(27.7)	13(27.7)	
35-45	14(29.8)	8(17.0)	
45-55	11(23.4)	20(42.6)	
>55	9(19.1)	6(12.8)	
Gender			0.410***
Female	31(66)	28(59.6)	
Male	16(34)	19(40.4)	
Marital status			0.610**
Single	3(6.4)	6(12.8)	
Married	42(89.4)	40(85.1)	
Divorced or Widowed	2(4.3)	1(2.1)	
Job			0.005**
Self-employed	15(31.9)	15(31.9)	
Employee	1(2.1)	12(25.5)	
Homemaker	27(57.4)	18(38.3)	
Other	4(8.5)	2(4.3)	
economic status			2.795***
Bad	5(10.6)	11(32.4)	
Mild	36(76.6)	30(63.8)	
Good	6(12.8)	6(12.8)	
Education level			2.085**
Elementary school	39 (83.0)	28 (59.6)	
High school	5 (10.6)	11 (23.4)	
Academic	1 (2.1)	3 (6.4)	
University Graduate	2 (4.3)	5 (10.6)	
Family relationship with patients			0.087**
Mother	16 (34.0)	13(27.7)	
Father	4 (8.5)	9(19.1)	
Spouse	8 (17.0)	14 (29.8)	
Sister	5 (10.6)	2 (4.3)	
Brother	7 (14.9)	1 (2.1)	
Child	7 (14.9)	8 (17.0)	
Duration of care(month)			2.085*
12-60	39 (83.0)	28 (59.6)	
60-120	5 (10.6)	11 (23.4)	
120-180	1 (2.1)	3 (6.4)	
>180	2 (4.3)	5 (10.6)	
Size of family			0. 830*
2-4	26(55.3)	29(61.7)	
5-7	20(42.6)	17(36.2)	
8-9	1(2.1)	1(2.1)	

The T- test was performed\*

\*\*The Fisher exact test was performed

\*\*\*The Chi-square test was performed

Table 2. Comparison of the Mean Caregivers' Burden Scores in the Study Groups Before and After the Intervention

Group	Control	Intervention	Independent t-test Result
	Mean ± S.D	Mean ± S.D	
Pre-intervention	40.04±17.02	42.11±14.51	p-value=0.529 dt= 92 t=0.633
after intervention	48.02±13.63	34.66±11.00	p-value<0.001, dt= 92 t=5.228
Variations	7.98±7.02	-7.45±6.25	p-value<0.001, dt=92 t=11.247

Table 3. Comparison of the level Caregivers' Burden Scores in the Study Groups Before and After the Intervention

**Discussion**

The study results indicate that training coping strategies has positive effects on care burden and reduced it. Our study findings

Group	Pre-intervention		after intervention	
	Control N %	Intervention N %	Control N %	Intervention N %
Mild(0-30)	15(31.9)	13(27.7)	6(12.8)	15(31.9)
Average(31-60)	27(57.4)	29(61.7)	32(68.1)	32(68.1)
Sever(61-88)	6(10.6)	5(10.6)	9(19.1)	0(0)
N(100)	47(100)	47(100)	47(100)	47(100)
Mean ± S.D	40.04±17.02	42.11±14.51	48.02±13.63	34.66±11.00
Independent t-test Result	p-value=0.529 df= 92 t=0.633		p-value<0.001, df= 92 t=5.228	

are compatible with those of the previous studies. A study reported that caregivers might experience high burden. Factors that led to high burden were the low income of caregivers, caregivers having to cope with work and taking care of persons with schizophrenia, care giving over long periods, increasing age of caregivers, and a lack of resources for caregivers(17). Also Khajavi et al. (18) reported that by use of the impact of type of coping strategies on extent of burden sustained to chronic schizophrenic and bipolar caregivers, training problem-centered coping strategies to caregivers may be considered as an approach for reducing burden tolerated by caregivers. Caregivers of patients with chronic mental disorder are a specific group with specific demands which must be recognized. Also, the burden on them may be reduced by planning medical sessions based on increasing use of problem-centered coping approaches(18). The research by Kate et al. (19) suggested that the caregivers spending more time on the patient experience higher tension. The scope of care burden tension has positive and significant association with avoidance strategy, compatibility, coercion, and total coping checklist score. The relationship between care burden and all life quality domains has been negative and significant. The total general health score has positive and significant relation with care burden tension. It is possible that problem-oriented coping strategies skills are associated with caregivers' knowledge, information source, mental training, and cognitive capabilities. Thus if these coping skills are inadequate or inappropriate, they may not sufficiently lower the caregivers' experienced stress and burden. Caregiving burden, especially tension is associated with use of maladaptive coping strategies, poor quality of life and higher level of psychological morbidity in caregivers (19). Navidian et al. (2010) reported that group mental training intervention can be an effective and efficient family intervention for family caregivers of mentally ill patients in a sample of Iranian community (16). Bademli and Çetinkaya (1) study indicates that the intervention program has a positive impact on the mental health status and coping strategies of caregivers of patients with schizophrenia. In this research, some special variations have been spotted among intervention group after program completion in the effective coping strategies of self-confidence, optimism, following the social support as well as in non-effective coping method in distress method. Concerning the study results, the intervention program has had positive effects on mental health and coping strategies of the caregivers of schizophrenic patients (1). Livingston et al. (20) study showed that in promoting the mental health of caregivers of patients with dementia, 40% of these caregivers had significant depression or anxiety and this study has been effective in lowering depression and anxiety symptoms of dementia patients' caregivers(20). The group mental training intervention had promoted the life quality and social support of caregivers of bipolar patients. It can be concluded from the study results that coping strategies training can lower care burden(21). Chen et al study showed that Patients with dementia may present various behavioral problems that cause different difficulties for caregivers. Individual intervention allows study nurses to provide intervention specific to caregiving

circumstances and to actively engage caregivers in skill acquisition aimed at regulating their own behavior, resulting in significant improvements in caregiver burden. However, the results showed that intervention cannot reduce negative coping strategies, such as avoidance, wishful thinking, and self-blame (10). Ghane et al reported that the effectiveness of problem-focused coping strategies on reducing the burden on caregivers of hemodialysis patients (22).

### Conclusions

In conclusion, the present study demonstrated that training coping strategies to caregivers has had positive effects and the post-intervention training has resulted in decreasing their burden. Based on the current research results, training coping strategies can promote the quality of life. Experts in family health education are in need to educate and train families. Therefore the mental health system is recommended to decrease burden via developing such specialized programs and facilities at educational and health centers.

This study was conducted only on caregivers of patients with chronic mental disorders, and the short time follow up might also be considered as a limitation to generalize the findings of this study. Therefore, conducting similar studies with longer follow-up is recommended.

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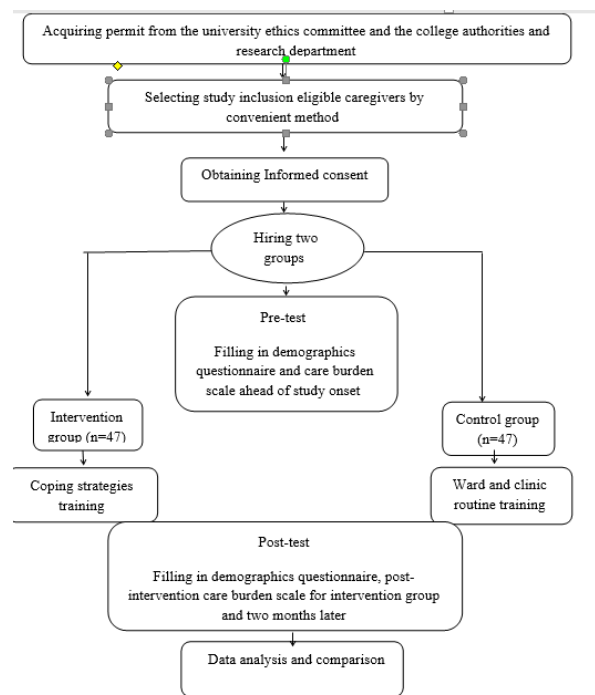
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**Authors' Contribution:** The study concept and design was performed by Fahimeh Ramezani, Mehrnoosh Inanloo, and Naimeh Seyedfatemi; Data acquisition was performed Fahimeh Ramezani. The statistical analysis and data interpretation were conducted by Fahimeh Ramezani, Hamid Haghani, and Mehrnoosh Inanloo. The drafting of the manuscript for important intellectual content were performed by Fahimeh Ramezani, Mehrnoosh Inanloo, Naima Seyedfatemi, and Susan Moudi.

### Conflict of Interest

The authors declared no conflict of interests.

### Method Diagram:



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