



Effects of Stress Management Skills Training on the Resilience of Family Caregivers of Heart Failure Patients: A Quasi-experimental Study

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Abstract

Background: Heart failure disrupts the lives of patients and their caregivers. Resilience is a dynamic process for adaptation in traumatic or disastrous events. As teaching stress management skills increases people's adaptation in stressful situations, this study was determined the effects of stress management skills training on the resilience of family caregivers of heart failure patients.

Objectives: To determine the effects of stress management skills training on the resilience of family caregivers of heart failure patients.

Methods: This quasi-experimental study conducted in 30 family caregivers of patients with heart failure hospitalized in the cardiac care unit (CCU) of Amir al-Mominin Ali (AS) hospital in Zabol, Iran. They were randomly divided into two groups, intervention and control. Data was collected using a demographic characteristics questionnaire and Connor Davidson questionnaire of resilience which were completed before and after the intervention.

Results: Independent *t*-test did not show a significant difference between the two groups before the intervention ($P > 0.05$). However, the mean score of the resilience was significantly different after intervention ($P < 0.001$).

Conclusions: The intervention of stress management skills training can be effective for family caregivers of heart failure patients in a sample of Iranian society. The results are consistent with the results of other studies. It is absolutely necessary and effective to provide such educational services in the healthcare service delivery system for patients' caregivers.

Keywords: Stress Management, Resilience, Family Caregivers, Heart Failure

1. Background

Heart failure affects patients and their family. Family as the most basic unit of society plays important role in their members' health condition and recovery process during illnesses by providing care, and financial and emotional support (1). However, long-term care for a sick family member such as heart failure patients may lead to physical, mental, and psychological challenges such as disturbances in sleep and appetite, fatigue, confusion, irritability, anger, helplessness, anxiety, depression, and low quality of life (2). Exacerbation periods of the disease and rehospitalization are stressful for the families (3).

However, learning the necessary skills assists to control stressful situations and to change level of resilience caregivers. Resilience is defined as acting and being effective instead of reacting and being passive in response to stressful situations and being adaptive to

life's challenges and threats (4). Resilient people dynamic and flexible when faced with life conditions as well are more capable of adapting to life changes and have the ability to create and expand a set of coping skills that support them in challenging situations (5). Although resilience is partly a personal characteristic and partly the result of environmental experiences, humans are not victims of their environment or heredity. They can overcome the problems by improving their resilience (6). One of methods for improving resilience is stress management training, which is a combination of various types of relaxation, imagery and cognitive-behavioural approaches such as cognitive restructuring, effective coping training, self-expression and anger management (7).

2. Objectives

As the goal of healthcare systems is to shorten the residency period of patients in hospitals and emphasize home-based care, and family members have to care their patients with chronic diseases at home, which might be cost-effective for both the patient and the hospital (8). Furthermore, family caregivers are essential components of health care services and bear a lot burden and stress in care for their loved ones, thus, this study aimed to determine the effect of stress management skills training on the resilience of family caregivers of heart failure patients.

3. Methods

This quasi-experimental study was conducted in family caregivers of patients with heart failure in cardiac care unit (CCU) of Amir al-Mominin Ali (AS) hospital of Zabol, Iran from April to September 2017. This study extracted from a master thesis and the first part of it was previously published (9). Thirty caregivers of heart failure patients who met the inclusion criteria and expressed their willingness to participate in the study randomly assigned into experimental (15 people) and control (15 people) groups. The inclusion criteria were being the main caregiver of a patient diagnosed as a class II or higher heart failure, ability to communicate in Persian, a minimum age of 15 years, ability to read and write, no previous participation in any formal self-management training, and not having stressful life events during the past 6 months. The exclusion criteria were having mental illness, chronic illness, physical disability, and taking care of another patient simultaneously. The sample size was estimated based on Almasi et al.'s (10) with 95% confidence interval and test power of 80%.

The data were collected using: (1) A demographic characteristics questionnaire with 11 questions including sex, age, place of residence, marital status, education level, employment status, monthly income, housemates, dependency role, average hours of care per day, and years of care; (2) the Connor-Davidson Resilience Scale with 25 Likert-type items from always true = 4 to completely false = 0. A higher score indicates more resilience (11). The Cronbach's α was 0.77 in this research.

In order to conduct the study, first the study objectives and the training program were explained to the caregivers. The oral and formal consent was achieved, then, the questionnaires was completed. After that, stress management training was held for 90 minutes weekly sessions in eight weeks. The presented topics in each session are in accordance with the cognitive-behavioural

stress management practical guidebook as: (1) Knowledge, stressors and response to stress; (2) relationship between thoughts and feelings; (3) recognition of illogical thoughts; (4) anger management; (5) problem solving; (6) communication skills and self-presentation; (7) time management, and (8) review of previous contents and practice. In each session practical techniques also presented and performed by the instructor and caregivers. The caregivers also have practiced the techniques between sessions and reviewed the contents. After the intervention program, the participants completed the resilience questionnaire. Moreover, the control group only received the routine care of CCU and completed the questionnaire after a week from pre-test. Finally, data were analysed using SPSS 22.

4. Results

The findings of the research showed that the mean and standard deviation of the age of the patients in the intervention and control groups were 35.20 ± 12.7 and 36.66 ± 10.49 , respectively. The mean and standard deviation of care hours per day in the intervention and control groups were 5.73 ± 1.90 and 4.80 ± 1.42 , respectively. The majority of participants were female (66.7% vs. 80%), married (53.7% vs. 60%), housewife (66.7% vs. 60%), parent caregivers (53.3% vs. 53.3%), diploma (53.3% vs. 40%), and city residence (66.7% vs. 46.7%) in intervention and control groups, respectively.

The Shapiro-Wilk test showed a normal distribution in the resilience scores of the intervention and control groups. The independent *t*-test did not show significant difference in resilience scores between intervention and control groups ($P = 0.140$). However, significant difference was achieved after the stress management skills training program between two groups ($P < 0.001$) (Table 1).

Table 1. Mean and Standard Deviations of Resilience Scores Between Intervention and Control Groups Before and After Training Program^a

Resilience	Intervention	Control	P-Value
Before	32.06 ± 8.14	36.26 ± 6.93	0.140
After	58.00 ± 9.02	37.60 ± 10.38	< 0.001

^a Values are expressed as mean \pm standard deviation.

5. Discussion

The results showed that the average score of resilience in intervention and control groups was very close to each other in the pre-test and was at a low level. The resilience level of people varies in societies, for example, Naderi et

al. (12) stated half of the family caregivers of patients with advanced heart failure under have weak resilience. However, studies by Peng et al. (13) in informal caregivers of heart failure patients and Sanayeh et al. (14) in the resilience of mothers of children with congenital heart diseases were at medium level.

According to the results of the present study, the average resilience score of the caregivers of heart failure patients before the intervention in the two groups did not have a statistically significant difference, but after the stress management skills training intervention, this difference became significant and it can be concluded that the acquisition of stress management skills has been effective in increasing the resilience of family caregivers of heart failure patients. In confirmation of this result, Almasi et al.'s (10) study reported that stress coping skills training had a positive and significant effect on increasing the level of resilience of mothers with disabled children. Despite the difference in the research community, this study confirms the results of the present study and can suggest a relationship between a person's stress level and his resilience. In confirmation of this possibility, Rasuli and Moghtader (15) wrote resilience in psychology is a talent, positive capacity, and a protective factor for people to overcome stressful situations. Besides, Ghezelsefloo et al. (16) concluded resilience training is an effective method in reducing the stress of caregivers. In line with the study results, Kaboudi et al. (17) have found that teaching resilience skills reduces the stress of the mothers of leukaemia children.

Furthermore, some studies highlight perceived social support, spirituality, optimism (13, 14, 18), cohesion, agreement, and mutual communication skills in family members (19-21) as effective factor on improving resilience. Besides, resilience can be a moderating factor on the perceived stress of caregivers (22). Therefore, a mutual relationship may exist between resilience and the above-mentioned factors.

Despite the positive effects of stress management training on the caregivers of heart failure, the results may not be generalized to the other groups. Thus, it is recommended the kind of programs should be conducted to the various groups.

5.1. Conclusions

Based on the results of the present study, the intervention of stress management skills training can be effective for family caregivers of heart failure patients in a sample of Iranian society. Therefore, predicting and providing such educational services in the health service delivery system can be beneficial for patients and their caregivers. Besides, paying attention to the factors that

can contribute to the improvement of resilience through reducing the stress level of people, such as social support, dealing with spirituality, optimism and having positive thinking, can also help in this regard.

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Footnotes

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