



Analysis of the effects of a support program based on psychosocial needs of families on care burdens of family caregivers of patients with ischemic heart disease hospitalized in Chamran heart ward of Isfahan University of Medical Sciences

¹Fateme Shariati Far, ²Mahin Moeini* and ³Gholam Reza Kheirabadi

¹Nursing Graduate Student, Student Research Center, School of Nursing and Midwifery, Isfahan University of Medical Sciences, internal-surgery trend

²Assistant Professor, Nursing and Midwifery Care Research Center, Faculty of Nursing and Midwifery, Isfahan University of Medical, Sciences, Isfahan, Iran

³Associate professor of psychiatry, Behavioral Sciences Research Center, Department of Psychiatry, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran

Corresponding email: moeini@mn.mui.ac.ir

ABSTRACT

This study was conducted in 2015 with goal of analysis of the effects of a support program based on psychosocial needs of families on care burdens of family caregivers of patients with ischemic heart disease hospitalized in Chamran heart ward of Isfahan University of Medical Sciences. This study in terms of purpose is functional and in terms of data gathering is Field survey. The population of this study consisted of 64 patients with ischemic heart disease (32 people in experimental group and 32 people in control group) who were referred to inner heart wards of Chamran hospital. Data collection tools were 2 questionnaires; Psychosocial Needs Assessment questionnaire and Care Burden questionnaire. Results of study showed that in the control group the mean score of the Care burdens was a significant difference between three times ($p < 0.05$). Apart from the physical realm there was no significant difference observed between control groups. The results showed that immediately after the intervention ($p < 0.001$) and one month after intervention ($p < 0.001$) the average score of the overall Care burdens and areas of (physical, emotional, social, developmental and time) in control group was significantly higher than experimental group and there was a significant difference between the two groups. The results also showed that findings revealed that before intervention, there was no significant difference between the two experimental and control groups in average of overall Care burdens and areas of (physical, emotional, social, developmental and time) of caregivers of patients with ischemic heart disease.

Keywords: Support program, Psycho-social needs of families, Care burdens, Family caregivers, Ischemic heart disease.

INTRODUCTION

Ischemic heart disease is the most common chronic diseases, progressive and life-threatening in most countries, including the United States and is the most common cause of hospitalization. According to the World Health

Organization at the end of the second millennium, the majority of health budgets in developing countries are dedicated to non-communicable diseases, particularly cardiovascular disease that constitute 50% of all deaths.

Before year 1900, Infectious diseases and malnutrition were the most common causes of death in the world that by Improving nutritional status and general health, the spread of the disease were decreased and Cardiovascular disease has become the most important public health problem [10]. Currently, cardiovascular diseases are the main cause of death in developed countries [8]. In developing countries with the passage of time and the control of infectious diseases, cardiovascular diseases have become increasingly important, so that the figures show, more than half of all deaths from cardiovascular disease that occurs in the world is related to developing countries. The mortality a rate due to cardiovascular disease in developing countries is 15-30 % and includes 50% of all deaths in industrialized countries[2]. According to Center for Health Statistics in America, High prevalence of cardiovascular disease is such that it is estimated, by eliminating all forms of cardiovascular disease; life expectancy can be increased to approximately seven years [6].

In Iran, the prevalence of coronary artery disease and its mortality is on the rise, so that this disease causes mortality accounted for 46% and its incidence between 100 thousand people is 181.4. According to investigations, the prevalence of coronary artery disease in the city of Esfahan is 19.4 percent. The economic burden of heart disease is very high, and according to America Heart Association estimates it costs more than 150 billion \$. About 20% of patients with ischemic heart disease are admitted twice within 1 year and nearly 60 percent of the costs associated with the disease are the result of readmission of patients.

The event of hospitalizations for families in many cases leads to emotional turmoil and confusion, anxiety, doubt and justified and understandable fear of the loss of loved ones. All this could be a bad influence on social and personal relations, as well as decisions in urgent cases, particularly in relation to the patient that is hospitalized. In such circumstances, family caregivers are in need of physical and emotional support of nurses and the nurses can never, not be responsible for supporting family members during the bitter and unforgettable experience of hospitalization. Family support can affect mortality, disability and psychosocial adjustment and compliance. Hence the importance of the issue of family and family care is significant because family members are actually hidden Health providers and can provide a major source of support for various aspects of the instrument, practical, emotional, intelligence and deductive.

Although taking care of patients is valuable but its negative effects affects quality of health care. Caring for a sick person in the family occurs in more than 22 million households in America. These informal caregivers spend 30 to 60 hours a week on caregiving without getting paid. The term Care burdens is used to describe complications of care which includes physical, emotional, financial and social problems of care giving. Social support and psychological nursing is important due to protective effects on mental and physical health, health behaviors and health services. Nurses play an important role in the development of family interventions and they can communicate with the patient and family members of patients develop family support and strengthen it. Nurses as healers of health profession and given the important role that support, training and care in cardiac patients and their caregivers can plan for appropriate care, support and guidance for patients and their families.

Among heart disease, Ischemic heart disease is the most common chronic illness and life-threatening. In Iran, the prevalence of ischemic heart disease and its mortality is on the rise, So that these diseases cause 46% of mortality and its incidence between 100 thousand is 181.4. According to investigations, the prevalence of ischemic heart disease in the city of Esfahan is 4.19 percent [5].

Hospitalization in intensive care unit at a hospital after life-threatening diseases often occurs without any warning and alerts and gives no time to patients and their families to prepare and get ready. The event for families in many cases, leads to emotional turmoil and confusion, anxiety, doubt, and fear that is justified and understandable. Because their patient is hospitalized in a part that there are patient that are about to die or are not in good condition. Faced with this situation it can increase sadness, loss of hope and empowerment to families [2]. All this could be a bad influence on social and personal relations, as well as making decisions in urgent cases, particularly in relation to the patient that is hospitalized [1].

Since nurses spend a lot of time with patients and their families, they are in a special position to check the burden and stretch of caregivers and provide appropriate interventions for their requirements. One of the important tasks of

nurses discovers the needs and concerns of family members during hospital admission and stay in hospital[7]. Family members of patients to various causes are the toast of nursing care and it is believed that nursing care focused on the family can bear the burden of care is effective as well as the attention and care of patients with ischemic heart disease should spread to the entire family [9].

In this regard, studies showed that the majority of nurses spend shortest time possible to communicate with patient's family and time is limited to say two or three sentences [4]. The results also indicated that the patient Abedi et al centers are ignored by staff and because of the contrast between the lack of knowledge of meditation and compulsory care of their patients with a constant tension in the environment [3].

In another study in 2012 by Etemadifar et al in Isfahan entitled "The impact of an educational intervention group over Burden of family caregivers caring for patients with heart failure" that The two-hour training sessions a week were four Burden of the level of care at the end of the intervention was evaluated using a Zarit questionnaire, results show that the Care burdens in caregivers of patients decreased after the intervention.

MATERIALS AND METHODS

This study is a clinical trial that by studying 64 patients with ischemic heart disease (32 patients in the experimental group and 32 in control group) Chamran Hospital were referred to wards of the heart. Sampling from patients inclusion criteria of the study were then randomly allocated to two groups (n = 32) and control (n = 32) groups first, using a psychosocial needs assessment, identify and prioritize the needs of family caregivers and then adjust the care plan based on needs. The data collection tool to help two-part questionnaire including demographic data and disease Care burdens questionnaires, was carried by family caregivers. Statistical analysis using descriptive statistics and the use of tests such as Chi-square, independent and paired t-test and ANOVA was repeated using SPSS version 18.

RESULTS

Table 1: determine and compare the average score for overall Care burdens and areas of (physical, emotional, social, developmental and time) in caregivers of patients with ischemic heart disease immediately after and one month after the end of treatment

Variable	Stage	Mean	Test statistics (F)	Significance level P
Total score of Care burdens	Before intervention	41	451/592	<0/001
	Immediately after the intervention	23/97		
	A month after the intervention	18/5		
care Burden depended to time	Before intervention	14/68	424/183	<0/001
	Immediately after the intervention	10/03		
	A month after the intervention	7/31		
Developmental care burden	Before intervention	12/03	172/737	<0/001
	Immediately after the intervention	8/22		
	A month after the intervention	7/313		
Physical care burden	Before intervention	6/88	133/149	<0/001
	Immediately after the intervention	2/66		
	A month after the intervention	1		
Social care burden	Before intervention	2/38	20/007	<0/001
	Immediately after the intervention	0/97		
	A month after the intervention	0/98		
Emotional care burden	Before intervention	5/03	111/041	<0/001
	Immediately after the intervention	2/1		
	A month after the intervention	1/94		

The results of analysis of variance with repeated observations showed that In the mean scores of the overall Care burdens and areas of (physical, emotional, social, developmental and time) between three times was significantly different ($p>0/001$).

Table 2: Comparison of the mean score of the overall Care burdens, and all areas (subscales) of samples between different test groups with LSD post hoc test

Time	p-value (Test group)
Before and immediately after intervention	< 0/001
Before and one month after intervention	< 0/001
Immediately and one month after intervention	< 0/001

After determining the overall score difference between the Care burdens, and all areas (subscales) of test samples between different groups, LSD post hoc test showed the average score of the overall Care burdens, and all areas (subscales) immediately after the intervention significantly lower than before the intervention ($p < 0/001$), A month after the intervention significantly lower than before the intervention ($p < 0/001$) and a month after the intervention was also significantly lower than immediately after the intervention ($p < 0/001$).

Table 3: determine and compare the mean change in the overall Care burdens and areas of (physical, emotional, social, developmental and time) in caregivers of patients with ischemic heart disease in experimental and control groups immediately and one month after the intervention

(Variable (the scale)	Stage	Group				The results of repeated measures	
		Test		Control			
		Mean	Standard Deviation	Mean	Standard Deviation	Test statistics (F)	Significant level (P)
Total score of Care burdens	Immediately after the intervention	23/97	2/04	51/25	1/93	25/812	<0/001
	A month after the intervention	18/5	2/5	52/97	1/69	94/825	<0/001
care Burden depended to time	Immediately after the intervention	13/125	1/58	15/19	0/896	165/53	<0/001
	A month after the intervention	7/31	1/7	15	0	145/48	<0/001
Developmental care burden	Immediately after the intervention	8/22	0/553	12/563	0/716	0/335	0/57
	A month after the intervention	7/31	1/31	13/25	1/27	17/8	<0/001
Physical care burden	Immediately after the intervention	2/66	1/49	12/063	0/564	25/03	<0/001
	A month after the intervention	1	0/76	12	0	21/52	
Social care burden	Immediately after the intervention	0/97	0/31	4/34	0/7	29/558	<0/001
	A month after the intervention	0/94	0/25	4/44	0/56	37/08	<0/001
Emotional care burden	Immediately after the intervention	2/1	0/893	7/09	1/089	9/33	0/003
	A month after the intervention	1/94	0/62	8/28	1/08	15/84	<0/001

Using analysis of variance, measures repeated, It was found that the effects were significant for overall score and all subscales ($P < 0.05$). In other words, it can be said variables in each phase of Care burdens research, there are significant differences. However, under the transformation measures ($P = 0.57$) effect was not significant. The interaction between time and group for total score and subscales were significant ($P < 0.05$) that shows both the group and the time variable, but on average the Care burdens people you influence and the average Care burdens in two groups in two stages, are different and significant differences in the process (increase or decrease) the Care burdens individuals in both groups during the study.

CONCLUSION

The findings showed that before intervention, no significant difference in mean score overall Care burdens and areas of (physical, emotional, social, developmental and time) in caregivers of patients with ischemic heart disease was observed between test and control groups ($p=0/149$). This is due to the random allocation of cases and no

intervention was to be expected. The findings of this study confirm the results of the study revealed Lopez- Hartman et al. Before the intervention, there was no significant difference in Burden, between the intervention and control groups. Also in the study is to investigate the Etemadifar and colleagues in 1391 in Isfahan showed that there is no significant difference between the experimental and control groups before the intervention ($P \geq 0.05$).

The results showed that immediately after the intervention ($p < 0/001$) and one month after intervention ($p < 0/001$) Average score overall Care burdens and areas of (physical, emotional, social, developmental and time) group control was significantly greater than the experimental group there was a significant difference between the two groups.

In this regard, the results of Etemadifar and colleagues as "the effectiveness of educational intervention support of family Care burdens in patients with heart failure" in the city of Isfahan, burden of family caregivers caring for patients immediately and 3 months after intervention between the two groups was statistically significant ($P = 0.003$) So that in the control group the mean Burden of care in the control group than the experimental group (Average Care burdens immediately after, and 3 months after 36/15 and 41/27 respectively in the experimental group and the control group the mean Burden of care immediately after, and 3 months after the study was to arrange the 59/79 and 60/94). The study results Sign Andren et al in 2009 in Sweden as "effect of psychosocial interventions on the Care burdens in caregivers of people with dementia" showed that the average Care burdens three months after the intervention ($p = 0/05$) and 12 months after the intervention ($p = 0/03$) in the control group than in the intervention group were more. This study titled "Effects of an educational intervention on the Care burdens for family members and psychological symptoms in patients with schizophrenia" in Shiraz by Sharif and colleagues showed that care burden immediately one month after intervention in test group was more significant than control group ($p < 0/001$). The results of the study of Dias and colleagues in 2008 in India as "the effectiveness of a surveillance program to support caregivers of patients with dementia" showed that Care burdens for dementia caregivers of patients in the experimental group and control in the area before, 3 months and 6 months after treatment has decreased that these reduction in the intervention group is more than the control group, so that the average Care burdens in the test group, respectively, in the interval: 24/8, 19/5 and 19 and for control group, respectively was, 21/7, 21/5 and 21/4 respectively. The results of this study showed that the mean score of Care burdens control group, was significant between three-times ($P > 0.05$). Apart from the physical realm between three significant differences were observed in the control group ($P > 0.05$). The findings of this study confirm the results of Etemadifar and colleagues titled "The Impact of educational intervention on Burden of support of family care in patients with heart failure" in the city of Isfahan. In the control group in the three areas before, immediately after, and 3 months after the intervention had increased Care burdens ($p = 0/000$). In certain studies, Moeini et al., Entitled "Effect of nursing interventions focused on the family Care burdens on family members of patients undergoing coronary artery bypass graft surgery" was performed in Isfahan in 1391 showed that in the control group before and after the intervention, the Care burdens family members was significant ($p = 0/01$) these significant That unlike the test group has been an increase in the average Care burdens So that the average Care burdens in the control group before and after the intervention, respectively was 30/16 and 35/44 and the average Care burdens in the experimental group before and after treatment, respectively was 30/08 and 19/2. In a study in 2015 by B. Beygi and colleagues in Tehran entitled "The impact of cognitive behavioral training interventions on family caregivers of elders with Alzheimer's caregiver Burden of" on 70 family caregivers showed that the Care burdens control group at 6 weeks after the intervention significantly increased ($p < 0/001$) so that the average Care burdens in the control group before and after the intervention respectively was 42/57 and 44/86 and the average Burden of care before and after the intervention in the experimental group was 44/54 and 39/54. Also in this study as the level of physical Care burdens for the difference is not significant in the control group according to researcher since routine training given by nurses in the hospital emphasis on psychological and physical problems and according to the information that the patient's family about the disease and the necessary care during a person's disease main stream times from different sources and gain experience in dealing with physical issues are usually basic information and this can cause a rise in average despite the scale of the Care burdens in the control group over time, following a significant increase no physical scale.

The results showed that the mean change score of Burden of family caregivers caring for patients with ischemic heart disease, immediately after the intervention ($p > 0/05$) as well as one month after intervention ($p > 0/05$), in the control group was significantly higher than test but was not statistically significant in the scale transformation test ($P = 0.57$). Of course, it was expected that with the passage of times and keep track of the needs of in caregivers of patients with ischemic heart disease in the experimental group than the control group reduced Care burdens that this problem could be related to the follow-up groups. In order to study Etemadifar and colleagues who study entitled

"The impact of educational interventions on burden of family caregiving support of patients with heart failure" in Isfahan, also showed that the Care burdens caregivers of immediately and 3 months after the intervention and control groups was significant ($p = 0/000$). In relation to the scope of delivery care is not significant, in this study, certain and colleagues in 1391 That focused on the effects of nursing interventions on the Care burdens on families of patients undergoing open heart surgery was performed, the scope of transformation in the control group before and after the study was not significant ($p = 0/06$). This area is off the Care burdens for the caregiver and the feeling of stagnation in the growth and development of life for the caregiver is due to result of activities related to caregiving. Since the intervention of social caregivers of is now emphasizing the priority of needs, further studies with an emphasis on developmental needs of caregivers.

REFERENCES

- [1] Rabi siyahkali, soheila, Pourmemari, Mohammad hossain, Khaleghdustmohammadi, Tahere, Mazlumsaeede, Paryadezat, Winter 2010. Psychological stress and environmental factors affecting their study in families of patients admitted to the Intensive Care Unit. *Journal of Critical Care Nursing*. Volume 3, Number 4, pp. 175-180.
- [2] Sedighi, Omid, 2012, The effect of carnitine on cardiac function of patients, *Journal of Gorgan University of Medical Sciences*, Issue 14, pp. 71-77.
- [3] Abediheydarali, mojgankhademi, Reza daryabeygi, Nasrolahalimohammadi, Spring and summer 2006, Needs of hospitalized elderly companions: a foundation for nursing education. *Iranian Journal of Medical Education*. Volume 6, Issue 1, pp. 65-73.
- [4] Abbas zade Ali, Abazarifarzaneh, 2007, Compare the attitudes of nurses and caregivers CCU and ICU departments of the psychosocial needs of caregivers, *Journal of Medical Science*, the 19.s 58-62.
- [5] Momeni Tahere, ghasemighale, rezayamirmusa, Moimahin, 2012. The effect of the pastoral care program on anxiety in ischemic heart disease patients hospitalized in the Cardiac Intensive Care Unit, *Behavioral Sciences Research Journal*, Volume 1, Issue 6, a mental health project.
- [6] Artiniannt. Magnan, m, Sloan, m, lang, mp, mitching, 2003, sele-care behaviors among patients with heart failure, *heart and lung*, 31(3), pp: 161-172.
- [7] Baielyj, sabbagh m, loiselle cg, bioleau j, mcvey l, 2010. Supporting families in the ICU: A descriptive correlational study of informational support, anxiety and satisfaction with care. *intensive and critical care nursing*, 26, pp: 144-122.
- [8] Frederick PD, Lambrew CJ. 2009. Prevalence, clinical characteristics and mortality among patients with myocardial infarction Presenting without chest pain. *JAMA*. 28; 238(24): 322.
- [9] Kloosja, daly bt. 2008. effect of a family-maintained progress journal on anxiety of families of critically ill patients. *Critical care nursing research*, 51(5), pp: 331-324.
- [10] Sign andren, solve elmstahl. 2008. psychosocial intervention for family caregivers of people with dementia reduce caregivers burden: development and effect after 6 and 12 months. *Scand journal caring sciences*, 22, pp: 98-109.