

Original Article**Patients experiences of cardiac rehabilitation effects**

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Abstract

Background: Cardiac rehabilitation is used for preventing disease progression, improving quality of life, reducing disability and mortality in cardiovascular disease. Numerous studies mentioned cardiac rehabilitation effects on patients, but the structure of its effects is not absolutely defined. The aim of this study was to identify and describe the patient's experiences of cardiac rehabilitation effects.

Methods: It was a descriptive phenomenological study. Its participants were patients with cardiovascular accidents, participating in cardiac rehabilitation programs in Isfahan Cardiovascular Research Center in 2006 selected by purposive sampling. Deep semi structured interview with 8 participants was done and data were analyzed by Colaizzi method.

Results: Four obtained themes were "now I know", "to be able", "well being" and "healthy family".

Conclusion: the structure of rehabilitation effects reflected in knowledge, physical and psychosocial aspects that improve participants and their family's quality of life.

Key words: Cardiac rehabilitation, rehabilitation effects, experience

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The diseases related to life style, are recent major challenge for community health. The cardiovascular diseases (CVD) are the first cause of mortality in the world. CVD accounts for 38.0 percent of all deaths or 1 of every 2.6 deaths (1). Isfahan Cardiovascular Research Center reported that CVD is the first mortality cause in Isfahan and its prevalence dramatically increase in recent decade (2). It may seriously impair patient quality of life if not well managed and appropriately treated (3,4). Because of chronic and non curable nature of these diseases, for preventing disease progression and improving the quality of life, health promotion and illness prevention is necessary (5).

Like other conditions, heart diseases prevention has 3 levels. When heart diseases is established and diagnosed in patient, tertiary prevention including comprising treatment, care and rehabilitation will be done. Nurses have an essential role during the different phases of rehabilitation (5,6).

Cardiac rehabilitation is a multidisciplinary and multifaceted intervention, which aims to benefit patients and their relatives through exercise, education and psychosocial support. The aims of cardiac rehabilitation are to promote recovery, return health and maximize quality of life and to reduce the risk of recurrence of cardiac illness (4).

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The study of these processes is considered to be an essential part of the evaluation of health care interventions because, amongst other benefits, it can allow providers and policy makers to understand the outcomes, strengths and weaknesses of services provision (7).

Although the numerous studies have mentioned the effects of cardiac rehabilitation on patients, but the structure of its effects is not clear very well. The aim of this study was to identify and describe the patient's experiences of cardiac rehabilitation effects.

Methods

This was a descriptive phenomenological study; its participants were patients with cardiovascular events participating in cardiac rehabilitation programs in Isfahan Cardiovascular Research Center in 2006. Sampling initiate purposeful and continue to data saturation. Exclusion criteria were any limitation factor for describing the experiences such as communication disability or severe illness. Deep semi structured interview with 8 participants was done. Each of the interviews was done in private place and lasted between 30 to 60 minutes base on patients prefer. The focus of interview was the "experience of heart event", "life quality after event", "life accompanied with cardiac rehabilitation" and "life changing after participation in cardiac rehabilitation". All of interviewers were recorded. After each interview, the data were transcribed and analyzed using Collizzi method. Each transcribed interview was read several times and significant statements were identified at first, then, meaning of them formulated in separate terms. Similar meanings were sorted in one group and main them of each group was extracted. Finally 4 main themes were obtained, including "now I know", "to be able", "well being" and "healthy family", which present a complete view of cardiac rehabilitation experience.

Qualitative studies evaluated the trustworthiness of their data using the criteria of credibility, dependability, conformability and transferability (8). In our study, for improvement of these criteria, prolonged engagement of re-

searcher to the data collection and data analysis, peer debriefing with person who didn't participate in our study and findings recheck by participant after data analysis, inquiry audit and bracketing were considered. The aim of study was explained for every participant and consent form was given in Isfahan Cardiovascular Research Center for ethical consideration.

Results

Interview was done with 8 participants (6 men, 2 women) between 49 to 66 years old. 7 participants were undergone coronary artery bypass graft, and 1 angioplasty. Their education levels varied between diploma and lower to PhD. 3 persons were retired, 2 employees, 1 shopkeeper, 1 worker and 1 house keeper. Based on analysis, 4 obtained themes were "now I know", "to be able", "well being" and "healthy family".

"Now I know": knowledge about appropriate diet and its related risks was one of experiences that participant mentioned.

"I learn in rehabilitation program what I should eat and should not, if I don't do it, I well sick ... I don't eat salt any more."

Some participants referred to the knowledge about the importance of physical activity and take a healthy life style.

"Now I know that with on time exercise, taking drugs, avoiding of stress, I will not have any problem ..."

"To be able": improvement of physical activity tolerance is one of major participant's experiences.

"Before this program I couldn't walk, my tolerance was very low, but now it isn't like that I had problem ... now I could run about 45 minute ..."

Returning to work and daily activity as soon as possible, increasing physical fitness, increasing appetite, improving sleep pattern, and resistance against disease, pain relief and having no cardiac problem were another participants experiences in different aspect.

"Since beginning of program, nothing was wrong with my heart... I came back to my work soon ..."

"Coming here affected my appetite ... I can sleep without any pill ..."

"Well being": Having better moral and being happier, well being improvement, and decreasing psychological stress were emphasized by most participants.

"Since I come here I feel happier and younger, it is such a good feeling that I didn't have even in my juvenility ... my stress became lower and I can manage it."

Bravery in doing physical activity following rehabilitation program was noticeable.

"When you come here and see other participants who are like you, your fear will decrease little by little ... you do your activity more bravely ..."

Another participants' experience was friendly relationship with other patients.

"Here we are with friends, have similar condition, talk with each other, do exercise together, and it is perfect ..."

"Healthy family": Their experience presented cardiac disease risk factor awareness and its adjusting among patients, their family and relatives. Shifting information to other family members was a considerable result of program.

"My family learned whatever I learned ... now anybody in our home don't take high fat diet, or salt ..."

Discussion

Experiences of cardiac rehabilitation effects present in different life aspects. Improving the knowledge and awareness, physical activity tolerance, psychological status and family health promotion due to their engagement in rehabilitation program reflect these experiences.

Patient's knowledge and awareness Improvement about how to live healthier and modify heart disease risk factors are one part of valuable results from participating in rehabilitation program, which provide circumstance for participants to manage their life to be healthy. Clark et al in a qualitative research showed that participating in rehabilitation programs was accompanied with awareness about cardiac disease, healthy life styles and

modifiable risk factors (9). Mooney et al in a qualitative research explained that participants understood safe levels and limitations of activity and consequently took more confidence in physical activity. They also learned how to manage cardiac symptoms (10).

"To be able" is an experience that was emphasized by participants in several aspects. Their refer to increasing physical activity, decreasing disease induced limitations, having no cardiac problem, Returning to work and daily activity as soon as possible, increasing physical fitness and ideal weight, increasing appetite, improving sleep pattern, pain relief and resistance against disease. Koukouvo et al suggested that cardiac rehabilitation results in improvement of activity tolerance (11). Karacabey et al similarly showed that regular and persistent exercise improve significantly patient's physical tolerance, and their general health status, in addition, it prevents different disease by enhancing immune system potential (12). Decreasing further fetal and non-fetal infarction, further hospitalization, therapeutic interventions was also mentioned by some authors (13-17). Cooper et al identified cardiac rehabilitation as a factor that results in quicker returning to work (18). Findings of another study stated that regular physical exercise results in pain relief and health promotion (19). One of the most important goals of cardiac rehabilitation is decreasing residual physical and psychological disability of cardiac event, and this achievement was obvious in participant's experience in this study. One considerable point is motivating and stimulating role of regaining physical ability in follow up and continuing cardiac rehabilitation. This effect was highlighted in this study.

Well being which presents in social relationship and psychosocial status improvement was another participant's experience. Paying attention to patient's psychosocial status improvement is considerable because the relationship between psychological problem and high level of stress and increased cardiovascular disease is well known, on the other hand, they experience psychological crisis and de-

creased quality of life that has more stability than physical disabilities. So the rehabilitation effects on psychological status causes the improvement of quality of life, which can play a motivating role for participating in rehabilitation program. Bettencourt et al and Kardis similarly found improvement in all aspects of participants' life after rehabilitation (21,22).

"Healthy family" was another theme in this study. It refers to the effects of rehabilitation on not only participants, but even his or her family and relatives. Their families with direct and indirect collaboration were one part of rehabilitation. Meanwhile they affect program, and also program has effect on them. Gentz described that patient's spouse and other family members need a lot of information and should take part in education programs. He

mentioned that their participation in cardiac rehabilitation has benefits for both them and patients (23).

The structure of rehabilitation effects reflected in knowledge, physical and psychosocial aspects that improved participants and their family's quality of life. Achievement of these effects by patient is the aim of the cardiac rehabilitation, which is mentioned in our study by the participants. Based on our findings, achievement of these effects motivated the patients to participation and compliance. The experience of cardiac rehabilitation in different setting and population should be studied. Identification of motivation factor and barrier is necessary for promotion of patient participation and compliance.

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