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The effects of transitional care on quality of life in patients

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Abstract

The purpose of this study was to compare the effects of transitional care before and after intervention on quality of life in patients with chronic heart failure via an interventional method with the help of Minnesota Living with Heart Failure Questionnaire. As a result, the patients' quality of life after the intervention is significantly higher than that before intervention in different terms namely physical, emotional, and socioeconomic. In conclusion, measuring changes made to patient's health over time, for example, symptoms of illness, physical functioning, and quality of life in patients, represent the effect of the model on patient's recuperation.

Keywords: Transitional Care, Heart Disease, Hospitalization.

Los efectos de la atención de transición en la calidad de vida de los pacientes

Resumen

El propósito de este estudio fue comparar los efectos de la atención de transición antes y después de la intervención sobre la calidad de vida en pacientes con insuficiencia cardíaca crónica a través de un método de intervención con la ayuda del Cuestionario de vida con insuficiencia cardíaca de Minnesota. Como resultado, la calidad de vida de los pacientes después de la intervención es significativamente más alta que la anterior a la intervención en diferentes términos: físico, emocional y socioeconómico ($P = 0.00$). En conclusión, la medición de los cambios realizados en la salud del paciente a lo largo del tiempo, por ejemplo, los síntomas de enfermedad, el funcionamiento físico y la calidad de vida en los pacientes, representan el efecto del modelo en la recuperación del paciente.

Palabras clave: Atención de transición, Enfermedades del corazón, Hospitalización.

1. INTRODUCTION

Heart disease is considered a major and growing problem, and the first cause of mortality in the world. Patients with chronic heart disease face many barriers to managing their health needs. The results of a host of studies have indicated that poor management of health needs of patients with chronic disease contributes a lot to getting the economic and physical situation worse among the group of patients. The frequent hospitalization of this group of patients in hospital is unavoidable, not to mention the costs of care at the hospital which increase as they grow older. Experience has shown that modifying process and improving their management can contribute greatly to the results of these patients (Bowman et al., 2018). In 2018, a mixed method study was conducted by Naylor and colleagues, aiming at explaining and categorizing widespread methods and models for transitional care and its components as well as its impact on the outcomes of patients and older adults with chronic disease at the time of being transferred from hospital to their house in the US. In this study, 582 individuals who had a part in care transition at different institutions and social organizations participated. Out of the participants, 24 individuals were then interviewed in a semi-structured manner. According to the results of the study, 59% of participants reported the full administration of transitional care in their subset institutions with positive results. The results suggest the important role of the nurse and the need for developing a transitional care model. Similarly, the results of the interviews suggest the need of investment by institutions and healthcare and medical centers

in the operation and development of transitional care model (Bixby & Naylor, 2010). Considering the results of the studies in the field of the transitional care on chronic heart patient care, we need more recent approaches that follow three major goals; increase in patient experience, promotion of social health, and reduction of costs. Particularly, evidence-based transitional care that provides care needed for patients during hospitalization is regarded as an accepted approach among patients with chronic heart failure. In this transitional care model, besides a thorough assessment of a patient's health status at the time of hospitalization, required planning is made to continue healthcare in their house and social support for them. Thus, the present study was designed and conducted with an aim to explore the effect of transitional care on the quality of life in patients with chronic heart failure physically, emotionally-psychologically and socioeconomically (Alberto et al., 2014).

2. METHODOLOGY

The present study was conducted based on an interventional method on patients with chronic heart failure who were referred to the emergency department of selected hospital of Shahid Beheshti University of Medical Sciences and needed nursing care at home. The instrument for data collection is Minnesota Living with Heart Failure Questionnaire (MLHFQ). The sampling method is accidental or convenience sampling. For sampling, the researcher went to the selected hospitals and set out to perform sampling (84 subjects from three hospitals). Upon their arrival, an informed consent form was signed and a questionnaire containing

demographic information as well as a questionnaire about the quality of life in patients with heart failure were completed by the subjects, and the patients received support and training by the researcher throughout their attendance at the hospital (from admission to hospitalization); the support included training in reducing anxiety and stress of patient and patient companions, acquainting patients with their rights, acquainting patients and their relatives with treatment stages and process, as well as providing spiritual and emotional support. After their discharge, they received medical care on the phone or by a visit at their house if necessary (given their conditions and needs) for the follow-up procedure (Choi, 2017). After six months of follow-up by the researcher, the quality of life in the patients was examined with the help of Minnesota Living with Heart Failure Questionnaire (MLHFQ), which is one of the most common tools specifically used for measuring the quality of life in those with chronic heart failure. It should be noted that all the stages of the plan implementation were followed with the coordination of the department's nurses, physicians, patient consent, as well as the observance of ethical considerations. In an attempt to provide standard and consistent training for the patients by the researcher, educational pamphlets were prepared using the latest available references with the help of educational liaisons of the selected hospitals, and approved by an educational supervisor in the respective hospitals (Betz et al., 2018).

2.1. Determining the number of samples

The number of samples was determined by using the equation below;

$$n \geq 2 \frac{(z_{\alpha/2} + z_{\beta})^2 \sigma^2}{(\mu_1 - \mu_2)^2}$$

Where

$$\alpha = 0.05 \Rightarrow z_{\alpha/2} = 1.96 \quad \text{The probability of first-type error}$$

$$\beta = 0.10 \Rightarrow z_{\beta} = 1.28 \quad \text{The probability of second-type error}$$

$$1 - \beta = 0.90 \quad \text{Exponent}$$

$$(\mu_1 - \mu_2) / \sigma = 0.50 \quad \text{The value of the observed effect}$$

$$n = 2(1.96 + 1.28)^2 \left(\frac{1}{0.50} \right)^2 = 84$$

The minimum required samples

Given the above formula, a total of 84 subjects were included in this study.

2.2. Inclusion criteria for the study

All the samples meet the following conditions in order to be included in this study;

- 1- Their diagnosis is the merely heart failure (or diseases that have caused heart failure)

- 2. They are hospitalized at least once in the hospital over the last six months
- 3. The disease is diagnosed with no other underlying condition
- 4. Their age is between 20 and 76 years
- 5. They are residents of Tehran or its counties
- 6. They mastered Farsi
- 7. They needed to be hospitalized in the hospital.

3. RESULTS

In the present study, 84 patients with chronic heart failure were examined in total before and after an intervention. Table 1 shows the frequency distribution of patients according to their demographic characteristics.

Table 1. Frequency distribution of patients according to their demographic characteristics

Personal information	Intervention group	
	number	%
Age		
44-30	7	6.1%
54-45	30	36.6%
64-55	24	29.3%
65>	23	28%
Gender		
female	32	37.3%
male	52	62.7%

Job housewife freelancer employee retired unemployed		
	20	24.1%
	31	37.3%
	22	25.3%
	10	12%
	1	1.2%
Education Unfinished diploma diploma Associate degree Bachelor's degree Master's degree		
	15	18.5%
	28	34.6%
	8	6.2%
	26	32.1%
	7	8.6%
Marital status Single Married		
	8	10.7%
	76	89.3%
Another disease history Affirmative negative		
	19	22.9%
	65	77.1%
Type of disease except heart disease diabetes Blood pressure Renal failure Fat Other		
	5	27.8%
	6	33.3%
	2	11.1%
	2	11.1%
	3	16.7%

According to the results of the data analysis and administration of paired sample t-test, the quality of life was shown to be significantly and statistically different in the group in question in different aspects physically, emotionally-psychologically, and socioeconomically before and after the intervention (P=0.00). Table 2 shows the mean and standard

deviation of the threefold dimension of quality of life in patients with chronic heart failure before and after the intervention (Dreyer, 2014).

Table 2. Mean and standard deviation of the threefold dimension of quality of life in patients with chronic heart failure before and after the intervention

		mean	number	Standard deviation	Sig
physically	Before intervention	19.0998	84	4.96452	.000
	After intervention	8.7952	84	2.10550	
Emotionally- psychologically	Before intervention	14.6988	84	5.02611	.000
	After intervention	8.7470	84	1.56051	
Socioeconomically	Before intervention	19.0241	84	4.53167	.000
	After intervention	8.0723	84	1.93670	
Total	Before intervention	54.0163	84	13.19753	.000
	After intervention	26.0843	84	4.46724	
					Sig

Given the above table and the mean, the quality of life in three dimensions, namely physical, emotional-psychological, and socioeconomic was shown to be significantly and statistically different before and after the intervention ($p=0.00$). That is to say, the mean after the intervention is lower than that before the intervention, indicating that the quality of life has a better situation, i.e. the intervention was effective and helped to

improve the quality of life with respect to three dimensions in patients with chronic heart failure.

4. DISCUSSION AND CONCLUSION

Transitional care model is kind of planning for providing comprehensive care for chronic patients and elderly people in the hospital and its continuity at home. The transitional care model focuses on positive and long-term outcomes of patients by making sure that they have the essential skills and knowledge in the family to diagnose and address their health needs (Chaboyer, 2007; Prihastiwi, 2019). In the transitional care model, patient's home is a primary caregiving place that is guided and directed by a nurse. For thousands of patients who suffer from chronic diseases or complex therapies, transitional care model contributes to the improvement and promotion of health among these patients with managed care approach and an emphasis on the continuity of cares, prevention from complex complications, and active family-patient involvement in care program in liaison with their physician (Chaboyer, 2007). In the transitional care model, patient caregiving proceeds with coordination between a professional and skilled nurse, patient and his relatives, his physician and other members of the treatment team (Gronroos, 2010). In this regard, the results of several studies confirm the

result of the present research, showing that transitional care method can improve patient result including the reduction of hospitalization cases, reduction of medical costs, and promotion of their quality of life.

Care for elderly patients and patients with chronic diseases, especially residents of nursing houses or elderly halls, is facing many problems, particularly when they are hospitalized for their condition. Thus, care models which help to continue care for elderly people right from admission to their discharge seem to be necessary. In this respect, a qualitative study based on concept analysis was conducted by Crilly et al. in 2016 in Australia. The purpose of this study was to investigate the concept of continuity of care and various care models including transitional care. The result of this study indicated that there are four types of continuous care for patients that transitional care is one of the effective methods for continuous care for older adults (Hansen et al., 2011). Similarly, another study was conducted in 2007 in children hospital, intensive care unit, in Melbourne Australia. In this study, it was assumed that a liaison nurse can reduce the re-admission of children in the intensive care unit 48 hours after discharge from this unit by applying this transitional care model. In this model, the nurse was regarded as a linking bridge between normal and intensive unit. After a year of pilot studies, 1388 kids were discharged from the ward. During this

period, 67 patients ceased to be admitted again and generally the rate of the re-admission of children decreased from 5.4 to 4.8%. After a year of pilot study, staff and patients were asked about the impact of the transitional care model. 98.5% of intensive care unit staff found the actions of a liaison nurse over the application of the transitional care model very positive and useful. As for other results of this study, we can touch on the improvement of the relationship between parents and healthcare personnel, promotion of quality of education provided on the ward, the improvement of patient outcomes and reduction of re-admission in the hospital and intensive care unit (Hader, 2016).

In this regard, another study was conducted in 2012 in Argentina, in that an attempt was made to explore the effect of applying transitional care by a liaison nurse on patient readmission in the hospital. The liaison nurse observed and took care of 200 patients over 18 years of age after their discharge from ICU from 1 April to 31 July 2012. The samples suffered from heart and respiratory disease and diabetes. The results indicated that only one-fifth of patients who had been followed up and visited at home by liaison nurse after being discharged from ICU needed readmission and re-hospitalization. In general, transitional care contributes greatly to increased patient safety, outcomes of care, promotion of patient quality of life,

satisfaction with care and cost reduction (Hirschman et al., 2015). Measuring changes made to the patient's health over time, for example, symptoms of illness, physical functioning (cognitive, physical, mental and psychological), and quality of life in patients, represent the effect of the model on patient's recuperation. The evaluation of the treatment team's and patient family's ideas about the continuity of care in this model is another aspect of the role of the transitional care model in the promotion of patient health. Additionally, the change in patient's first readmission time, the number of hospitalization and the number of hospital presence days following the application of the model is another reason for its benefits and the need for healthcare system policy makers' attention to investment in the widespread application of this model.

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