

ORIGINAL ARTICLE

The Effect Survey of Self-Care Education Based on Multistage Method on Self Efficacy in Patients

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ABSTRACT

Hemodialysis led to the creation of many problems which to remove these problems self-care ability is needed, but self-care is dependent on self-efficacy. Purpose of present study is effect survey of self-care education multi-stage method program on self-efficacy of hemodialysis patients. This study is a Quasi-experimental research with before and after designs that 60 hemodialysis patients were selected with simple random. Data gathering instrument in this study was included demographic information and Shrer self-efficacy questionnaire that before training questionnaire was given to the research units then self-care training was done by multi-stage method and three months after training again questionnaire was given to the samples then information was collected. To analyze the data was used from 18 edition SPSS software and descriptive statistical, paired T-test, independent T-test and Pearson correlation. Comparison between control and intervention groups by independent t-test showed a non significant differences before training ($P=0/238$) but after training Comparison between two groups by independent t-test showed a significant differences ($P<0.00$). According to the results of this study, using of multiple-stage training method as a program is recommended to increase self-efficacy in patients with chronic diseases.

Keywords; Education, Renal dialysis, Self care, Self efficacy

Received 21/01/2016 Accepted 04/04/2016

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How to cite this article:

H Ghaffari, H A Chenari, A A Esmaili. The Effect Survey of Self-Care Education Based on Multistage Method on Self Efficacy in Patients. Adv. Biores. Vol 7 [3] May 2016: 29-33. DOI: 10.15515/abr.0976-4585.7.3.2933

INTRODUCTION

Chronic Kidney failure is an irreversible and incurable kidney function, caused by decreased glomerular filtration rate [1, 2, 3]. High blood pressure, diabetes, chronic glomerulonephritis and autoimmune diseases are the most common factors for kidney failure in adults [3, 4]. And its incidence is different in the countries, and 337, 90, 95, and 107 cases per million have been reported in the United States, Australia, England and New Zealand, respectively [5]. The prevalence rate of chronic kidney failure in Iran is 18.9%, which makes chronic health care an important issue [6].

There are various treatments in the field of kidney failure including hemodialysis, peritoneal dialysis, kidney transplant that hemodialysis is the first step usually to treat patients with kidney failure [4]. It is accepted that, hemodialysis is the most effective treatment to prolong the life of patients at a satisfactory level; however, this treatment creates limitations and changes, resulting in a damaging effect on the efficacy and quality of life [7]. Hemodialysis effects on mental state, social, economic, leading to a large number of psychological disorders [8, 9]. Psychological problems such as depression and reduced efficacy in patients undergoing hemodialysis, are created due to limitations in food and liquids, changes in the role of marital status, financial concerns, changes in social relationships and marriage, frequent admissions to hospital, limitations on vacation, restrictions on leisure activities, increased dependence on an artificial kidney machine, medical staff and the family environment, uncertainty about the future and etc. [10, 11]. Long illness and daily decisions such as fluid intake, nutrition, physical activity and management of the

symptoms are the main problems of hemodialysis, and adjustment of these problems needs care and self-care and self-care needed to create the high self-efficacy [12, 13].

According to Bandura's theory, self-efficacy is the level of individual's belief in his ability to formulate and implement actions in positions and future obligations, and involves in the performance as pervasive and central mechanism [14]. According to Bandura, self-efficacy contained self-confidence in one's ability to perform optimally, so that in this way the individual will achieve the desired results [15].

In addition to this self-efficacy in the self-management, decision-making [16,17], greater independence of patients [18,19], better compliance with recommended diet and public health, better adaptation with treatment [20], better social and occupational compatibility play significant role [21]. Many factors improve self-efficacy in patients that, with different forms of patient education is one of these cases, Education is the mean to achieve health promotion and a combination of education activities planned to enhance the self-efficacy and help the patients treated with hemodialysis. This program helps these people so they can change in their behavior resulted in improvement [22].

Unfortunately, in our country patient education program is not desirable, and it is concluded from the evidence that patient education either is not executed or has incomplete and irregular execution [23]. There are several methods for patient education, which according to conducted research, one of the best methods of training in chronic disease is self-care education [24]. Considering the importance of patient education, and due to the fact that studies in the country on the impact of multistage education on self-efficacy, have not been conducted, and because we have also received numerous reports of reduced self-efficacy in the country, in this study, we have tried to carry out this study with the aim of comparing the effects of multistage self-care education on self-efficacy in hospital haemodialysis patients of Shahid Chamraan hospital of Ferdos.

MATERIAL AND METHODS

The present study is a Quasi- experimental research with before and after designs study. The sample consisted of all patients with kidney failure in 2014 from the hemodialysis ward of Shahid Chamraan hospital in Ferdos(78 person). Cochran formula with error level of 5 percent was used for sampling which samples were 64 persons. Based on inclusion criteria and exclusion criteria 60 persons was entered to study, after that, research units randomly selected by lottery, and they set by simple randomization in control group(30 persons) and intervention group(30 persons).

Inclusion criteria for this study included age older than 15 years who do not have medical and paramedical education, ability for self-caring and flexibility in training and without consciousness disorders, the exclusion criteria also included, migration in the training program of this study, not passing training courses in the field of self-care program. Data gathering tools in this study was a Scherrer demographic information and self-efficacy questionnaire. Scherrer self-efficacy questionnaire is a 17 items questionnaire with 5-point Likert scale "Strongly Disagree, Disagree, no idea, agree and completely agree". This questionnaire totally has 85 points, that in this research Ganji and Farahani (2009), its validity was confirmed by content validity and its reliability have been gained by Cronbach's Alpha with reliability factor of 81% [25].

Firstly, the aim of the study was explained to the patients then the satisfaction of the patient was considered addressed in writing, and a demographic information questionnaire was given to the patients. After its completion and prior to any intervention Scherer self-efficacy questionnaire was given to control and intervention group, also, they were asked to complete the form, and a pre-test was performed, then the educational interventions began. Educational implementation in intervention group included training in understanding the nature of treatment and other treatment methods and the advantages and disadvantages of each, diet, drug, non-drug regimen including daily weight control, exercise and physiotherapy, emergency or warning signs to call a doctor, that they were in seven categories, and each category was divided into four sub-categories from easy to hard, in terms of comprehensibility and difficulty of content. Two sessions are held each week and time of each session depended on the patient's ability to learn subjects taught. And With an average time of each session was variable between 30 minutes to one hour. Training began through face to face training session and Q & A that is one of the easiest sub-categories of classes and when each sub-category ended, some questions in regard to completed subset training were asked from patients. If the answer was correct next subset were taught to the patient and otherwise things were repeated, so at sessions, all sub-categories were taught to the patients. The condition for training the next category is answering the questions from the previous session and otherwise it was required to retrain previous contents to the patient again. So the number of sessions depends on the ability of individuals varied between 10 to 20 sessions. At the end of training sessions, the phone number is given to the patient to communicate the instructor in case of any questions

and every two weeks after the end of the training sessions contact was made with the patient and compliance of training program will be followed in the patient's life. After three months, Scherer self-efficacy questionnaire was completed by patients in tow groups, and post-test is performed then the entire collected data with using SPSS software version 18 was analyzed. For analyzing data, was used from descriptive statistics such as mean and standard deviation, Pearson correlation, paired t-test to compare score of self-efficacy before and after training in every group independently and independent t-test compare self-efficacy score before and after training between two groups.

RESULT

The results showed that the age range of patients was 29 to 88 years and the largest age group was between 60 to 70 years of age. Also, 60% of patients (n = 18) were male and 40% (n = 12) were women. 66.7% (n = 20) of patients were illiterate and lowest educational level was related to higher education by 3% (n=1). 50% (n = 15) patients were with a history of diabetes, 33.3% (n = 10) with a history of heart disease and 16.7% (5 patients) were with kidney disease. 33.3% (n = 10) were unemployed, the highest percentage was related to job kind. Years of patience and duration of disease in patients was from 2 years to 30 years and an average of 13.5 years was mean duration of disease of the patients. Duration of dialysis was at least 1 year to a maximum of 10 years and average duration of dialysis was 3.05 years.

The score self-efficacy of the patients before training in control group was 47.23 ± 2.61 and after training was 55.20 ± 3.39 . Using paired t-test showed a significant increase after training. The score self-efficacy of the patients before training in intervention group was 45.33 ± 2.30 and after training was 62.24 ± 2.18 , also, using paired t-test showed a significant increase after training. Comparison between two groups by independent t-test showed a non significant difference before training but after training comparison between two groups by independent t-test showed significant differences (Table 1). Pearson correlation test showed a partial indirect linear relationship between age, time span of dialysis and disease, but it is not significant (Table 2).

Table 1: Score of self-efficacy in the intervention and control group before and after training

P-value	R	studied Variables
(Sig)P=0.12	-0.2	Age
(Sig)P=0.27	-0.15	Time span of dialysis
(Sig)P=0.82	0.07	Time span of disease

Table 2: relationship between ages, Time span of dialysis, Time span of disease with self-efficacy

Result based on independent T test	Group				Stage
	Control		Intervention		
	Number	SD± Mean	number	SD±Mean	
df=58 P=0/238	30	47.23 ± 2.61	30	45.33 ± 2.30	Before training
df=58 P<0.00	30	55.20 ± 3.39	30	62.24 ± 2.18	After training
		df=29 P<0.00		df=29 P<0.00	Result based on paired T test

DISCUSSION

Usually when people are in special circumstances, such as illness often try to increase their knowledge about that disease. This issue in patients with chronic disease that requires long-term treatment, such as patients with chronic kidney failure treated with haemodialysis devices often need to learn and perform self-care behaviours. On the other hand, self-care does not created, unless the self-care reaches an appropriate level. Therefore, in this study the effect of education with multi-stage method on the self-efficacy in Shahid Chamran Hospital dialysis patients were evaluated. Evaluation the effect of education with multi-stage method on self-efficacy showed that, using this method causes increased awareness of patient about self-care issues, such as: Drug regimen, food and etc. In haemodialysis patients and affect the self-efficacy; so, one can use this training method according to the conditions and facilities used in these patients. In this study, Comparison between two groups by independent t-test showed a non significant differences before training (P=0/238) but after training Comparison between two groups by

independent t-test showed a significant differences ($P < 0.00$). This result reflects the need for self-care education in this area by the stage method and it is consistent with other studies, including Shirazi and Joisik [26, 27, 28]. Shirazi and colleagues in their quasi-experimental study have found this point that, self-care education can have a significant positive effect on patients ($P = 0.04$), that is consistent with our study [26]. Joisik et al. in their randomized clinical trial study entitled "The impact of self-management interventions on outcomes for heart failure patients" show that the awareness of self-care behaviours in the intervention group after the training was better compared to baseline and it was statistically significant ($P < 0.001$). However, his training methods were different with our study [27]. Caldwell et al study results as "training program to improve awareness and self-care behaviors" shows that, method to perform self-care behaviors after training in the experimental group became significantly better than the control group ($P = 0.03$) [29]. In a study carried out by Madani and colleagues, it was found that execution of self-care program causes self-care improvement and significant reduction in side effects in patients [30]. In a study conducted by Rambod and colleagues in 2007 as self-efficacy in the field of regimen treatment, experimental and clinical markers in haemodialysis patients, it was demonstrated that, laboratory markers such as potassium, phosphate, nitrogen urea and weight gain between dialysis sessions, statistically correlated with self-efficacy ($P < 0.05$), that is consistent with this study and shows the positive effects of self-efficacy on controlling complications of haemodialysis [31]. In a study that was done by Baljany and colleagues on heart patients, it was shown that, increased self-efficacy through education lead to a reduction of risk factors in cardiovascular patients, and the quantities such as average BMI, LDL, systolic and diastolic blood pressure one month after or before the intervention has a significant positive relationship ($P = 0.001$) [32]. One of the limitations of this study was low sample size due to limited number of research community. Also, to have applicable findings in this research, the whole population census method was used and the total population size in the present study was not anticipated. More sample size is recommended for future researches. Another proposal is that, it is better in future research to investigate the effectiveness of other methods of self-care education on self-efficacy and compare them to determine the best method of education.

CONCLUSION

Health education, including self-care is one of the roles of nursing care that needs to pay more attention by nurse managers in this regard to the deployment of experienced nurses. According to the results of this research and the significance of self-care education with multi-stage approach in the self-efficacy of haemodialysis patients with regard to the applicability of this method, using this method as a program to increase self-efficacy in patients is recommended and emphasized.

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