



EVALUATION OF EFFICIENCY IN PATIENTS WITH A CHRONIC RENAL DISEASE UNDERGOING HEMODIALYSIS IN JAHROM UNIVERSITY, 2017

Mirzaei Maryam¹, Hosseini Samera², Zeinijahromi Mojtaba^{1*}

1. *Msc of Critical Care Nursing, Medical Ethics Research Center, Jahrom University of Medical Sciences, Jahrom, Iran,*
2. *Phd student of psychology, Semnan University, Semnan, Iran.*

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ABSTRACT

Introduction: Considering the importance of self-efficacy in patients' coping with the illness and having a successful life, the researchers decided to put in necessary plans to improve the level of self-efficacy in this population of patients and increase their self-confidence in the treatment plan. **Method:** The present study is an analytical descriptive study. It includes all patients over 18 years with a chronic renal illness, who have at least undergone of one year of treatment by hemodialysis and coverage of dialysis center at Shahid Motahhari Educational Hospital Under the supervision of Jahrom University of Medical Sciences. Sampling was done by census method. A 2-part questionnaire was used to collect information. After collecting the data, by using the SPSS21 software, the data were analyzed. **Results:** Self-efficacy was significantly higher in people over 60 years than those under 60 years. The self - efficacy score was higher in those without a history of renal disease (62.3 ± 11.5) than those with a history of renal disease (55.5 ± 11.8). There was no significant relationship between the self-efficacy score with sex, number of children, the cause of renal disease, economic status, occupational status, history of renal disease in the family, duration of the disease and duration of treatment with hemodialysis. **Conclusion:** Due to the low self-efficacy score in people under 60 years, single and with longer illness, we can conclude that it should be given more attention and therapeutic plans to these three groups to improve self-efficacy in patients undergoing hemodialysis in Jahrom.

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Introduction

A chronic renal disease is caused by irreversible damage to the neoprene [1] and it's one of the chronic diseases that causes many problems in the life of patients [2]. now, the incidence of ESRD is increasing all over the word [3-5], so that every year an 8% increase is added to the population of this disease [5]. According to the United States annual data report, the incidence of ESRD has been increased, from 337 to 355.4 in per million population between 1999 to 2009 [6]. The National foundation of the United States of America defines the chronic renal disease as a kidney injury or glomerular clearance less than 60 mm per minute for 1.73 m² from the body surface during 3 months or more. This disorder is a progressive and irreversible disorder that ultimately leads to uremia [7]. According to published statistics in Iran, by the end of 1394, the population of patients with ESRD treated with alternative renal methods has reached to more than 55,000 people [8]. According to the Ministry of Health, the disease is associated with an annual growth rate of 20%; various methods are proposed for the treatment of patients with chronic renal failure, one of the most effective and commonly of them is hemodialysis [9]. The treatment options of this disease include long-term dialysis or kidney transplantation. In the world, the incidence of chronic renal failure is 242 cases in per million population, and about 8% is added to this rate, annually [10]. Studies have also shown that the incidence of renal disease in advanced stages increases by 7-9% annually [11]. According to the latest statistics provided by Iranian Transplant Management and Special Disease Center, the number of people with advanced renal disease in the country is about 25,000, of which approximately more than 50% of these patients are undergoing of hemodialysis treatment. The number of patients undergoing hemodialysis in Iran increases by 15% annually

Corresponding Author: Zeinijahromi Mojtaba, Msc in Critical Care Nursing Medical Ethics Research Center, Jahrom University of Medical Sciences, Jahrom, Iran. Email: m.zeini@jums.ac.ir

[10]. Many diseases, especially Chronic and debilitating types, have many psychiatric consequences. Therefore, the occurrence of psychiatric disorders is common after a physical illness [12]. Patients with chronic renal failure also face many physical and psychological stresses, including increased blood pressure, lack of appetite, anemia, sexual dysfunction, reduced or no financial income, social isolation, lack of sense of security, etc. On the other hand, the nature of the disease, and consequently hemodialysis problems, make significant changes in the patients' lives, including reducing the effectiveness and ability to perform activities, weakness, fatigue, muscle contraction and disappointment towards the future that leads to social isolation, lack of mobility and self-confidence decrease [13]. In the results of most studies, high incidence of psychosocial disorders in dialysis patients is observed so that increasing the desire for suicide, depression, anxiety, sexual dysfunction and interpersonal problems in dialysis patients is more evident. The most common cause of mental illness is depression in these patients and after that anxiety is common with less incidence [14]. One of the effective factors in improving the quality of hemodialysis patients is self-efficacy, which means assuring the person of the ability to take care of themselves in a specific condition [14]. Self-efficacy as one of the main concepts of cognitive-social theory was first introduced by Bandura in 1977; In Bandura's social learning theory, self-efficacy is a dynamic cognitive process that evaluates the ability of individuals to perform a health behavior [15] and includes the individual's confidence and confidence in being able to do his or her own self-care activities so that in this way, the person will achieve the desired results [16]. Self-efficacy is the person's trust in the ability to perform particular behaviors in particular situations which means the trust that one has in himself/herself to conduct a particular behavior successfully and he/she expects its results. Self-efficacy is an important prerequisite for behavior as it acts as an independent part of the basic skills of a person [15] The sense of self-efficacy can affect all aspects of life in the future. [10] And, according to Bandura, it is possible to increase self-efficacy and personal ability through the creation of appropriate fields in order to acquire the skills and knowledge required and achieve the success in it. Low self-efficacy can also reduce cognitive and practical function [10]. This feeling may affect all aspects of life. For example, a study by researchers has shown that the higher the level of self-efficacy, the better a person can do his/her job and he/she will have more interest in doing it. Some other researchers have concluded that increasing self-efficacy and self-confidence can reduce the patient's physical and mental symptoms, and those who are more confident in doing things have a higher level of health, but patients who are unable to adapt to their illness face with consequences such as a decline in the quality of life [14]. Considering the importance of self-efficacy in helping the patients to deal with the illness and having a successful life, the researchers decided to consider self-efficacy in patients with chronic renal disease undergoing hemodialysis in Jahrom city so that if necessary, they plan to improve the level of self-efficacy in this population of patients and increase their self-confidence in the patients' plans.

Method

In a cross-sectional descriptive study, 100 patients with chronic renal failure undergoing hemodialysis in Shahid Motahari Health Center in Jahrom were enrolled. Sampling was done by census method. Entrance criteria includes patients over the age of 18 with CKD, patients with verbal, auditory and audible ability to answer the questions, patients who have been undergoing hemodialysis for at least one year, and they were excluded from the study if they did not have the mentioned criteria. The data collection instrument was Sherer's self-efficacy questionnaire. This questionnaire measures individual beliefs and individual ability to overcome different situations. This scale has 17 questions, which every question is set up based on Likert scale from extent of completely disagree to completely agree. Scale scoring is that each item has a score of 1 to 5 points. Questions 1, 3, 8, 9, 13, and 15 are scored from right to left, and the rest of the questions are scored inversely from left to right. So the maximum score that a person can get from this scale is 85 and the minimum score is 17. High scores show high self-efficacy in individuals. Sherrer et al. (1982) stated that Cronbach's alpha was 0.86 [10]. This scale was translated and validated by Barati (1376) quoted by Najafi and Foulad Chang. To ensure reliability, Cronbach's alpha in the sample was equal to 80% [17]. After obtaining permission from the respected deputy director of the department of disease control and responsible for dialysis department, the researchers referred to the dialysis department during some days, in a few shifts in the morning and noon and afternoon and after obtaining the patients' satisfaction, gave them the questionnaires. Questions were asked verbally if they were illiterate, and answers were recorded in each one's form. Data were collected by SPSS software version 21 and analyzed by using descriptive and analytical statistics.

Results

Of the 100 cases that were included in the study, 56% of the samples were male and the rest were female. Most (87%) were married and the mean age was 60.9 ± 1.4 years (Table 1). The self-efficacy score in the samples was 56.6 ± 1.2 . Self-efficacy score in married people (57.5 ± 11.5) was higher than single ones (44.2 ± 6.0 and p less than 0.001). Self-efficacy was significantly higher in people over 60 years than those under 60. Also, self-efficacy score in those without a history of renal disease (62.3 ± 11.5) was higher than those with a history of renal disease (55.5 ± 11.8 and p less than 0.05) (Table 2).. However, there was no significant relationship between self-efficacy score and gender, number of children, the cause of renal disease, economic status, occupational status, history of renal disease in the family, duration of the disease and duration

of treatment with hemodialysis (Table 2). The Pearson correlation test was used to determine the relationship between the duration of renal disease and the duration of hemodialysis with self-efficacy score in patients which showed no meaningful relation between them (Table 3 and 4).

Table 1. Relationship between self-efficacy score and age

P value Df	Mean + self-efficacy standard deviation	age category
0/005<p 2	2/3±48/0	45<
	1/8±56/9	60<&<45
	1/8±58/6	<60

Table 2. The link between self-efficacy score and the history of kidney disease

P value Df	Mean + self-efficacy standard deviation	history of kidney disease
0/05< 98	11/8±55/5	YES
	11/5±62/3	NO

Table 3. The relationship between self-efficacy score and duration of kidney disease

P value	Pearson correlation coefficient	Spearman correlation coefficient	Mean + self-efficacy standard deviation	Duration of kidney disease
0/26 0/23	0/1	0/1-	56/6±1/2	0.7±6/5

Table 4. The relationship between self-efficacy score and duration of hemodialysis treatment

P value	Pearson correlation coefficient	Spearman correlation coefficient	Mean + self-efficacy standard deviation	duration of hemodialysis treatment
0/41 0/24	0/1	0/1-	56/6±1/2	0/3±3/3

Discussion and Conclusion

Although the immunization, health and treatment promotion, and mortality of infectious diseases have declined since the beginning of the 20th century, the progress made has led to diseases that have definitely led to death in the last century; several years after the diagnosis they become chronic diseases. Chronic diseases are one of the most important causes of death in the world. Chronic renal disease is a general term used for various disorders that affect the structure and function of the kidney. The incidence of this disease is different in different parts of the world. But in general, the incidence of this disease in most countries is more than 200 cases in per million people every year [18]. Some of the chronic renal disease, depending on the underlying cause, can be cured. One of the common treatments in this case is hemodialysis. Dialysis is a stressful process and causes many psychological and social problems. Knowing about chronic renal disease and, subsequently, using a hemodialysis therapist will change the person's life and the person's surroundings. Adapting to these changes seems to be a problem because it affects different aspects of the person's life and creates worries and fears. For many people who has this illness, thinking about using hemodialysis can cause them to be horrified. But a better understanding of the expected outcomes can greatly reduce their fears and lead to increase self-care ability in them [19]. The purpose of this study was to evaluate the self-efficacy of patients with chronic renal disease undergoing hemodialysis. In this study, self-efficacy was significantly higher in people over 60 years than those under 60. In line with these results, Weng, Dai, Wang, Hung and Chiang (2008) also showed that patients with higher self-efficacy were older [20]. Also, Cartin, Walterz, Shatel and panel (2008) studies in which self-efficacy was evaluated in patients with chronic renal disease undergoing hemodialysis, self-efficacy was found to be higher in older patients [21]. It can be said that as he/she grows older, he/she has an experience in coping with a variety of stresses. This future experience can help to strengthen self-confidence in countering with stressful conditions, such as diagnosis of chronic renal disease and hemodialysis treatment. On the other hand, it can be said that chronic renal disease in higher ages seems to be more normative than in inferior age. Therefore, if you are diagnosed with chronic kidney disease at an advanced age, the person may be better prepared to deal with it. Findings of this study showed that there is a significant relationship between self-efficacy and marital status of patients undergoing hemodialysis, so that married people have higher self-efficacy than single ones. Perhaps marriage and family formation take on more responsibilities, which indirectly contribute to increase self-efficacy. In fact, married people choose more challenging goals. Rising self-efficacy leads to focus on opportunities instead of focusing on barriers. Self-efficacy is explicitly linked to the qualifications and future behavior of individuals. High self-efficacy is associated with

better compatibility and improving the quality of life in patients undergoing hemodialysis. Also, the results of this study showed that there is a significant relationship between the longer duration of the disease and self-efficacy, so that the rate of self-efficacy in those with a history of renal disease was lower than those who did not have a history of renal disease. The findings of this study were in line with the study of Ramdad, Pirovi, Rafi and Hosseini (2009). They also found an inverse and significant relationship between the history of renal disease and self-efficacy [22]. It can be said that since the anticipation of people with pre-existing chronic renal disease is a predictor of subsequent psychological stress, therefore, patients may experience higher rates of self-efficacy before and at the beginning of the disease due to their high self-efficacy; with the advancement of disease and a long history of disease, it gradually reduces their self-efficacy and will have a negative impact on their expected outcomes. Among the limitations in this study, it can be mentioned to the small number of samples and hemodialysis patients investigated only in one hemodialysis center in Jahrom. In general, considering that patients with chronic renal failure undergo hemodialysis treatment for a long time and this affects the quality of their lives, therefore, self-efficacy is considered as one of the effective factors in controlling and achieving the expected outcomes by patients. Therefore, increasing self-efficacy of patients can increase self-care capacity. Based on the findings of this study, we can say that there are unique personal factors that affect the ability of individuals in patients with chronic renal disease undergoing hemodialysis. One of these personal factors is self-efficacy; the ability to manage individual situations (Bandura, 1997). Therefore, high self-efficacy is associated with better adaptation and less reflective of psychological stress levels in patients with chronic renal failure undergoing hemodialysis. As a result, patient education and support to increase self-efficacy seems necessary.

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