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Assessment Self-Care of Patients' Undergoing Hemodialysis with end Stage Renal Disease

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Abstract

Objective: this study designed to assess self-care of patients' undergoing hemodialysis with end stage renal disease and to determine out association between self-care of patients with end stage renal disease and their socio-demographic characteristics. Descriptive cross-sectional design is adopted in the recent study to perform the early stated objects. Started the study from (October 1st, 2016 until May, 6th, 2017). A Non-Probability (Accidental Sample) of (61) ESRD patients, those who visit dialysis centers of Al-Sadder Medical City in Al-Najaf Al-Ashraf., are included in the study sample. Analyzed data by descriptive analysis contains (Frequencies & Percentages) and statistical figures (Pie Charts) and Pearson's Correlation Coefficients. The outcome of the present study that the self-care activities are interdependent and there is a positive relationship between the patients' self-care with their age, income and marital status. While there is a non-significant difference between self-care activities and their clinical data in all items except there number of admission to emergency is a high significant difference. The study concludes that most patients with ESRD need moderate assistance in performing in dietary, exercise and other activities.

Keywords*: assessment, self-care, patient, End Stage Renal Disease (ESRD).*

Introduction

End-stage renal disease (ESRD) is irreversible and a progressive chronic disease reasons a main health crisis worldwide. The occurrence of ESRD is rising by 7% every year [1]. It is a chronic, life-threatening condition has been emerged as a main public health problem around the world [2, 3]. ESRD is a growing public health problem, given the raising prevalence international. It is estimated that by 2020 the number of patients ESRD will increase by 60% when compared with the number of patients recorded in 2005. Data from 150 countries showed that over 3 million patients were treated for ESRD worldwide by the end of 2012 [4] . Hemodialysis is the process used to removal fluid and waste products from the body when the kidneys are notable to doing. The object is to maintain the life and well-being of the patient until the renal function is repaired. Mechanism of the dialysis working on the principles of the diffusion of solutes and ultrafiltration of fluid transit a semi-permeable membrane. There are three types of dialysis i.e. hemodialysis (primary), peritoneal dialysis , hemofiltration , as well as there are two secondary types of dialysis which are hemodiafiltration , and the intestinal dialysis [5]. Self-care defined as an active participation in own health care, it is about learning what to do to take care of on self and when to decide to ask for help; it is an achievement, and measures persons get to enhance their health and well-being, to prevent and reduce the likelihood of disease, and to restore health after injury or illness. According to Orem (1998) self-care theory is founded on the philosophy that "all patients wish to care for themselves" if the patients are allowed to perform their own self-care requisites to the best of their ability, it will recompense more rapidly and holistically. The theoretical frame-work of Orem's self-care theory was taken as a base for carrying out the current study aiming at assessing self-care practices of patients' on maintenance hemodialysis at one of teaching hospital [6] .

Methodology

Design of the Study

Descriptive cross-sectional design is adopted in the current study to achieve the early stated objectives. The study started from October 1st, 2016 until May, 6th, 2017. A Non-Probability (Accidental Sample) of (61) ESRD patients, those who visit dialysis centers of Al-Sadder Medical City in Al-Najaf Al-Ashraf., are included in the study sample.

An assessment tool is adopted and developed by the researcher to assess of self-care activities for patients' with ESRD. The final study instrument consists of three parts:

- **Part 1: Demographic Data:**

This part consists of (7) items, which involve, age, gender, level of education, monthly income, residence, marital status, occupation status.

- **Part 2: Clinical Data:**

This part consists of (6) items: (number of admission to emergency, previous hospitalization/ day, problems begin since: years, hemodialysis begin since: years, number hours hemodialysis sessions/ week, heart disease, diabetes mellitus, hypertension and respiratory disease)

- **Part 3: Self Care:**

This part of the questionnaire comprised of (4) domains: (dietary, exercise, psychological and general care)

Collected the data by applying of the developed questionnaire with aid of structured interview technique with the subjects as they were individually interviewed. The study subjects are interviewed in a similar way. The interview technique spends about 20-25 minutes for each subject.

Statistical Analysis

The data were analyzed by using statistical methods to evaluate the study result:

- Descriptive Data Analysis: This approach includes the following measurements: A- Frequencies and Percentages. B-Mean, Mean of scores (MS) C-through using Split Half.

- Inferential data analysis: include Pearson's Correlation Coefficients to determine the reliability of questionnaire (Internal consistency).

Ethical consideration:

This is one of the most essential principles before collecting the data, to keep the patient's morals and self-esteem. The researchers achieved this agreement from the ethical committee at the Faculty of Nursing / University of Kufa. The researchers promised to keep the patient's information confidential, and use these data for this study only then he explained the purpose of this study to each participant without affecting the routine visiting and care. In addition to above the researcher told each participant that this is an involuntary work, and they can leave any time even the interview process is not completed.

Results

Table (1): Distribution of the study sample according to their demographic data

Demographic data	Rating and intervals	Frequency	Percent
Age/ years	<= 29	14	23
	30 - 39	13	21.3
	40 - 49	10	16.4
	50 - 59	8	13.1
	60 +	16	26.2
Gender	Male	39	63.9
	Female	22	36.1

Cont... **Table (1): Distribution of the study sample according to their demographic data**

Levels of education	Unable to read and write	14	23
	able to read and write	15	24.6
	Primary school grad.	14	23
	Intermediate school grad.	8	13.1
	Secondary school grad.	5	8.2
	Institute graduated	2	3.3
	College graduated	3	4.9
Income	Sufficient	22	36.1
	Sufficient To What Limit	11	18
	Insufficient	28	45.9
Residency	Rural	25	41
	Urban	36	59
Marital status	Single	11	18
	Married	49	80.3
	Widowed	1	1.6
Occupation	Retired	4	6.6
	Housewife	18	29.5
	Employee	10	16.4
	Jobless	14	23
	Free job	15	24.6

Table (1) This table shows that (26.2%) of the study subjects age within (29 years old and more), the study results revealed that the majority (63.9%) are males, In addition, the study results present that (24.6%) of the sample are able to read and write, while (23%) are primary school graduated. additionally, the study results reveals that (45.9%) of the sample are present insufficient monthly income. Also (59%) are living in urban residential area. Concerning the subjects marital status, (80.3%) of the study sample are married. In regards to occupational status (29.5%) are housewives.

Table (2): Statistical distribution of the study sample according to their clinical data

Clinical data	**Rating and intervals**	**Frequency**	**Percent**
Number of admission to emergency	<= 0	15	24.6
	1 - 5	34	55.7
	6+	12	19.7
Previous hospitalization/ day	<= 0	23	37.7
	1 - 5	26	42.6
	6+	12	19.7
Problems begin since: years	<= 5	49	80.3
	6- 10	7	11.5
	11+	5	8.2
Hemodialysis begin since: years	<= 3	56	93.3
	4- 6	2	3.3
	7+	2	3.3

Cont... Table (2): Statistical distribution of the study sample according to their clinical data

Number hours hemodialysis sessions/ week	<= 2	3	4.9
	3- 4	2	3.3
	5+	56	91.8
Heart disease	Yes	9	14.8
	No	52	85.2
Diabetes mellitus	Yes	23	37.7
	No	38	62.3
Hypertension	Yes	43	70.5
	No	18	29.5
Respiratory disease	Yes	8	13.1
	No	53	86.9

This table show that the number of admission to emergency, the highest percentage (55.7%), the study results show that (42.6%) of the study sample are Previous hospitalization, the study results show that (80.3%) of the study sample are Problems begin showing <= 5years, (93.3%) showing <= 3.00 years, Hemodialysis begin, the study results present that (91.8%) of the sample are hemodialysis sessions above 5 years, (85.2%) are no suffering from heart disease, (62.3%) are no suffering from diabetes mellitus, (70.5%) are the suffering from hypertension, (86.9%) are no suffering from respiratory disease.

Table (3): Assessment self-care of patients' end stage renal disease

Self-care domains	Levels	Frequency	Percent	M.S.	Assessment
Dietary	Independent	28	45.9	2.2	Interdependent
	Interdependent	31	50.8		
	Dependent	2	3.3		
Exercise	Independent	9	14.8	1.7	Interdependent
	Interdependent	30	49.2		
	Dependent	22	36.1		
Psychological	Independent	28	45.9	2.3	Interdependent
	Interdependent	32	52.5		
	Dependent	1	1.6		
General Care	Independent	41	67.2	2.5	Independent
	Interdependent	20	32.8		

This table shows that the patients' responses are interdependent at dietary, exercise and psychological domain. Independent at the general care domains.

Table (4): Overall Assessment self-care of patients' end stage renal disease.

	Levels	Frequency	Percent	M.S.	Assessment
Overall patients' Self-care	Independent	24	39.3	2.2	Interdependent
	Interdependent	36	59		
	Dependent	1	1.6		

Table (4) This table shows that overall patients' self-care are Interdependent

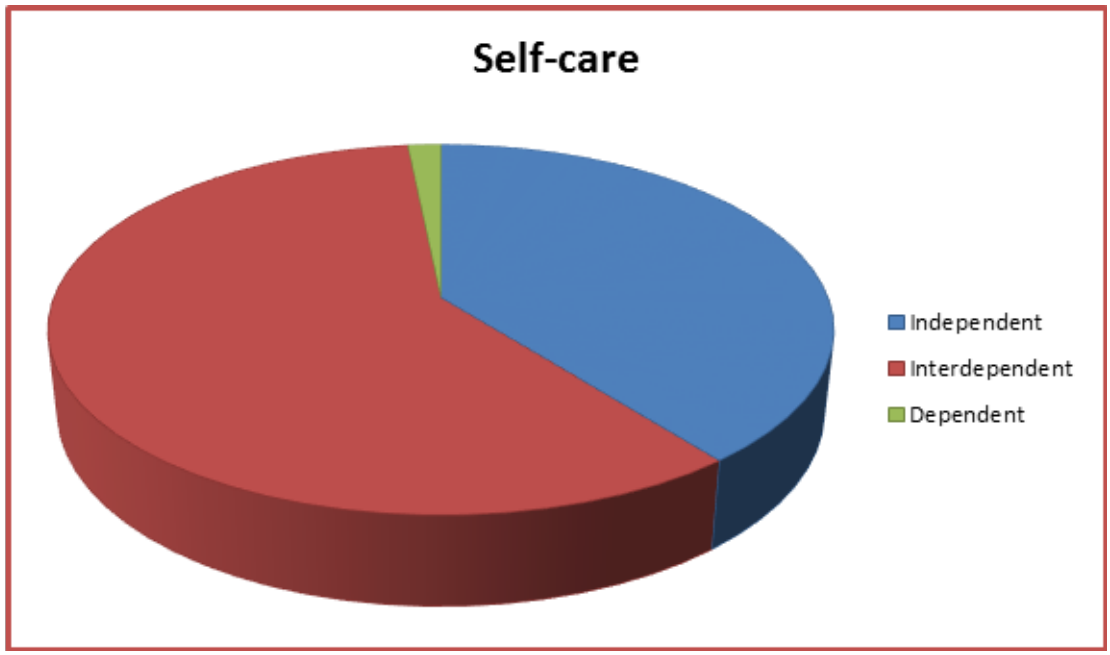

Figure (1) Overall Assessment for Patients' Self care

Table (5): Relationship between the patients' self-care and their demographic and clinical data

Demographic and clinical data	Pearson Correlation	Sig. (2-tailed) P-Value
Age / years	-.343	0.007 HS
Gender	0.068	0.6 NS
Levels of education	-.064	0.625 NS
Income	-.271	0.034 S
Residency	-.114	0.382 NS
Marital status	-.275	0.032 S
Occupation	-.121	0.354 NS

Cont... **Table (5): Relationship between the patients' self-care and their demographic and clinical data**

Number of admission to emergency	.306	0.017 HS
Previous hospitalization/ day	-.059	0.654 NS
Problems begin since: years	-.071	0.584 NS
Hemodialysis begin since: years	0.033	0.805 NS
Number hours hemodialysis sessions/ week	0.056	0.667 NS
Heart disease	0.17	0.191 NS
Diabetes mellitus	0.186	0.151 NS
Hypertension	0.15	0.25 NS
Respiratory dis.	0.203	0.116 NS

NS: Non-Sig. at P>0.05, S: Sig. at P<0.05, HS: high significant at p-value less than 0.01.

The table reveals that there is a highly significant association among the patients (self-care activities) and their (age and emergency), at p-value < 0.01. and significant in relation with (income and marital status) at p-value <0.05. while there is a non-significant association with remaining demographic and clinical data.

This study is the effort to investigate Personal care for dialysis Patients in Najaf Governorate Iraq in general. That the majority of the study subjects (26.2%) are within the age group (more than 60 years). This finding comes along with [7]. Whose results indicated that the thirty five percentage were age group of 60 and over years. Concerning to the study subjects gender, the results indicate, that the higher percent of the study sample are males. This result comes along with [8, 9]. Concerning educational levels, the higher percentage (24.6%) are able to read and write. This result is in agreement with other studies Al-Garni, (2006) and Anees, *et al.* (2011) in their studies found that the majority of the study subjects are able to read and write [10, 11]**.** Most of the sample results indicate that (45.9%) of the study sample are insufficient monthly income. This come is consistent with another study of Mahmoud and AbdElaziz, (2015) and Halle, *et al*. (2015) reveals in their studies that most of the study sample hasn't enough monthly income [12, 13]. Regarding residency, the current study results show that most of the sample (59%) is live who at urban area. This result in agreement with Crews, *et al*. (2014) they indicated that the majority (98.4%) patients of ESRD is living in urban area, Concerning to marital status, majority of subjects (80.3%) are married [14]. Table (2) shows that the majority of the study subjects (55.7%) are admitted to the emergency department for 1-5 days annually. While the number of hospitalization days, the study results indicates that the majority of the subjects (42.6%) are hospitalized for 1-5 days annually [19]. In addition to that and in regarding to the period when the renal problems appear, the results show that the (80.3) are equal or less than (5 years). While for the hemodialysis duration, about (91.8%) from the study subjects were meeting dialysis for more than 5 hrs weekly. This finding agrees with the result [20]. In addition to the problem, the higher percentage (85.2%) of study results had no heart disease then diabetes mellitus (62.3%) which represent the highest percentage of other included problem followed by hypertension (70.5%) and (86.9%) are no suffering respiratory disease. This result is supported by [21, 22]. The study findings indicate that the overall assessments for patients' self-care activities

are interdependent. It shows that the sample responses to the following self-care activities are interdependent which mean they need some assistance in performing these activities, while the sample self-care activities were independent in general care domain which means they do not need any assistance. These results agree with [6]. According to the study results indicate that the high-significant relationship between the patients self-care activities and their (age and emergency), and significant in relation with (income and marital status) while there is a non-significant relationship with other demographic and clinical data. Present study is in agreement with [10, 23].

Conclusions

All the patients with ESRD are completely independent in General Care themselves in their daily self-care activities and Most patients with ESRD need moderate assistance in performing in dietary, exercise and psychological in their daily self-care activities.

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Conflict of Interest: None to declare.

Ethical Clearance: All experimental protocols were approved under the Faculty of Nursing, University of Kufa and all experiments were carried out in accordance with approved guidelines.

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