Assessment of Patient's Knowledge Regarding Hemodialysis Therapy at Imam Hussein Medical City in Holly Karbala Governorate

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Absract

Background: Descriptive and analytical study in which evaluation approach applied in order to achieve the objectives of the study mentioned at the beginning of the search. The study began in 2 April 2016 to 21 June 2017,The research was conducted in order to identify hemodialysis patients knowledge regarding hemodialysis therapy at Imam Hussein medical city in holly Karbala Governorate

Objectives: to assess hemodialysis patients knowledge about hemodialysis therapy, To find out the relationship between hemodialysis knowledge and some variables such as: age, gender, level of education.

Methods: This Descriptive and analytical study was conducted at Imam Hussein medical city in the province of Karbala, Iraq, from 1 October 2017 to 1 April 2018, use to to identify hemodialysis patients knowledge regarding hemodialysis therapy. SPSS 21 was used for statistical analysis.

Results: shown on Results of the study that Highest percent of the study samples was samples age (50 or more) years old, According to the gender, the study sample were male and female, equal percent and number was (50-50%), Most of the study sample low educational levels, Most of them had married, Finally the general knowledge level of Imam Hussein medical city regarding hemodialysis therapy is High.

Conclusion: Highest percent of the study samples was samples age (50 or more) years old, According to the gender, the study sample were male and female, equal percent and number was (50-50%), Finally the general knowledge level of Imam Hussein medical city regarding hemodialysis therapy is High.

***Keywards**: hemodialysis patients knowledge, hemodialysis.*

Introduction

Kidney failure, also known as renal failure or renal insufficiency, is a medical condition in which the kidneys fail to adequately filter waste products from the blood. The two main forms are acute kidney injury, which is often reversible with adequate treatment, and chronic kidney disease, which is often not reversible [6]. Kidney failure is mainly determined by a decrease in glomerular filtration rate, which is the rate at which blood is filtered in the glomeruli of the kidney. The condition is detected by a decrease in or absence of urine production or determination of waste products (creatinine or urea) in the blood. Depending on the cause (National Institute of Diabetes and Digestive and Kidney Diseases, 2013). Dialysis is the artificial process of eliminating waste (diffusion) and unwanted water (ultrafiltration) from the blood. Healthy kidneys do this naturally. Some people, however, may have failed or damaged kidneys which cannot carry out the function properly - they may need dialysis. Dialysis is the artificial replacement for lost kidney function (renal replacement therapy). Dialysis may be used for patients who have become ill and have acute kidney failure (temporary loss of kidney function), or for fairly stable patients who have permanently lost kidney function (stage 5 chronic kidney disease) (Medical News Today, 2015). If kidneys are damaged the waste product is removed from the human body by hemodialysis procedure. Without dialysis the amount of waste products in the blood would increase and eventually reach levels that would cause coma and death [11].

Methodolog

A descriptive analytic study was designed to identify hemodialysis patients knowledge regarding hemodialysis therapy at Imam Hussein medical city in holy Karbala, Iraq.The study has been conducted on hemodialysis patients at Imam Hussein medical city in the province of Karbala, Iraq. The data were collection through the use of questions put in the questionnaire and data collection done through used the self-administration techniques. Study population was using purposive selection sample technique, 100 samples from hemodialysis unit at Imam Hussein medical city in the province of Karbala, Iraq

Instrument

Measure which was built by researchers, who used contain 34 question divided into two sections: Demographic knowledge, Patients' knowledge of kidney failure and hemodialysis: Knowledge relate to kidney failure, Knowledge relate to causes kidney failure, Kidney and hem dialysis, Problem happen through hem dialysis process, Knowledge must be done after hem dialysis process. The first section of the questionnaire was the participants background; (age, gender , educational level, marital status, duration of kidney failure.

Second section: Patients' knowledge of kidney failure and hemodialysis.

Rating and scoring

Some question consists of (2) alternative responses, and only one of these alternative responses was considered a correct response. To achieve the purpose of the present study, the responses of emotional distress questionnaire were scored as (3) never and (2) sometimes and(1)always.

(Cut of point) x100 / (No. of scale).

Low = (less than 75), Moderate = (75.1-87.5), High = (87.6-100), these calculated according to the following formula (100-75) /2 =12.5, then this score was added to (75+ 12.5=87.5) moderate level, (87.5+12.5=100) high. level **(Al-maliky, 2010).**

The instrument was validity by a panel of (9) expert from the Karbala university, college of nursing, and (1) from hemodialysis unit at Imam Hussein medical city.

Pilot study:

A pilot study was conducted on a purposive sample of (10) patients which was selected from hemodialysis unit from the period 25 December 2018 to 26 December, 2018. The pilot study sample was excluded from the original sample of the study.

Reliability assessments according to the internal consistency of the studied questionnaire was (75.5%) by using Cronbach Alpha test.

Data analysis:

Statistical analyzes were conducting by using the statistical package for social science (SPSS) version 23. Data analysis was employed through the application of descriptive and inferential statistical approaches which were performed through the computation of the following:(Frequencies(F),Percentage(%),Cumulative percentage ,Means of score(M.S),Standard deviations(SD) and Relative sufficient.

Results of the Study

This chapter present results of the study with correspondence to the study objectives.

Table (1) Statistical Distribution of the Study Sample by their Demographic Data:

No		Frequency	Percent	Cumulative Percent

Cont... **Table (1) Statistical Distribution of the Study Sample by their Demographic Data:**

1	Age	20 or less	6	12.0	12.0
		21-30	6	12.0	24.0
		31-40	9	18.0	42.0
		41-50	11	22.0	64.0
		51 or more	18	36.0	100.0
		Total	50	100.0	
2	Gender	Male	25	50.0	50.0
		Female	25	50.0	100.0
		Total	50	100.0	
3	Education	Illiterate	6	12.0	12.0
		Read & Write	4	8.0	20.0
		Primary school	20	40.0	60.0
		Secondary school	10	20.0	80.0
		high school	5	10.0	90.0
		Institute	3	6.0	96.0
		University or more	2	4.0	100.0
		Total	50	100.0	
4	Marital status	Single	17	34.0	34.0
		Married	33	66.0	100.0
		Total	50	100.0	
5	History of renal failure	1 or less	15	30.0	30.0
		2-4	24	48.0	78.0
		5-7	6	12.0	90.0
		8 or more	5	10.0	100.0
		Total	50	100.0	

in the **Table (1)** represented the sociodemographic characteristics of the sample patients that the most sample was (36%) of the samples age (50 or more) years old, while the lowest percent (12%) were at group (20 or less) years old. According to the gender, the study sample were male and female, equal percent and number was (50-50%), the educational levels, most of the studied sample had low educational levels, since 20 number and percent(40%) of them were primary school graduates and, while the lowest percent (12%) were University or more in percent (4%), With respect to the marital status most of the studied sample was married in percent (66%), The last section of demographic Characteristics is medical history or duration of renal failure, that the (2-4 yrs) was the most sample present (48%).

Table (2): Knowledge relate to kidney failure:

No	ITEM	Response					
		Answer	Frequency	Percent	M.S.	R.S.	Level of knowledge
1	kidney failure is a shortage in kidney function	don't know	19	38.0	1.62	81	moderate
		Know	31	62.0			
2	kidney failure leads to morbidity in the human body	don't know	11	22.0	1.78	89	high
		Know	39	78.0			
3	kidney failure is two type Acute & Chronic	don't know	22	44.0	1.56	78	moderate
		Know	28	56.0			
4	kidney failure can be treated after transplants	don't know	12	24.0	1.76	88	High
		Know	38	76.0			

Table 2: Knowledge relate to kidney failure The results showed that hemodialysis patient s had average high knowledge, where knowledge was high in questions (2,4) And their average was moderate responses to questions (1,3)

Table (3): Knowledge relate to causes kidney failure

No	ITEM	Response					
		Answer	Frequency	Percent	M.S.	R.S.	Level of knowledge
1	Unknown causes	don't know	33	66.0	1.34	67	low
		Know	17	34.0			
2	Genetic factors	don't know	18	36.0	1.64	82	moderate
		Know	32	64.0			
3	Blockage of the urinary tract	don't know	13	26.0	1.74	87	moderate
		Know	37	74.0			
4	Suffering from chronic disease (hypertension &diabetes)	don't know	4	8.0	1.92	96	high
		Know	46	92.0			
5	Excessive use of drugs (sedations)	don't know	14	28.0	1.72	86	moderate
		Know	36	72.0			
6	Smoking	don't know	10	20.0	1.80	90	high
		Know	40	80.0			

Table 3: Knowledge relate to causes kidney failure, The results showed that hemodialysis patient had average moderate knowledge, where knowledge was moderate in questions (2,3,5) And their average was high responses to questions (6,4), And their average was low responses to(1) questions.

Table (4): Knowledge relate to hemodialysis

No	ITEM	Response					
		Answer	Frequency	Percent	M.S.	R.S.	Level of knowledge
1	Human needs the dialysis when it reaches end stage K.F	don't know	4	8.0	1.92	96	High
		Know	46	92.0			
2	Dialysis rid the human body of waste and fluids	don't know	3	6.0	1.94	97	High
		Know	47	94.0			
3	Maintain a safe level of minerals and electrolytes	don't know	33	66.0	1.34	67	Low
		Know	17	34.0			
4	Control on the blood pressure	don't know	29	58.0	1.42	71	Low
		Know	21	42.0			

Table 4: Knowledge relate t o Kidney and hemodialysis, The results showed that hemodialysis patient had average moderate knowledge, where knowledge was high in questions (1,2) And their average was low responses to questions (3,4).

Table (5): Problem happen through hemodialysis process

No	ITEM	Response					
		Answer	Frequency	Percent	M.S.	R.S.	Level of knowledge
1	Bleeding from fistula	don't know	21	42.0	1.58	79	Moderate
		Know	29	58.0			
2	Hypotension(Elevated B.P)	don't know	7	14.0	1.86	93	High
		Know	43	86.0			
3	Bacterial and viral infection	don't know	20	40.0	1.60	80	Moderate
		Know	30	60.0			
4	Nausea and vomiting	don't know	8	16.0	1.84	92	High
		Know	42	84.0			
5	Chest pain, backache and muscles pain	don't know	6	12.0	1.88	94	High
		Know	44	88.0			
6	Fatigue	don't know	2	4.0	1.96	98	High
		Know	48	96.0			
7	Itching	don't know	29	58.0	1.42	71	Low
		Know	21	42.0			

Table 5: Problem happen through hem dialysis process, The results showed that hemodialysis patient had average high knowledge, where knowledge was high in questions (2,4,5,6) And their average was moderate responses to questions (1,3), And their average was low responses to(7) questions

Table (6): Knowledge must be done after hemodialysis process

No	ITEM	Response					
		Answer	Frequency	Percent	M.S.	R.S.	Level of knowledge
1	Limitation fluid intake	don't know	8	16.0	1.84	92	High
		Know	42	84.0			
2	Avoid fruits that is rich in potassium	don't know	10	20.0	1.80	90	High
		Know	40	80.0			
3	Avoid vegetables that is high sodium content	don't know	20	40.0	1.60	80	Moderate
		Know	30	60.0			
4	Cook food without adding salt	don't know	9	18.0	1.82	91	High
		Know	41	82.0			
5	Avoid eating nuts and legumes	don't know	12	24.0	1.76	88	High
		Know	38	76.0			
6	Encourage eating high quality proteins	don't know	2	4.0	1.96	98	High
		Know	48	96.0			
7	Timeliness of dialysis within specific deadlines	don't know	1	2.0	1.98	99	High
		Know	49	98.0			
8	Continuing care shunt area to prevent infections	don't know	13	26.0	1.74	87	Moderate
		Know	37	74.0			

Table 6: Knowledge must be done after hemodialysis process, The results showed that hemodialysis patient had average high knowledge, where knowledge was high in questions (1,2,4,5,6,7) And their average was moderate responses to questions (3,8).

Discussion

This chapter presents a systematically, organized, interpretation and reasonably derived discussion of the results with a support of the available literatures and related studies.

Part one: Discussion of the patients' demographic characteristics:

In this study, we assessed the knowledge hemodialysis patients knowledge regarding hemodialysis therapy at Imam Hussein medical city in holy Karbala, Iraq , as a results we found in the **table (1)** represented the sociodemographic characteristics of the sample patients that the most sample was (36%) of the samples age (50 or more) years old, while the lowest percent (12%) were at group (20 or less) years old. this result was agreement

with studies done by (Sharman et al.,2006) and (Levey, et al., 2005).

According to the gender, the study sample were male and female, equal percent and number was (50-50%), this result was disagreement with study done by Nasrin (2014).

According to the educational levels, most of the studied sample had low educational levels, since 20 number and percent(40%) of them were primary school graduates and, while the lowest percent (12%) were University or more in percent (4%), this result was agreement with study done by Tawfiq (2006).

With respect to the marital status most of the studied sample was married in percent (66%), this result was agreement with study done by nurten (2015).

The last section of demographic Characteristics is medical history or duration of renal failure, that the (2-4 yrs) was the most sample present (48%), this result was agreement with study done by [4]. In Table (2,3,4,5,6) shown the mean of score, standard Deviation and the relative sufficiency of participant's in assessment of the level of knowledge regarding hemodialysis therapy that was High.

Conclusion

In conclusion, According to the present study finding the researcher has been able to conclude the following: Highest percent of the study samples was samples age (50 or more) years old, According to the gender, the study sample were male and female, equal percent and number was (50-50%), Most of the study sample low educational levels, Most of them had married, Finally the general knowledge level of Imam Hussein medical city regarding hemodialysis therapy is High.

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Conflict of Interest: None to declare.

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

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