Effect of Teaching Guidelines on Performance for Patients with End Stage Renal Disease Treated with Hemodialysis

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ABSTRACT

Background: End stage renal disease (ESRD) is a major public health problem. Hemodialysis is the most common form of medical management of patients affected by end-stage renal disease. ***The aim*** of the present study was to evaluate the effect of teaching guidelines on performance for patients with end stage renal disease treated with hemodialysis. ***Research design*** used was Quasi experimental research design utilized in this study. The study was carried out at Urology and Nephrology Center of Mansoura University. ***A purposive sample*** including 80 Egyptian patients with ESRD on Hemodialysis therapy. ***Two tools*** were used in data collection; **Tool** I a structured Questionnaire sheet, **Tool II** Patient knowledge & attitude interviewing questionnaire sheet and Practices' observational checklist. ***The Result*** of the study showed that there were high statistical significant differences in study subjects' knowledge, Practice and Attitude scores after implementation of the teaching guidelines. ***Conclusion:*** It can be concluded that there were high statistical significant differences in study subjects' knowledge, practice, and attitude scores related to all items between pre and post implementation of the teaching guidelines, increasing also noticed on study subjects' mean scores post implementation of the teaching guidelines. ***Recommendations:*** Replication and expanded studies are needed for hemodialysis patients. Further studies have to be carried out in order to assess nurse's knowledge and practices regarding care of hemodialysis patients.

Keywords*:* End stage renal disease, hemodialysis, Performance Teaching guidelines

INTRODUCTION

End-stage renal disease is a health problem that requires long-term and costly care ***(Minn, 2013).*** Worldwide, the number receiving renal replacement therapy (RRT) is estimated at more than 1.4 million, with a growing incidence by approximately 8% annually. Driving this increase are; population ageing, type 2 diabetes mellitus and hypertension are key risk-factors for chronic kidney disease ***(Moeller, et al., 2002 & Schieppati and Remuzzi, 2005).***

Hemodialysis is the most common form of medical management of patients affected by end-stage renal disease (ESRD). For hemodialysis to be successful, strict fluid and weight control is recommended. Education, in terms of self-care activities, is an important intervention for improving patients' outcomes ***(Aliasgharpour, et al., 2012).***

Additionally, these patients encounter many physical and psychosocial stresses including hypertension, lack of appetite, anemia, sexual disorders, reduced or loss of financial income, social isolation, loss of sense of security, dependence on caregivers, etc. ***(Moshtagh, et al., 2013).***

Patients with ESRD are at increased risk for cardiovascular morbidity and mortality, the need for continuous education is important to decrease these risks ***(Kumar and Sahu, 2016).*** Knowledge is a precondition for change. If people lack knowledge about how their lifestyle habits affect their health, they have little reason to change behavior. So, successful contemporary educational interventions for people with a chronic disease especially, hemodialysis patients is needed to improve knowledge, along with a variety of psychological methods to empower patients and change their behaviors ***(Mason, et al., 2008).***

AIM OF STUDY:

This study aims to:

Evaluate the effect of teaching guidelines on performance for patients with end stage renal disease treated with hemodialysis through:

- Assessing knowledge of patients with end stage renal disease treated with hemodialysis.

- Assessing attitude of patients with end stage renal disease treated with hemodialysis.
- Assessing practice of patients with end stage renal disease treated with hemodialysis.
- Developing and implementing teaching guidelines regarding end stage renal disease treated with hemodialysis based on needs assessment.
- Evaluating the effect of applying teaching guidelines on performance for patients with end stage renal disease treated with hemodialysis.

Hypotheses:

To achieve the aim of this study the following research hypothesis were formulated:

- Patients' knowledge will significantly increase after the implementation of the teaching guidelines.
- Teaching guidelines will have positive effect on patient s' attitude after the implementation of the teaching guidelines.
- Patients' practices scores will significantly increase after implementation of the teaching guidelines.

SUBJECT AND METHODS:

1. Technical design: The technical design includes; the research design, study setting, subjects, and tools for data collection.

Research design: A Quasi experimental research design was used in this study.

Setting: The present study was conducted at Hemodialysis units at Mansoura Urology and Nephrology Center.

Subjects: A purposive sample including 80 Egyptian patients with ESRD on Hemodialysis therapy. All Adult patients with ESRD on hemodialysis therapy aged between 20-60 years old. Patients with clinical evidence of malignances, handicaps, paralysis, cerebral stroke are excluded. Patients who are unable to communicate also excluded from the sample.

Tools for data collection: Two tools were used in data collection:

Tool I: A structured Questionnaire sheet:

An Arabic questionnaire sheet was developed by the researcher; it is divided into the

following parts:

- **Part one:** Demographic data consists of (patient's age, sex, level of education, occupation, marital status, residence and monthly income). It is composed of (9) closed ended question.
- **Part two:** Patient's medical history which consists of past medical history, present medical history and family history.
  - Past medical history: It is composed of (7) questions including (2) open ended questions about duration of disease(in years) and duration of transplantation and (5) closed ended questions about associated chronic diseases, number of hospitalization during the last six months with its causes and history of renal transplantation.
  - Present medical history of the patients: It is composed of (13) questions including (8) open ended questions about: duration of dialysis, number of vascular access, physical assessment as: (vital signs, body weight, height, body mass index, dialysis adequacy index and laboratory investigations) and (5) closed ended questions about: number of hemodialysis sessions/week, duration of dialysis session, types of vascular access, occurrence of complications due to ESRD, urination problems.
  - Family history including: presence of renal failure in the family and degree of relation. It is composed of (2) closed ended questions.

Tool II: consists of three parts:

An Arabic questionnaire sheet was developed by the researcher and it is divided into the following parts:

- **Part I: Patient knowledge interviewing questionnaire sheet:** Patients' knowledge regarding ESRD, which includes Series of questions to elicit subject's knowledge related to disease (definition, kidney function, renal failure types and causes, methods of treatment, functions of dialysis machine and ways to maintain healthy nutrition). It is composed of (13) closed ended questions.

❖ **Patient knowledge interviewing questionnaire scoring system:**

This questionnaire formed of multiple choice questions. Each item had (one mark) for right answer, zero was given for wrong answer and the total score for knowledge was (87) points.

❖ **Part II: Practices' observational checklist**:

The related observational checklist that is developed by the researcher which composed of (15) questions aimed to assess patient's practice in dealing with hemodialysis sessions covering the following items: (5)questions about patients' practices before, (5)questions about patients' practices during and (5)questions about patients' practices after hemodialysis.

❖ **Practices' observational checklist scoring system:**

The rating scale was graded as the following: Not done (0), and done (1); the total score for practice was (15) points.

➢ **Part III: Patient attitude interviewing questionnaire sheet:** Patients' attitudes regarding ESRD. It is composed of (19) closed ended question covering the following items(fistula care, bleeding from fistula or nose, edema, cramps, hypertension, hypotension, itching, dyspnea, constipation and sleeping troubles).

❖ **Patient attitude interviewing questionnaire scoring system:**

This questionnaire formed of multiple choice questions. Each item had (one mark) for right answer, zero was given to wrong answer; and the total score for attitude was (94) points.

II. Operational design:

The operational design consists of preparatory phase, content validity, pilot study, field work, operational definitions, and limitation of the study.

Preparatory phase:

The first step of this phase was concerned with the review of literature related to ESRD and theoretical knowledge of the various aspects of the performance for these patients using books, articles, periodicals and Medline search to develop the study tools for data collection.

The second step of this phase was concerned with assessment of expertise opinions about aspects of the developed tools and various parts of the proposed patient guidelines for patient with ESRD.

Content Validity & reliability:

Content validity was conducted to test the tool for appropriateness, relevance, correction and clearance through a jury of seven experts: from medical surgical nursing staff at the faculty of nursing (Jury was done from different academic categories (professors and assistant professors)., one from Port Said University, two

from Ain Shams University and three from Mansoura University and assistant professor of urology from UNC at Mansoura University. It involved two parts:

A- The opinions of the experts for each item were recorded on a three point scale: agree, disagree and agree with modification.

B- General or overall opinion about the form, they were requested to express their opinions and comments on the tool and provide any suggestions for any additional or omissions of items. Then necessary modifications were done. This phase was carried out in a period of one month.

Test reliability of the proposed tools was done by cronbach's alpha test, showed a strong significant positive correlation between test (A) and retest (B) in knowledge, practice and attitude items.

Pilot study:

The pilot study was applied on (8) patients (10%) within the selected criteria to test the applicability of tools, arrangement of items, and estimate the time needed for each sheet, and then excluded from the study sample after modification of the tools.

Field Work

The selection of the patients, the collection of data, and the implementation of the teaching guidelines lasted over a period of (6)months starting from March 2015 to September 2015for hemodialysis patients. The researcher recruited them from the two work shifts (morning and afternoon) at Hemodialysis units at Mansoura Urology and Nephrology Center.

The data collection was done after starting hemodialysis session by one hour to confirm patient's ability to concentrate and relieve the signs of azotemia.

The study consists of two phases:

pre phase of assessment: This phase was done prior of conducting the teaching guidelines to the patients using two tools

The 1st session: included interviewing the patients regarding Demographic characteristics, past, present and family history, checking vital signs obtaining physical assessment and laboratory investigations.

Time allowed: from 20- 30 minutes for each patient.

The 2nd session included assessment of patients' knowledge, practices and attitude. Time allowed: from 30- 40 minutes.

From 3rd to 5th session (the sessions): the teaching guideline was developed by the researcher after determining patients' needs and review of related literature. It was applied through patients teaching sessions using questions, discussion, demonstration and re-demonstration aided by using booklets, illustrative pictures and handouts. These teaching guidelines consisted of 3 sessions; each session lasted about 60 minutes and was accompanied by feedbacks.

Teaching guidelines was applied during hemodialysis sessions and were done either individually or in groups (3-4) patients.

Post phase of assessment: This session included reassessment of patients' knowledge, practice and attitude after applying the teaching guidelines.

III-Administrative design

An official permission was obtained from director of Mansoura Urology and Nephrology Center based on a letter that issued to him from Dean of faculty of Nursing Port Said University and before conducting the study explaining the aim of the study to obtain the permission for data collection.

Additional oral consents were taken from the patients who participated in the study after explanation of its purpose. They were given an opportunity to refuse the participation, and they were assured that there information which would be used for research purposes only.

Ethical consideration:

All ethical issues were taken into consideration during all phases of the study. The ethical research considerations in this study included the following: The research approval was obtained before guidelines implementation, the objectives and the aim of the study were explained to the participants, the research maintains on anonymity and confidentiality of subjects, and subjects were allowed to choose to participate or not and they have the right to withdrawal from the study at any time without penalty.

IV- Statistical analysis

All collected data were organized, categorized, tabulated, entered, and analyzed by

using SPSS, (Statistical Package for Social Sciences), soft-ware program version 15, which was applied to frequency tables, statistical significance and associations were assessed using the arithmetic mean, standard deviation (SD), student t-test, anova test, and coefficient correlation (r) to detect the relations between the variables.

Non significant (NS) $p > 0.05$

Significant (S) $p \leq 0.05$

Highly significant (HS) $P < 0.001$

RESULTS:

Table 1: shows that the mean age for the study subjects was 41.7 ±13.2 years. Males were predominate in the group 62%, and 61.3 % of them were married. 45% of the study subjects had Secondary degree education and 65% of them were not working. Also, 57.5% of the study subjects had inadequate monthly income.

Table 2: illustrates that, the mean duration of renal failure (mean ±SD) was (11.1 ±6.9) as 55.0% of the study subjects suffered from disease since (1-10) years. In relation to renal transplantation, 40% of the study subjects had renal transplantation with mean duration± SD (range) (18.5 ±35.9), as 95% of them had mad transplantation with in less than ten years.

Table 3: shows that all the entire study subjects attends three times/ week to hemodialysis sessions and 78.8% of them spending four hours on the session. **As regard** to vascular access, it was noticed that 85% of the study subjects had fistula as well as 91.2% of them performed the access (1-4) times. 81.3% of the entire study subjects suffer from anuria, while 18.8% of them suffer from oliguria.

Table 4: shows that there were high statistical significant differences in study subjects' knowledge scores related to all items between pre and post implementation of the teaching guidelines with ($p \leq 0.001$).

Table 5: shows that there were high statistical significant differences in study subjects' practice scores post implementation of the teaching guidelines with ($p \leq 0.001$) except for two items (Wearing the hemodialysis unit uniform and Measure body weight) as they done by all patients pre-implementing the teaching guidelines

Table 6: shows that there were high statistical significant differences in study subjects' attitude score related to all items between pre and post implementation of the teaching guidelines with ($p \leq 0.001$).

Table 7: shows that there were negative correlations between total knowledge, practice and the duration of the disease, while there is a positive correlation between the duration of the disease and the attitude scores of the study subjects with no statistical difference.

Figure 1: illustrates that, the major associated CKD complications were for fatigue, anemia, cramps and sleeping troubles (75%, 67.5%, 65% and 58.8% respectively).

Figure 2: reveals that (25.0%) of the study subjects have positive family history to renal failure, where (75.0%) of them with first-degree relatives.

Table (1): Percentage Distribution of Study Subjects according to Demographic Characteristics.

Demographic Characteristics	No. =80	%
Age Distribution (in years)		
<20	3	3.8
21 – 30	15	18.8
31 – 40	23	**28.8**
41 – 50	20	25
50 – 60	11	13.8
>60	8	10
(mean ±SD)	41.7 ±13.2	
Sex		
Females	30	37.5
Males	50	**62.5**
Marital status		
Single	15	18.8
Married	49	**61.3**
Divorced	11	13.8
Widowed	5	6.3
Educational level		
Illiterate	11	13.8
Read and write	9	11.3
Secondary degree	36	**45.0**
University	24	30.0
Occupational status		
Governmental	9	11.3
Private	19	23.8
Not working	52	**65**
Monthly income		
Enough	34	42.5
Not enough	46	**57.5**

Table (2): Distribution of the Study Subjects Regarding to their Past Health History.

Past Health History	No.=80	%
Duration of renal failure:		
1 – 10	44	**55.0**
11 – 20	28	35.0
21 – 30	8	10.0
(mean ±SD)	**11.1 ±6.9**	
Renal transplant	32	40
<10 years	28	95
10 years or more	4	5
Duration of renal transplant (months) (mean±SD)	18.5 ±35.9	

Table (3): Distribution of the Study Subjects Regarding to their Present Health History.

Present Health History	No.=80	%
Frequency of weekly hemodialysis sessions		
Two times /week	0	0
Three times /week	80	**100**
Duration of hemodialysis session		
3 hours	7	8.8
3.5 hours	10	12.5
4 hours	63	**78.8**
Type of vascular access		
Fistula	68	**85.0**
Graft	9	11.3
Catheter	3	3.8
Times of vascular access		
1 – 4	73	**91.2**
5 – 8	7	8.8
Suffer from urination problem		
Anuria	65	**81.3**
Oliguria	15	18.8

Table (4): Mean score, Standard Deviation and Test of Significance of Patient's Knowledge Score of Study subjects related to ESRD Pre and Post guidelines Implementation.

Value / Knowledge about	Pre	Post	Student's t test	
	Mean ±SD	Mean ±SD	t	P
Kidney function	1.19 ±0.81	2.2 ±0.75	8.137	<0.001
Definition of renal failure	0.93 ±0.76	1.98 ±0.62	9.607	<0.001
Types of renal failure	1.08 ±1.04	2.18 ±0.73	7.757	<0.001
Causes of renal failure	2.18 ±1.22	4.21 ±1.24	10.579	<0.001
Types of CRF treatments	2.08 ±0.59	2.63 ±0.51	6.291	<0.001
Function of dialysis machine	1.15 ±0.42	1.95 ±0.50	10.907	<0.001
Identify dietary regimen component	2.46 ±0.79	3.34 ±0.94	6.356	<0.001
Diet to be avoided	3.88 ±1.46	5.61 ±1.7	6.944	<0.001
Calculation of fluids amount per day	1.36 ±0.7	2.34 ±0.73	8.646	<0.001
Identify protein resources	2.4 ±0.65	3.05 ±0.69	6.133	<0.001
Identify Potassium rich diet resources	7.55 ±2.06	14 ±3.89	13.101	<0.001
Identify Phosphorus rich diet resources	1.73 ±0.75	3.01 ±0.89	9.898	<0.001
Identify how to measure dietary salts	2.18 ±1.19	3.98 ±1.32	9.059	<0.001

Table (5): Mean Score, Standard Deviation and Test of Significance of Patient's Practice Score Pre and Post guidelines Implementation.

Practice	Done Pre		Done Post		Chi square test	
	N	%	n	%	X^2	P
Before dialysis session:						
Follow the treatment of blood pressure if found	31	38.8	65	81.2	30.104	<0.001
Don't eat immediately before the hemodialysis session	20	25	74	92.5	75.203	<0.001
Wearing the hemodialysis unit uniform	80	100	80	100	0	1
Washing hands & fistula with soap and water then betadine or alcohol	12	15	60	75	58.182	<0.001
Measure body weight	80	100	80	100	0	1
During dialysis session:						
Don't eat during the hemodialysis session	1	1.3	61	76.2	94.799	<0.001
Keeping the limb with fistula extended	5	6.3	67	83.8	97.071	<0.001
Notification about any complication	48	60	72	90	19.200	<0.001
Awareness about the machine alarms and notify the nurse	17	21.3	63	78.8	52.900	<0.001
Aware to vital signs measurement	23	28.8	63	78.8	40.228	<0.001
After dialysis session:						
Wait until be sure that sites of needle insertion is closed and having dressing	46	57.5	74	92.5	26.133	<0.001
Sitting down for a short period of time for maintaining balance	33	41.3	67	84.8	32.318	<0.001
Aware to vital signs measurement	14	17.5	67	84.8	70.236	<0.001
Measure body weight	78	97.5	80	100	2.025	<0.001
Follow the treatment prescribed by the physician	35	43.8	67	84.8	27.694	<0.001
Be sure of taking all of hemodialysis session period	51	63.8	71	88.8	13.805	<0.001

Table (6): Mean Score, Standard Deviation and Test of Significance of Study Subject's Attitude Score Pre and Post Implementation of the teaching guidelines:

Attitude	Pre	Post	Student's t test	
	Mean ±SD	Mean ±SD	T	P
Care of fistula	4.84 ±1.41	8.04 ±1.75	12.723	<0.001
Measures to manage fistula bleeding	1.53 ±0.62	2.38 ±0.54	9.308	<0.001
Measures to manage fistula sound weakness	1.11 ±0.32	1.98 ±0.56	12.133	<0.001
Measures to manage fistula edema	1.16 ±0.37	2.08 ±0.69	10.423	<0.001
Measures to relief fistula inflammation symptoms	1.23 ±0.48	2.13 ±0.58	10.702	<0.001
Measures to manage nose bleeding	1.9 ±0.69	3.67 ±1.15	11.796	<0.001
Protection from bleeding	1.7 ±0.83	2.83 ±0.95	7.957	<0.001
Protection from dyspnea	1.25 ±0.56	2.06 ±0.58	8.984	<0.001
Measures to relief dyspnea	2.09 ±0.68	3.49 ±0.94	10.791	<0.001
Protection from hypertension	1.71 ±0.66	2.63 ±0.66	8.724	<0.001
Measures to relief hypertension	2.03 ±0.73	3.49 ±0.98	10.706	<0.001
Protection from hypotension	1.18 ±0.44	1.93 ±0.61	8.878	<0.001
Measures to relief hypotension	1.76 ±0.6	2.54 ±0.69	7.562	<0.001
Measures to relief edema	1.73 ±0.69	3.25 ±1.07	10.676	<0.001
Protection from cramps	1.05 ±0.39	1.61 ±0.49	8.059	<0.001
Measures to relief cramps	1.45 ±0.61	2.28 ±0.69	7.968	<0.001
Measures to relief itching	3.84 ±1.12	6.69 ±1.3	14.873	<0.001
Protection from constipation	1.66 ±0.64	2.48 ±0.54	8.084	<0.001
Measures to relief sleeping disturbance	1.85 ±0.58	2.41 ±0.59	6.109	<0.001

Table (7): Correlation between the Duration of the disease Practice, Attitude and Knowledge.

Item \ Value	Duration of the disease	
	r	**P**
Knowledge	-0.074	0.516
Practice	-0.050	0.660
Attitude	0.018	0.874

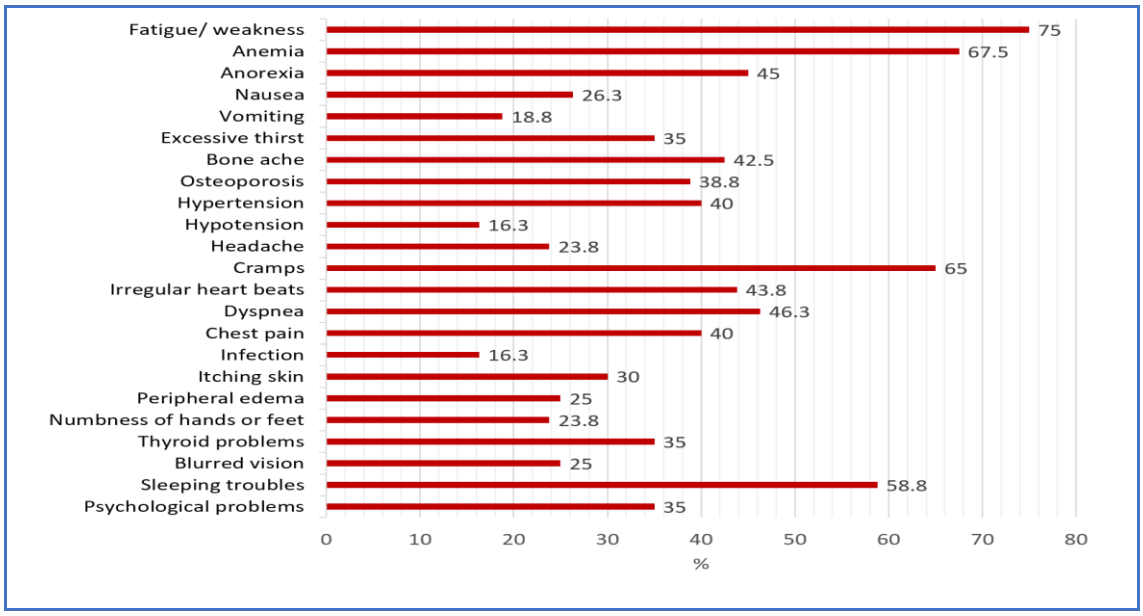

Figure (1): Distribution of the Study Subjects Regarding to Chronic Kidney Disease Complication**.**

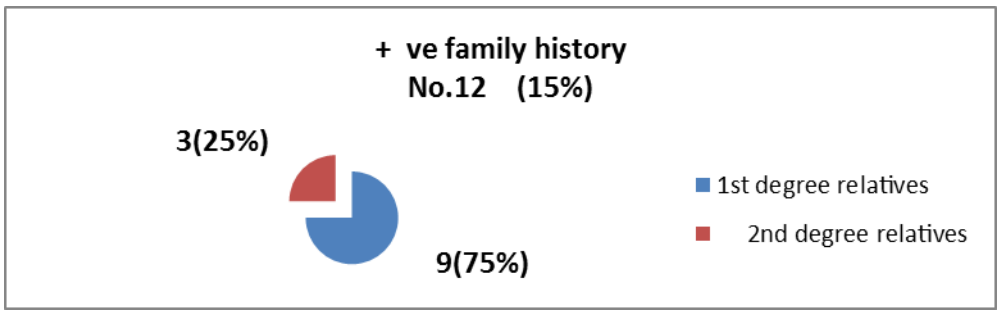

Figure (2): Distribution of the Study Subjects Regarding to their family History of Renal Failure

DISCUSSION :

End-stage renal disease (ESRD) is one of the main health problems in Egypt. Currently, hemodialysis represents the main mode for treatment of chronic kidney disease stage 5 (CKD5). In Egypt, the estimated annual incidence of ESRD is around 74 per million and the total prevalence of patients on dialysis is 264 per million. The average cost of the hemodialysis session ranges from US $16 in governmental hospitals to around US $32 in some private centers ***(Ahmed, et al., 2010).***

Concerning age, the finding of the present study revealed that The mean age± SD (range) for the study subjects was 41.7 ±13.2 (31-40 years).This finding is in agreement with ***Badheeb, (2006)*** who revealed that, the mean age range of the HD patients was 42 years as 29.4% of patients aged between (31 to 40) years. These findings also supported by ***Mohammad, (2007)***, who mentioned that age increases more the likelihood to have ESRD, as it is uncommon in individuals younger than eighteen years.

Regarding to gender, the present study clarified that, more than three fourth of the study subject were males. This result is in accordance with ***Shinde and Mane, (2014)*** found regarding to the sex majority of the patients was male.

Concerning marital status, the results of the current study revealed that the majority of the study subjects were married. This may be due to that the majority of the study subjects were over thirty years and according to the Egyptian society culture, by this age they are married. These findings are in the same line with ***Mohammad, (2007)*** and ***Lutf, (2007),*** who mentioned that their majority of the study subjects were married.

As regards to educational level, the result of this study showed that nearly half of patients shared in study had Intermediate degree. These findings aren't in agreement with ***Abd-El hamed, (2011)*** and ***Lutf, (2007),*** who found that above (one third and two third) respectively of the study subjects, had basic education. Concerning occupation, the present study showed that more than half of the study subject weren't working, this findings could be due to the fact that the subjects that didn't work were within age >60 years old which is considered the age of retirement in Egypt and large number of females were house wives also many factors such as fatigue, tiredness and

the disability caused by the disease must be taken into consideration. This finding goes on the same line with ***Abd- Elazeem, (2008) and Sharaf, et al, (2004)*** who found that the majority of their subjects were not working.

Regarding duration of HD treatment per year, the current study revealed that, more than half of the study subject were suffering from disease since (1-10) years with (mean ±SD) (11.1 ±6.9). Within the same line ***Yousif, (2008),*** and ***Abd- Elazeem, (2008),*** who found that, two thirds of HD patients dialyzed from 6 month to less than 8 years and one third of the study subjects were dialyzed for 8 years or more. Also, this finding is supported by ***Heidarzadeh et al., (2010)***, who reported that, 59.3% of patients had received HD for 1 to less than 5 years.

In relation to HD frequency and duration, the current study clarified that, the entire studied subjects attends three times/ week to hemodialysis sessions and the majority of them spending four hours on the session. This finding is supported by ***Ahmed, et al., (2010)*** who mentioned that, the main hemodialysis regimen adopted in Egypt is three times per week.

As regard to vascular access used, the majority of studied subjects having fistula and performed the access from one to four times. These results come in consistent with ***Abd-El hamed,, (2011)*** findings. ***Anees, et al. (2011),*** recommended that, arteriovenous fistula is considered the optimal form of vascular access for patients who have ESRD and receive hemodialysis. As well, he found majority of hemodialysis patients had AVF and ***Afifi, et al., (2002)*** who studied one thousand hemodialysis patients in eighteen dialysis centers in Egypt reveal that 93% of the patients had natural arteriovenous access while 7% had synthetic arteriovenous grafts.

As regard to chronic kidney disease complications, the present study revealed that, the major associated CKD complications were for fatigue, anemia, cramps and sleeping troubles. These results are in the same direction with ***Weisbord et al., (2007) and Tsay,(2003)***. In addition ***Hammed, (2001)*** mentioned that the primary hematological effect of renal failure was anemia.

Also, ***youssif, (2009)***, Added that three fourth of study subject suffering from muscle cramps. This may be due to increase ultrafiltration rate causing rapid fluid shifting (rapid removal of sodium and water) and ***Mohammad, (2007)*** mentioned that

predisposing factors of cramps are hypotension, being below dry weight and usage of low sodium dialysis solutions.

Concerning family history, the present study clarified that less than quarter of the study subject has positive family history. This result is in the same line with ***El Sayed, (2007),*** who found that the majority of his study subjects had no family history.

Regarding knowledge of the studied subjects pre and post implementation of the teaching guidelines, the results of the present study shows that there were high statistical significant differences in knowledge mean scores of the study subjects and in total Knowledge score of the study subjects after implementing the teaching guidelines. These findings go in the same line with the result findings of ***Saelim, et al., (2011)*** who revealed that، the health education program significantly improved HD patients' knowledge of the diseases, dietary behaviors, weight control and clinical parameters. These findings are supported by ***Man, (2010),*** who emphasized that, pre-dialysis patient education programs were effective in improving disease-related knowledge and slow down the progression of stage 4 CKD.

In the same line, ***King and Hinds, (2008)*** stressed that, there is no doubt that class attendance resulted in increased knowledge about kidney disease, dialysis treatments, transplantation, diet, finances, and coping. Participants viewed the program as valuable in facilitating coping and treatment decision making.

Concerning patients practice, the present results show that there were high statistical significant differences in practice mean scores of the study subjects and in total practice score of the study subjects after implementing the teaching guidelines except for two items (Wearing the hemodialysis unit uniform and Measure body weight).This may be due to all patients do these practices as a principle of center policy.

Concerning patient's attitude, the present results reveal that there were high statistical significant differences in attitude mean scores of the study subjects and in total attitude score of the study subjects after implementing the teaching guidelines.

These findings is supported by ***Abd-El hamed, (2011)***, who found that Concerning patients' knowledge regarding practice of self -care activities, the present study showed statistical significant difference in patients' knowledge at pre vs post and pre

vs follow up tests regarding measures to be considered for HD session, care of fistula, protection from some problems due to CRF, dietary management as well as the total knowledge score.

CONCLUSION:

Based on study findings, it can be concluded that: there were high statistical significant differences in study subjects' knowledge, practice, and attitude scores related to all items between pre and post implementation of the teaching guidelines, increasing also noticed on study subjects' mean scores post implementation of the teaching guidelines.

RECOMMENDATIONS:

Encourage social agencies to support these patients who suffer from ESRD treated with hemodialysis. Replication and expanded studies are needed for hemodialysis patients.

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تأثير الإرشادات التعليمية علي أداء مرضي أمراض الكلي بمراحله الأخيرة الخاضعين للغسيل الكلوي

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الـــخـــلاصـــة

تعتبر امراض الكلي بمراحله الأخيره من المشكلات الصحية العامة والكبيرة ويعتبر الغسيل الكلوي من أكثر الطرق العلاجية شيوعاً..كان الهدف من هذه الدراسة تقييم تأثير الإرشادات التعليميه علي مستوي أداء مرضي أمراض الكلي بمراحله الأخيره. تم عمل دراسة شبه تجريبية مع تقييم قبلي وبعدي في هذه الدراسة. أجريت هذه الدراسة علي عينة مناسبة والتي شملت (٨٠ مريض) والخاضعين للغسيل الكلوي. وقد أجريت هذه الدراسه بمركز امراض الكلي والمسالك البوليه بجامعة المنصورة. وتشمل أدوات جمع البيانات أداتين: الاولي ورقة استبيان باللغة العربية وتتكون من جزئين البيانات الاجتماعية والديموغرافية والتاريخ المرضي للمريض والثانية : أداة لقياس معرفة وممارسات والاتجاهات التي يقوم بها المرضي. وقد أظهرت نتائج هذه الدراسة ظهور تحسن إيجابي إحصائي ملحوظ في مستوي الأداء لأفراد العينة المدروسة. وأوصت الدراسة أنه يجب علي الابحاث المستقبلية تقييم مستوي أداء فريق تمريض الغسيل الكلوي وضرورة تكرار الدراسات والأبحاث لمرضى الغسيل الكلوي بشكل أوسع نطاقاً.

الكلمات المرشدة: أمراض الكلي بمراحله الأخيره، الغسيل الكلوي، أداء، الإرشادات التعليمية .