EVALUATION OF NURSING CARE FOR PATIENT WITH PERITONEAL DIALYSIS IN KHARTOUM TEACHING HOSPITAL (2011)

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ABSTRACT

Background: peritoneal dialysis is an important issue in the management of renal failure General objective: to assess nurse role pre, during and post peritoneal dialysis by diagnosis weak point and so seventh. Specific objective: to assess nurse knowledge about peritoneal dialysis. to assess nurse intervention toward occurrences of complication. to assess nurses skills pre, during and post peritoneal dialysis.Methodology: 47 questionnaires and 10 check lists used to collect data from qualified nurses with BSC degree working not less than 4 month in peritoneal dialysis units. Three areas were selected to conduct the study Khartoum teaching hospital, Soba university hospital and military hospital. **The aim of study:** To assess the effectiveness of structured teaching program on the skills of peritoneal dialysis among the nursing staff in the Khartoum teaching hospital, Soba university hospital and military hospital.**Methods:** A quasi experimental design pretest/posttest for the same group. The study was conducted in the intensive care units in Khartoum hospitals. 47 questionnaires and 10 check lists used to collect data from qualified nurses with BSC degree working not less than 4 month in potential dialysis units. Data was collected by a questionnaire and an observational checklist. The intervention program was in a form of lectures guidelines book. Data were analyzed using Statistical Packages for Social Sciences (SPSS). **Results:** Nurses knowledge about potential dialysis and it's complication range from 97.19% - 51.3%.Regarding practice of qualified nurses in peritoneal dialysis 60% explain the procedure to clients, 100% not weighting the client pre and post dialysis, 90% of nurses don't instruct pt to empty their bowel or bladder pre dialysis, 60% don't wear gowns, caps and masks, 90% don't warm dialysis fluid and 90% don't place antiseptic solution at the pore of insertion, 90% fair in preparing dialysis in and out flow of dialysate 80% don not check vital signs every 30-60 minutes. 100% fair in removal of catheter and application of sterile dressing conclusion – nurses have more knowledge than skills.**Conclusion:** The study concluded that educational program had a significant impact related to the improvement of the nurses' practice post application of the program.

Key words: Training program, Practice, peritoneal dialysis .

Introduction

The kidneys are vital body organs they regulate the body's fluid, electrolyte, and acid base balances while removing toxic substrate from the blood. Also the kidneys play a significant role of the Erthropotein and prostaglandin synthesis, in insulin degradation and in the rennin angiotensin – aldosterone system(1).

When kidneys fail to do their job dialysis is used to relieve symptom of renal failure temporally or to sustain life in the client with irreversible kidney disease(2).

There are two types of dialysis: peritoneal dialysis and hemodialysis peritoneal dialysis is the method of renal replacement therapy this involves repeated cycles instilling dialysis into the peritoneal cavity, allowing time for substance exchange and then removing the dialysate(3).

The first peritoneal dialysis date back to 1877 when Wargnar conducted experiment in rabbits (4). In 1923 an article by Ganter was published in which he described intermittent infusion and removal of saline solution into and from peritoneal cavity of guinea pigrnade uremic by ureteral ligation the urea concentration in the fluid was close to blood concentration after a dwell time of 1 hour after several institution and removal of fluid the animal improve he also observe reversal of unconscious patient with diabetic coma after interpretational infusion of saline(5).

History of peritoneal dialysis in Sudan

Peritoneal dialysis started in KTH in 1969 by Dr. Abdel Rahman M. Musa, First in special ward AI, and then in renal unit, it started

with cases of acute renal failure then with chronic prenal failure. Laiel, two renal units were opened at Soba University hospital, and another in (Ibn Sina Hospital), then PD stopped at Ibn Sin hospital and shifted to HD. Recently there is a PD unit at the Military Hospital and Wad Medni Hospital.

Methodology

The methods begin by presenting the research design, followed by setting and duration of the study, sample, sample size, data collection technique and tools, phases of the study, validity and reliability of instruments and ethical consideration.

2.1. Study design: A Quasi-experimental study: pretest and posttest for the same group.

2.2. Study setting: four hospitals were (the Khartoum teaching hospital, Soba university hospital and military hospital chosen for this study, Khartoum state, Sudan.

2.3. Sample: Nursing staff providing the patients nursing services in the peritoneal dialysis unit in Khartoum Teaching hospital, Soba university hospital and military hospital.

2.4. Sample size: The recommended sample size given by the total coverage of nurses. So the total numbers of participants were 47.

2.5. Data collection technique and tools: one tool was used to collect the needed data to achieve the aim of the study, they was: observational checklist to assess practice.

2.6. Data analysis: The collected data as pretest and posttest organized, categorized, tabulated using mean and standard deviation. The statistical package for social sciences (SPSS version 20) was used for analysis.

2.7. Phases of the study:

2.7.1. Pre intervention phase: Baseline survey was conducted.

2.7.2. Intervention phase: Started from (July-October, 2016), the education was given through Lectures, vides, group discussion, booklets and seminars. The contents of the program were assigned to, include basic knowledge regarding nursing care of CPR.

2.7.3. Post Intervention Monitoring: Posttest was done twice early post interventions and later after three months' post interventions. She was using the same tools to compare between pre and post intervention program which were conducted to evaluate the effect of the program on respondents.

2.8. Ethical Consideration: An official letter was taken from the Khartoum University to hospitals administrators for permission to carry out the study. Participants provided verbal consent to participate they have also been assured of confidentiality and of freedom to withdraw without conditions.
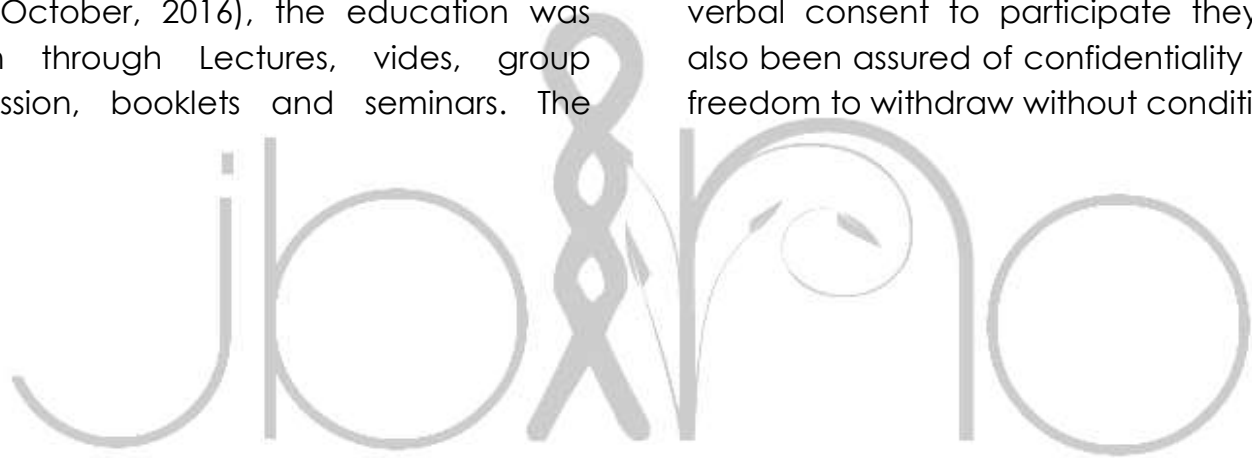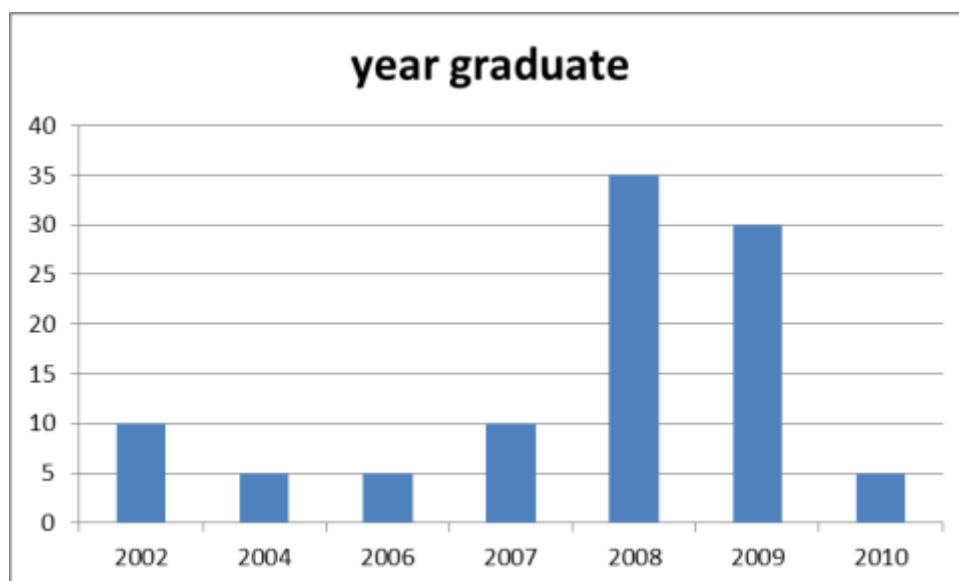
Frequencies

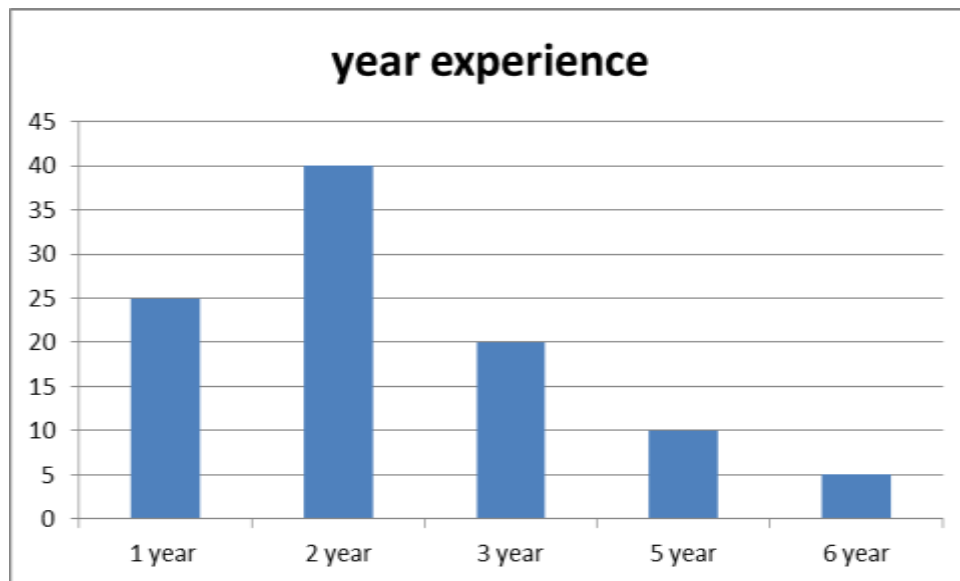Table (1) year graduate

		frequency	Percent	Valid percent	Cumulative percent
Valid	2002	2	10.0	10.0	10.0
	2004	1	5.0	5.0	15.0
	2006	1	5.0	5.0	20.0
	2007	2	10.0	10.0	30.0
	2008	7	35.0	35.0	65.0
	2009	6	30.0	30.0	95.0
	2010	1	5.0	5.0	100.0
	Total	20	100.0	100.0	

year experience

Frequencies table:

Table (2) year experience:

	Frequency	Percent	Valid percent	Cumulative percent
1 year	5	25	25	25
2 year	8	40	40	65
3 year	4	20	20	65
5 year	2	10	10	95
6 year	1	5	5	100
Total	20	100.0	100.0	
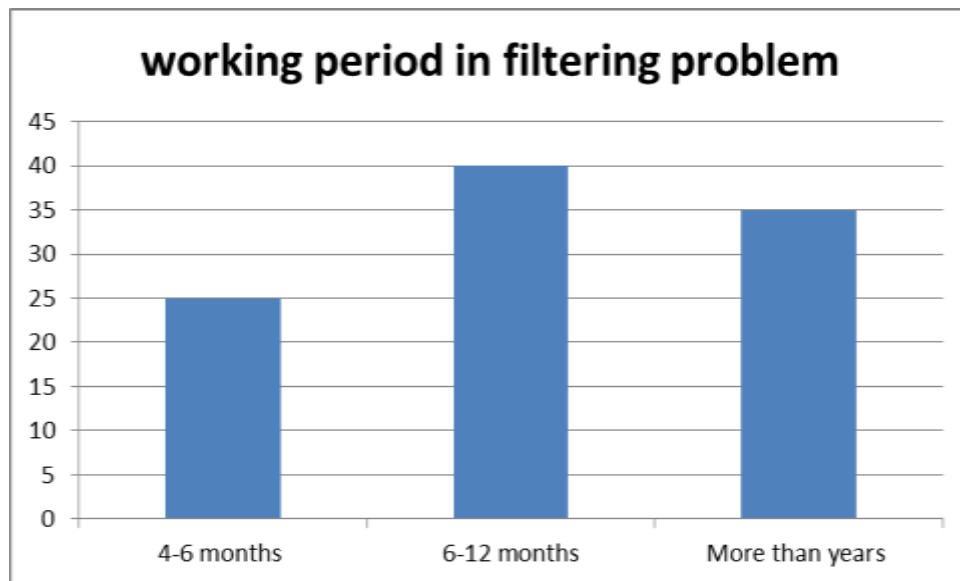
Frequencies table:

Table (3) working period in filtering problem:

	Frequency	Percent	Valid percent	Cumulative percent
No training	11	55	55	55
One training	4	20	20	75
More than one training	5	25	25	100
Total	20	100.0	100.0	

number of trainings in filtering field
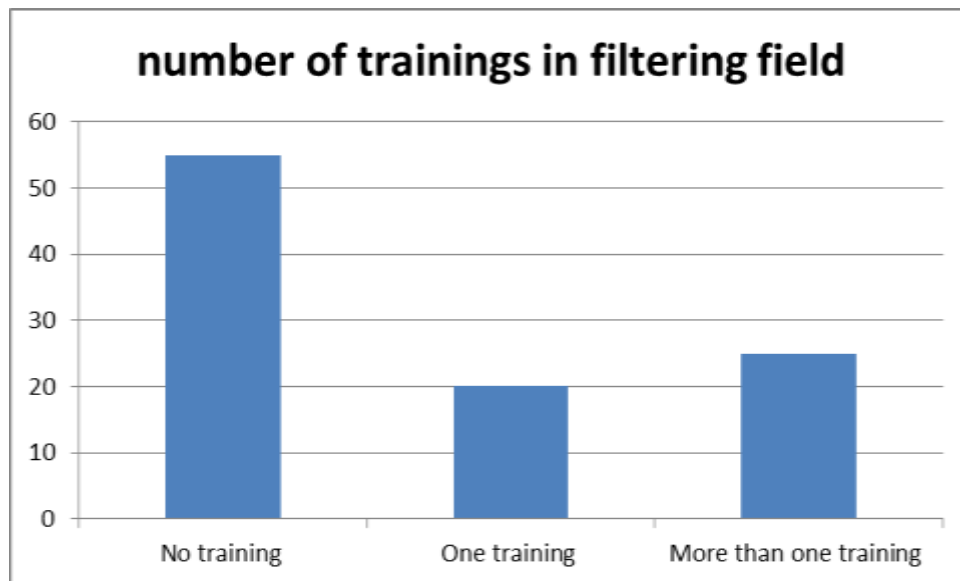
Frequencies table:

Table (4) number of trainings in filtering field:

	Frequency	Percent	Valid percent	Cumulative percent
No training	11	55	55	
One training	4	20	20	55
More than one training	5	25	25	75
Total	20	100.0	100.0	100

use from the training
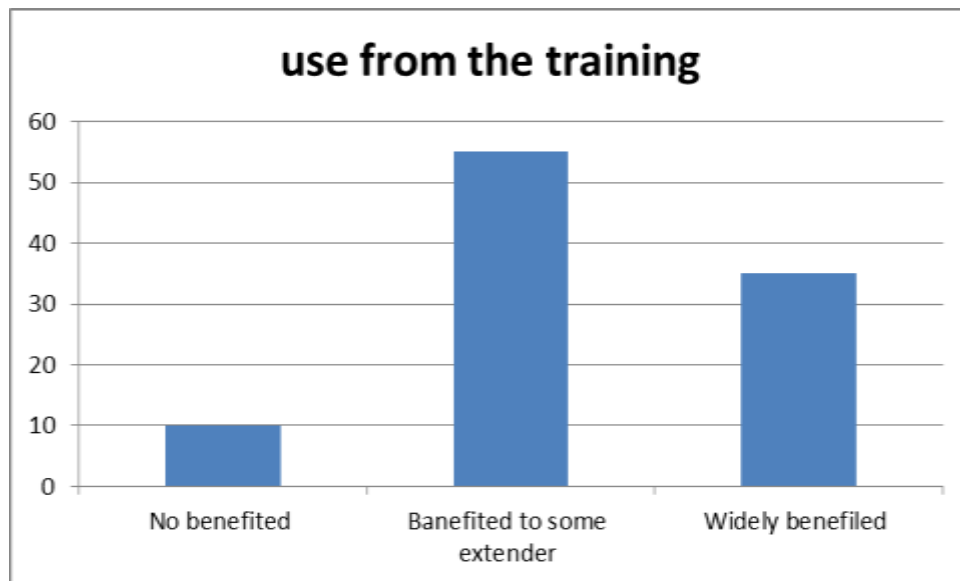
Frequencies table:

Table (5) use from the training :

	Frequency	Percent	Valid percent	Cumulative percent
No benefited	2	10	10	10
Banefited to some extender	11	55	55	65
Widely benefiled	7	35	35	100
Total	20	100.0	100.0	100

the filterization is
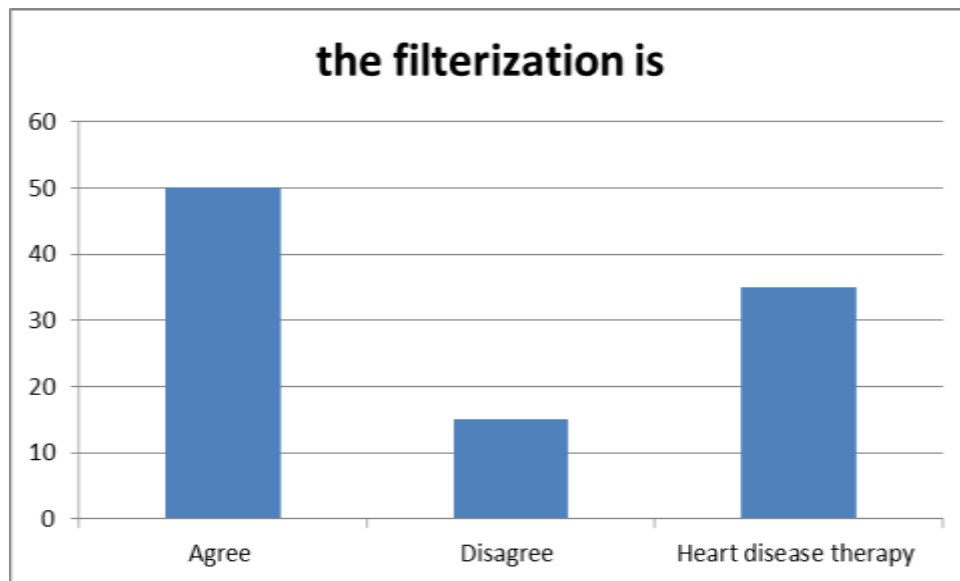
Frequencies table:

Table (6) the filterization is:

	Frequency	Percent	Valid percent	Cumulative percent
Agree	10	50	50	50
Disagree	3	15	15	85
Heart disease therapy	7	35	35	100
Total	20	100.0	100.0	100

Discussion

Section (1): 51.1% of the qualified nurses were graduated between 2000-2003.

The mean experience year was 5 and half years the average was 3years, the duration 4-6 months in PD was 44.7% regarding training courses. The percentage of nurses who did not have courses was equal to who had one course and 27.7% was more satisfied with the course.

Section (2): This section discusses nurse's knowledge regarding dialysis 95.7% of nurses know that dialysis is done to remove waste an excessive fluid and 23.4% ticked that it used to tract congestive heart failure, 97.19% knew the type of dialysis.

Section (3): This section discusses knowledge about PD 63.8% ticked that PD is done though catheter put in a peritoneal cavity and 74.5% ticked that id done through opening under the umbilici and insertion of catheter. 78.7% ticked peritoneal cavity was selected for dialysis because its semi perfume membrane, 70.2% ticked that it decrease the possibility to germ HIV and hepatitis B viruses, 70.2% ticked that PD solution consist of Glucose concentration has relation with the fluid removal during dialysis 93.6% ticked that PD solution found in plastic container while 21% ticked that PD found in glass an 70.2% ticked that the amount was 2 liter.

Section (4): This section discusses knowledge about pre dialysis preparation 95.7% ticked that psychological support to pt. and relative check vital sign and investigation 83% ticked that weight of pt. is important and because it is indicator for fluid loss post dialysis.

Section (5): this section discusses the complication of PD and nursing intervention towards this complication 95.7% ticked that sign of peritonitis is turbid out flow, increase temperature and abdominal rigidity and pain 78.7% ticked to treat peritonitis add antibiotic to dialysis fluid, and 29.8% ticked add 200 unit of heparin to dialysis fluid.

91.5% ticked if pt. develop hypokalemia add KCL in dialysis fluid, and 31.9% ticked pt should be connect to ECG monitor. 89.4% ticked if pt become dyspnea during PD pt. should be in upright position, and 44.7% ticked decrease the rate of flow. 95.7% ticked if there is no out flow the cause is blockage of the catheter, 66% ticked the intervention to this complication is change the position and gentle massage. 53.2% ticked add heparin in dialysis fluid.

14.9% ticked that if pt. develops abdominal pain lignocaine 1% should be added to dialysis fluid.

If bladder was puncture 60.7% ticked pt. complain of increase frequency and amount of urination, 7.12% ticked the out flow will be change if bowel as puncture, 57.4% ticked pt. develop diarrhea and 89% ticked dialysis should not be continue immediately after bowel puncture.

Section (6): this section discusses documentation during PD 89.4% ticked the colure and amount of and out flow, 80.9% ticked he vital sign three hourly and 87.2% the inflow, out flow dwell times and result of urea electrolyte.

Conclusion

According to the study findings the researcher concluded that: An early evaluating post training program test revealed a significant improvement of both knowledge and practice of the

participating nurses. A late (three months) post program assessment to assess the retention of the already gained knowledge and practice demonstrated a little drop in their level.

Acknowledgements

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