Novelty Journals

ISSN 2394-7330

International Journal of Novel Research in Healthcare and Nursing
Vol. 5, Issue 2, pp: (158-172), Month: May - August 2018, Available at: www.noveltyjournals.com

Impact of Educational Intervention program about Time Management for nurses in Dialysis Unit

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Abstract: **The aim of the study was to assess the effect of nursing education intervention on time management for nurses in dialysis unit. Hypothesis: After the nursing education intervention: 1- the knowledge of nurses about renal failure, haemodialysis and time management will increase, 2- The perception of nurses about importance of time management in improving their performance and the perception about their ability to control time wasters will increase. 3- The performance of nurses will improve after receiving the educational intervention. Design: Quasi-experimental design used. Setting: dialysis unit at Benha university hospitals and health insurance hospital used to conduct study. Tools: two tools were designed; I): Interview questionnaire sheet: It consists of four parts (I): It consisted of personal identification and demographic characteristics of the studied nurses. Part (II): to assess nurses' general knowledge about renal failure and haemodialysis. Part III: Time management perception questionnaire. Part IV: Time wasters' perception questionnaire. Tool (II): Observational Checklist for nurses' performance with workload at dialysis unit. Results: The results of the study revealed that (58.3%) of nurses were working at Benha University Hospital and having experience at dialysis unit more than 5 years. more than half (55%) their age above 30 years, The majority of them 76.7% were working as a bedside nurse, (60.6%) have not any training program in time management. The results showed that there are statistically significant improvement regarding to total level of general knowledge about renal failure and time management, total level of perception about importance of time management and perception about ability to control time wasters after 1 month and at follow up among studied nurses. Conclusion: the nursing educational intervention had a significant effect on improvement of the nurses' knowledge related to renal failure, haemodialysis, time management and performance. Also, it improved the perception of nurses about importance of time management in their performance and their ability to control time wasters. Recommendations: Orientation program for newly staff and continuous education for nurses in dialysis unit about time management and time waster with periodic evaluation of knowledge and practices for the nurses working at dialysis to assess what needs and appraisals. In addition to application of protocol or Schedule of care for patient with chronic renal failure CRF written in Arabic language to improve factor that reinforce time waster.**

Keywords: **Dialysis, Workload, Time management, time waster.**

1. INTRODUCTION

Chronic renal failure has been recognized as significant medical problems for most of the last 2 centuries. It can lead to irreversible reduction of renal function that gradually progresses to end-stage renal disease (***Abeysekera, et al, 2016)*** .Because it is one of the most common causes of death and disability through the world, the most common procedures performed in U.S. hospitals in 2011was Hemodialysis , occurring in 909,000 stays (a rate of 29 stays per 10,000 population) ***(Pfuntner, et al, 2013).*** In Egypt, 99.9% of patients with ESRD are treated by hemodialysis, while only 0.1% of patients with ESRD treated by peritoneal dialysis. The estimated number of patients with ESRD almost doubled, from 18,000 in year 2000 to 33,693 in 2009 ***(Mohamed, 2009a).*** Renal failure can affect persons of all ages, but the peak incidence is between 45 to 65 years old ***(Afifi and Karim, 2008).***

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Dialysis removes excess fluids and restores chemical and electrolyte balance. HD involves passing the patient's blood through an artificial semipermeable membrane using the principle of osmosis, diffusion, and ultrafiltration to perform the filtering and excretion functions of the kidney ***(Donna and Linda, 2013).*** also remove waste products from the body when the kidney are unable to do so. The purposes are to maintain the life and well- being of the patient until kidney function is restored. Methods of therapy include hemodialysis, hemofiltration, and peritoneal dialysis. The need for dialysis may be acute or chronic ***(Shiel and William, 2011 & Towel and Adams, 2008).***

Patient undergoing dialysis requires high qualified, skilled, well-educated and motivated registered nurses because they deals with patients who are suffering the real or threatened influence of acute or chronic kidney failure ***(ANNA, 2018).***And dialyzer nurses need to manage available time at work in order to accomplish their critical duties, because they need to spend more time with patients with many problems and need numerous cares ***(Romina 2017)***. Nurses working in critical care units conform more stress and suffering from work pressures with little time and insufficient staff, these leads to reduce quality of care ***(Van Dam, et al, 2013).*** Their responsibilities include monitoring patient vital signs, help and supervise patients submit dialysis treatments as decided by a physician, may teach them about their health status, treatments, and other life altering factors that may help them maintain a balance of health, assessing the effectiveness of procedures and responsible for work area cleanliness. Dialysis nursing is dealing with patients who are under stress and encounter serious symptoms enable replacement a patient's life ***(Nurse Journal, 2018).***So managing time well means managing life well and promote performance and save more time to perform activities efficiently and effectively with setting priorities ***(Rapp, et al ,2013 & Ghiasvand, et al ,2017).***

A high workload is needed by kidney disease Patients higher than the workload needed by patients in medical and surgical units (**Panunto and Guirardello 2009 & Brito and Guirardello 2011)** and Quality of services provided for the patients has a close and strong association with the workload of nurses ***(Bahadori , et al , 2014)*** .The nursing workload is a work that delegated to or expected from them in specific period of time ***(Merriam, 2016).*** It is also the amount of time and the complexity of care that a nurse can specify directly and indirectly towards patients, workplace, and professional development ***(Alghamdi, 2016)***. In hospital there are in sufficient number of nurses and this leads to high workload. As a consequence of nursing shortage in hospitals, the nurses workload is increased and leads to inefficient care, decrease productivity, burnout (***Ohue, et al 2011)*** and job dissatisfaction **(*Bronwyn, 2010 & Ni Luh, etal, 2011)*** and associated with adverse patient effects such as; increase mortality rate for patient***(Junttila, et al., 2016),*** medication errors, and rescue failures ***(Liu et al., 2012).*** So good workload management will help keep employees healthy ***(Spence L 2012)*** and in service training for nurses can decrease the workload of them and contribute to high quality in providing of nursing care and effective use of available time ***(Mohammad, et al, 2014).***

Many factors affecting time, lead to wasting it and are correlated to high workload of nurses with adverse negative effects on patients especially in critical care units such as, in appropriate planning, in ability to say "no", procrastination, un expected visitors, meetings, ***(Holden, et al., 2011 & Ahlam, 2015),***in sufficient equipment and supplies, inadequate administrative support ,crowded unit and unit disorganization ***(Fagerstrom , 2014 & Mohammadi, et al., 2015)*** .So the principles of time management mentioned by (***Grissom, et al., 2013 & Said, 2014)*** are; setting goals, prioritization, planning, organizing, delegating of routine tasks and control of interruptions and evaluation. If the time handled well, the nurse performs tasks with more creativity.

Time Management is a fundamental in work place**,** optimal managing time is critical for the success of any operation especially in critical care units. So the nurses who dealing with chronic kidney failure patients under dialysis must be use time wisely and appropriately in such work areas. Time management in work place has positive effects, it leads to job satisfaction, minimize stress, increase motivation, interests for the work, increase productivity and reduce costs (***Radonshiqi. 2013***). So effective managing and organizing the time by nurses can make them much more efficient, and will be able to attend to the needs of many patients in less time, through a continuous process of proper planning, organizing time, analyzing with proper implementation of the plan and positive disposition towards wasting time and evaluation of all activities carried out during working hours daily ***(Nizar, 2014).***

Nurses are a key role in patient's outcomes, so a need to provide evidence -based knowledge needed for patients and implement best guidelines in their practice ***(Bernard, and Moore, 2012).*** Because care is often delivered in a pressurized and fast-moving environment, involving a vast array of technology, daily decisions and judgments by health-care

professional staff. In such circumstances, things can do wrong. Sometimes unintentional harm comes to a patient during a clinical procedure, or as a result of a clinical decision. Mistakes in care can result in injury and harmful patients and seriously ill ended by death. ***(WHO,2014).*** So learning time management skills in nursing lets nurses work smarter instead of harder, because time management is an important component of work performance and professional nursing practice, ***(****Rosario, 2012).*

2. SUBJECTAND METHODS

Aim of the study:

The study was carried out to assess Impact of Educational Intervention program about Time Management for nurses in Dialysis Unit on nurses

Research hypothesis:

After Educational Intervention program:

1. Nurses' knowledge about renal failure, hemodialysis and time management will be increase.
2. Nurses' perception about importance of time management in improving their performance will increase.
3. Nurses' perception about their ability to control time wasters will increase.
4. Nurses' sociodemographic data will effect nursing knowledge and performances

Research Design :

The researchers used Quasi-experimental design in performing the study to assess the effect of the educational intervention on nurses' awareness and perception regarding importance of time management and ability to control time wasters in dialysis unit to deliver effective patient care.

Setting: dialysis unit at Benha university hospital and health insurance hospital. Used to conduct study

Sample: convenience sample was used; the subjects of the study compromised of all the available nurses working in dialysis unit at both hospitals over a period of 8 months. The total number of nurses were all available nurses whom present care to patient undergoing hemodialysis (60).

Tools of data collection:

Tool (I):

Interview questionnaire: It consists of three parts **Part (I):** identification and demographic characteristics of the studied nurses such as; hospital name, age, occupation, educational level, experience in dialysis unit and training program in time management. **Part (II):** developed by researchers after reviewing literatures to assess **firstly**, nurses' general knowledge about renal failure and hemodialysis, which include knowledge related to renal failure, medication needed during dialysis session, complication of dialysis, knowledge related to patient and nursing care during dialysis session and complications. S**econdly**, to assess nurses' general knowledge about time management, definition, objectives, strategies and principles, time wasters, and time saving methods.

Each item was scored 1 for correct answer and 0 for incorrect answer. The total score of all questions will be represented in 100% and categorized into two levels, unsatisfactory (<75%) and satisfactory (≥ 75%).

Part III:

Time management perception questionnaire: It was designed to measure the perception level that nurses have regarding importance of using time management to improve performance

Scoring system: Scores were allocated as follows: 3 marks were given for agree, and 2 marks was given for not sure and 1 mark for disagree. Total score were expressed as percentages. If the score was less than 60% it referred to poor perception, 60 to less than 75% referred to average perception and if more than 75% referred to high perception.

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Part IV:

Time wasters' perception questionnaire: It was designed to measure the perception level that nurses have regarding their ability to control time wasters

Scoring system: Scores were allocated as follows: 3 marks were given for agree, and 2 marks were given for not sure and 1 mark for disagree. Total score were expressed as percentages. If the score was less than 60% it referred to poor perception, 60 to less than 75% referred to average perception and if more than 75% referred to high perception.

Tool (II):

- Observational Checklist for Nurses' performance in dialysis unit, It was developed by the researchers after reviewing a literature guided by (Ibrahem, 2009, el said, 2013) to assess nurses' performance including, management of nurse care, professional responsibility, interpersonal relationships, interprofessional health care and quality improvement.

Scoring system:

Scoring system: Scores were allocated as follows: 3 marks were given completely done, and 2 marks were given for not complete done and 1 mark for not done. Total score were expressed as percentages. If the score was less than 60% it referred to unsatisfactory practice, 60 to less than 75% referred to average practice and if more than 75% referred to satisfactory practice.

Face & Content Validity: Researcher perform Validity of tools through 4 assistant professors of medical surgical nursing, and nursing administration departments to check the relevancy, clarity, comprehensiveness, and applicability of the questions. According to their opinions, minor modifications were done and the final form was developed.

Pilot study: 10% of the sample was used to test the clarity and applicability of the study tools. To detect the obstacles and problems that may be encountered during data collection required modifications were done in the form of adding or omission of some questions. The time needed to fill in the questionnaire was about (30-45 minutes). Nurses involved in the pilot study were excluded from the main study subjects

Fieldwork:

An official approval to conduct the study was obtained from medical and nursing directors of Benha University Hospital and health insurance Hospital before any attempt to collect data. Clarifying the aim of the study to them to gain cooperation .Each participant was notified about the purpose of the study and their right to accept or refuse to participate. Complete confidentiality of any obtained information was ensured. Data collection covered a period of 8 months started from the beginning of November 2015 to the end of July 2016. The data was collected throughout three phase of assessment for nurses. The first phase of assessment was collected prior to conducting the guidelines for nurses Stage I : Pre implementation phase (Initial assessment) using the tools to have base line of data about nurses awareness of performances in the dialysis unit, and work load management knowledge questionnaire assessment was done pre ,during, and after induction of **Educational Intervention program**. The second phase of assessment was done one month post-**Educational Intervention program** to evaluate the impact of teaching **Educational Intervention program**. The third phase 3 months after **Educational Intervention program**. Theses by using study tools were applied to assess nurses'retened knowledge, and attitude in relation to nurses awareness of activity, knowledge and practice in the dialysis unit, work load management process., clear instructions were given to nurses about questionnaire sheets and the time waster's questionnaire were distributed and collected in the same day or next day, according to the workload on head nurses.

Performance Checklist: It was filled by the researchers using the tool II, and take available time about 6 hours to fill it. Checklist used 3 times (pre- post- and follow up test) .Each nurse was observed throughout dialysis session from its initiation till its termination for a period of about 4 to 6 hours at the morning and afternoon shift. Nurses member were unaware that they were being observed. Each observation sheet was filled immediately while observing the nurse when performing dialysis procedure and ability to manage of work load or time assessment sheet, delegation scale, time wasters' questionnaire.

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C. **Educational Intervention program** was developed guided by reviewing the most recent related literature. Based on the opinions of experts, the result of the nurses' performance, available structure guidelines the nurses learning needs were identified and classified into knowledge and performance. Detected needs, requirements and performance deficiencies were translated to aim and objectives. Teaching materials was be prepared as audiovisual materials, video tape and handouts. After that, the theoretical and practical parts of the guideline were discussed and demonstrated through a group discussion sessions, twenty sessions were used for each group. Nurses were divided into small groups (2-4 nurses/session), It divided as following: A total 8 sessions for theoretical part, 10 sessions for the practical part. The total number of group was (12groups) and total time for achieving the teaching guideline was (60) hours for each group under the study. Each session lasted for not less than two hour. Using PowerPoint presentation, discussion, demonstration and re-demonstration were also conducted during each session. A post-test was done immediately after the program for all subjects of the sample, using the assessment tools. (follow-up): Three months after program implementation, all the study tools were applied for nurses to evaluate the effect of the educational program on their knowledge and attitude in comparing with the pre-post and follow-up results.

Evaluation of nurses, knowledge using tools I, II Comparison of each nurse's findings with the preceding one to evaluate the impact of implementing guidelines on nurses performance.

Data entry and analysis were done using the Statistical Package for Social Sciences (SPSS), version 15. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations for quantitative variables.

Ethical consideration:

The purpose of the study was explained to the nurses and oral consent was obtained from them to participate in this study. They were given an opportunity to withdraw from the study without given a reason and they were assured that anonymity and confidentiality of information was protected. Ethics, values, culture, and beliefs were respected.

3. RESULTS

(Table 1) portrayed that that more than have of nurses (58.3%) were working at Benha University Hospital and having experience in dialysis unit more than 5 years, (55%) their age above 30 years, The majority of the them 76.7% were working as a bedside nurse,(46%) technical (60.6%) not have any training program about time management.

Table (2): showed nurses' knowledge about renal failure and hemodialysis throughout the program phases. The result showed satisfactory knowledge after 1 month and at follow up related to renal failure, medication needed during dialysis session, complication of dialysis, patient and nursing care during dialysis session and complication

(Table 3) The results showed Improvement in all items regarding to knowledge about time management after program and at follow up.

Table (4) revealed Improvement in nurses Performance with workload after program and at follow up.

(Table 5) The results showed statistically significant improvement in nurses' perception regarding importance of using time management element to improve their performance after 1 month and at follow up.

Table 6) The result showed improvement in nurses ability to control time waster factors in dialysis unit after 1 month and at follow up except family factor minimally changed after 1 month but improved at follow up.

Table7) The results showed that there are statistically significant improvement regarding total level of general knowledge about renal failure and time management, total level of perception about importance of time management and total level of perception about ability to control time wasters through the phases of the program among studied nurses.

Table 8) revealed that there are no association between socio-demographic characteristics of nurses with their satisfactory knowledge pre intervention, except in educational level.

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ISSN 2394-7330

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Table (1) Distribution of the study group according to their socio-demographic characteristics (n=60)

Socio-demographic Characteristics	Total (60)	
	No	%
Hospital		
Benha University hospital	35	58.3%
Benha Teaching hospital	25	41.7%
Age		
<20	5	8.4%
20-30	22	36.7%
> 30	33	55%
Occupation		
Bedside Nurse	46	76.7%
Head nurse	4	6.7%
Specialist	10	16.7%
Educational level		
Diploma	11	18.3%
Technical institute	28	46.7%
Bachelor	21	35%
Experience in dialysis unit	2.5 ± 0.6	
> 1yr.	5	8.4%
1-5 yrs.	20	33.3%
< 5 yrs.	35	58.3%
Time management training		
Yes	23	39.4%
No.	37	60.6%

Table (2) Distribution of studied sample according to their general knowledge about renal failure and haemodialysis

Items	Pre		After 1 month		Follow up	
	N	%	N	%	N	%
General knowledge related to renal failure						
• Satisfactory	16	26.7%	39	65%	51	85%
• Average	22	36.7%	13	21.7%	6	10%
• Poor	22	36.7%	8	13.3%	3	5%
Knowledge related to medication needed during dialysis session						
• Satisfactory	34	56.7%	48	80%	54	90%
• Average	13	21.7%	6	10%	4	6.7%
• Poor	13	21.7%	6	10%	2	3.3%
Complication of dialysis						
• Satisfactory	39	65%	51	85%	55	91.7%
• Average	10	16.7%	2	3.3%	3	5%
• Poor	11	18.3%	7	11.7%	2	3.3%
Knowledge related to patient and nursing care during dialysis session						
• Satisfactory	32	53.3%	47	78.4%	52	86.7%
• Average	16	26.7%	5	8.3%	5	8.3%
• Poor	12	20%	8	13.3%	3	5%
Knowledge related to patient and nursing care during complication						
• Satisfactory	29	48.3%	46	76.7%	54	90%
• Average	15	25%	5	8.3%	4	6.7%
• Poor	16	26.7%	9	15%	2	3.3%

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Table (3) Distribution of studied sample according to their general knowledge about time management

Items	Pre		After 1 month		Follow up	
	N	%	N	%	N	%
Definition						
• Correct and complete	30	50%	39	65%	51	85%
• Incomplete	23	38.3%	17	28.3%	6	10%
• Don't know	7	11.7%	4	6.7%	3	5%
Objectives						
• Correct and complete	28	46.7%	41	68.3%	52	86.7%
• Incomplete	25	41.7%	15	25%	7	11.7%
• Don't know	7	11.6%	4	6.7%	1	1.6%
Strategies and principles						
• Correct and complete	26	43.3%	48	80%	54	90%
• Incomplete	13	21.7%	6	10%	4	6.7%
• Don't know	21	35%	6	10%	2	3.3%
Time waster						
• Correct and complete	33	55%	51	85%	55	91.7%
• Incomplete	17	28.3%	2	3.3%	3	5%
• Don't know	10	16.7%	7	11.7%	2	3.3%
Time saving methods						
• Correct and complete	32	53.3%	47	78.3%	52	86.7%
• Incomplete	20	33.4%	10	16.7%	5	8.3%
• Don't know	8	13.3%	3	5%	3	5%

Table (4) Frequency distribution of studied sample according to their Performance with workload

Items	Pre		After 1 month		Follow up	
	N	%	N	%	N	%
management of nurse care						
• Low	28	46.7%	22	36.7%	15	25%
• Average	18	30%	13	21.7%	11	18.3%
• High	14	23.3%	25	41.7%	34	56.7%
Professional Responsibility						
• Low	32	53.3%	21	35%	8	13.3%
• Average	15	25%	11	18.3%	10	16.7%
• High	13	21.7%	28	46.7%	42	70%
Interpersonal Relationships						
• Low	32	53.3%	17	28.3%	8	13.3%
• Average	16	26.7%	10	16.7%	13	21.7%
• High	12	20%	33	55%	39	65%
Interprofessional Health Care and Quality Improvement						
• Low	35	58.3%	16	26.7%	7	11.7%
• Average	13	21.7%	22	36.7%	18	30%
• High	12	20%	22	36.7%	35	58.3%

Table (5) Perception of studied nurses regarding importance of using time management element to improve their performance

Items	Pre		After 1 month		Follow up	
	N	%	N	%	N	%
goal setting						
• Low	35	58.3%	17	28.3%	7	11.7%
• Average	11	18.3%	16	26.7%	8	13.3%
• High	14	23.3%	27	45%	45	75%
Set priorities						
• Low	37	61.7%	23	38.3%	12	20%

• Average	12	20%	7	11.7%	16	26.7%
• High	11	18.3%	30	50%	32	53.3%
Be organized						
• Low	33	55%	23	38.3%	10	16.7%
• Average	17	28.3%	12	20%	8	13.3%
• High	10	16.7%	25	41.7%	42	70%
Use of delegation						
• Low	29	48.3%	23	38.3%	10	16.7%
• Average	16	26.7%	17	28.3%	17	28.3%
• High	15	25%	20	33.3%	33	55%
Proper staffing						
• Low	41	68.3%	25	41.7%	9	15%
• Average	9	15%	19	31.7%	10	16.7%
• High	10	16.7%	22	36.7%	41	68.3%
Use team work						
• Low	42	70%	31	51.7%	21	35%
• Average	11	18.3%	10	16.7%	9	15%
• High	7	11.7%	19	31.7%	30	50%
Control time wasters						
• Low	29	48.3%	15	25%	7	11.7%
• Average	14	23.3%	17	28.3%	11	18.3%
• High	17	28.3%	28	46.7%	42	70%
Take your break						
• Low	38	63.3%	15	25%	10	16.7%
• Average	9	15%	12	20%	8	13.3%
• High	13	21.7%	33	55%	42	70%

Table (6) Frequency distribution of studied nurses regarding their ability to control time wasters

Items	Pre		After 1 month		Follow up	
	N	%	N	%	N	%
Organizational factors						
• Low	40	66.7%	22	36.7%	6	10%
• Average	12	20%	13	21.7%	25	41.7%
• High	8	13.3%	25	41.7%	29	48.3%
Physical instruction						
• Low	38	63.3%	28	46.7%	8	13.3%
• Average	12	20%	5	8.3%	14	23.4%
• High	10	16.7%	27	45%	38	63.3%
Process that have excessive number of stages						
• Low	31	51.7%	21	35%	9	15%
• Average	18	30%	17	28.3%	12	20%
• High	11	18.3%	22	36.7%	39	65%
Wasters related staffing and delegation						
• Low	32	53.3%	17	28.3%	5	8.3%
• Average	15	25%	20	33.3%	14	23.3%
• High	13	21.7%	33	55%	41	68.3%
Locating supplies and equipment						
• Low	42	70%	23	38.3%	6	10%
• Average	9	15%	18	30%	15	25%
• High	9	15%	21	35%	39	65%
Charts and documentation						
• Low	45	75%	21	35%	10	16.7%
• Average	8	13.3%	19	31.7	7	11.7%

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• High	7	11.7	20	33.3%	43	71.6
Physician interaction						
• Low	29	48.3%	15	25%	7	11.7%
• Average	14	23.3%	17	28.3%	11	18.3%
• High	17	28.3%	28	46.7%	42	70%
Interaction with patient family						
• Low	38	63.3%	26	43.3%	9	15%
• Average	9	15%	15	25%	14	23.3%
• High	13	21.7%	19	31.7%	37	61.7%

Table (7) Frequency distribution of studied sample according to total level of study dimension

Items	Pre		After 1 month		Follow up		CHI	P
	N	%	N	%	N	%		
Total level of general knowledge about renal failure and time management								
• satisfactory	31	51.7%	48	80%	54	90%	24.5	.00001
• unsatisfactory	29	48.3%	12	20%	6	10%		
Total Performance with workload								
• satisfactory	49	81.7%	33	55%	22	36.7%	28.8	.00001
• unsatisfactory	11	18.3%	27	45%	38	63.3%		
Total level of perception about importance of time management								
• satisfactory	48	80%	31	51.7%	14	23.3%	39.4	.00001
• unsatisfactory	12	20%	29	48.3%	46	76.7%		
Total level of perception about ability to control time wasters								
• satisfactory	51	85%	29	48.3%	14	23.3%	60.3	.00001
• unsatisfactory	9	15%	31	51.7%	48	80%		

Table (8) Association between socio-demographic characteristics of nurses and their total level of knowledge pre intervention

Socio-demographic Characteristics	Satisfactory31		Unsatisfactory 29		CHI	P
	N	%	N	%		
Age						
<20	1	20	4	80	3.4	.18
20-30	10	45.4	12	54.6		
> 30	20	60.6	13	39.4		
Educational level						
Diploma	2	18.2	9	81.8	13	.001
Technical institute	12	42.9	16	57.1		
Bachelor	17	80.9	4	19.1		
Experience in dialysis unit						
> 1yr.	2	40	3	60	2.3	.8
1-5 yrs.	8	40	12	60		
< 5 yrs.	21	60	14	40		
Time management training						
Yes	16	69.5	7	30.5	4.7	.02
No.	15	40.5	22	59.5		

4. DISCUSSION

High workload is needed for Patients with kidney disease, higher than needed for patients in medical and surgical units***(Panunto and Guirardello. 2009 & Brito and Guirardello.2011***. Dialysis nursing is characterized by frequent, ongoingcontact with these patients who have require to complex nursing care ***(Hayes, 2010)***. We cannot manage time, but canmanage events related to time .This is considered one of the most production elements in the organization and is the essential element of the work as well as human element ***(Al-Mubarak and Al-Rashidi, 2016)***.It is difficult to provide a precise definition of time but it can be allocated from less important to important activities. ***(Tawfiq, 2013).***

Based on the results, the majority of nurses (76.7%) were working as a bedside nurse, more than half (55%) their age above 30 years having experiences in dialysis unit more than 5 years, this maybe in case of hospital policies in keeping the more experience and old nurse in this specialties because its importance . These findings in disagree with ***(Yousif , et al 2017),*** who found that, The majority of the nurses (72%) were younger than 36 years of age, (75%) of the nurses have bachelor degree in nursing and 25% of the participants had Master degrees in nursing.

Slightly more than half of the nurses had more than 10 years of experience in hemodialysis unit. Also the findings agreed with the study by ***(Abd-Alfatah, et al ,2012 & Hassan,2010)*** they stated that the majority of the nurses have diploma of nursing and more than half (54.2%) of them had experience from 5 years to less than 10 years and more than half (55%) their age above 30 years. The study disagree with ***(Abd-Alfatah, et al ,2012 &Hassan,2010)***who found that the majority of nurses working in dialysis unit their experiences range from 5 to less than 10 years. As regarding to attending training programs in time management it was found that large percentages (60.6%) did not attend any training programs in time management this was agree with previous studies. Experience was one of the factors facilitating care of dialysis patients. To provide high quality nursing care, the nurses may take advantage of their technical knowledge, clinical skills, and interpersonal relationships (intimacy, humor, and training patient) ***(Bennett.2011)***.

End stage renal disease is a worldwide health issue that requires strongly experienced nurses. Regarding nurses' knowledge related to renal failure and hemodialysis. The result showed satisfactory improvement of general knowledge related to renal failure, medication needed during dialysis session, complication of dialysis, patient and nursing care during dialysis session and complication after 1 month and at follow up**.** This may be due to the most of studied nurse had more 5 years of experiences. And could be due to that the nurses are responsible about patient undergoing HD procedures and more contact with those patients. On the same line This agree with ***(Abd-Alfatah, et al ,2012 & Ali,201l)*** who stated that the majority of studied nurses had better percentage score in knowledge. Also, ***(Yousif , et al 2017)***mentioned that there was significant improvement in level of knowledge of studied nurses after an educational intervention. And this was in agreement with the study by ***(Shrestha, 2013)*** showed that after applying of an educational program, the overall level of knowledge of participants improved from 50% to 70%. In the same line ***(Ibrahim, 2013)*** showed that there is highly statistically improvement in general knowledge regarding to kidney, and treatment of chronic renal failure, types of dialysis, when comparing with pre and immediate after implementation of teaching guidelines. Additionally ***Group, 2009*** stated that, As nurses working in dialysis must be knowledgeable and have enough information about the disease, dialysis, patients and complications during dialysis, they also should have technical skills combined with appropriate experience. This skills plays an important role in their comfort. Lack of information of the health care providers about the disease is one of the barriers to the delivery of care for patients with chronic renal failure (***Rastogi, et al 2008***).

The result revealed that the educational intervention program were effective as the nurses' general knowledge related to time management was improved after 1 month and at follow up. Although (60.6%) of them had not any training program before in time management, may be due to lack of concern from responsible authorities. On other hand ***Wright and Stephanie (2017)*** mentioned that large percentage of participants (53.3%) indicated they had not received any dialysis-related continuing education or training within the past year and all staff indicated that educational program met their learning needs and was valuable and they would recommend the workshop be used as annual competency .The present study mentioned that there was improvement in nurses' performance of activities with workload after 1 month and at follow up after conducting the training program at dialysis unit. This improvement may explain by, dialysis nurses are interested by the importance of the program to establish effective care in their work. This was supported by ***Ahmad and Orany ,(2010)*** who confirmed that commitment of nurses about their responsibilities, duties and perform their work in time manner , there are advantage the performance in the work. This in line with ***(Ramanujam, et al., (2008)*** who stated that the nurses' perception of workload demands has an inverse relationship to their perceived ability to provide safe care. As the workload demands increase, the perception that safe care delivery can be achieved diminishes.

Time management is the first priority in planning process and affects any organization because it helps in achieving its goals. The study by ***(Qteat and Sayej 2014)*** entitled that the development of professional goals can be used effectively as a tool for planning time in order to help achieve the objectives of the organization, and staff can achieve work goals more efficiently and effectively. ***Said (2013)*** revealed that, effective planning and analyzing of time with the proper implementation of the plans lead to effective and successful management of time

The present study revealed significant improvement in nurse's perception regarding importance of using time management elements to improve their performance after 1 month and after three months at follow up of the training program. This improvement indicates that the program had good effect and may be due to the willing of nurses to conduct the program and their conscious of its importance. These agree with ***Soliman,(2009)*** stated that in-service education program turned to be effective in increasing the level of the head nurses' knowledge and attitude about time management .This findings in contrast with ***(Qteat and Sayej 2014)w***ho showed that no significant difference was found between skill of time before and after the training program. In this respect

The result showed improvement in nurse's ability to control time waster factors in dialysis unit after the educational intervention at 1 month and at follow up except family factor minimally changed after 1 month but improved at follow up. This may be due to difficult to change it but they need additional services to manage social and family factors. Study supported by ***Marquis, B. & Huston, C. , (2012)*** the common time wasters were due to poor planning, failure to set objectives, procrastination, ineffective meeting and socializing .Time waster factors lead to a reduction in the quality of patient care and outcomes. ***Berry, and Curry, (2012)*** mentioned that poor work environments continue to affect nurses' ability to provide safe care. limited technical and human support, role confusion, frequent interruptions, lack of system integration and coordination, increasing patient acuity, and a lack of decision making and input into patient care decisions negatively affect nurses and the patients. Also ***Kalisch and Williams (2009)*** revealed that staffing problems frequently resulting from a sudden or unexpected increase in care demands within the shift. (***Westbrook, 2010)*** determined that each interruption of nurses is associated with a12.1% increase in procedure failure and 12.7% increase in clinical errors. 38 . Other study *by* ***Ashker, et al., (2012)*** mentioned that work environment of the hemodialysis is stressful and these affect the level of job satisfaction that a nurse can achieve ***(Castaneda and Scanlan., 2014)***. Heavy nursing workload, weak authority, ignorant director of nursing, lack of nurse's aide and nursing assistant, unskilled staff and interventions by caregivers are among the barriers dialysis care. ***Nobahar and Tamadon, (2016).*** Study by ***Walker, et al (2016);*** believe that the delivery of dialysis care requires special technical abilities and providing care for patients is a challenge which is associated with increased supervisory activities and many human resources and equipments are needed to provide different services.

The results of study showed that to provide effective care for patient on dialysis it is important to include nurses have knowledge, skills, can manage their time although workload and time waster factors. This result matched with (***Nobahar and Tamadon., 2016)*** study which showed that to facilitate hemodialysis care it is necessary to recruit efficient human re-sources and nurses who would be able to establish close relationships with patients, have basic knowledge, be able to achieve hemodialysis skills, and have enough experience.

5. CONCLUSIONS

Based on the results can be concluded that there are statistically significant improvement regarding to the knowledge of nurses about renal failure, haemodialysis, time management after receiving the educational intervention. Also, the perception of nurses about importance of time management in improving their performance and their ability to control time wasters increased and the performance of nurses improved after receiving the intervention.

6. RECOMMENDATIONS

- Periodic evaluation of knowledge and practices for the nurses working in dialysis to assess what needs and appraisals.
- Improve factor that Reinforce time waster.
- Orientation program for newly staff and Continuous education for nurses in dialysis unit about time management and time waster.

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