

“Effectiveness of self-instructional module on knowledge regarding home care management of hemodialysis among patients undergoing hemodialysis”

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ABSTRACT

Background:- Renal Failure or insufficiency is a condition of partial or total loss of kidney function. Failure does not occur until the functional loss of 75% of kidney occurs. Haemodialysis is used for the client with acute or irreversible renal failure. **Aim:-**The study attempted to assess the effectiveness of self instructional module on knowledge regarding home care management of hemodialysis among patients undergoing hemodialysis. **Objectives:-** 1)To assess the knowledge on home care management of haemodialysis among patients undergoing haemodialysis at selected hospital of Indore city, M.P. 2)To find out the association of the knowledge level on home care management of hemodialysis with socio-demographic variables among patients undergoing haemodialysis at selected hospital of Indore city, M.P. 3)To determine the effectiveness of self instructional module on the knowledge of patients regarding home care management among patients undergoing hemodialysis at selected hospital of Indore city, M.P. **Research Methodology:-** A pre-experimental study was carried out with 30 patients present in the dialysis Unit, Bombay Hospital Indore were selected for the study. Non Purposive sampling technique was used to select the subjects. Self administered tool-multiple choice statements were used to evaluate the knowledge before and after administration of self instructional module. Data was analyzed with both descriptive and inferential statistics. **Results:-**The result showed that there was no significant association of the knowledge level on home care management of hemodialysis with socio-demographic variables. The calculated mean pre test score is 14.3 with the S.D is 3.97. The calculated mean post test score is 20.7 with the S.D is 3.62.The computed ‘t’value 10.67 is higher than the ‘p’ value at 0.05 level of significance. **Conclusion:-**Thus for this study one can conclude that self instructional module could be an effective strategy to improve the knowledge of regarding home care management of hemodialysis among patients undergoing hemodialysis.



Keywords:- Pre-experimental, Effectiveness, Self instructional module, Hemodialysis.

INTRODUCTION

End stage renal disease is a chronic illness which inevitably reduces the lifespan of the patients. Chronic renal failure (CRF) or end-stage renal disease(ESRD) is a progressive irreversible deterioration in renal function in which the body is unable to maintain metabolic and fluid and electrolyte balance resulting in uremia and azotemia. Dialysis is a medical treatment that makes up for decreased kidney function by filtering toxins out of the body, maintaining a safe level of chemicals and proteins in the bloodstream, and helping control blood pressure, notes the National Kidney Foundation The Continuous Ambulatory Peritoneal Dialysis [CAPD], haemodialysis and Renal Transplantation treatment modalities are available, none of these treatments are curative, instead they offer symptom relief, extend life expectancy and are intended to improve the quality of life.

Home care management is the critical component of the treatment of CRF patients undergoing hemodialysis. The dietary restriction is also vital to maintain optimal health for the CRF patients, because certain substances present in the foods and drinks, when taken in excess, damaged kidney may not be able to remove the waste, which are harmful to the body. So the foods and drinks containing those substances, which are harmful to the body, must be regulated. Dietary protein restriction represents an important new development in treatment of chronic renal disease for the last 10 years

The need for good education and preparation of the individual and the family at all stages of chronic renal failure, and potentially heading towards end stage renal failure, cannot be underestimated. Teaching must be provided in small increments and time is provided for



clarification, repetition and reinforcement. Time must be provided for the patient and family to ask questions and receive clarification.

The ultimate goal of patient educational programme is to achieve long lasting changes in behavior by providing patients with the knowledge to take autonomous decisions to take ownership of their care as much as possible and improve their own outcomes

NEED FOR THE STUDY

End stage renal disease is a chronic life threatening condition. Continuous Ambulatory Peritoneal Dialysis or Transplantation imposes severe limitations over a number of significant psycho-social life aspects like-loss of job, helplessness, depression, dependency, lack of support from family and financial crisis. These psychosocial stressors experienced by end-stage renal disease patients if not assessed and intervened might lead to mental illness and disability.

Studies on self-care strategies on dietary behaviors and sources of home management of hemodialysis highlight the poor quality of patients and caregiver's knowledge regarding their treatment regimen. The deficiency in knowledge appears to have two components: Lack of counseling by health professionals, and lack of recall by caregivers. Therefore, it is important that written information is tailored to a particular population.

The investigator during the clinical experience identified that though the hemodialysis patients are getting repetitive verbal instructions from doctors and nurses, most of them find it difficult to retrain this information because of complexity of the treatment regimen. The day- to-day care is the responsibility of the client. But they often fail to follow the prescribed diet and fluid regimen which undermines the effectiveness of care and leads to unpredictable progression of the disease and greater livelihood of complications. Thus patient education about self care management is an important component in the management of ESRD to maintain a quality life. Hence the researcher found it imperative to develop a self instructional module for patients and caregivers which will provide a source of reinforcement under a continual reference. So creating awareness regarding the home care management of dialysis among the patient is needed to improve their knowledge.



PROBLEM STATEMENT

A Pre-experimental study to assess the effectiveness of self instructional module on knowledge regarding home care management of hemodialysis among patients undergoing hemodialysis in Bombay Hospital, Indore (M.P.).

OBJECTIVES OF THE STUDY

- 1) To assess the knowledge on home care management of haemodialysis among patients undergoing haemodialysis at selected hospital of Indore city,M.P.
- 2) To find out the association of the knowledge level on home care management of hemodialysis with socio-demographic variables among patients undergoing haemodialysis at selected hospital of Indore city,M.P.
- 3) To determine the effectiveness of self instructional module on the knowledge of patients regarding home care management among patients undergoing hemodialysis at selected hospital of Indore city,M.P.

HYPOTHESIS

H₁:- There will be significant difference in pre-test and post-test knowledge regarding home care management of hemodialysis after administration of self instructional module at 0.05 level of significance.

H₂:- There will be significant association of the knowledge level on home care management of hemodialysis with socio-demographic variables among patients undergoing haemodialysis

ASSUMPTIONS

1. The study assumes that patients undergoing hemodialysis may not have adequate knowledge regarding home care management of hemodialysis.
2. Self Instructional module will be an effective intervention to increase knowledge regarding home care management among patients undergoing hemodialysis

DELIMITATIONS

The study was limited to-

- Patients who are on hemodialysis admitted in the dialysis unit of Bombay Hospital, Indore.
- Patients who are present during data collection period.
- Patients who are willing to participate.

REVIEW OF LITERATURE

Lorig, et al.(2008), conducted a study to assess the effectiveness of Self-Management Program Can Improve Health Status While Reducing Hospitalization among patient with CKD. This study evaluated the effectiveness (changes in health behaviors, health status, and health service utilization) of a self-management program for chronic disease designed for use with a heterogeneous group of chronic disease patients. Participants were 952 patients 40 years of age or older with a physician-confirmed diagnosis of CKD. This study concluded that the treatment subjects, when compared with control subjects, demonstrated improvements at 6 months in weekly minutes of exercise, frequency of cognitive symptom management, communication with physicians, self-reported health, health distress, fatigue, disability, and social/role activities limitations. They also had fewer hospitalizations and days in the hospital.

Kerri L, et.al.(2011) conducted a study to assess the Patient Dialysis Knowledge Is Associated with Permanent Arteriovenous Access Use in Chronic Hemodialysis. Investigator selected CHD patients from May 2002 until November 2005 and followed for 6 months after initiation of hemodialysis. Patient knowledge was measured using the Chronic Hemodialysis Knowledge

Survey. This study concluded that Patients with less dialysis knowledge may be less likely to use an arteriovenous access for dialysis at initiation and after starting hemodialysis. Additional studies are needed to explore the impact of patient dialysis knowledge, and its improvement after educational interventions, on vascular access in hemodialysis.

Jojo joseph (2012) conducted study related to teaching programme regarding home management of hemodialysis. A study was conducted on education on dietary behaviors and sources home management hemodialysis patients. This descriptive study was designed to identify the knowledge on home management and dietary management in Japanese hemodialysis patients. Subjects 65 years and older received support from family members, doctors, nurses, and technicians than younger subjects. Multiple regression analysis identified that person undergoing hemodialysis are unaware of diet as well as home management.

RESEARCH METHODOLOGY

A Pre-experimental research design was used to evaluate the effectiveness of self instructional module through the difference between the pre-test and post-test score regarding home care management of hemodialysis among patients undergoing hemodialysis.

Research approach:-Pre experimental research approach

Research design:- Pre experimental One group pre-test post-test research design.

Setting:- The study was conducted at Dialysis unit of Bombay hospital Indore, M.P.

Population:- The population for this study was patients undergoing haemodialysis in Dialysis unit, Bombay Hospital, Indore, M.P

Sampling Technique:- Purposive sampling technique was used to select samples.

Sample:- Patients who met the inclusion criteria were selected as sample.

Sample size:- The sample size for the study was 30.

Variables:-Two types of variables were used in this study

- **Independent variable:-**Self Instructional Module on home care management of haemodialysis

- **Dependent Variable:-** Knowledge of haemodialysis patient present in dialysis unit of Bombay Hospital Indore.

Inclusion criteria:-

- Patient who were on haemodialysis.
- Patient with Permanent Arteriovenous Access
- Patients who could be able to read & speak English & Hindi,

Exclusion criteria:-

- Patient who are Critically ill.

Reliability & validity of the tool:-

The questionnaire on home care management of haemodialysis was tested on 10 samples by Test retest method and the reliability is calculated and is 0.80 by Karl Pearson's formula which showed that the tool was reliable. Validity of tool was done by experts.

Data collection procedure:-

Data collection was started after obtaining permission from the Hospital Authority. Written informed consent was obtained from all participants. Data collection was done by using multiple choice statements on patients undergoing hemodialysis at Bombay Hospital, Indore, M.P. The tool consists of two section, first section consist of 7 socio-demographic variables & second section consist of 25 multiple choice statements related to homecare management of hemodialysis. Pre-test was conducted among samples. Then self instructional module was administered after that post-test

among same samples was taken after one week. The collected data was analyzed by using descriptive & inferential statistics.

RESULTS

Section 1:- Description of socio-demographic variables.

Demographic data revealed that majority (50%) of patients belonged to 41-60 years of age, (57%) were female, (60%) patients were having from joint family, (43%) had completed secondary education, (83%) had history of previous illness. Majority of patient's income (47%) was above Rs. 10,001 per month. (37%) had previous information regarding dialysis from newspaper.

Section-2 Assessment of knowledge level of haemodialysis patients regarding home care management

n=30

Knowledge score	Pre-test	Post-test
Poor(0-25%)	0(0.00%)	0(0.00%)
Average(26-50%)	12 (40%)	2 (6.7%)
Good(51-75%)	14 (46.67%)	6 (20%)
Excellent(>75%)	4 (13.34%)	22 (73.4%)
Mean scores /Mean %	14.3/57.2%	20.7/90%

Section-3 Effectiveness of self-instructional module on knowledge regarding home care management of haemodialysis

n=30

Overall	Mean knowledge score	SD	Mean percentage	t value	Tabulated value
Pretest	14,3	3.97	57.2%	10.67	1.69**
Post test	20.7	3.62	90%		p < _0.05

**** Highly significant at $p < _0.05$**

There is significant difference in pre-test and post-test knowledge regarding home care management of hemodialysis after administration of self-instructional module at 0.05 level of significance, hence H_1 is accepted.

Section-4 Association of knowledge score in relation to demographic variables

n=30

Demographic Variables	No. of patients	Percentage	Chi Square Table	Evaluated Value
Age				
20-40	8	27	0.23	12.59
41-60	15	50		
61-80	7	23		
Gender				
Female	17	57	0.13	7.81
Male	13	43		
Type of family				
Nuclear	12	40	0.24	12.59
Joint	18	60		

Educational Status				
Primary	8	27	0.1	16.9
Secondary	13	43		
Graduate	6	20		
Post-graduate	3	10		
Previous illness				
Yes	25	83	0.96	7.8
No	5	17		
Monthly income				
Below 5000	7	23	0.34	12.59
5001-10,000	9	30		
Above 10,000	14	47		
Source of information				
Health education	7	23	0.3	16.9
Friends	8	27		
Newspaper	11	37		
Books	4	13		

There is no significant association between Pretest knowledge Score and demographic variables, hence H₂ is rejected.

NURSING IMPLICATIONS

A) NURSING ADMINISTRATION:

- As a nurse practitioner and educationalist, a self-learning module can be prepared to teach self-care management of dialysis to the renal failure patients & instruct staffs to increase awareness to CRF patients about proper care.
- Cost effective production of self-care management of haemodialysis education materials by nursing staff should be encouraged.

B) NURSING EDUCATION:

- Awareness programme regarding various aspects of self-care management of hemodialysis ie, dietary restrictions, fluid regulation, medication and vascular access site care & prevention of infection can be taught to renal patients with haemodialysis to maintain a quality life.
- The nursing curriculum has to focus on enabling the nursing students to develop skill on care of renal failure patients.

C) NURSING RESEARCH:

- The study will be a valuable reference material for further researchers. The aim is to provide knowledge to hemodialysis patients and to develop a positive attitude in them about self-care management of haemodialysis.

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