International Journal of Web of Multidisciplinary Studies
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
website: http://ijwos.com
Vol.02 No.12.
OPEN ACCESS
E-ISSN : 3049-2424
DOI: https://doi.org/10.71366/ijwos

ASSESSMENT OF PLANNED EDUCATION PROGRAMME REGARDING FLUID CONSUMPTION AND ITS MANAGEMENT AMONG ATTENTION SUPPORTERS OF CLIENTS UNDERGOING HEMODIALYSIS IN SELECTED HEALTH FACILITIES

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Article Info

Article History:

Published:24 Dec 2025

Publication Issue:
Volume 2, Issue 12
December-2025

Page Number:
498-506

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Abstract:

Kidney failure is a dangerous in alteration of kidney function in which the body unable to preserve electrolyte and water and unable to excrete waste product from the body. Hemodialysis is the machine helps to excrete waste product from the body. Dialysis act like a health kidney excrete waste product and control fluid and electrolyte balance. Kidney able to maintain proper function.

Objective:To assess the fluid consumption and its management among care givers of hemodialysis patients.In this study quantative research approach and pre-experimental research design was used to evaluate the information regarding fluid consumption and its management among caregiver of patient undergoing hemodialysis. Non-probability convenience sampling technique was used to select sample. Sample sizes of 60 caregivers of patients undergoing hemodialysis were selected to participate in the research study. Structured questionnaire was used to assess the knowledge about fluid consumption and its management.Result showed that comparison of the before the test and after the test information score concerning fluid consumption and its management among think about givers of patients. Pretest level good knowledge 0.00 percent, average knowledge 15(25%) and poor knowledge 45(75%) and posttest level of information regarding fluid consumption and its administration among care givers of patients.60(100%) were good knowledge,0(0.0%) were average knowledge and 0(0.0%) were poor knowledge.so $p<0.05$ level of significant Hence planned education programme helps to increase knowledge regarding fluid consumption and its management among care givers of patients.Demographic variable educational level of care giver of clients had a statistically significant association with the pretest levels of information regarding fluid consumption and its management among care caregivers of dialysis patients.Age, sex,religion, professional status, income of the family, previous knowledge about care of the client, and source of knowledge had shown no statistically significant association with the pretest level of information regarding fluid consumption and its management among caregivers of dialysis patients.Intentional education teaching was actually to increase the information regarding fluid consumption and its administration among

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caregivers of dialysis clients. Information teaching helps to improve data among those providing care to clients.
Keywords: Effectiveness, Planned education, Hemodialysis, fluid organization

1. Introduction

The human body is a highly ordered, intricate organization composed of individual cells that cooperate to perform the various tasks required to maintain life. Among these, the kidney is crucial for waste compound filtration, metabolism, and excretion. Toxins and contaminants can accumulate in the blood as a result of a important decrease in kidney function. End-stage renal disease is one of the potentially fatal outcomes that might result from this. Hemodialysis is "a medical procedure to correct electrolyte imbalances and remove fluid and waste products from the blood." A machine and a dialyzer—also known as a "artificial kidney"—are used to achieve this.[1]

Patients with end-stage renal illness and advanced chronic kidney disease who need long-term or permanent renal replacement therapy can get hemodialysis. A persistent, irreversible decline in renal function, end-stage kidney failure, also known as chronic renal failure (CRF), causes azotemia or uremia by impairing the body's ability to maintain fluid, electrolyte, and metabolic balance.Systemic diseases like diabetes mellitus, hypertension, chronic glomerulonephritis, pyelonephritis, obstruction of the urinary tract, vascular disorders, infection, medications or toxic agents, and self-medication that cause nephrotoxicity can all contribute to end-stage renal failure.It is a chronic, incurable disease that frequently has no permanent cure other than renal replacement therapy, such as dialysis or kidney transplantation.[2] An estimated 200,000 people in India are thought to get end-stage renal failure each year. Even though most of them begin dialysis, about two-thirds of them are compelled to stop because of different limitations, and as a result, they are sentenced to death. Currently, a large number of clients are receiving kidney treatment in India; the command for kidney failure is rising at a pace of 31% in India and 8% worldwide.Effective home care should be made available to patients in order to prolong their lives in addition to dialysis, for which health education is required.[3]

In India, the number of hemodialysis patients is rising, although it has been noted that these patients are unaware of at-home self-care practices.As a result, understanding the degree of patient self-care management is crucial. Improving self-management abilities is especially crucial for people with serious or long-term medical conditions. The number of dialysis patients in India is believed to be around 55,000. The dialysis population is growing at a pace of 10–20% per year, and more than 100,000 new patients enroll in renal replacement programs there each year. The continuity and follow-up of hospitalized patients' care are lacking in the setting of homecare.Twelve Significant lifestyle changes are necessary for the management of ESRD.[4]

Haemodialysis, dietary restrictions, medicine, and exercise are all part of the complex treatment regimen that patients with chronic renal failure must adhere to. The secret to successful haemodialysis is appropriate vascular access. Failure to adhere to this routine could lead to both immediate and enduring wellbeing and endurance complications. Immediate noncompliance with therapy may raise the risk of hospitalization and emergency room visits.Social variables that significantly alter the lives of people with chronic renal disorders also collision the excellence of living for haemodialysis clients. Patients' and their families' lives are complicated and altered by changes in living habits and their limitations, which ultimately lowers their quality of life.[5]

2. Methods

Study area and period Study area and period

The research was carried out in the Bangalore government health facilities dialysis center. More than 1000-bedded hospitals have well-equipped dialysis centers, and every month more than 100 patients visit for dialysis treatment, and a study was conducted one month.

Study design

A pre-experimental one-group pretest and posttest research design was employed in this investigation.

Population

Source of population: is taken from study area, dialysis center

Study population: was taken from who were available during research time.

Inclusion criteria: the study included care giver of patients who was

- Interest to involved in the research
- Presented during data collection time
- Who can read and write Kannada or English

Exclusion criteria

- Care giver not interested in study

Sample size: 60 care giver of dialysis patients
Technique of sample:

Non-probability convenience sampling technique

Variables

Independent variables

In this study effectiveness of planned education regarding fluid consumption and its management among caregivers of patients undergoing hemodialysis in a selected dialysis Centre, Bangalore.

Dependent variables

In this researchvariable are dependent variable refers to increasing the information on fluid consumption and its management among care givers of patients undergoing hemodialysis. The components included in successful fluid management of patients.

Demographic profile: Includes Age, sex, religion, educational status,occupation,family history of care of patients, source of information.

Operational definition

1.Effectiveness: It refers to the way in which an action produces an intended or desired outcome. It refers to the extent to which the planned teaching programme regarding fluid consumption and its management has achieved the desired effect and improves the knowledge of care givers of patients undergoing hemodialysis.

2.Programme of education: An Important developed teaching plan to impart knowledge to caregiver of patientsregarding fluid consumption.

3. Knowledge: It refers to the care givers regarding care of dialysis patients, fluid consumption and its management.

4.Care giver: It refers to the caregiverswho are the bystanders (family member,relatives and friends) of the patient undergoing hemodialysis.

5. Hemodialysis: Removing waste products from the body and filtration of blood through a dialyzer.

3. Data collection instrument and procedure

Based on the literature study, the lead investigators developed a tool in English version. The lead investigators first translated the Kannada version before starting the data collection period, and then they translated it into English once more. In addition to providing a brief overview of the study's purpose and self, it includes data on the sociodemographic traits of dialysis patients as well as their fluid administration and management. A relationship was built with the carers.

Data processing and analysis

Version 23 of the statistical package for social science (SPSS) was used to enter the coded data onto a computer for analysis. Frequency distribution was used for cleaning. After the original data was revised using the questionnaires' code numbers, any errors were fixed. In order to describe the research population in regard to sociodemographic and other pertinent factors, frequencies were calculated. An odd ratio with a 95% confidence interval and a p-value below what is deemed statistically significant indicates the relationship between the independent and dependent variables. The odd ratio with 95% CI was used to measure the intensity and direction of the statistical correlation. Paired t tests were used to assess the proposed instructional database's effectiveness. The chi-square test will be used to compare the pretest score with a few selected demographic factors. If the p-value in this study was less than 0.05, the result was considered statistically significant. the result shown in charts, figures, and tables.

4. Results

Table 1: Demographic characteristics of sample

Variables		**n**	**%**
Age in years	20-30	11	18
	31-40	22	37
	41-50	16	27
	>51	11	18
Gender	Male	37	62
	Female	23	38
Marital status	Married	15	26
	Unmarried	20	33
Religion	Hindu	35	58
	Christian	16	27
	Muslim	9	15
	<5000	23	38

Monthly income in(Rs)	5000-10,000	16	27
	10,000-15,000	11	18
	>20,000	10	17
Educational status	No formal education	11	18
	Primary	17	28
	Secondary education	23	39
	Higher secondary	5	8
	Graduation and above	4	7
Occupational status	Self employed	15	25
	unemployed	20	34
	Daily wage employed	17	28
	Government employed	8	13
Source of information	Friend	10	17
	Family member	15	25
	Health person	25	41
	Mass media	10	17
Total		**60**	**100**

The frequency and percentage distribution of the patient care provider demographic factors are displayed in Table 1. 22 (37%) of them were between the ages of 31 and 40, 16 (27%) were between the ages of 41 and 50, and 11 (18%) were between the ages of 20 and 30 and over 51.

Of the carers, 37 (62%) were men and 23 (38%) were women. In terms of marital status, 15 people (26%) were married, while 20 people (33%) were single. In terms of marital status, 15 people (26%) were married, while 20 people (33%) were single.

Regarding religion of care givers 35(58%) were hindu,16(27%) were Christian and 9(15%) were Muslim. Regarding monthly income 23(38%) were less than 5000,16(27%) were 5000-10,000,11(18%) were 10,000-15,000 and 10(17%) were more than 20,000.

Regarding educational status 23(39%) were secondary education,17(28%) were primary education,23(39%) were secondary education,5(8%) were higher secondary and 4(7%) were graduation and above.

Regarding occupational status of care givers 20(34%) were unemployed,17(28%) daily wages,15(25%) were self employed and 8(13%) were government employee. Regarding source of information 25(41%) were health person,15(25%) were family member and 10(17%) were friend and mass media.

Table 2: Comparison of patient care providers' pre- and post-test knowledge levels of fluid intake and management

Knowledge level	Pretest levels		Posttest levels	
	n	%	n	%
Poor knowledge	45	75	0	0.0
Average knowledge	15	25	0	0.0
Good knowledge	0	0.0	60	100
Total	**60**	**100.00**	**60**	**100.00**

P<0.05

Table 2 compares the degree of knowledge that patient care providers had before and after the test about fluid intake and management. At the pretest level, excellent knowledge was 0.00 percent, average knowledge was 15 percent, and poor knowledge was 45 percent. Following a structured training program, at the posttest level, good knowledge was 60 percent, poor knowledge was 0 percent, and average knowledge was 0 percent. $p<0.05$ at the significant threshold.

Therefore, a designed education program at the posttest level aids in improving patient care providers' understanding of fluid consumption and management.

Table 3: Effectiveness of the proposed education campaign on managing fluid intake and knowledge among patients' carers. Tests before and after

Times	Mean	SD	Mean diff.	SD Diff.	t-value	df	p-value
Pretest	1.734	0.4824	0.201	0.0537	27.289	59	0.05 s
Posttest	1.533	0.5361					

P<0.05

Table 3 demonstrates that the experimental group's posttest mean score for fluid consumption was mean and SD1.533±0.5031, while the pretest mean score for fluid consumption and its management among patient care providers was mean and SD 1.734±0.4824. The estimated paired t value of t=27.289 was determined to be statistically significant at the $p<0.001$ level, which made it evident that posttest knowledge of fluid consumption and its control among patient care providers improved following the intended instruction program.

Table 4: Relationship between sociodemographic factors and pretest knowledge levels

Variables	Knowledge level						
	Poor knowledge	Average knowledge	Good knowledge	Total	X^2	df	P-value
Age Groups in Years							
20-30	10	2	0	12	0.321	2	0.199 NS
31-40	12	6	0	18			
41-50	15	5	0	20			
>51	8	2	0	10			
Gender							
Male	27	10	0	37	0.7151	3	0.641 NS
Female	18	5	0	23			
Educational status							
No formal education	10	2	0	12	1.729	4	0.003 S
Primary Education	12	5	0	17			
Secondary education	15	4	0	19			
Higher secondary	5	3	0	8			
Graduation and above	3	1	0	4			
Religion							
Hindu	25	8	0	33	1.891	2	0.241 NS
Muslim	15	4	0	19			
Christian	5	3	0	8			
Marital status							
Married	35	10	0	45	1.423	4	0.739 NS
Unmarried	10	5	0	15			

Occupational status							
Unemployed	10	4	0	14	0.820	2	0.362 NS
Daily wage	12	5	0	17			
Self-employee	19	5	0	24			
Government employee	4	1	0	5			
Family Monthly income							
Rs.<5000	17	3	0	20	1.431	2	0.621 NS
Rs.6000-8000	12	4	0	16			
Rs.8000-12000	10	5	0	15			
Rs.>20,000	6	3	0	9			
Source of information							
Friend	4	3	0	7	1.521	2	0.421 NS
Family member	6	4	0	10			
Health person	25	6	0	31			
Mass media	10	2	0	12			

***p<0.001*Indicates significant S-Significant NS-Non significant**

Table 4 demonstrated that among carers of dialysis patients, the demographic variable of educational attainment was statistically significant in relation to the before the test stage of information regarding fluid consumption and its control. There was no statistically important correlation establish between the pretest level of information regarding fluid consumption and its management among dialysis patients' carers and factors such as age, gender, religion, occupation, family monthly income, or information source.

This demonstrated that the intended educational program was highly successful in raising carers' awareness of fluid intake and management among dialysis patients.

Discussion:

The principle of this research was to success of planned education regarding fluid consumption and its management among care givers of patients undergoing hemodialysis.it is found that more than 50 percentage of clients having poor and average knowledge.

The impact of nurse guidelines on haemodialysis patients' compliance with their meal and hydration schedules was investigated in a related study. Using a quazi experimental design, the study was conducted. A suitable sample of 60 haemodialysis patients was provided by the Haemodialysis

Department at El Manial University, Kasr Al-Aini Hospital, which is affiliated with Cairo University, Egypt. These patients were divided into 30 patients each for the research and control groups at random.A knowledge evaluation sheet, a patient nutrition and water compliance sheet, a nutrition sheet, a socio-demographic and chart of clients, a biochemical indicators data sheet, and an behavior towards nutrition and water compliance were the six instruments used to gather information. Following the nursing adoption, the study group's knowledge, attitude, and compliance with regard to nutrition and fluid regimen superior important when compared to the control group. According to the study's answer, nursing guidelines could improve hemodialysis patients' comprehension of their meal and hydration schedule as well as their adherence to these recommendations.[6]
The findings showed that the two groups' baseline demographics, clinical traits, and measures of fluid restriction adherence were similar. On the fourth week follow-up, however, the treatment group's thirst scores were statistically lower than those of the control group. Additionally, the treatment group's partial eta-squared values for interdialytic weight gain and thirst were significantly lower than baseline, at 0.39 and 0.43, respectively. The fluid distribution schedule was found to be a useful supplemental therapy approach for encouraging compliance with fluid restriction.[7]

5. Conclusion

The study findings established that caregivers were moderately burned and reported poor knowledge outcomes and established that the information module was effective in improving caregiver outcomes, whichimproved patient health.

Competing interest:

The authors report no conflicts of interest for this work.

Authors' contributions

All authors were involved in the interpretation of the data and contributed to manuscript preparation. All authors have read and approved the final version of the manuscript

Acknowledgments

The authors would like to thank the cooperation of care giver of patient undergoing hemodialysis and dialysis unit of Bangalore.

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