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Effect of Information Booklet on Level of Knowledge among Patients Undergoing Haemodialysis

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ABSTRACT

Chronic Kidney Disease (CKD) is a global threat to health in general and especially for developing countries in particular, because therapy is expensive and life-long. In India ~90% patients cannot afford the cost. Incidence of CKD has doubled in the last 15 years. Chronic kidney failure is a permanent condition. CKD is well managed by hemodialysis. So the number of patients undergoing Hemodialysis is higher now a day. Hemodialysis is usually administered three times a week in a dialysis center or clinic. These patients and families need to know about the home care management of hemodialysis to prevent complications, which will increase their life expectancy and help them to lead a near normal life. Different studies showed the importance of proper knowledge about home care management such as Dietary management Fluid management, Care of oral cavity, Prevention of infection and skin care, Safety measures to prevent bleeding tendencies, Care of dialysis Access- AV fistula and catheters, Emergency care and First aid etc: Providing an information booklet will help the hemodialysis patients to care for themselves at home.

Keywords*: Haemodialysis, Information Booklet, Chronic kidney Disease, Dietary Management. AV fistula.*

OBJECTIVES [1]

1) Assess the pre interventional knowledge among experimental and among control groups.
2) Assess the post interventional knowledge among experimental and among control groups.
3) Compare pre and post interventional knowledge between experimental groups.
4) Compare pre and post interventional knowledge between control groups.
5) Compare the post interventional knowledge between experimental and control group.
6) Find out association between pre interventional knowledge among experimental group. with their selected demographic variables.

HYPOTHESES [2]

1) There is significant difference between the pre interventional level of knowledge scores and the post interventional knowledge scores among experimental groups.
2) There is significant difference between post interventional levels of knowledge scores between experimental and control groups
3) There is significant association between pre interventional score of knowledge among experimental group with selected demographic variables.

OPERATIONAL DEFINITIONS [3]

Effect: The change in level of knowledge recorded in the post test of experimental group after reading and learning the

information booklet about home care management, for the prevention of complications of Hemodialysis.

Information Booklet: Is the source of information regarding homecare management for preventing complications in hemodialysis patients, which includes, Dietary management, Fluid management, Care of oral cavity, Prevention of infection and skin care, Safety measures to prevent bleeding tendencies, Care of dialysis Access–AV fistula and catheters, Emergency care and First aid

Knowledge: The understanding and ability of hemodialysis patients, regarding home care management for the prevention of complications of hemodialysis before and after implementation of the information booklet, which is assessed by a structured questionnaire.

Home care Management: The care of hemodialysis patient at their home setting, for the prevention of complications of hemodialysis.

Prevention of Complications of Haemodialysis: Measures taken to prevent the following by the following remedies, like

1) Anemia, malnutrition and GI symptom: Dietary management and Care of oral cavity.
2) Edema due to fluid and electrolyte imbalance: Fluid and salt restrictions.
3) Infection- Prevention of infection and skin care
4) Air embolism, infection and other vascular access (fistula or catheters) related complications: Exercise, Emergency care at home and access care.
5) Bleeding tendencies: Safety measures.

Haemodialysis: Type of dialysis which effectively uses the principles of osmosis, diffusion and ultra filtration in order to facilitate the effective removal of nitrogenous waste from the body of renal failure patients.

Patients: The persons who undergo Hemodialysis at SIMS hospital, Kollam.

METHODOOGY IN BRIEF

Quantitative approach with pre–test and post–test control group design.

Setting: Hemodialysis unit of SIMS Hospital Kollam.

Population: Hemodialysis patients admitted in the dialysis units of Kollam Disrict.

Sampling: Simple random sampling with 60 samples (30 experimental, 30 control).

Samples: Hemodialysis patients admitted in the dialysis units of SIMS Hospital, Kollam

Inclusion criteria- All patients admitted in hemodialysis unit of SIMS Hospital, Kollam and are willing to participate and who can understand and comprehend the booklet.

Exclusion criteria- Patients who are hemodynamically unstable and are admitted due to acute complications, and patients <20years of age.

TOOLS AND SCORING [5]

Demographic Performa: With 8 questions such as age, gender, education, occupational status, Source of health information, residence, presence of risk factors and Number of dialysis done.

Structured Questionnaire to Assess Knowledge: with 30 questions arranged under six headings–Anatomy and Physiology of renal system, renal failure, diet and fluid Management, Care of oral cavity, Infection control measures and safety measures at home. Total score was also 30. Each correct answer carried one score and incorrect answer carried 0 score [6]. According to scores,

1) Adequate knowledge - >73%
2) Moderate level of knowledge - 41-73%
3) Inadequate knowledge - <40%

INFORMATION BOOKLET

Title: Information booklet on home care management for the prevention of complications among patients undergoing hemodialysis [7].

On completion of reading and learning the information booklet, the patient and care givers,

1) Define renal failure,
2) Discuss the etiology of renal failure,
3) Explain the mechanism of hemodialysis,
4) List the complications of hemodialysis and management,
5) Describe the dietary management, fluid management, care of oral cavity, prevention of infection and skin care, safety measures to prevent bleeding tendencies, care of dialysis
6) Access: AV fistula and catheters and Emergency care and First aid.
7) Apply this knowledge and practice it during homecare management.

DATA COLLECTION

Consent was obtained from both experimental and control groups of patients. Using demographic performa and structured questionnaire, first assessed the pre interventional knowledge of both the experimental and control groups then provided the information booklet to the experimental groups only. After one week the post test was conducted with the same tool to assess the post interventional knowledge of both the experimental and control groups [8].

ANALYSIS AND INTERPRETATION

Demographic data

Experimental Group

1) Majority were in the age group of 41-60 years.
2) Majority were males.
3) Majority had high school education.
4) Majority all the sources like health workers, Newspapers, health magazines and TV for health information.
5) 53.3% were private employees.
6) 70% had monthly income between Rs 5001 to 10,000.
7) 73.4% were resided in rural area.
8) 50% had both Diabetes mellitus and hypertension
9) 40% had more than 101 dialysis done.
10) Majority received HD treatment between 2 to 5 years.

Control Group

1) 46.7% belonged to 41-60 years of age.
2) Most of the samples were males.
3) 50% had high school education.
4) Majority used all the sources like health workers, Newspapers, health magazines and TV for health information.
5) 50% were private employees.
6) 66.7% had monthly income between Rs 5001 to 10,000.
7) Most of them resided in rural area.
8) 53.3% had both Diabetes mellitus and hypertension,
9) 40% had dialysis done between 51 to 100 and 11 (36.7%) had more than 101 dialysis done.
10) Majority were receiving HD treatment between 2 to 5 years.

Assessment of Pre and Post Interventional Knowledge Score in Experimental Group

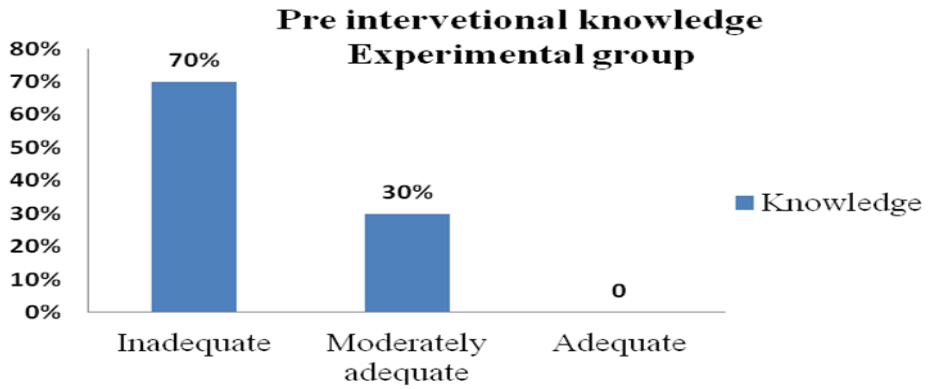

Fig. 1. Shows that 70% of samples had inadequate knowledge, 30% had moderately adequate knowledge and none had adequate knowledge about home care management of HD pre interventional in Experimental group.

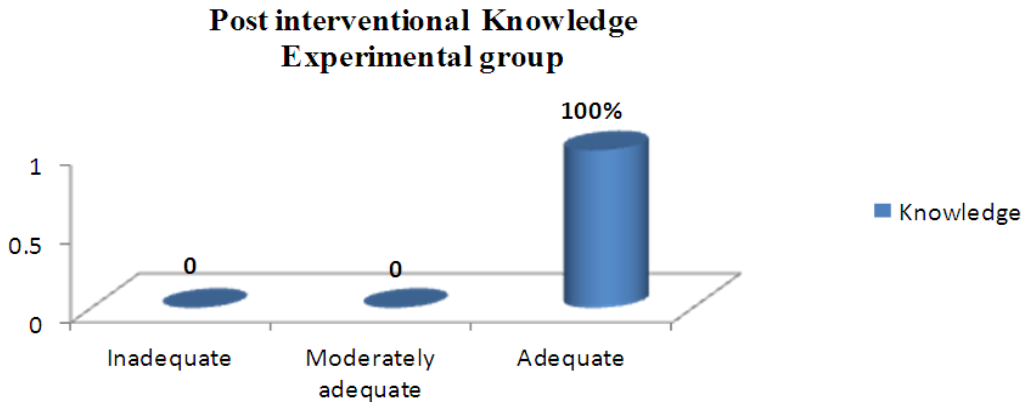

Fig..2. Shows that 100% of samples had adequate knowledge and none had inadequate or moderately adequate knowledge about home care management of HD post interventional in Experimental group.

Assessment of Pre and Post Interventional Knowledge Score in Control Group

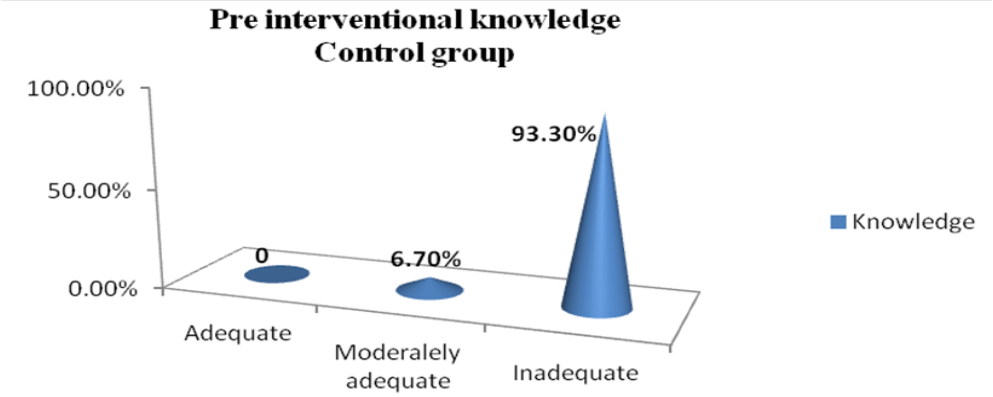

Fig. 3. Shows that 93.30% of samples had inadequate knowledge 6.70% had moderately adequate and none had adequate knowledge about home care management of HD pre interventional in control group.

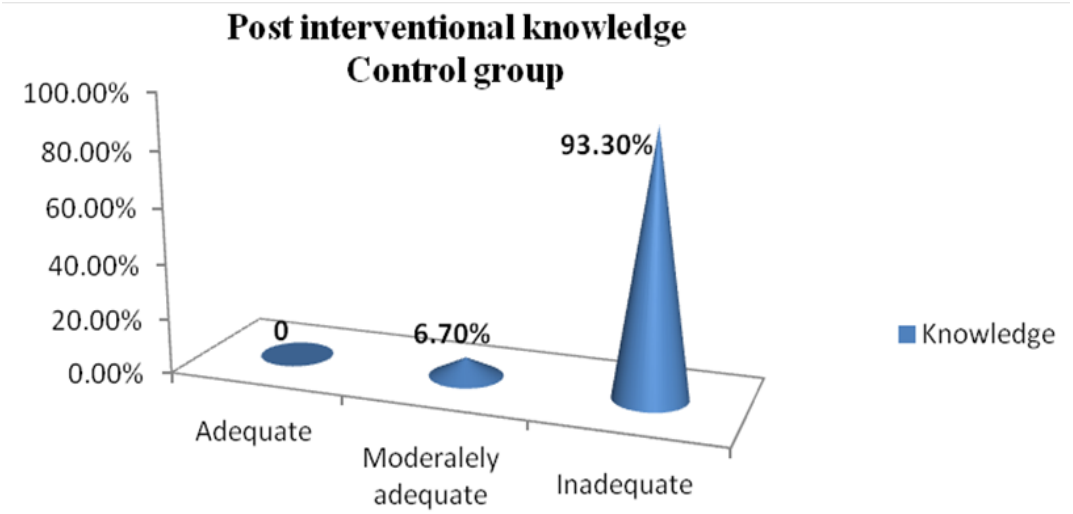

Fig. 4. Shows that 93.30% of samples had inadequate knowledge 6.70% had moderately adequate and none had adequate knowledge about home care management of HD post interventional in control group

Table 1 Comparison of Pre and Post Interventional Knowledge Regarding Home Care Management among Experimental Group

n=30

Sl. No	Experimental group	Mean	SD	Degrees of freedom	Calculated paired 't' value
1	Pretest Knowledge	14.3	2.64	29	29.2**
2	Posttest Knowledge	25.8	1.4		

***Significant at 0.01 level of significance*

The calculated paired 't' value of pre (14.3±2.64) and post (25.8 ±1.4) interventional scores of knowledge among experimental group was 29.2, which is significant at 0.01level of significance. So the first hypothesis is accepted.

Table 2 Comparison of Pre And Post Interventional Knowledge Regarding Home Care Management Among Control Group

Sl. No	Control group	Mean	SD	Degrees of freedom	Calculated paired 't' value
1	Pretest Knowledge	11.3	1.9	29	1.64 NS
2	Posttest knowledge	11.4	2.2		

NS: Not significant

Assessment of pre and post test knowledge score of control group showed that there were no significant improvement in the post test score and this was proved by paired 't' test at p=0.05 level of significance.

Table 3 Comparison of Post Interventional Knowledge Between Experimental Group And Control Group

Sl. No	Group	Mean	SD	Degrees of freedom	Calculated paired 't' value
1	Experimental Knowledge	25.8	1.4	58	144**
2	Control Knowledge	11.4	2.2		

***Significant at 0.01 level of significance*

Comparison of post interventional knowledge regarding home care management between experimental and control groups showed that there were significant difference in pre and post scores which was proved significant by unpaired 't' test at 0.01 level of significance. So the second hypothesis is accepted [9].

Association between Pre Interventional Knowledge among Experimental Group with their Selected Demographic Variables

There was no association between pre interventional knowledge among experimental group with their all demographic variables which was proved by chi square test. So the third hypothesis is rejected [10].

CONCLUSION

The study concluded that the information booklet was effective in enhancing the knowledge among hemodialysis patients about homecare management for the prevention of complications of hemodialysis and it can be used effectively in hospitals and community setting.

SUGGESTIONS

1. In-service education to nurses and technicians about home care management of hemodialysis for the prevention of complications can be given in all institutions.
2. Health education session can be conducted periodically in hemodialysis units.
3. Information booklet can be used in the hospital and community setting for hemodialysis patients
4. Nurse administrators can directly motivate the staff nurses and students to practice newer methods and can make a policy or procedures regarding the haemodialysis complication prevention protocol.

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