

Effectiveness of Nurse Led Education on Self Care Management of Renal Failure among Haemodialysis Patients

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Abstract

Introduction: Self care management of renal failure is a positive effort to oversee and participate in their health care to optimize health, prevent complications, control symptoms, control medical symptoms and minimize the intrusion of the disease in to their preferred life. Self management comprised of 2 domain self management of health care and self management of everyday life; the nurse should provide ongoing education and reinforcement while monitoring the patient progress and compliance with treatment regimen. *Methods:* An Evaluatory approach with one group pre test post test pre experimental design was used for this study. The sample consist 60 haemodialysis patients who belong to 35-45 years of age attending nephrology ward at NRI general hospital. They were employed by a non probability purposive sampling technique. The study was conducted at NRI general hospital chinakakani. The data was collected prior to and after the Nurse led education by administration a structured interview schedule. *Results:* The data was analyzed by descriptive and inferential statistics. There was significant difference in the Mean scores of pre-test and post test of haemodialysis patients on self care management of renal failure after Nurse Led education. The educated haemodialysis patient's scores after intervention showed association. *Conclusion:* The Nurse led education was found to be an effective strategy for providing information and for improving the knowledge of haemodialysis patients on self care management of renal failure.

Keywords: chronic kidney disease; haemodialysis; Nurse led education; Renal failure; self care management.

Introduction

Chronic kidney disease (CKD) is a major public health problem worldwide; the current burden of disease might be due to change of an underlying pathogen city of chronic kidney disease [1]. Now a day's infection became a less evident and co morbid conditions such as hypertension, diabetes, cardiovascular disease and obesity are major risk factors in chronic kidney disease [2].

Self care management is a positive effort to oversee and participates in their health care to optimize health, prevent complications, control symptoms and minimize the intrusion of the disease in to their preferred life [5].

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The nurse should provide ongoing education and reinforcement while monitoring the patient progress and compliance with treatment regimen. From the available literature, it was found that chronic renal failure is debilitating condition responsible for high mortality and morbidity. Hence, Life style modification is effective to prevent and control the disease progression.

Objectives

- To Evaluate the effectiveness of Nurse led education programme on self care management of Renal failure among Haemodialysis patients by Pre-test and Post-test.
- To find the association between the post-test scores of Haemodialysis patients on self care management of Renal Failure with their selected variables.

Hypothesis

H₁: There will be significant difference between pre-test and post-test knowledge scores of haemodialysis patients after implementation of

Nurse led education on self care management of renal failure.

H₂: There will be significant relationship between selected variables and the post test knowledge scores of haemodialysis patients on self care management of renal failure.

Materials and Methods

Research Approach: Descriptive survey research approach was adopted

Research design: Pre experimental one group pre-test and post-test design was used for the study.

Setting of the study: The present study was conducted in nephrology wards at NRI General Hospital, Chinakakani, Guntur district, Andhra Pradesh.

Sample and sampling Technique

Sample size for the present study was 60 renal failure patients undergoing haemodialysis. Subjects were recruited by using non probability purposive sampling technique.

Inclusion criteria

The study included haemodialysis patients who are

- ❖ With the age 35 years and above
- ❖ Admitted in Nephrology ward at NRI General hospital, chinakakani, Guntur, Andhrapradesh
- ❖ Able to understand and speak Telugu
- ❖ Available at the time of data collection
- ❖ Willing to participate in the study

Exclusion criteria

The study excluded haemodialysis patients who are

- ❖ Less than 35 years
- ❖ Not admitted in nephrology ward at NRI General Hospital
- ❖ Undergoing peritoneal dialysis
- ❖ Receiving haemodialysis treatment for the first time
- ❖ Not able to understand and speak Telugu
- ❖ Not available at the time of data collection

Description of the tool

The Structured interview schedule was developed and used for collecting the data. The interview schedule consists of 2 sections, namely section A and B.

Section A consists of 8 questions selecting the demographic data and general information of the subjects, Age, Sex, Religion, Marital status, Education. Occupation, Monthly income in rupees, Diet pattern.

Section B consists of 33 multiple choice questions on knowledge regarding self care management of renal failure with 4 options each correct answer was assigned 4 of one. The total score of section B was 33. Subjects who got scores above 76% were considered as having the adequate knowledge; the score between 51-75% were considered moderately adequate and the scores below 50% were considered as having inadequate knowledge.

Development of Nurse led education: Nurse led education was conducted by the researcher using Power point projection, Flash cards, charts on self care management of renal failure for 35 min.

Validity of the Tool

The content is validated by 7 experts, of which 5 were nursing experts and 2 were doctors. The validates had suggested some modifications in the questions the modifications and suggestions were incorporated in the final preparation of the interview schedule by the investigator.

Reliability of the tool

The reliability was assessed by applying split half method (6 subjects); Karl Pearson's correlation formula used to test the reliability of the prepared tool. The reliability was $r = 0.86$ indicating high reliability.

Pilot study

Pilot study was conducted in nephrology ward (43A) at NRI General Hospital with purpose to find the feasibility and practicability of the study design. A group of 10 renal failure patients undergoing haemodialysis with age 35 and above were randomly selected from nephrology wards, interviewed to assess the knowledge regarding self care management of renal failure then Nurse led education was given on self care management of renal failure among haemodialysis patients using flash cards, natural food stuffs, charts and pamphlet

and post test was conducted after a fifteen days and It was found to be feasible it covered 35 to 40 mints on average for interview for one subject.

Collection of Data

Researcher obtaining prior permission from authorities, consent was taken from subjects. The subjects were recruited by employing purposive sampling technique and sixty subjects were selected based on inclusion and exclusion criteria; the data were collected in two phases; in first phase pre test was given to renal failure patients undergoing haemodialysis in nephrology ward (43)

at NRI General Hospital. A Nurse led education was administered on the same day of the pre test with the help of visual aids, in second phase a post test was given with gap of 15 days from pre test and data were collected by using structured interview schedule.

Results

Section I: Frequency and percentage distribution of Haemodialysis patients,

Table 1 describes socio-demographic

Table 1: N=60

S. No	Sample characteristics	Frequency (f)	Percentage (%)
1.	<i>Age in Years</i>		
	a) 35 - 45 years	41	68.3
	b) 46 - 55 years	12	20
	c) 56 - 65 years	3	5
	d) 66 years and above	4	6.7
2.	<i>Educational qualification</i>		
	a) Illiterate	12	20
	b) 1 - 5 th class	5	8.3
	c) 6 - 10 th class	15	25.2
	d) Intermediate	14	23.2
	e) Undergraduate	12	20
	f) Post-graduate and above	2	3.3
3.	<i>Monthly income in Rupees? []</i>		
	a) Rs. 5,000/- and below	38	63.4
	b) Rs. 5001/- to Rs.10,000/-	17	28.3
	c) Rs. 10,001/- to Rs. 20,000/-	4	6.6
	d) Above Rs.20,000/-	1	1.7
4.	<i>Diet pattern?</i>		
	a) Vegetarian	29	48.4
	b) Non-vegetarian	31	51.6

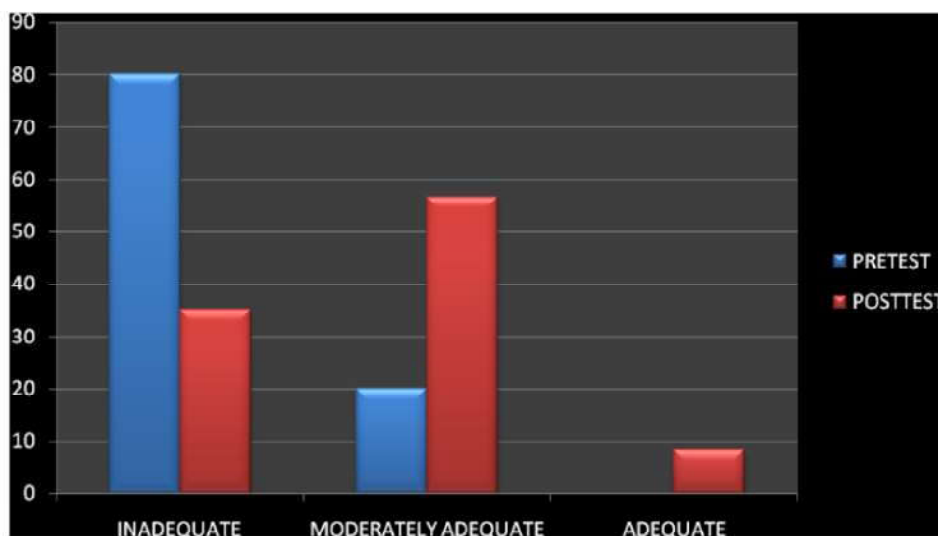


Fig. 1:

characteristics of sample 68.3% (41) subjects belong to age group of 35-45 years, 25.5% (15) had 6th to 10th class education, 63.4% (38) had income 5000 and below, 51.6% (31) were non vegetarians (Table 1)..

Section II: Frequency and percentage distribution of knowledge scores of haemo dialysis patients on self care management of renal failure in pretest and post test. (Fig.1)

Section III: Mean and Standard deviation and Paired -'t' value of knowledge scores of renal failure patients undergoing haemodialysis regarding self care management of renal failure in both Pre test and post test (Table 2).

Table 2: N =60

Knowledge scores	Mean (\bar{x})	Standard deviation (SD)	Paired-'t' Value
Pre test	25.6	5.9	
Post test	30.3	8.3	33.3
Improvement	4.63	2.4	(P<0.001)

Table: 2 conclude that there was significant difference between post test and pre test knowledge scores regarding self care management of renal failure among haemodialysis patients indicating that the Nurse led education was effective.

Section IV: Association between Selected variables and post test scores obtained by renal failure patients undergoing haemodialysis

There was significant association between the knowledge levels of renal failure patients undergoing haemodialysis and selected variable, education ($\chi^2 =20.3$). There was no significant association between the knowledge levels of renal failure patients undergoing haemodialysis and selected variables like age ($\chi^2 =2.05$), monthly income ($\chi^2=6.06$), diet pattern ($\chi^2=2.7$).

Discussion

The findings of present study revealed that majority of the respondents 80% (48) had In adequate knowledge, few respondents 20% (12) had moderately adequate knowledge and none of them have adequate knowledge in pre-test. The overall pre test mean knowledge scores of haemodialysis patients was \bar{x} -25.6 with SD-5.9, these findings were consistent with the study conducted by Curtin, Roberta Braun; which state that mean post test knowledge score of the subjects was 78.8%; higher than the mean pre test score 31.0% and was found to be significant with a calculated t -value of 32.8,

$p<0.05$ [2]. Sota. Marisela stated that noncompliance dialysis patients require major changes in lifestyle including dialysis, strict diet, fluid restriction and medication through proper teaching programme [7] in accord with the study.

The findings of present study after Nurse led education, showed majority, 56.6% (34) had gained moderately adequate knowledge, 35% (20) had In adequate knowledge and 8.3% (5) had adequate knowledge. This is concurrent with the study by Issac R. Which showed that an information booklet is an effective method in improving the knowledge of hemodialysis patients [11].

The overall post test mean knowledge scores of haemodialysis patients was \bar{x} 30.3 with SD-8.3 which is homogenous with the study by Lingerfelt KL. Thornton K, et al. stating a significant improvement in ESRD knowledge post-intervention ($p<0.000$), which could lead to improved self management and better outcomes [10]. Tsay S.L., Hunglo, et al., concluded that, there is greater significant improvement in the empowerment group than the control group [6]. The present study findings yield that an significant improvement in the post test scores after nurse led education will enhance quality of life haemodialysis patients which is supported by Bayoumi M, El-Fouly Y, et al. The results show significant improvements that revealed in the scores of many domains of quality of life, $p<0.001$ [9].

On Comparison of pre test and post test knowledge scores obtained paired 't' test value is greater than the table value t-33.3 ($p<0.01$) both at 0.01 and 0.05 level of significance. Therefore the research hypothesis H1 was accepted and Null hypothesis H01 was rejected at 0.05 level of significance. It is inferred that there is a significant difference in the knowledge levels of the renal failure patients undergoing haemodialysis on self care management of renal failure due to the implementation of Nurse led programme.

There was significant association between the knowledge level of the renal failure patients undergoing haemodialysis with selected variable Education ($\chi^2=20.3$). Hence, the research hypothesis H_2 was accepted both at 0.01 and 0.05 level of significance and Null hypothesis H02 was rejected.

There was no significant association between the knowledge level of the renal failure patients undergoing haemodialysis with selected variables like Age ($\chi^2=2.05$), Monthly income ($\chi^2=6.06$), Diet pattern ($\chi^2=2.7$). Hence, the Research hypothesis H01 was rejected both at 0.01 and 0.05 level of

significance and Null hypothesis was accepted. Which is persistent with the study by Curtin, Roberta Braun there is no association between the Post test mean knowledge score and selected variables like age religion occupation, residence [2].

Conclusion

The study concluded that there is significant improvement in knowledge score before and after nurse led education on self care management on renal failure among haemodialysis patients; and the knowledge scores had association with the variable education indicating educated patients learn faster in comparison to illiterates. The nurse led programme will enhance the quality of life among haemodialysis patients.

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Conflict of Interest:

No conflict of interest

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