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“A COMPARATIVE STUDY TO ASSESS THE QUALITY OF LIFE BETWEEN PATIENTS UNDERGOING HEMODIALYSIS AND PERITONEAL DIALYSIS AT SVIMS, TIRUPATI”.

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ABSTRACT

Objectives:

- ❖ To assess the quality of life between patients' undergoing haemodialysis and peritoneal dialysis.
- ❖ To compare the quality of life for patients undergoing haemodialysis and peritoneal dialysis.
- ❖ To find out the association between the quality of life, between patients undergoing haemodialysis and peritoneal dialysis with their selected sociodemographic variable.

Material and methods:

Methodology: The research approach used for the present study was Cross-Sectional Comparative Research Design. The sample of the study chosen by Non-Probability Convenience Sampling Technique, which includes 100 samples, that haemodialysis patients 50, and peritoneal dialysis patients 50. A self-structured general information questionnaire and modified standardized questionnaires which consists of kidney disease quality of life short form-36 (SF-36) standardized questions was used to collect the data.

Results:

The major findings of the study were out of 100 patients of haemodialysis and peritoneal dialysis patients, haemodialysis patients 26 (52%) had poor quality of life, 14 (28%) were having moderate quality of life, 10 (20%) had better quality of life. and the peritoneal dialysis patients, 24 (48%) had better quality of life, 19 (38%) were having moderate quality of life, 7 (14%) had poor quality of life. The association of demographic variables with quality of life among patients undergoing haemodialysis with the age, food habits, had highly significant at $p < 0.01$. Gender, occupation, income, place of residence, family history, duration of illness, duration of dialysis, had significant at $p < 0.05$. And peritoneal dialysis with the gender, education, place of residence, duration of dialysis had highly significant at $p < 0.01$. Age, occupation, food habits had significant at $p < 0.05$.

Conclusion: The study concluded that majority of hemodialysis patients, were had poor quality of life, and a majority of patients were had better quality of life, on undergoing peritoneal dialysis patients, and some of the demographic variables were statistically significant, and hence it can be concluded that, comparative study to assess the quality of life between patients undergoing haemodialysis and peritoneal dialysis after comparing which was better quality of life in patients on peritoneal dialysis than those undergoing haemodialysis .

KEY WORDS: Haemodialysis and Peritoneal Dialysis Patients, Quality of Life,

INTRODUCTION:

Chronic kidney disease, A life we did not choose, but a life we deal with every day, being poked and prodded, surgery, dialysis, transplants, all temporary ways to prolong a life...CKD a silent killer with NO cure¹. According to pinner (2020)

Chronic kidney disease involves gradual loss of kidney function where kidneys fail to filter wastes and excess fluid from the blood which are the removed by urine. Advanced chronic kidney disease (ESRD) patient develops serious life-threatening complications like fluid retention, hyperkalemia, pulmonary edema etc².

Hence as a treatment of end stage renal disease patient will be started with renal replacement therapy; hemodialysis, peritoneal dialysis or kidney transplantation^{3,4}.

Heamodialysis and peritoneal dialysis are most common treatment options to have similar long-term survival in absence of medical contraindications⁵.

NEED FOR STUDY

It is estimated that 850 million people were living with chronic kidney disease worldwide by (2021) and it is third fastest growing cause of death globally⁶. Treatment of choice of chronic kidney disease is renal replacement therapy; hemodialysis, peritoneal dialysis and renal transplantation. But only 3.9 million persons are treated by renal transplantation and rest are all treated by dialysis, out of which hemodialysis is commonest accounting approximately 69% of renal replacement therapy and 9% by peritoneal dialysis⁷.

Both hemodialysis and peritoneal dialysis patients were observed to have similar long-term survival. The decision as to which dialysis modality should be used becomes a matter of personal choice. Such decision needs thoughtful consideration of value of patients places on the potential gains or losses regards to quality of life associated with each treatment^{8,9}.

Thus, considering to quality of life as an important indicator of effectiveness of treatment, the researcher opted for the present study titled – “a comparative study to assess the quality of life between patients undergoing hemodialysis and peritoneal dialysis at svims, Tirupati”.

Incidence of haemodialysis and peritoneal dialysis patients at Svims hospital, Tirupati.

Year	2022	2021	2020	2019	2018
Haemodialysis Patients	99,313	98,456	91,169	80,079	73,567
Peritoneal dialysis patients	120	112	98	82	75

STATEMENT OF THE PROBLEM

A COMPARATIVE STUDY TO ASSESS THE QUALITY OF LIFE BETWEEN PATIENTS UNDERGOING HEMODIALYSIS AND PERITONEAL DIALYSIS AT SVIMS, TIRUPATI.

OBJECTIVES

- ❖ To assess the quality of life between patients' undergoing haemodialysis and peritoneal dialysis.
- ❖ To compare the quality of life for patients undergoing haemodialysis and peritoneal dialysis.
- ❖ To find out the association between the quality of life, between patients undergoing haemodialysis and peritoneal dialysis with their selected socio-demographic variable.

OPERATIONAL DEFINITIONS

- **End -stage renal disease:** Retention of uremic waste products and need for renal replacement therapy.
- **Assess:** It refers to evaluate the quality of life.
- **Quality of life:** Quality of life, the degree to which an individual is healthy, comfortable, and able to participate in or enjoy life events.
- **Hemodialysis:** To remove fluid and waste products from the blood and to correct electrolyte imbalances.
- **Peritoneal dialysis:** It is process of procedure which allows exchange of wastes, fluids and electrolytes in the peritoneal cavity.
- **Patients:** Who are sick are ill who comes for taking haemodialysis and peritoneal dialysis.

NULL HYPOTHESES: -

H0: there will be may or may not significant difference in quality of life between the patients undergoing haemodialysis and peritoneal dialysis.

1.7 LIMITATIONS

- ❖ The study is limited to patients undergoing haemodialysis and peritoneal dialysis who are admitted in department of nephrology SVIMS, Tirupati.
- ❖ This study is limited to 100 samples only.

CONCEPTUAL FRAMEWORK

Conceptual frame work adopted for the present study was ‘**General System Theory**’ by **Leud Wigvon Berrtalanffy (1968)**. General system theory explains that, systems of inter-related elements in the abstract system are the human being and their environment. According to general system theory, ‘silence of wholeness and its purpose is scientific thinking across the discipline and which provide frame work for analyzing the whole of any system. This system specifics the purpose of goal and uses a process to achieve that goal. The aim of the study was to assess the quality of life between patients undergoing haemodialysis and peritoneal dialysis.

A system can be resolved into an aggregation of feedback circuit such as:

- **Input**
- **Throughput**
- **Output**
- **Feed back**

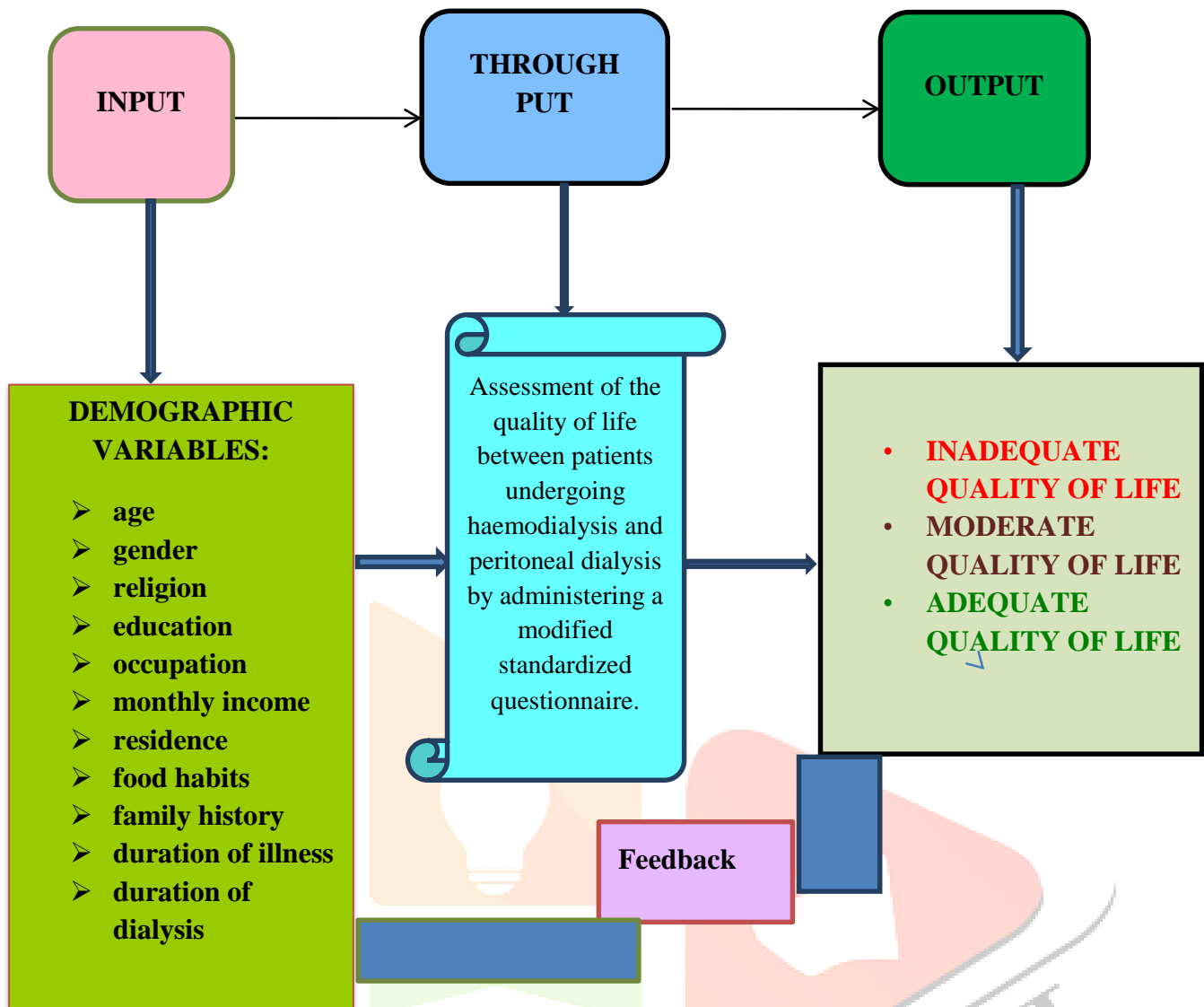


Fig-1: Conceptual Frame work

METHODOLOGY

RESEARCH APPROACH

The research approach adopted was Non experimental quantitative research approach to achieve the objective of the study, which is felt to be most appropriate in the field of education for its practicability in real life situations.

RESEARCH DESIGN

The research design selected for the present study was Cross-Sectional Comparative Research Design.

SETTING OF THE STUDY

The study was conducted at department of nephrology, SVIMS, Tirupati. The setting was chosen on the basis of the investigator's feasibility in terms of availability of required sample and co-operation extended by the management and health personnel.

POPULATION

The population includes patients undergoing haemodialysis and peritoneal dialysis patients.

Target population: All patients who are undergoing haemodialysis and peritoneal dialysis patients.

Accessible population: It is only 100 patients who are undergoing haemodialysis and peritoneal dialysis patients in between 18-60 years of age group.

SAMPLE

Sample consists of patient with end- stage renal failure, and undergoing haemodialysis and peritoneal dialysis patients at department of Nephrology, SVIMS, Tirupati.

SAMPLE SIZE

Sample size consists of haemodialysis patients 50, peritoneal dialysis patients 50, total 100 come under inclusive and exclusive criteria.

SAMPLING TECHNIQUE

Non -probability convenience sampling technique was adopted based on inclusive criteria. **CRITERIA FOR SAMPLE SELECTION:**

Inclusion criteria:

Patients who are: -

- ❖ Undergoing haemodialysis and peritoneal dialysis patients.
- ❖ In the age group of 18- 60 years.
- ❖ Willing to participate in the study.
- ❖ Available at the time of data collection.

Exclusion criteria:

Patients who are: -

- ❖ Critically ill like haemodialysis patients with hypotension, muscles cramps, clot formation, septicemia, disequilibrium syndrome.
- ❖ Critically ill like peritoneal dialysis patients with peritonitis, hernia, atelectasis and pneumonia.
- ❖ Unable to read English or Telugu.

TOOL:

The tool was developed with the help of related literature from various textbooks, journals, websites, discussions and guidance from experts.

The tool consists of III sections:

Section I: Consists of socio-demographic data related to patient 's age, gender, religion, educational status, occupation, and income, place of residence, food habits, family history, duration of illness, and duration of dialysis.

Section II: It consists of 10 multiple choice questions of renal failure, based on general information 5 (11 to 15) multiple choice questions, based on general information of the haemodialysis and peritoneal dialysis by using a/b/c/d options.

Section III: A modified standardized questionnaire to assess quality of life in patients undergoing haemodialysis and peritoneal dialysis. It consists of 27

Rating scale questions based on kidney disease quality of life -short form-36, by using 1/2/3/4/5 options.

Scoring key:

Section 1: By coding the demographic variables.

Section II: Multiple choice questions were given on general information of renal failure by using with four options _ 'a/b/c/d. in the questionnaire, the correct option Carry —1 mark”.

Scoring interpretation:

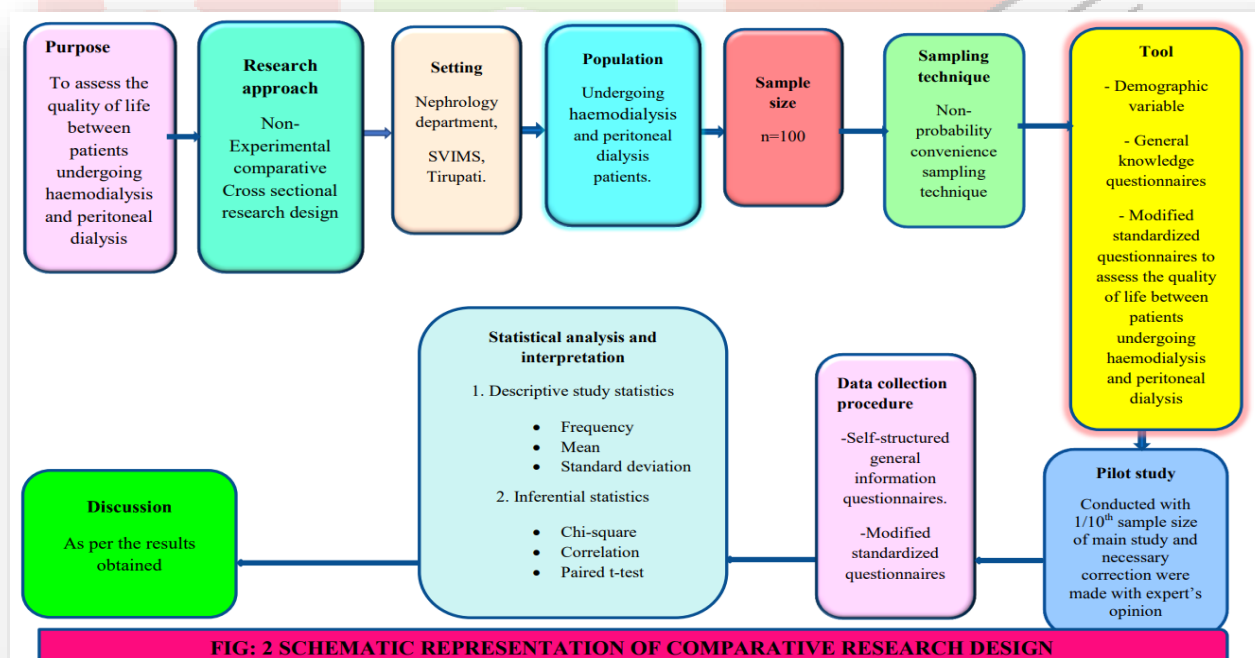
There are total 54 questions regarding the general information about renal failure and quality of life in patients undergoing haemodialysis and peritoneal dialysis.

Scoring interpretation of test is divided into 3 quartiles.

Poor quality of life: < 34%

Moderate quality of life: 35-68 %

Better quality of life: >68%



RESULTS

- Majority of haemodialysis and peritoneal dialysis patients 29(58%), 28(56%) were belongs to age group of 51-60 years ,37(74%),31(62%) were males,44(88%),48(96%) belongs to Hindu religion,20(40%),19(38%) having secondary education ,19(38%)were daily wage, in peritoneal dialysis patients 14(28%)were pensioners , 44(88%), 37 (74%) has income of below Rs.20000/- per month,43(86%),45(90%) were married,28(56%) belongs to rural area, and in peritoneal dialysis 31 (62%) belongs to urban area, 45 (90%), 49 (98%) were both veg & non vegetarian,30(60%),24(48%) have both DM and HTN, 25(50%), 25 (50%) were suffering illness from since 1-3 years, 25(50%), 30 (60%) were taking dialysis since 1-3 years.

Assess the level of knowledge in haemodialysis and peritoneal dialysis:-In regards out of 50 samples in haemodialysis patients the data showed that 27 (54%) of haemodialysis patients were having adequate knowledge and 18 (36%) having moderate knowledge, and 5(10%) were having inadequate knowledge, In regards out of 50 samples in Peritoneal Dialysis patients the data showed that 29(58%) of peritoneal dialysis patients were having Adequate knowledge, and 15(30%) having moderate knowledge, and 6(12%) were having inadequate knowledge.

Table 1: Distribution of a comparative study to assess the quality of life in patients undergoing haemodialysis and peritoneal dialysis.

In regards out of 100 samples, haemodialysis patients (50), and peritoneal dialysis patients (50), the data presented comparison of quality of life between haemodialysis patients peritoneal dialysis patients, the data showed that in haemodialysis patient's poor quality of life were present 26 (52%), and peritoneal dialysis patients 7 (14%), and moderate quality of life were present in haemodialysis patient's 14(28%), and peritoneal dialysis patients 19 (38%), and better quality of life present in haemodialysis patients was 10 (20%), and peritoneal dialysis patients 24 (48%).

(N=150)

assess the quality of life	haemodialysis patients	peritoneal dialysis patients
poor quality of life	52%	14%
moderate quality of life	28%	38%
good quality of life	20%	48%

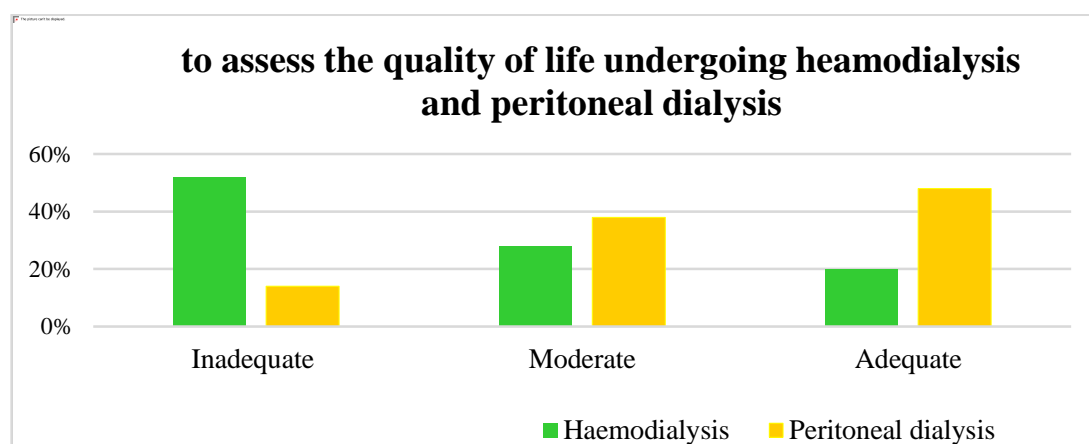
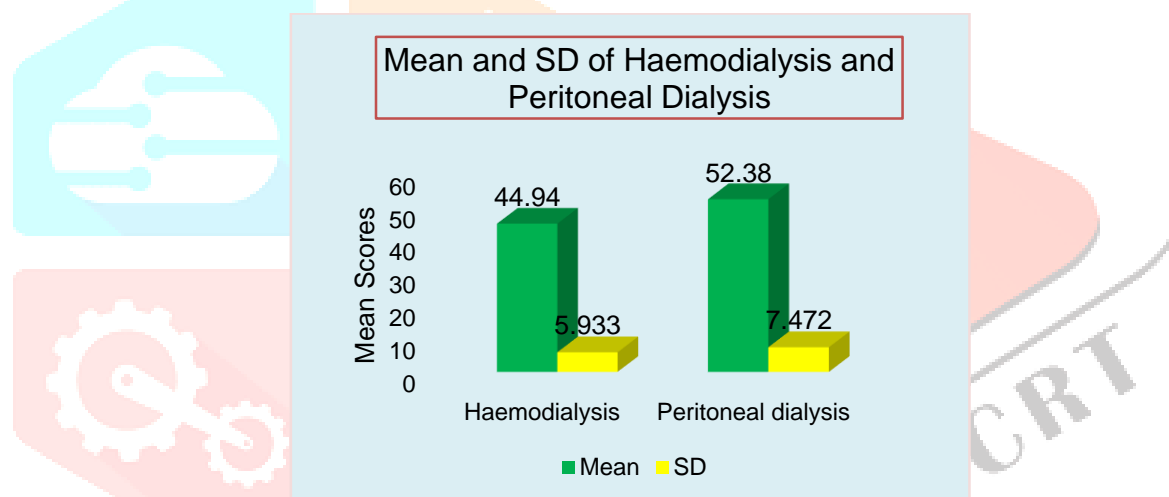


TABLE 2: Distribution of mean and standard deviation and paired t-test of patients undergoing haemodialysis and peritoneal dialysis

(N=150)

Group Statistics						
	Group	N	Mean	S. D	Std. Error Mean	t-test (p-value)
Quality of Life	Haemodialysis	50	44.94	5.933	0.839	5.505** (0.000)
	Peritoneal dialysis	50	52.38	7.472	1.057	

Table – 2: Haemodialysis patients the data showed that mean and standard deviation value 44.94 ± 5.933 , In Peritoneal Dialysis patients the data showed that mean and standard deviation value was 52.387 ± 7.472 .



Association of quality of life between patients undergoing haemodialysis with their demographic variable revealed that age, food habits, had highly significant at $p < 0.01$ level. Gender, occupation, income, place of residence, family history, duration of illness, duration of dialysis, had significant at $p < 0.05$ level. and the other variable such as religion, education, marital status, were not found significant association with quality of life on haemodialysis patients.

Association of quality of life between patients undergoing peritoneal dialysis with their demographic variable revealed that gender, education, place of residence, duration of dialysis had highly significant at $p < 0.01$ level, Age, occupation, food habits had significant at $p < 0.05$ level, and the other variable such as religion, income, marital status, family history, duration of illness were not found significant association with quality of life on peritoneal dialysis patients.

CONCLUSION

The study findings revealed that, a majority of hemodialysis patients, were had poor quality of life, and a majority of patients were had better quality of life, on undergoing peritoneal dialysis patients, and some of the demographic variables were statistically significant, and hence it can be concluded that, comparative study to assess the quality of life between patients undergoing haemodialysis and peritoneal dialysis after comparing which was better in patients on peritoneal dialysis than those undergoing haemodialysis .

IMPLICATIONS

The implications drawn from the present study are vital concern to health care team, including nursing practice, nursing education, nursing administration and nursing research.

Nursing Practice:

- ❖ The present health care delivery system gives emphasis on comprehensive health care, which includes preventive, curative and rehabilitative care.
- ❖ Nurse should be specifically trained to improve quality of life in patients undergoing haemodialysis and peritoneal dialysis.
- ❖ Nurse should be specifically tainted in peritoneal dialysis to improve better quality of life and to prevent spread of infection

Nursing education:

- ❖ In nursing colleges and in department of nephrology the Nursing leaders can take initiative to provide information regarding to improve quality of life in patients undergoing haemodialysis and peritoneal dialysis.
- ❖ The nursing leaders should give more emphasis on training nurses to identify the risk group of dialysis patients and educate the preventive strategies.
- ❖ The student can be guided at community setups to focus on health education to public regarding quality of life in patients undergoing haemodialysis and peritoneal dialysis.
- ❖ Evidence based practice, nursing research and panel discussion can help students to improve their knowledge and leads to innovation in to improve quality of life in patients undergoing haemodialysis, and peritoneal dialysis.
- ❖ There must be adequate supervision, guidance and evaluation of the health education to the people to ensure their good quality of health.

Nursing administration:

- ❖ The administration should provide necessary resources for the nursing personnel to implement various health educations to patients undergoing haemodialysis and peritoneal dialysis.
- ❖ The nurse administrations should pursue steps to prepare and appoint nephrology specialized nurses to provide efficient and evidenced based nursing care.
- ❖ The nurse administrator should take initiative in service education programs and continuing nursing education programme to improve quality of life in patients undergoing haemodialysis and peritoneal dialysis

Nursing research:

- ❖ The new knowledge obtained through the study would enhance evidence-based nursing practice. The emphasis on research and clinical studies is needed to improve the quality of nursing in nephrology department.

- ❖ Nursing research can be done on practicing newer methods of teaching focusing on interest, quality and cost-effectiveness.

Limitations:

The data collection was obtained from haemodialysis patients and peritoneal dialysis patients age between 18 – 60 years in department of nephrology SVIMS, Tirupati.

RECOMMENDATIONS

On the basis of findings, the following recommendations have been made for further study.

- ❖ A similar study can be conducted among nurses and students.
- ❖ A structured teaching programme can be conducted on same sample on a large sample that helps to draw more definite conclusion and make generalizations.
- ❖ A quasi-experimental study can be conducted on effectiveness of planned teaching programme regarding to improve quality of life in patients undergoing haemodialysis and peritoneal dialysis.

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