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# "A STUDY TO ASSESS KNOWLEDGE ON SELF CARE MANAGEMENT AMONG PATIENTS UNDER GOING HEMODIALYSIS UNIT AT ,SVIMS ,TIRUPATI."

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## ABSTRACT

**Introduction :**Urinary System Is Of One Of The Vital System Among Human Body ... The Urinary Tract Is Like The Plumbing System, It Drains Urine From The Kidneys And Plays An Important Role In Maintaining The Homeostasis, A Set Of Complex Processes To Maintain The Balance Of Water, Ions, Calcium And Blood Pressure In The Human Body. The Urinary System Consists Of two Kidneys, two Ureters, one Bladder, And The Urethra. The Urinary Tract Is The Body's Drainage System For The Eventual Removal Of Urine. Two Kidneys Are Present In The Human Body And Are Located Retroperitoneally. Each Kidney Consists Of Functional Units Called Nephrons. Following Filtration Of Blood And Further Processing, Wastes Exit The Kidney Via The Ureters, Tubes Made Of Smooth Muscle Fibres That Propel Urine Towards The Urinary Bladder, Where It Is Stored And Subsequently Expelled From The Body By Urination.

**Methods :**Non- experimental quantitative approach was adopted to achieve the objectives of the study , which is felt to be most appropriate in the field of education for its practicability in real life situations ,it has the advantage of practicability ,feasibility and to a certain extent for generalization .Research design was adopted was descriptive research design .the study was conducted in haemodialysis unit ,svims ,tirupati. The population in this study includes in haemodialysis unit , svims ,tirupati. Sample size consists of who are undergoing haemodialysis patients on CKD II nd stage dialysis unit ,svims ,tirupati. Non probability convenient sampling technique was adopted for the present study based on inclusion criteria .

**Results:** The findings of the study revealed that only 17% of patiens have inadequate knowledge, 44% of patients have moderate knowledge, and 39% of patients have adequate knowledge on self care management of haemodialysis . The findings of the association between the knowledge 0n self care management among patients undergoing haemodialysis among patients with their selected demographic variables were analyzed with chi-square. The results shown that education, occupation, showed significant association with the level of knowledge with a chi square value of 43.201, 18.441 respectively which was highly significant at P<0.01 level Gender, previous self care management among patients undergoing haemodialysis had significant association with the level of knowledge with a chi square value of 3.051, 7.832 respectively which was statistically significant at P<0.05 level and other variables were not having any significant association with the level of knowledge 0n self care management among patients undergoing haemodialysis. With the correlation of demographic variables among participants revealed that Age, Gender, Education, Occupation, Monthly income were positively correlated at p<0.05 level

**Conclusion :** The study concluded that only17% of patients have inadequate knowledge, 44% of patients have moderate knowledge, and 39% of patients have adequate knowledge 0n self care management among patients undergoing haemodialysis and hence the patients should improve their knowledge on self care management of hemodialysis.

**Key words:** Self care management , haemodialysis patients

**INTRODUCTION :**Urinary System Is Of One Of The Vital System Among Human Body ...

The Urinary Tract Is Like The Plumbing System, It Drains Urine From The Kidneys And Plays An Important Role In Maintaining The Homeostasis, A Set Of Complex Processes To Maintain The Balance Of Water, Ions, Calcium And Blood Pressure In The Human Body. The Urinary System Consists Of two Kidneys, two Ureters, one Bladder, And The Urethra. The Urinary Tract Is The Body's Drainage System For The Eventual Removal Of Urine. Two Kidneys Are Present In The Human Body And Are Located Retroperitoneally. Each Kidney Consists Of Functional Units Called Nephrons. Following Filtration Of Blood And Further Processing, Wastes Exit The Kidney Via The Ureters, Tubes Made Of Smooth Muscle Fibres That Propel Urine Towards The Urinary Bladder, Where It Is Stored And Subsequently Expelled From The Body By Urination.

**The Main Functions Of The Urinary System And Its Components Are To Regulate Blood Volume And Composition**

- Regulate Blood Pressure.
- Regulate Ph Homeostasis Of The Blood.
- Contributes To The Production Of Red Blood Cells Through Erythropoietin By The Kidney Helps Synthesize Calcitrol.
- Stores Waste Products, Mainly Urea And Uric Acid Before Excretion And Other Products Are Removed From The Body.

The Formation Of Urine Begins Within The Functional Unit Of The Kidney, The Nephrons. Urine Then Flows Through The Nephrons, Through A System Of Converging Tubules Called Collecting Ducts. These Collecting Ducts Then Join Together To Form The Minor Calyces, Followed By The Major Calyces That Ultimately Join The Renal Pelvis. From Here, Urine Continues Its Flow From The Renal Pelvis Into The Ureter, Transporting Urine Into The Urinary Bladder. Urine Is Formed In The Kidneys Through A Filtration Of Blood. The Urine Is Then Passed Through The Ureters To The Bladder, Where It Is Stored. During Urination, The Urine Is Passed From The Bladder Through The Urethra To The Outside Of The Body. 800– 2,000 Milliliters Of Urine Are Normally Produced Every Day In A Healthy Human. This Amount Varies According To Fluid Intake And Kidney Function.

The Urinary System Is Regulated By The Endocrine System By Hormones Such As Antidiuretic Hormone, Aldosterone, And Parathyroid Hormone. Vasopressin Regulates The Body's Retention Of Water By Increasing Water Reabsorption In The Collecting Ducts Of The Kidney Nephron. Vasopressin Increases Water Permeability Of The Kidney's Collecting Duct And Distal Convoluted Tubule By Inducing Translocation Of Aquaporin Water Channels In The Kidney Nephron Collecting Duct Plasma Membrane.

**Chronic Kidney Disease** Is Also Known As Chronic Renal Failure, In Which There Is Gradual Loss Of Kidney Function Over A Period Of Months Or Years.Early On There Are Typically No Symptoms.Later, Leg Swelling, Feeling Tired, Vomiting, Loss Of Appetite, Or Confusion May Develop. Complications May Include Heart Disease, High Blood Pressure, Bone Disease, Or Anemia. There Are 5 Stages Of Chronic Kidney Disease. They Are:-

- Stage 1 (Glomerular Filtration Rate > 90 Ml/Min)
- Stage 2 Mild (Glomerular Filtration Rate = 60-89 Ml/Min)
- Stage 3A Moderate (Glomerular Filtration Rate = 45-59 Ml/Min)
- Stage 3B Moderate (Glomerular Filtration Rate = 30-44 Ml/Min)
- Stage 4 Severe (Glomerular Filtration Rate = 15-29 Ml/Min)
- Stage 5 End Stage Renal Disease (Glomerular Filtration Rate)

## Need for study

10% Of The Population Worldwide, Affected By Chronic Kidney Disease, And Millions Die Each Year Because They Do Not Have Access To Affordable Treatment.

- [ According The 2010 Global Burden Of Disease Study, Chronic Kidney Disease Wasranked 27th In The List Of Causes Of Total Number Of Deaths Worldwide In 1990, But Rose To 18th In 2010. This Degree Of Movement Up The List Was Second Only To That For HIV And Aids.

- Over 2 Million People Worldwide Currently Receive Treatment With Dialysis Or A Kidneytransplant To Stay Alive, Yet This Number May Only Represent 10% Of People Who Actually Need Treatment To Live. Of The 2 Million People Who Receive Treatment For Kidney Failure, The Majority Are Treated In Only Five Countries – The
  United States, Japan, Germany, Brazil, And Italy. These Five Countries Represent Only 12% Of The World Population. Only 20% Are Treated In About 100 Developing Countries That Make Up Over 50% Of The World Population.

- More Than 80% Of All Patients Who Receive Treatment For Kidney Failure Are In Affluent Countries With Universal Access To Health Care And Large Elderly Populations.
- It Is Estimated That Number Of Cases Of Kidney Failure Will Increase Disproportionately In Developing Countries, Such As China And India, Where The Number Of Elderly People Are Increasing.
- In Middle-Income Countries, Treatment With Dialysis Or Kidney Transplantation Creates A Huge Financial Burden For The Majority Of The People Who Need It. In Another 112 Countries, Many People Cannot Afford Treatment At All, Resulting In The Death Of Over 1 Million People Annually From Untreated Kidney Failure.
- In The US, Treatment Of Chronic Kidney Disease Is Likely To Exceed $48 Billion Per Year. Treatment For Kidney Failure Consumes 6.7% Of The Total Medicare Budget To Care For Less Than 1% Of The Covered Population.

## INDIA

Chronic Kidney Disease, With Its High Prevalence, Morbidity And Mortality, Is An Important Public Health Problem. Mass, India Hosts 17% Of The Earth's Population. Large Numbers Of Patients Below The Poverty Line, Low Gross Domestic Product, And Low Monetary Allocation For Health Care Bave Led To Suboptimal Outcomes. Moreover, Chronic Kidney Disease And Other Non-Communicable Diseases Have Often Been Ignored In The Face Of Persistent Challenges From And Competition For Resources For Communicable Diseases And High Infant And Maternal Mortality.

# MATERIALS AND METHODS

## RESEARCH APPROACH

Non experimental quantitative research approach was adopted 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. It has the advantage of practicability, feasibility and to a certain extent for generalization

## RESEARCH DESIGN

A Research design is the overall plan, structure and strategy of investigation of answering the research questions. It is the blue print that the researcher selects to carry out the study. The research design selected for the present study is cross -sectional descriptive research design.

## VARIABLES OF THE STUDY

**Independent Variable**:-Undergoing haemodialysis patients.

**Dependent Variable**:- Knowledge on self care management of undergoing haemodialysis patients

**Extraneous Variables**:- Which could influence the study includes age .gender ,religion , Education , Occupation,Income of the family per month , Place of residence, Type of family, Relation ship with patient,Marital status, Sources of information, type of diet.

**Setting of the study**: The study was conducted in hemodialysis unit , svims , Tirupati.

**Population**: The population in this study includs in dialysis unit svims , Tirupati

**Sample**: Sample consists of who are undergoing haemodialysis patients ,on **CKD IInd** stage dialysis unit, svims ,tirupati.

**Sample size**: Sample size consists of 100 who come under inclusion criteria.

**Sampling technique**: Non probability convenient sampling technique was adopted based on inclusion criteria.

## CRITERIA FOR SAMPLE SECTION:

**Inclusion criteria**:- Clients who are:- In the age group of 25-50 years Willing to participate in the study and available at the time of data collection.

**Exclusion criteria:**-Clients who are:- Who could not understand English. Suffering with chronic diseases.

**Development and description of the tool:**

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

**The tool consists of II sections**:

**Section-I: -** Consists of socio demographic data related to patients such age .gender ,religion , Education , Occupation,Income of the family per month , Place of residence, Type of family, Relation ship with patient,Marital status, Sources of information, type of diet .

**Section-II:** -General Information.

**Section III**-Knowledge On self care management of Hemodialysis.

## CONTENT VALIDITY:

Content validity was obtained for the questionnaire from 10 experts. It includes, 4experts from the department of nephrology and 6 experts from the nursing department, necessary modifications were made and appropriateness was obtained from English and telugu department, and the tool was incorporated in the pilot study.

**Reliability of the tool:**

Reliability is defined as the extent to which the instruments field the same results on repeated measures: it is then concentrated with consistency, accuracy, precision, stability, equivalence and homogeneity. The reliability of instrument was established by administrating the tool to 100 samples who were nephrology deportment ,svims and not included in the main study and who fulfilled inclusion criteria.

Reliabilityof the tool was established by inter rater reliability method using cronbach,,s alpha for level of knowledge on self care management of haemodialysis patients . The tool was found reliable with a score of r=.08609.

**PILOT STUDY:**

Prior formal permission was obtained from the head of the department of nephrology ,svims , Tirupati for conducting the study. The sample was selected by following non probability convenient sampling technique. Fiften patients who were in dialysis unit and come under inclusion criteria were selected for the pilot study. Rapport was established with the self introduction to the patients and written consent was obtained from the participetents in the study. Instructions were given to the patients to answer the questionnaire frankly. Then the questionnaire was administered and the responses of the patients were noted. After the questionnaire was

answered which consists of aspects of self care of heamodialysis patients . 38 Statistical analysis was done by using descriptive and inferential statistics. The findings of the study revealed that the tool was reliable and feasible.

**PROCEDURE FOR THE DATA COLLECTION**:

The investigator obtained prior permission from the head of the department of nephrology , svims ,tirupati to conduct the study. 100 samples were selected by non probability sampling technique with minimum of 20 cases per day from 11.00 am- 12N. The names of the patents were obtained from the nephrology deportment and made into a list. The investigator made them to sit comfortably and introduced him self to the patients explained the purpose of the study and took a written consent. The investigator administered structured questionnaire to the patients . The data collection took 10 minutes from each participant.

## RESULTS :

The findings of the study revealed that only 17% of patiens have inadequate knowledge, 44% of patients have moderate knowledge, and 39% of patients have adequate knowledge on self care management of haemodialysis .

The findings of the association between the knowledge 0n self care management among patients undergoing haemodialysis among patients with their selected demographic variables were analyzed with chi-square. The results shown that education, occupation, showed significant association with the level of knowledge with a chi square value of 43.201, 18.441 respectively which was highly significant at $P<0.01$ level Gender, previous self care management among patients undergoing haemodialysis had significant association with the level of knowledge with a chi square value of 3.051, 7.832 respectively which was statistically significant at $P<0.05$ level and other variables were not having any significant association with the level of knowledge 0n self care management among patients undergoing haemodialysis. With the correlation of demographic variables among participants revealed that Age, Gender, Education, Occupation, Monthly income were positively correlated at $p<0.05$ level.

## DISCUSSION

The purpose of the a study to assess the knowledge on self Care management among patients undergoing haemodialysis unit at SVIMS, Tirupati. Human body is a complex magical creation by God. Kidneys are other wise called garbage collectors‟. The purpose of the urinary system is to remove excess fluid and other substances from the body and filter out waste products from the body. Kidneys once damaged can‟t revert back to normal completely, even with enough external interventions.

Chronic kidney disease is a kidney disease in which there is gradual loss of kidney function over a period of months or years. Early on there are typically no symptoms. Later, Oedema, fatigue, vomiting, loss of appetite, or confusion may develop.10% of the population worldwide is affected by chronic kidney disease and millions die each year because they do not have access to affordable treatment. Haemodialysis is a way of replacing some of the functions of kidney ,if kidneys have failed ,by using a machine to filter and clean blood is pumped out of body to the machine where it is passed through a series of tiny tubes ,in an artificial kidney or dialyzer .The knowledge of patients providing care to patients on haemodialysis was inadequate hence it is necessary to create awareness . The problem selected for the study to assess the knowledge on self Care management among patients undergoing haemodialysis unit at SVIMS, Tirupati. first objective of To assess the knowledge on self Care management among patients undergoing haemodialysis . The study findings revealed that 17% of patients have inadequate knowledge, 44% of care givers have moderate knowledge, and 39% have adequate knowledge.

So the hypothesis **H1**, which states that there was significance difference with knowledge on self Care management among patients undergoing haemodialysis , was accepted.

## CONCLUSION

The study concluded that only17% of paients have inadequate knowledge, 44% of patients have moderate knowledge, and 39% of patients have adequate knowledge 0n self care management among patients undergoing haemodialysis and hence the patients should improve their knowledge on self care management of hemodialysis.

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