



A STUDY TO ASSESS THE KNOWLEDGE ON RENAL TRANSPLANTATION AMONG CHRONIC RENAL FAILURE PATIENTS ATTENDING DEPARTMENT OF NEPHROLOGY SVIMS TIRUPATI.

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ABSTRACT

Introduction:

The urinary system plays a vital part in maintaining homeostasis of water and electrolyte concentration within the body. The kidney are the principle organs of the urinary system which produce the urine that contains metabolic waste products including the nitrogenous compounds urea and uric acid excess ions and some drugs. The main functions of the kidneys are formation and secretion of urine, production and secretion of erythropoietin and production and secretion of renin. Kidneys are one of the vital organs in the human body. Kidneys perform vital functions like excretion of waste products, maintenance of water balance, thus maintaining the homeostasis. In addition, kidneys perform may other functions such as role in homeostasis, of blood sugar and regulation of blood calcium level. Because the kidney performs a wide variety of functions, the effect of loss of renal function not only in kidney but also in other organ systems

Methods:

The research approach adopted was **Quantitative research approach** to achieve the objectives of the study, which is felt to be most appropriate in the field of education for its practicability in real situations. It has the advantage of practicability, feasibility and to a certain extent for generalization. The research designs selected for the present study was **Cross-sectional Descriptive research design**. The study was conducted in department of Nephrology, Sri Venkateswara Institute of medical sciences, Tirupati. The population in this study includes Chronic Renal Failure patients Sri Venkateswara Institute of Medical Sciences, Tirupati. Sample size consists of 100 clients of who come under inclusion criteria. **Systematic random sampling technique** was adopted for the present study based on inclusion criteria.

Results:

The finding of the study revealed that only 58% of patients have inadequate knowledge, 24% of patients have moderate knowledge, and 18% of patients have adequate knowledge on renal transplantation of chronic renal failure patients. The finding of the association between the knowledge on renal transplantation among chronic renal failure patients with their selected demographic variable were analyzed with chi-square. The results shown that age has obtained with a chi-square value 25.51, sex (gender) shows significant association with chi-square value 9.63, education shown significant association with chi-square value 24.28, occupation shown significant association with chi-square value 16.17, monthly income shown significant association with chi-square value 37.80 which are statistically significant at $p < 0.001$ level. The other variable source of information shown significant association with chi-square value 12.59 which is significantly < 0.05 level.

Conclusion:

The study concluded that only 58% of patients have inadequate knowledge, 24% of patients have moderate knowledge, and 18% of patients have adequate knowledge on renal transplantation among chronic renal failure patients should improve their knowledge on renal transplantation of chronic renal failure patients.

Key words: Renal transplantation, Chronic renal failure patients, knowledge on renal Transplantation

INTRODUCTION

The urinary system plays a vital part in maintaining homeostasis of water and electrolyte concentration within the body. The kidney are the principle organs of the urinary system which produce the urine that contains metabolic waste products including the nitrogenous compounds urea and uric acid excess ions and some drugs.

The main functions of the kidneys are formation and secretion of urine, production and secretion of erythropoietin and production and secretion of renin.

Chronic kidney disease is a common and rapidly increasing global public health problem, both in developed and developing countries. The global prevalence of chronic kidney disease is estimated to be 8-16%, and the diseaseburden is expected to grow. In India recent studies have shown a variable prevalence ranging from 4% to 17.2% with wide regional differences. Globally chronic kidney disease is associated with high morbidity and mortality with approximately 7,35,000 deaths annually.

Thus chronic kidney disease is the 12th most common cause of death and 17th most common cause of disability. Renal transplantation has emerged as the preferred treatment of choice for end stage renal disease patients when compared to other forms of renal replacement therapy like haemodialysis or peritoneal dialysis. Many studies that were conducted either in Malaysia or abroad have demonstrated that renal transplant contributes to a longer survival rate, better quality of life and more economical treatment compared to dialysis.

INDIA:

In India currently there are 820 nephrologists, 710 haemodialysis units with 2,500 dialysis stations and 4,800 patients on continuous ambulatory peritoneal dialysis. There are 172 transplant centres, two-thirds of which are in south India and mostly privately run. Nearly 3,500 transplants are done annually, the total number of cadaver donors being approximately 700 till now. Thus, taken together nearly 18,000- 20,000 patients in India.

Kidneys are one of the vital organs in the human body. Kidneys perform vital functions like excretion of waste products, maintenance of water balance, thus maintaining the homeostasis. In addition, kidneys perform many other functions such as role in homeostasis, of blood sugar and regulation of blood calcium level. Because the kidney performs a wide variety of functions, the effect of loss of renal function not only in kidney but also in other organ systems.

Stages of chronic kidney disease

Glomerular filtration rate

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|-----------|--|------------------|
| Stage 1. | Kidney damage with normal kidney function. | : 90% or higher. |
| Stage 2. | Kidney damage with mild loss of kidney function | : 89 to 60% |
| Stage 3a. | Mild to moderate loss of kidney function. | : 59 to 45% |
| Stage 3b. | Moderate to severe loss of kidney function. | : 44 to 30% |
| Stage 4. | Severe loss of kidney function. | : 29 to 15% |
| Stage 5. | Kidney failure less than 15% or end state renal disease. | |

In India, a study was conducted on renal transplantation Indian scenario, PGIMER, Chandigarh, shows that in the absence of data such as dialysis and Transplantation registries it is possible to only estimate the incidence of chronic kidney disease (CKD) and End Stage Renal Disease (ESRD), where the prevalence was about 0.79% for CKD. Population based studies are few, numbering only three this tie, renal transplantation therapy, on the side the government has initiated a process by which it is planning to establish

stand-alone haemodialysis with in the country to increase the facilities at on a affordable cost, and on the transplant side it had launched a national organ transplant program to facilitate transplantation on a national scale.

Renal transplantation is extremely successful with one year graft survival rates of about 90% decreased donors transplantation and 95% for live transplants. An advantage of kidney transplantation when compared with dialysis is that it reverses many of the pathologic changes associated with renal failure when normal kidney function is restored. It also eliminates the dependence on dialysis and the accompanying dietary and lifestyle restrictions. Science 1973 many deaths have been prevented through the use of maintenance dialysis and renal transplantation.

NEED FOR STUDY

Globally chronic kidney disease is associated with high morbidity and mortality with approximately 735,000 deaths annually. Thus, CKD is the 12th most common cause of death and the 17th most common cause of disability. End-stage renal disease represents the terminal stage of Chronic kidney disease and is defined by a glomerular filtration rate of $<15 \text{ mL/min/1.73 m}^2$. There is a paucity of data in India regarding true incidence of end stage renal disease An Indian population-based study determined the crude- and age-adjusted end stage renal disease incidence rates at 151 and 232/million populations Chronic kidney disease is a common and rapidly increasing global public health problem, both in developed and developing countries. The global prevalence of chronic kidney disease is estimated to be 8–16%, and the disease burden is expected to grow. In India, recent studies have shown a variable prevalence ranging from 4% to 17.2% with wide regional differences.

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In India, a study was conducted on renal transplantation Indian scenario, PGIMER, Chandigarh, shows that in the absence of data such as dialysis and Transplantation registries it is possible to only estimate the incidence of chronic kidney disease and End Stage Renal Disease, where the prevalence was about 0.79% for CKD. Population based studies are few, numbering only three this tie. In Chennai, the reported prevalence of CKD was 0.86%. A study from Delhi were in prevalence were 0.79% or 7852 per million patients, the incidence of ESRD based on 572,029 subjects resides in Bhopal, suggested that average crude and age adjusted incidence rates of ESRD ranged from 151 to 232.

Chronic kidney disease is a global treat to health in general and for developing countries in particular, because therapy is expensive and life-long. Over one million people worldwide are alive on dialysis of with a functioning with graft. Incidence of has doubled in last 15 years. In USA 30 million people suffer from chronic kidney disease and by 2010 > 6000000 patients will require renal transplant therapy United States, there is a rising incidence and prevalence of kidney failure, with poor outcomes and high cost. Kidney disease is the ninth leading cause of death in the United States. A cross sectional study was conducted among 459 patients from 8 dialysis units in Budapest, Hungary, who were on haemodialysis for at least 3 months

were approached to complete a self-administered questionnaire to assess the attitude of dialysis patients to renal transplantation.

shows worldwide Census of chronic renal failure patients

| | | |
|----|-----------------------|--------|
| 1. | America | 36,541 |
| 2. | Europe | 27,917 |
| 3. | Western pacific | 18,505 |
| 4. | Southeast Asia | 8,604 |
| 5. | Eastern Mediterranean | 3,207 |
| 6. | Africa | 705 |
| 7. | India | 750 |

METHODOLOGY

Research approach

The research approach adopted was **Quantitative research approach** to achieve the objectives of the study, which is felt to be most appropriate in the field of education for its practicability in real situations. It has the advantage of practicability, feasibility and to a certain extent for generalization.

Research design

The term research design refers to the plan of organization of scientific investigation. It is the blueprint that the researcher selects to carry out the study. The research designs selected for the present study was **Cross-sectional Descriptive research design.**

Variables of the study:

Independent variable: Chronic Renal Failure patients.

Dependent variable: Knowledge on renal transplantation among chronic renal failure patients.

Setting of the study

The study was conducted in department of Nephrology, Sri Venkateswara Institute of medical sciences, Tirupati.

Population

The population in this study includes Chronic Renal Failure patients Sri Venkateswara Institute of Medical Sciences, Tirupati.

Sample

Who is admitted in Chronic Renal Failure patients in department of nephrology, SVIMS, Tirupati.

Sample size

Sample size consists of 100 clients of who come under inclusion criteria.

Sample technique

As the selection of sample depends on system of intervals in a numbered population, systematic random sampling technique was adopted based on inclusion criteria.

Criteria for sample selection

Inclusion criteria:

Patients who are willing to participate in the study.

Exclusion criteria

Patients who are medical personnel.

Development and description of tool

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

The tool consists of II sections:

Section 1: Consists of socio-demographic data.

Section 2: A self structured questionnaire to assess the knowledge on renal transplantation among Chronic Renal Failure patients. It consists of 32 multiple choice questions based on general information and indications of renal transplantation by using a/b/c/d options.

Content validity

The content validity was obtained for the questionnaire from 9 experts. It includes 5 experts from the department of nephrology, 4 experts from the Dept of Medical Surgical nursing, necessary modifications were made and appropriateness was obtained from English department, and the tool was incorporated in the pilot study.

Reliability of tool

Reliability is defined as the extent to which the instruments yield 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 administering the tool to 10 samples who were in college of Sri Venkateswara Institute of Medical Science and not included in the main study and who fulfilled inclusion criteria.

Reliability was established by inter rater reliability method using Cranach's alpha for level of knowledge on renal transplantation. The tool was found reliable with a score of $r = 0.891$.

Pilot study

Prior formal permission was obtained from the head of the department of nephrology in SVIMS, Tirupati for conducting the study. The sample was selected by following systematic random sampling technique. A pilot study is a trial study carried out before a research design is finalized to assist in defining the research question or to test the feasibility, reliability and validity of the proposed study design. Formal prior permission was obtained from the principal College of nursing, SVIMS Tirupati for conducting the study. Prior formal permission was obtained from head of the department of Nephrology, SVIMS, Tirupati for conducting the study. 10 samples were selected by following systematic random sampling techniques, who fall under inclusion criteria, were selected for the pilot study. Rapport was established with self-introduction and written consent from participants to participate in the study.

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Procedure for data collection

The investigator obtained prayer permission from the head of the department in Nephrology ward SVIMS, to conduct the study. 100 samples were selected by systematic random sampling technique with minimum of 10 - 20 cases per day 10 am – 12pm. The investigator administered self-structured questionnaire to the clients. The data collection took 15 minutes from each participant. After the completion of the data collection the investigator educated clients regarding the renal transplantation and distributed the booklets for the future references and thanked the participants for their willingness and co-operation.

Results

The findings of the study revealed that 54(54.0%) were having inadequate knowledge, 34(34%) were having moderate knowledge, 12(12%) were having adequate knowledge on renal transplantation among chronic renal failure patients.

The study to assess the knowledge on renal transplantation among chronic renal failure patients with their significantly association of demographic variables with level of knowledge on Renal transplantation among chronic renal failure patients, age has obtained with a chi-square value 25.51, Sex (Gender) shows significant association with chi-square value 9.63, education shows significant association with chi-square value 24.28, occupation shows significant association with chi-square value 16.17, monthly income shows significant association with chi-square value 37.80 which are statistically significant at $p < 0.001$ level. The other variable, source of information shows significant association with chi-square value 12.59 which is statistically significant < 0.05 . The other variables were not having any significant association with knowledge on renal transplantation among chronic renal failure patients.

DISCUSSION:

The present study was mainly focused to assess knowledge on renal transplantation among chronic renal failure patients. The problem statement selected was “the study to assess the knowledge on renal transplantation among chronic renal failure patients in department of nephrology SVIMS, Tirupati”.

The sampling technique used was **Systematic Random Sampling Technique**. The tool used in the study consists of two sections. Section I: consists of questions to collect demographic data, Section II: consist 32 Questionnaire on knowledge on renal transplantation among chronic renal failure patients. The tool was validated by experts from 5 Nephrologist and 5 from nursing department and it was duly translated into Telugu language. The reliability of the tool was confirmed by **kuder-Richadson method** and the value obtained was $r = 0.891$.

After obtaining the formal permission from the HOD, department of nephrology, SVIMS, Tirupati, a pilot study was conducted among 10 samples in the same set up. Its clarity and feasibility was established to precede further actual study. The actual study was done on 100 samples, who were falling under inclusion criteria, after getting written consent from the participants. The data was analysed by using descriptive and inferential statistics. The findings of the study revealed that inadequate knowledge 58(58%), moderate knowledge 24(24%) and Clients had adequate knowledge 18(12%). The association of demographic variables with level of knowledge among chronic renal failure patients. The study findings revealed that had significant association at $p < 0.01$.

CONCLUSION

The findings of the study revealed that based on knowledge statements, majority of chronic renal failure patients 58(58%) were having inadequate knowledge, 24(24%) were having moderate knowledge, 18(18%) were having adequate knowledge levels. Some of the demographic variables were statistically significant at $p < 0.01$ and hence it is concluded that, chronic renal failure patients should improve their knowledge in various aspects/dominos of renal transplantation.

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