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Knowledge and Attitude regarding Kidney Transplantation among the family members of patient suffering from Chronic Kidney Disease in selected hospitals: A Descriptive Study

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Abstract

In 1954, the first kidney transplant was performed in Bostan between identical Herrick twins at the Peter Bent Brigham Hospital in U.S. In India, the number of people requiring transplantation is estimated to be around 220,000. Against this huge demand, meager 7500 kidney transplantation was performed at the 250 kidney transplant centers across India. Most of the transplants done are live related donors and only 10% are from deceased donors. **Objectives of the study:** To assess the Knowledge regarding Kidney Transplantation among the family members of patient suffering from Chronic Kidney Disease in selected hospitals. 2. To assess the Attitude regarding Kidney Transplantation among the family members of patient suffering from Chronic Kidney Disease in selected hospitals. 3. To correlate the knowledge and attitude regarding Kidney Transplantation among the family members of patient suffering from Chronic Kidney Disease in selected hospitals. 4. To associate the Knowledge scores with selected demographic variables. 5. To associate the Attitude scores with selected demographic variables. **Methods:** The research design selected for the study was Non Experimental Descriptive design is used. Non-probability purposive sampling technique with 100 family members were selected for the study. **Results:** In, 54% of the family members of patient suffering from chronic kidney disease had average level of knowledge score, 28 % of the family members of patient suffering from chronic kidney disease had good level of knowledge score, 15% of the family members of patient suffering from chronic kidney disease had poor level of knowledge score and only 3 % of them had very good level of knowledge score. The result reveals that there is association of attitude score with education, occupation and monthly family income at p $p<0.005$ level of significance. None of the other demographic variables were associated with attitude

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score.**Conclusion:** The study shows that family members are having good knowledge related to anatomy and physiology, self-care, management and introduction. While they have inadequate knowledge related to indication, contraindication, process, investigation, procedure and complication.

Keywords:Kidney,Transplantation, family members, knowledge & attitude

Introduction

Current review found CKD is more common in people and the higher incidence rate at aged 65 years or older (38%) than in people aged 45–64 years (13%) or aged 18–44 years (7%). CKD is more common in women (15%) than men (12%). CKD is more common in non-Hispanic blacks (16%), Hispanics (14%), or non-Hispanic whites (13%) or non-Hispanic Asians (12%) have CKD.[1]

Major progress has been made in organ transplantation. In 1954, the first kidney transplant was performed in Bostan between identical Herrick twins at the Peter Bent Brigham Hospital in U.S. The advances made in organ procurement and preservation, surgical techniques, tissue typing and matching, understanding of the immune system, immunosuppressant therapy, and prevention of and treatment for graft rejection have dramatically increased the success of organ transplantation. Kidney transplantation is extremely successful, with 1 year 5 graft survival rates of about 90% for deceased donor transplants and 95% for live donor transplants. Advantage of the kidney transplantation when compared with dialysis is that it reverses many of the pathophysiologic changes associated with renal failure when normal kidney function is restored. Kidney Transplantation is also less expensive than dialysis after the first year. The disparity between the supply and demand for organs is significant, Transplantation from a deceased donor usually requires a prolonged waiting period with differences depending on age, gender, race, as well as the availability of a matching blood type, B and O blood types have the longest waiting times. An advantage also eliminates the dependence on dialysis and the accompanying dietary and lifestyle restrictions.9More than 99,000 Americans are on the waiting list to receive a kidney (Organ Procurement and Transplantation Network (OPTN), 2016). In India, the number of people requiring transplantation is estimated to be around 220,000. Against this huge demand, meager 7500 kidney transplantation was performed at the 250 kidney transplant centers across

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India. Most of the transplants done are live related donors and only 10% are from deceased donors.Patients choose kidney transplantation for various reasons, such as the desire to avoid dialysis, to improve their sense of well-being and wish to lead a more normal life ahead.

Need of the study

World kidney day is celebrated on 14 March every year; the aim of the programme is to create awareness about kidney diseases all over the world. The common kidney disease is chronic kidney disease and its affects about 10% of the world's population. Hypertension and diabetes are two major causes of kidney diseases in both men and women. Per year over 100,000 patients are diagnosed with End Stage of Kidney Disease (ESKD) in India. In India due to lack of accurate national data collection, the incidence of CKD is not clear but studies estimate that the number of new patients with End stage of kidney disease who are started on dialysis or transplantation is over 100,000 per year. This number grossly underestimates that true burden of kidney disease in our country given the inequality in access to health care between urban and rural populations due to disparities in wealth and literacy. 2

A study was conducted to describe Kidney –organ donation developing family practice initiatives to reverse inertia. The aim of this study is to discuss the complexity of kidney donation issues, by briefly reporting on bio-ethical, organizational or social aspects of donation, and to highlight the need for synchronised community-oriented changes to reverse inertia or negativism to donation, through the pathways of family practice driven services and 11 research initiatives. Misunderstandings, public uncertainty and issues of trust in the medical system, that limit willingness to be registered as a potential donor, could be addressed by community dissemination of information and new family practice initiatives that respond to individuals' personal beliefs and concerns regarding organ donation and transplantation. The study shows that tackling both personal and public inertia on organ donation is important for any community oriented kidney donation campaign. Ongoing growth in the number of patients with kidney failure and limited availability of kidney transplants leads to long waiting lists and poor quality of life. Negative, neutral or ambivalent organ donation perceptions often interlace between bio-ethical, organizational and social limitations. The implementation of family practice driven information and education campaigns about organ donation and transplantation has the potential to increase the numbers of new donors.3

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Dialysis and Transplantation is the treatment of choice in end stage renal disease. Kidney transplantation is needed for the survival. Many studies have conducted throughout the India on knowledge and attitude of family members of patient suffering from chronic kidney disease. It shows that the inadequate knowledge and inappropriate attitude on the topic. Investigator would like to further explore the knowledge and attitude of family members on kidney transplantation to better deal with the disease in the selected area.

Aim of the study

The aim of the study was to assess Knowledge and Attitude regarding Kidney Transplantation among the family members of patient suffering from Chronic Kidney Disease.

Methodology:

The research design selected for the study was Non Experimental Descriptive design is used. Non-probability purposive sampling technique with 100 family members were selected for the study. Demographic data, structured knowledge questionnaire, attitude scale were prepared to evaluate the knowledge and attitude of family members of patient suffering from chronic kidney disease regarding kidney transplantation.

The final tool is tested for reliability. The reliability of the tool is established by testing the stability using Guttman Split half method (Parallel method) was used for questionnaire and attitude scale.. The correlation coefficient 'r' of the questionnaire and attitude scale was 0.922. Reliability was 0.9594 which is more than 0.8.

Pilot study was conducted from 14th December 2020 to 20th December 2020 for a period of 7 days. A sample of 10 family members of patient suffering from chronic kidney disease was selected from the selected areas of hospital of the city. The investigator approached the sample individually, discussed the objective of the study and obtained consent for participation in study. The pilot study was feasible in terms of time, money, material and resources.

Result

Section –I: Description of family members of patient suffering from chronic kidney disease in selected hospitals with regards to their demographic variables.

majority 39% of the family members of chronic kidney disease patients were in the age group of 28-37years, 26% were in the age group of 18-27 yrs, 25% were in the age group of 38-47 yrs and 10% of the family members were in the age group of more than 48 years of age respectively.

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•Majority 58% of the family members of chronic kidney disease patients were males and 42% of them were females. • Majority 68% of the family members of chronic kidney disease patients were married and 29% of were unmarried, 2 % of were widow/widower, 1% of were divorced and none of them were separated. • Majority 48% of the family members of chronic kidney disease patients were from urban area, 46% were from rural area and 6% of them were from urban slum. Majority 57% of the family members of chronic kidney disease patients were Hindus, 22% of them were from Buddhist and 15% of them from other religions such as Jain and Sikhism, 4 % of them from Muslim and 2% of the family members of chronic kidney disease patients were belonging from Christian religion. • Educational status reveals that majority 58% of the family members of chronic kidney disease patients were secondary educated, 30% of them were graduated, 7% of them were primary educated, 3 % of them were post graduated and 2% of them were having other education such as D.pharm and hotel management. • Majority 27% of the family members of chronic kidney disease patients were doing private service, 25% of them were unemployed, 22% of them were labourer, 5% of them were doing government service and 4% of them were driver and painter. Majority 54% of the family members of chronic kidney disease patients were from nuclear families, 45% were from joint families and 1% of them were from extended families. • Majority 55% of the family members of chronic kidney disease patients were having monthly family income of below 15001-20000 Rs, 18% of them were having between Rs 10001-15000, 14% of them were having more than 20000 Rs per month and 13% of them were having below 10000 rupees. • 35% of the family members of chronic kidney disease patients were son, 17% of them were wife, 12% of them were husband, 12% of them were daughter, 11% of them were from others such as cousins, 7 % were mother and 6 % of them were father. Majority 91% of the family members of chronic kidney disease patients were having awareness about kidney transplantation and 9% of them need not have any awareness. • 26.4% of the family members of chronic kidney disease patients were having information about kidney transplantation from relatives and 26.4% from health workers, 20.9% had information from mass media, 15.4% had information from family members, 8.8% of them were having information from friends, and only 2.2% of the family members of chronic kidney disease patients had information from other sources such as seminar

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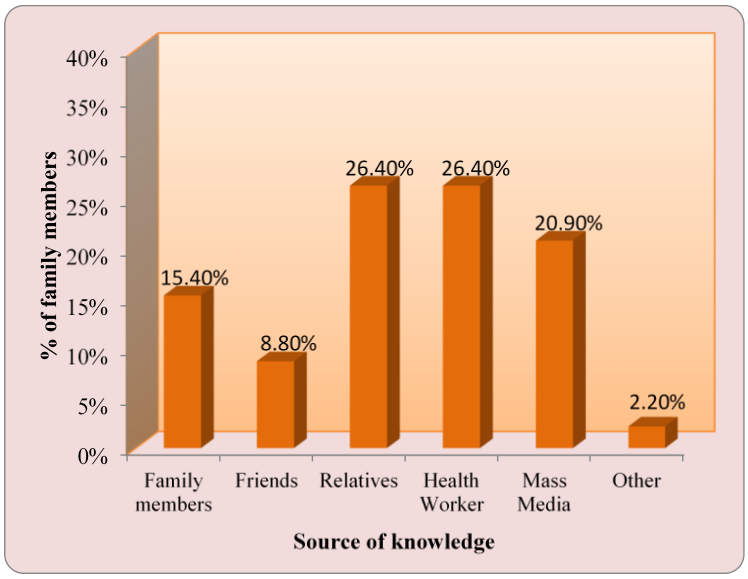

Figure No. 1: Bar diagram representing percentage wise distribution of family members of patient suffering from chronic kidney disease according to source of knowledge about kidney transplantation

Section -II: Description on assessment of level of knowledge score and attitude regarding kidney transplantation among the family members of patients suffering from chronic kidney disease.

Level of knowledge	Score Range	Level of Knowledge Score	
		No of family members(f)	Percentage (%)
Very Good	76 – 100%(16 – 20)	3	3
Good	51 – 75%(11 – 15)	28	28
Average	26 – 50% (06- 10)	54	54
Poor	0 – 25%(0- 5)	15	15
Minimum score		2	
Maximum score		17	
Mean knowledge score		9.13 ± 3.32	
Mean % Knowledge Score		45.65 ± 16.61	

The result shows the frequency and percentage wise distribution of family members of patient suffering from chronic kidney disease in selected hospitals. In, 54% of the family members of patient suffering from chronic kidney disease had average level of knowledge score, 28 % of the

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family members of patient suffering from chronic kidney disease had good level of knowledge score, 15% of the family members of patient suffering from chronic kidney disease had poor level of knowledge score and only 3 % of them had very good level of knowledge score. Minimum knowledge score was 2 and maximum knowledge score was 17. Mean knowledge score was 9.13±3.328 and mean percentage of knowledge score was 45.65 ± 16.61.

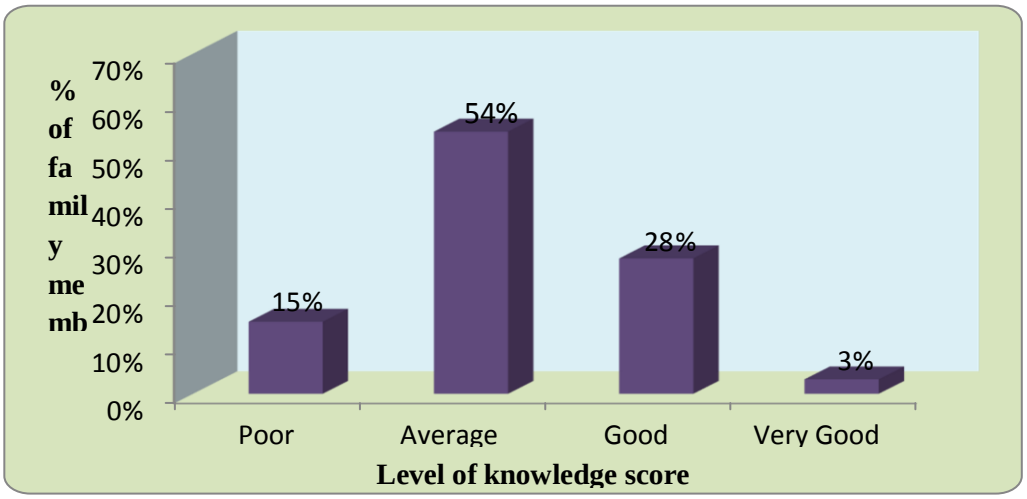

Figure no 2: Assessment of level of knowledge score and attitude regarding kidney transplantation among the family members of patients suffering from chronic kidney disease.

Section - III: Description of area wise assessment of knowledge of family members of patient suffering from chronic kidney disease in selected hospitals regarding kidney transplantation.

The result shows that 75% of the family members of patient suffering from chronic kidney disease had favourable attitude, 15% of them had highly favourable attitude and 10 % of the family members of patient suffering from chronic kidney disease had unfavourable attitude. Minimum attitude score was 22 and maximum attitude score was 66. Mean attitude score was 48.11±8.89 and mean percentage of attitude score was 60.13 ± 11.11

Section- IV: Correlation between knowledge and attitude regarding kidney transplantation among the family members of patients suffering from chronic kidney disease.

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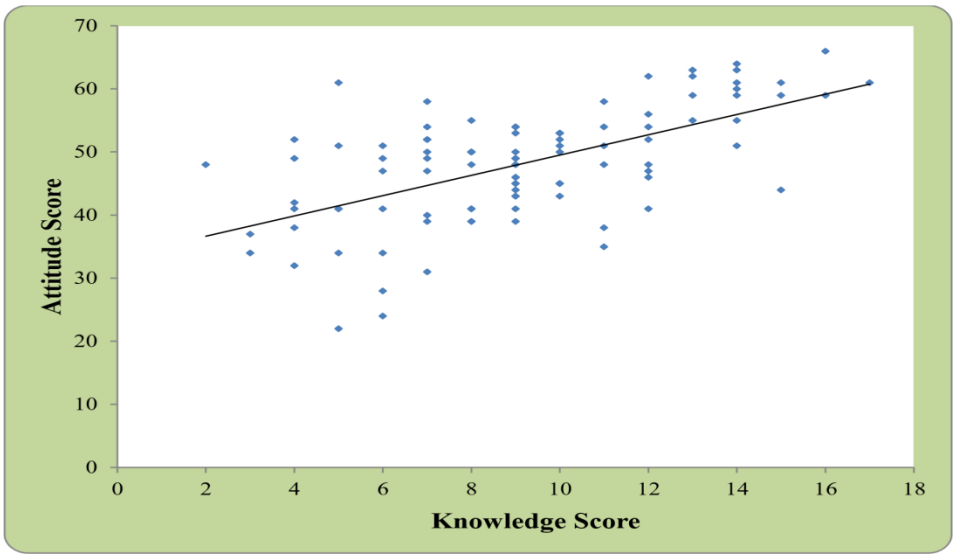

Figure 3:The findings deal with the correlation between knowledge and attitude regarding kidney transplantation among the family members of patients suffering from chronic kidney disease in selected hospitals. Correlation is compared with the help of Pearson's Correlation coefficient.

Section -V: Association of knowledge and attitude score regarding kidney transplantation among the family members of patients suffering from chronic kidney disease with their selected demographic variables.

The result reveals that there is association of knowledge score with area of residence, education, occupation, monthly family income, relationship with patients, awareness of kidney transplantation and source of knowledge at $p<0.005$ level of significance.

The result reveals that there is association of attitude score with education, occupation and monthly family income at p $p<0.005$ level of significance. None of the other demographic variables were associated with attitude score.

Discussion

A cross sectional study was done to assess the knowledge and attitude regarding organ donation among relatives of patients admitted in ICU (Intensive care unit). The sample size was 180 relatives of patients admitted in ICU and data was collected through face to face interview based on a structured, pre-tested (piloted) questionnaire. It was found that 81.1% participants had good knowledge and 72.8% had appropriate attitude towards organ donation. There was significant association between education of participants with their knowledge. They found that highest level of knowledge about organs donated was kidneys, eyes and heart. 71 In above study

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relatives knowledge related to organ donation was 81.1% that is good knowledge but in present study 54% of family members of the patient suffering from chronic kidney disease were having average knowledge score. Above study also reveals 72.8% had appropriate attitude towards organ donation. In present study 75% of participant have favorable attitude towards kidney donation and transplantation. In above study there was significant association between education of participants with knowledge score. 118 Similarly in present study a significant association was found between knowledge score with educational status at p< .05). They conclude that the attitudes of the relatives of individuals undergoing dialysis treatment toward kidney donation were determined to be more positive. 72 In above study individual whose relatives was undergoing dialysis treatment was having higher attitude than those who not. Similarly in present study also favorable attitude was found among family members of patient suffering from chronic kidney disease towards organ donation and transplantation. Above study also reveals significant difference between educational status and organ donation similarly in present study a significant association was found between attitude score with educational status at P<0.005 level of significance.

Conclusion

The study reveals mean pre test knowledge score 9.13 and the mean percentage knowledge score was 45.65, mean attitude score 48.11 and the mean percentage attitude score was 60.13. Also the study shows that family members are having good knowledge related to anatomy and physiology, self care, management and introduction. While they have inadequate knowledge related to indication, contraindication, process, investigation, procedure and complication. Thus the assumption that family may have inadequate knowledge related to kidney transplantation in some areas is proved. Moreover attitude of family members of patient suffering from chronic kidney disease was also favorable. Thus the assumption that family members attitude will differ is proved. Analysis also reveals that ($r = 0.601$ and $p = 0.0001$) that means there is positive correlation between knowledge score and attitude score. There is association of knowledge score with area of residence, education, occupation, monthly family income, relationship with patients, awareness of kidney transplantation and source of knowledge at $p< 0.05$ level of significance. None of the other demographic variables were associated with knowledge score. The study also reveals that there is association of attitude score with education,

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occupation and monthly family income at p< 0.05 level of significance and none of the other demographic variables were associated with attitude score.

Conflict of interest- The authors certify that they have no involvement in any entity with any financial/ non-financial interest in the subject matter or materials discussed in this paper.

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