A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge and Attitude towards Kidney Donation among Family Members of Chronic Renal Failure Patients Attending Haemodialysis Unit at Selected Hospitals of Bagalkot

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Abstract: *Introduction: Chronic kidney disease (CKD) is irreversible and progressive reduction of functioning renal tissue.[1] a living person gives one his or her kidney to someone else who has kidneys that are not working.[2] Giving a kidney to someone who needs a transplant is a very important thing to do.[3] Objective: 1) To determine the effectiveness of structured teaching programme on knowledge and attitude regarding kidney donation among family members of chronic renal failure patients. 2) To find out co-relation between knowledge and attitude towards kidney donation among the family members of chronic renal failure patients. Method: Pre-experimental, i.e. one group pre-test and post test design was used. The sample includes 50 family members. Convenient sampling technique was used. Data collected using structured knowledge questionnaire and self constructed attitude scale & analyzed using descriptive and inferential statistics. Result: The calculated knowledge t value (t_{49}=22.62, P< 0.05%) & calculated attitude t value (t_{49}=31.29, P< 0.05%) hence planned teaching programme proved to be effective. The calculated 'r' value is (-0.1835) a statistically negative co-relation between knowledge and attitude. Conclusion: There was significant difference was found between the pre-test and post-test knowledge & attitude scores of family members after the administration of STP. Therefore study showed that STP was highly effective. & negative co-relation between knowledge and attitude.*

Keywords: Effectiveness, Family members of chronic renal failure patient, kidney donation, Knowledge, Attitude, Socio-demographic variables

1. Introduction

Chronic kidney disease (CKD) is irreversible and progressive reduction of functioning renal tissue. When the remaining kidney mass can no longer maintain the body's internal environment, renal failure is the result. This is labelled stage of 5 chronic kidney diseases and is also called as end-stage renal disease (ESRD). Chronic renal failure can develop insidiously over many years, or it may result from an episode of acute renal failure from which the patients has not recovered.[1]

Living kidney donation happens when a living person gives one his or her kidney to someone else who has kidneys that are not working. During this surgery the donor's kidney is removed, taken to where the recipient is and place into the recipient. A donor can live well with one kidney and the recipient will have better health with their new kidney. People who are older than age 18 and in good physical and emotional health can apply to be a living donor.[2]

Donating a kidney to someone who needs a transplant is a very important thing to do. But can it lead to kidney problems in the donor most people's do not experience health problems as a result of donation. There are many benefits to becoming a donor. One of the most obvious benefits is that you can save a life, or drastically improve the quality of life for the recipient. Long-term survival rate is markedly improved among patients who receive a donor kidney compared with patients who remain on dialysis.[3]

Objective
- To assess the knowledge regarding kidney donation among family members of chronic renal failure patients.
- To assess the attitude regarding kidney donation among family members of chronic renal failure patients.
- To determine the effectiveness of structured teaching programme on knowledge and attitude regarding kidney donation among family members of chronic renal failure patients.
- To find out the association between knowledge and attitude towards kidney donation among family members

of chronic renal failure patients with their selected socio demographic variables.

- To find out co-relation between knowledge and attitude towards kidney donation among the family members of chronic renal failure patients.

2. Materials and Methods

Study design: The pre-experimental, i.e. one group pre-test and post test design was adopted for the present study. The sample includes 50 family members of chronic renal failure patients who are attending the haemodialysis unit at selected hospitals Bagalkot. Simple random technique was used to select the hospitals, and convenient sampling technique was used to select the samples for the study.

Setting of the study: The study was conducted in haemodialysis unit at selected hospitals (H S K hospital & Government hospital) Bagalkot. Hospitals located in Bagalkot District in Karnataka. Government hospital situated 5 kilometers & H S K hospital situated ½ kilometers from the researcher's institution, B.V.V.S Sajjalashree Institute of Nursing Sciences, Bagalkot.

Participants: Sample consists of 50 family members of chronic renal failure patients who are attending the haemodialysis unit at selected hospitals Bagalkot.

Sampling Technique: Simple random technique was used to select the hospitals, and convenient sampling technique was used to select the samples for the study. The sample size was 50 family members of chronic renal failure patients.

Criteria for Sample Selection

Inclusion Criteria: 1.Willing to participate in the study. **2.** Available at the time of data collection. **3.** Able to speak Kannada or English.

Exclusion Criteria: 1. who are not able to co-operative throughout the period of study. **2.** Suppose to go out of the setting of the study and not able to cooperate throughout the period of study. **3.** Not able to read and write Kannada or English language.

Sample Size Estimation
The sample size was estimated by using **Epi info software** the estimation was done using the results (mean & standard deviation). Of a previous research study was conducted in Vijayapur, Karnataka, India.

The confidence level was 95% (a=5%)

The Za value at 5% level of significant (1.96)

The power of test was 80%

The effect size was 20%

The sample size estimated by researcher was 45.

To satisfy the estimated sample size the researcher enrolled the subjects (family members of chronic renal failure patients) admitted in 2 selected hospitals in Bagalkot. The final data was collected from 50 subjects as the sample for the study.

The pilot study conducted in Patil Medicare Multispecialty Hospital Extension area, Bagalkot. (5 family members)

The research study conducted in following Hospitals and data collected.
1) B.V.V.S, HSK Hospital & Research Center Navanagar, Bagalkot.
2) District Hospital Navanagar, Bagalkot.

Description of Data Collection Instrument:
The instrument for present study consists of 3 sections.
Section I: It related to socio-demographic data of family members of chronic renal failure patients.
Section II: Self administered knowledge questionnaire regarding kidney donation.
Section III: Self constructed attitude scale towards kidney donation.

Section I: Socio-demographic data:
The first part of the tool consists of 10 items for obtaining information of the selected background factors such as Age, Gender, Educational status, Religion, Occupational status, Place of residence, Family income per month, Sources of knowledge, Habits, and Relationship with patient.

Section II: Self administered knowledge questionnaire:
Self- administer knowledge questionnaire was prepared in the form of multiple choice questions. It consists of 30 items regarding kidney transplantation. Total score is 30.
For every right answer the score is – 1
For every wrong answer the score is – 0

The knowledge level has been divided in to five categories based on the knowledge score.
- Excellent knowledge: 25 to 30
- Good knowledge: 19 to 24
- Average knowledge: 13 to 18
- Poor knowledge: 7 to 12
- Very poor knowledge: 0 to 6

Section: Self constructed attitude scale:
Self constructed attitude scale was prepared in the form of attitude scale. It consists of 10 items regarding kidney transplantation. Total score is 50.
- In this attitude scale it consists of 10 items, and 5 attitudinal spaces (responses).
- The items are related to kidney donation.
- In this attitude scale it consists of the responses are ranging from strongly disagree to strongly agree.

The attitude level has been divided in to five categories based on the attitude score.
- Strongly disagree = 10-19
- Disagree =20 – 29
- Uncertain = 30
- Agree = 31 - 40
- Strongly agree = 41- 50

Data Collection
Data collection was done from 10-4-2021 to 24-04-2021 in haemodialysis unit at selected hospitals of Bagalkot.

Variables under the Study
Dependent variables: knowledge and attitude of family members of chronic renal failure patients.
Independent variable: structure teaching programme.

Statistical Analysis
The data was analyzed by using SPSS 18 statistical package. The data obtained from the sample, was organized and summarized with help of descriptive statistics like frequency and percentage, arithmetic mean, median, mode and standard deviation. Karl Pearson's correlation coefficient was used to justify the reliability of tool. Paired t test was used to find out difference between pre-test and post-test knowledge score, Chi-square test was used to find the association between selected socio demographic variables with post-test knowledge and attitude scores.

3. Result

The study was begun with selection of 50 family members of chronic renal failure patients who are attending haemodialysis unit at selected hospitals of Bagalkot.

Table 1: Description of socio-demographic characteristics, N=50

S. No.	Socio Demographic factors	Score	Character	Subjects F	%
1	Age	1	18-30 years	6	12%
		2	31-45 years	21	42%
		3	46-60 years	16	31%
		4	Above 61	7	14%
2	Gender	1	Male	24	48%
		2	Female	26	52%
3	Educational status	1	No formal education	3	6%
		2	Primary	12	24%
		3	S S L C	11	22%
		4	P U C	16	32%
		5	Degree & above	8	16%
4	Religion	1	Hindu	29	58%
		2	Muslim	16	32%
		3	Christian	3	6%
		4	Other/ specify	2	4%
5	Occupational status	1	House wife	16	32%
		2	Private employee	12	24%
		3	Government employee	3	6%
		4	Former	10	20%
		5	Business	9	18%
6	Family income per month	1	Below 10000 Rs	12	24%
		2	Rs10001-15000 Rs	25	50%
		3	Rs15001-20000 Rs	3	6%
		4	Rs20001 & above	10	20%
7	Place of residence	1	Urban	26	52%
		2	Rural	24	48%
8	Source of knowledge	1	Social media	7	14%
		2	Guidance from health workers	30	60%
		3	Books & magazines	7	14%
		4	Any others source	6	12%
9	Habits	1	Alcohol	10	20%
		2	Drug addiction	0	0%

		3	Smoking	9	18%
		4	Any other habits	31	62%
10	Relationship with patient	1	Parents	6	12%
		2	Spouse	26	52%
		3	Children	9	18%
		4	Other relation	9	18%

Table 2: Percentage wise distribution of family members of chronic renal failure patients according to level of knowledge in pre test and post test, N = 50

Level of knowledge	Pre test		Post test	
	No of respondent	Percentage (%)	No of respondent	Percentage (%)
Excellent	0	0%	12	24%
Good	0	0%	33	66%
Average	14	28%	5	10%
Poor	36	72%	0	0%
Very poor	0	0%	0	0%
Total	50	100%	50	100%

In pre-test, out of 50 family members of chronic renal failure patients, highest percentage (72%) of family members had poor knowledge, (28%) of family members had average knowledge, No one have excellent, good and very poor knowledge regarding kidney transplantation.

After Structured Teaching Programme (STP) post-test reveals that out of 50 family members of chronic renal failure patients, highest percentage (66%) of family members had good knowledge, (24%) of family members had excellent knowledge, and followed by lowest percentage (10%) of family members with average knowledge. No family members had poor and very poor knowledge regarding kidney transplantation.

Table 3: Percentage wise distribution of family members of chronic renal failure patients according to Attitude in pre test and post test, N = 50

Attitude	Pre test		Post test	
	No of respondent	Percentage (%)	No of respondent	Percentage (%)
Strongly agree	0	0	34	68%
Agree	0	0	16	32%
Uncertain	0	0	0	0%
Disagree	44	88%	0	0%
Strongly disagree	6	12%	0	0%
Total	50	100%	50	100%

In pre-test, out of 50 family members of chronic renal failure patients, highest percentage (88%) of family members had disagree attitude, (12%) of family members had strongly disagree attitude, no one had got uncertain, agree. and strongly agree attitude regarding kidney transplantation.

After Structured Teaching Programme (STP) post-test reveals that out of 50 family members of chronic renal failure patients, highest percentage (68%) of family members of chronic renal failure patients had strongly agree attitude, (32%) of subjects had agree attitude, and followed by no one had got uncertain, disagree, and strongly disagree attitude regarding kidney transplantation.

Table 4: Significant difference between the pre-test knowledge and post test knowledge scores of family members of chronic renal failure patients, N = 50

Test	Mean	Mean Diff	SD Diff	Paired 't' test	Table value
Pre – test (O₁)	11.58	10.62	0.67	22.62	1.96
Post – test (O₂)	22.2				

As the calculated 't' value (22.62) was much higher than table 't' value (1.96) for the Hypothesis: **H₁**: There is a significant difference between pre-test and post-test knowledge scores of family members regarding kidney transplantation. Findings revealing the presence of significant difference between pre-test and post-test knowledge scores, hence the Structured Teaching Programme proved to be effective.

Table 5: Significant difference between the pre-test attitude and post test attitude scores of family members of chronic renal failure patients, N = 50

Test	Mean	Mean Diff	SD Diff	Paired 't' test	Table value
Pre – test (O₁)	22.68	17.48	0.15	31.29	1.96
Post – test (O₂)	40.16				

As the calculated 't' value (31.29) was much higher than table 't' value (1.96) for the Hypothesis: **H₂**: There is a significant difference between pre-test and post-test attitude scores of family members of chronic renal failure patients regarding kidney transplantation. Findings revealing the presence of significant difference between pre-test and post-test attitude scores, hence the Structured Teaching Programme proved to be effective.

Table 6: Association between post-test knowledge score of family members of chronic renal failure patients regarding kidney transplantation with selected socio-demographic variables, N = 50

S. No	socio-demographic variables	DF	Chi-square	Table value	P value	Association
1	Age	1	0.971	3.84	0.05	Not significant
2	Gender	1	1.175	3.84	0.05	Not significant
3	Educational status	1	3.764	3.84	0.05	Not significant
4	Religion	1	0.773	3.84	0.05	Not significant
5	Occupational status	1	11.797	3.84	0.05	Significant
6	Family income per month	1	0.953	3.84	0.05	Not significant
7	Place of residence	1	0.031	3.84	0.05	Not significant
8	Source of knowledge	1	5.821	3.84	0.05	Significant
9	Habits	1	0.273	3.84	0.05	Not significant
10	Relationship with patient	1	0.396	3.84	0.05	Not significant

P ≤0.05 Two tailed

The socio demographic factors; occupation and sources of knowledge significant association with knowledge.

Table 7: Association between post-test attitude score of family members of chronic renal failure patients regarding kidney transplantation with selected socio-demographic variables, N = 50

S. No	socio-demographic variables	DF	Chi-square	Table value	P value	Association
1	Age	1	1.801	3.84	0.05	Not significant
2	Gender	1	0.025	3.84	0.05	Not significant
3	Educational status	1	0.005	3.84	0.05	Not significant
4	Religion	1	1.729	3.84	0.05	Not significant
5	Occupational status	1	0.034	3.84	0.05	Not significant
6	Family income per month	1	0.079	3.84	0.05	Not significant
7	Place of residence	1	0.025	3.84	0.05	Not significant
8	Source of knowledge	1	0.079	3.84	0.05	Not significant
9	Habits	1	0.521	3.84	0.05	Not significant
10	Relationship with patient	1	1.343	3.84	0.05	Not significant

P ≤0.05 Two tailed

4. Conclusion

There was significant difference was found between the pre-test and post-test knowledge scores of family members of chronic renal failure patients after the administration of STP. There was significant difference was found between the pre-test and post-test attitude scores of family members of chronic renal failure patients after the administration of STP. Therefore study showed that STP was highly effective in improving the knowledge and attitude of family members of chronic renal failure patient towards kidney donation. & negative co-relation between knowledge and attitude of family members of chronic renal failure patients.

5. Limitations of the Study

The study included family members of chronic renal failure patients above the 18 years of age only. Self constructed Knowledge questionnaire and attitude scale are used to assess the knowledge and attitude.

6. Source of Funding

Nil

7. Conflict of interest

None

References

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