

“A Study To Assess The Effectiveness Of Self-Instructional Module (Sim) On Knowledge Regarding Quality Of Life Among Renal Failure Patients Admitted In Ah&Rc Bg Nagara.”

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ABSTRACT

Background: The third biggest cause of death in the world, Renal failure affects 65 million people and claims 3 million lives annually. Renal failure is when the kidneys suffer damage and are unable to function. Diabetes, high blood pressure, and a number of other chronic (long-term) illnesses may result in damage. Chronic kidney disease, kidney stones, glomerulonephritis, polycystic kidney disease, and urinary tract infections are the most widespread types of kidney failure. Kidney illnesses are more likely to affect people with diabetes.

Purpose: The study assessed the effectiveness of Self-instructional module on knowledge regarding quality of life among renal failure patients.

Methods: The patients' level of knowledge was assessed using an 30-item Chronic Kidney Disease Patient Awareness Questionnaire. An administered to 60 patients with CKD. The data were analyzed using Statistical Package.

Discussion: pretest mean knowledge score in experimental group obtained by the patients was 19.93 (46.44%) with standard deviation 1.20 .In control group obtained by the patients was 14.03 (46.78%) with standard deviation 1.16. And the overall posttest mean knowledge score in experimental group obtained by the patients was 14.17(47.22%) with standard deviation of 1.72

Conclusions: SIM was effective in enhancing the knowledge of renal failure patients. This implies that when appropriately implemented, the renal failure patients will reap the benefits of SIM, which has the potential to improve their Quality of life.

Key Words: Renal failure, Self Instructional Module (SIM), Evaluate, Effectiveness, Knowledge.

INTRODUCTION:

The kidneys filter the blood, excreting urine and removing wastes. The urinary tract, which is made up of the ureters, urinary bladder, and urethra, serves as a plumbing system to remove urine from the kidneys, store it, and

then release it during urination. The urinary system regulates the homeostasis of water, ions, pH, blood pressure, and calcium in addition to filtering and removing waste from the body.

Kidney failure affects more than 700,000 Indians, a serious condition associated with increased morbidity and mortality, lost productivity, high costs and impaired quality of life. In the United States, the burden of kidney failure falls disproportionately on the country's most disadvantaged communities, with increased incidence rates among low-income individuals and black, Hispanic, and Native American individuals. Renal failure rates increased in the early years of the study period in expansion and non-expansion conditions before stabilizing. Kidney disease is the 28th cause of death in India. Over 850 million people live with some type of kidney disease, 12% of COVID19 patients over 60 will develop acute kidney injury. Based on the global data on kidney disease deaths in 2019, the CKD mortality rates have increased to 1.3 million in the mentioned year.

In addition to that, kidney diseases were the 8th cause of death in high-income countries. 10%–15% of adults have kidney diseases, whether it's chronic kidney disease (CKD), Urinary Tract Infection, Urolithiasis, Urinary Incontinence. Diseases of the kidney can interfere with our body's capacity to purify the blood, remove surplus water from the blood, and regulate blood pressure. Red blood cell synthesis and vitamin D metabolism, both of which are important for bone health, may also be impacted. One or both of your kidneys are in renal failure if they can no longer operate properly on their own. Kidney failure can occur suddenly and is occasionally transitory (acute). Sometimes it's a chronic (long-term) illness that deteriorates gradually.

A normal kidney removes creatinine from the bloodstream and excretes it in the urine. High creatinine in the blood is a sign that the kidneys are not purifying the blood. This test can identify anything wrong with a kidney failure patient before they become ill. Renal failure is common in hospitalized patients, with an increasing incidence. This is due to the aging of the population and the widespread use of nephrotoxic treatments or diagnostic techniques. Patients with altered renal function are frequently encountered in the emergency department (ED), and emergency physicians often play an important role in the evaluation and management of renal disease. According to the World Health Organization, quality of life (QoL) is the subjective assessment of an individual's reality as it relates to their aspirations, as seen through the prism of their culture and value system. QoL is defined by the University of Toronto's Quality of Life Research Unit as an individual's capacity to fully appreciate the significant opportunities in their lives. It is critical to distinguish between quality of life (QoL) and other ideas that are somewhat similar and may be mistaken with one another in the literature, such as standard of living and quality of life connected to health. In contrast to the former, quality of life is mostly determined by one's financial situation and income. The effects of a patient's health status on their quality of life (QOL) are the main focus of the multidimensional health-related quality of life (HRQOL). Patients with end-stage renal disease (ESRD) are more likely to die and require hospitalization if their Health related quality of life is low. Comparing dialysis patients to the general population, they have a lower Health related quality of life and worse outcomes that are similar to those of patients with other chronic illnesses like cancer and heart failure.

About 13 million people in the United States suffer from urinary incontinence. This condition is more prevalent in women than men. In the general population aged 15 to 64 years, 10-30 percent of women and 1.5-5 percent of men are affected. Urolithiasis is the third most common urological disease affecting both males and females, with the highest incidence of kidney stones occurring in the 30–45-year age group and decreasing after the age of 50 years. Thirty-seven were found to have chronic 6 renal failure (prevalence rate 0.78%). Applying these data to India's population of 1 billion, there are ~7.85 million CRF patients in India. The incidence and prevalence of patients with chronic kidney disease (CKD) is increasing worldwide. In Brazil, the Brazilian Society of Nephrology has collected information annually on patients with end-stage renal disease (ESRD) since 1999 and made it available on the Society's website. In 2008, the estimated number of patients in dialysis amounted to 87,044, of whom 90% were on haemodialysis and 10% on peritoneal dialysis.

METHODS

Research approach : The study involved a quantitative research approach.

Research design : The study utilized Quasi experimental pre-test and post-test control group design was adopted to assess the effectiveness of Self-Instructional Module on knowledge regarding quality of life among renal failure patients.

Setting

The study was conducted in a AH & RC B G NAGARA in Mandya , Karnataka, India. The selection of the setting was done on the basis of geographic proximity, feasibility to conduct the study, and availability of the samples. In this hospital with 750 bed strength. All the facilities including ICUs, medical, surgical, gynaecological, nephrology, and paediatric units were available. Every year, approximately 750 renal failure patients got treatment in this hospital. The hospital had a dialysis unit with 10 machines.

Population

Both male and female patients with renal failure patients were selected as study population.

Samples

Sixty patients with renal failure who are getting treatment in AH & RC B G NAGARA, Mandya, Karnataka, India, meeting the inclusion criteria were selected as samples for the study.

Sample selection criteria

Patients who were attending nephrology OPD and in-patients with renal failure and the patients who were willing to participate in the study were included in the study. The patients who were not available during the data collection period were excluded from the study.

Sampling technique

The samples were selected through non-probability convenient sampling technique.

Description and interpretation of the tool

Section A comprised of demographic data of the participants. It comprised of ten items including age, sex, religion, marital status, educational status, occupation, Income, any previous information acquired regarding renal failure, dietary habits, and family history of renal failure patients. Section B consisted of knowledge regarding renal failure and quality of life. The MCQs was designed to assess the awareness of knowledge of renal failure patients. This was a self-Instructional module for patient-reported outcome assessment. This MCQs scored from know nothing about it to know clearly with the score ranging from 0, 1, 2, 3, and 4 points. Total score could be calculated by summing up all the 15 items. Higher score represented better perceived disease awareness with full credit of points.

Translation of the tool

The tool was translated to Kannada language and retranslated to English language. Then, again, the tool was translated to Kannada language to check the clarity of the items, ambiguity of the language, and feasibility of the tool. The average time taken to complete the tool was approximately 20 minutes. The language of the tool was found simple and easy to understand.

Reliability and validity of the tool

The prepared instrument was submitted to seven experts including nephrologists, nutritionists, and medical surgical nursing experts to establish the content validity. The tool got its final shape after the modifications based on the opinions of the experts. The CVV index was 0.80. The reliability of the translated tool was 0.98.

Description of intervention

The SIM comprised of information related to renal failure and quality of life. It included the contents, namely, controlling the blood pressure, meeting the blood glucose goal if having diabetes, working with the healthcare team to monitor the kidney health, taking medicines as prescribed, working with a dietitian to develop a meal plan, making physical activity part of routine, aiming for a healthy weight, getting enough sleep, stop smoking, and finding healthy ways to cope with stress and depression. The SIM was reviewed and validated by the experts. The SIM was delivered using booklets and pamphlets. The intervention lasted for 45 minutes. The doubts of the participants were clarified.

Ethical considerations

Ethical approval was obtained from the Research and Ethics Committee of AH & RC Mandya, Karnataka, India. Formal permission was obtained to collect the data from the renal failure patients. The investigator personally visited each participant, introduced herself to renal failure patients, and explained the purpose of the study and ascertained the willingness of the participants. The participants signed in the written informed consent form. The respondents were assured of anonymity and confidentiality of the information provided by them. The participants were not compelled to participate in the study. They were given the freedom to withdraw from the study at any point of time.

Procedure for data collection

The data were collected by the investigator from April 12, 2023 to May 13, 2023 in the AH&RC. Pretest was conducted for both group by distributing the questionnaire to the renal failure patients. It took approximately 20 minutes to complete the questionnaire. Soon after the pretest, the SIM was given to the participants. On the 8th day, the post-test was conducted control group by using the same tool to determine the effectiveness of SIM.

Plan for data analysis

The data were analysed using descriptive and inferential statistics

RESULTS

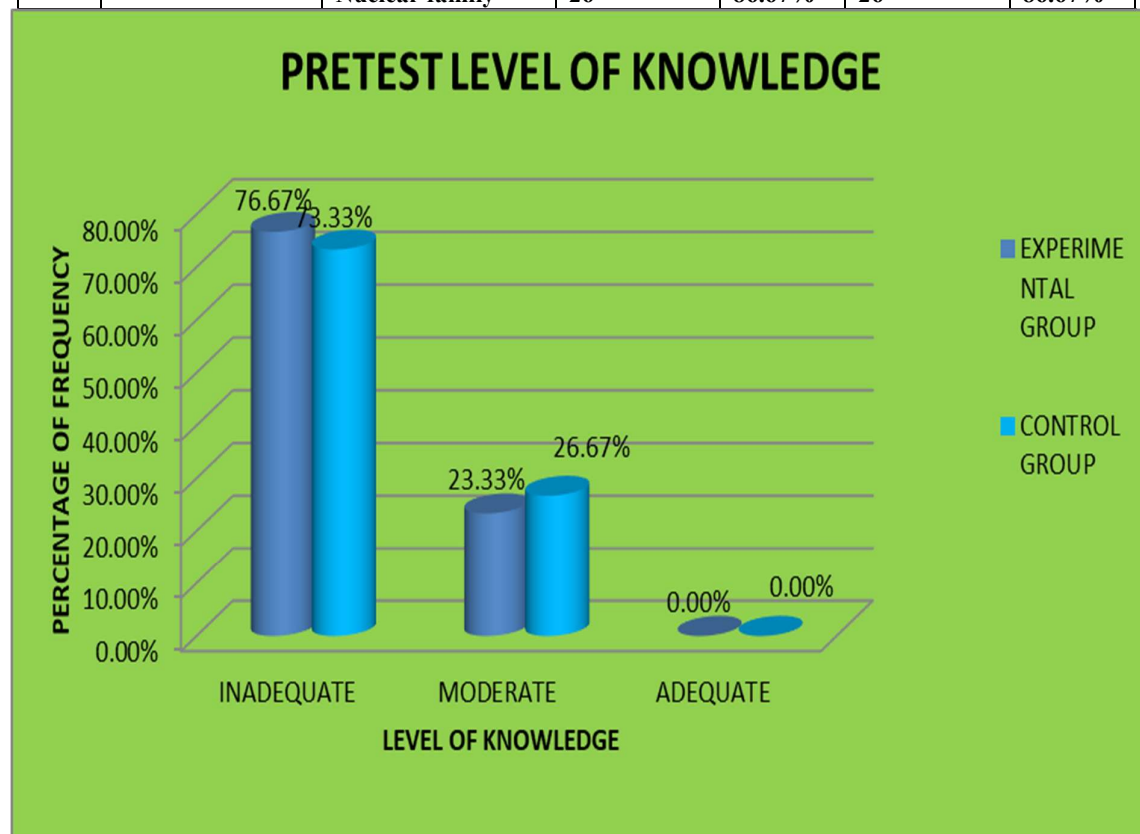
Table 1 shows the demographic variables of study participants. In our study experimental group among the renal failure patients 3.33% belongs to the age group of 21-30 years, 30.00% belonged to the age group of 31-40 years, 43.33% belonged to the age group of 41- 50% and remaining 23.33%of the subjects were in the age group of 51 & above year In experimental group 63.33%of the subjects were males and remaining 36.67% were females. in experimental group 10.00% of the participants has primary education, 56.67% is high school and remaining 36.67% of them degree and above. In control group 20.00% of the participants has primary education, 43.33% is high school and remaining 36.67% of them degree and above t in experimental group 80.00% of the participants is Hindu, 6.67% is Christian and remaining 13.33% of them is muslim. In control group 73.33% of the participants is Hindu, 3.33% is Christian and remaining 23.33% of them is Muslimin experimental group 13.33% of the subjects were vegetarian and remaining 86.67% were mixed. In control group 20.00% of the subjects were vegetarian and remaining 80.00% were mixed.

In experimental group 46.67% of the participants has business, 23.33% has doing coolie, 23.33% is agriculture and remaining 6.67% of them home maker. In control group 33.33% of the participants has business, 20.00% has doing coolie, 36.67% is agriculture and remaining 10.00% of them home maker. in experimental group 10.00% of the family members are suffering from renal failure, 90.00% of the family members are not suffering from renal failure . In control group 10.00% of the family members are suffering from renal failure, 90.00% of the family members are not suffering from renal failure . in experimental group 26.67% of the participants are having knowledge regarding renal failure, 73.33% of the participants are not having knowledge regarding renal failure. In control group 26.67% of the participants are having knowledge regarding renal failure, 73.33% of the participants are not having knowledge regarding renal failure. t in experimental group 10.00% of the source is from family below 10000, 23.33%is 10000-20000, 30.00% of the family income is 20000- 30000 remaining 36.67% were 30000 and above In control group 3.33% of the source is from family below 10000, 46.67%is 10000-20000, 30.00% of the family income is 20000-30000 remaining 20.00% were 30000 and above t in experimental group 13.33% of the samples are belongs to joint family and 86.67% of them belongs to nuclear family. In control group 13.33% of the samples are belongs to joint family and 86.67% of them belongs to nuclear family.

Table 1: Sociodemographic variables of patients with renal failure patients

SL NO	Socio demographic variables	Categories	Experimental Group (N=30)		Control Group (N=30)	
			Frequency	%	Frequency	%
1.	Age in years	21-30	1	3.33%	3	10.00%
		31-40	9	30.00%	3	10.00%
		41-50	13	43.33%	15	50.00%
		Above51	7	23.33%	9	30.00%
2.	Gender	male	19	63.33%	19	63.33%
		female	11	36.67%	11	36.67%
3.	Educational status	Primary education	3	10.00%	6	20.00%
		High school	17	56.67%	13	43.33%
		Degree and above	10	33.33%	11	36.67%
4.	Religion	Hindu	24	80.00%	22	73.33%
		Christian	2	6.67%	1	3.33%
		Muslim	4	13.33%	7	23.33%
		others	0	0.00%	0	0.00%
5.	Type of diet	Vegetarian	4	13.33%	6	20.00%
		Non-vegetarian	0	0.00%	0	0.00%
		Mixed	26	86.67%	24	80.00%
6.	Occupation	Self employed	14	46.67%	10	33.33%
		Coolie worker	7	23.33%	6	20.00%
		Agriculture	7	23.33%	11	36.67%
		Home maker	2	23.33%	3	10.00%
7.		yes	3	6.67%	3	10.00%

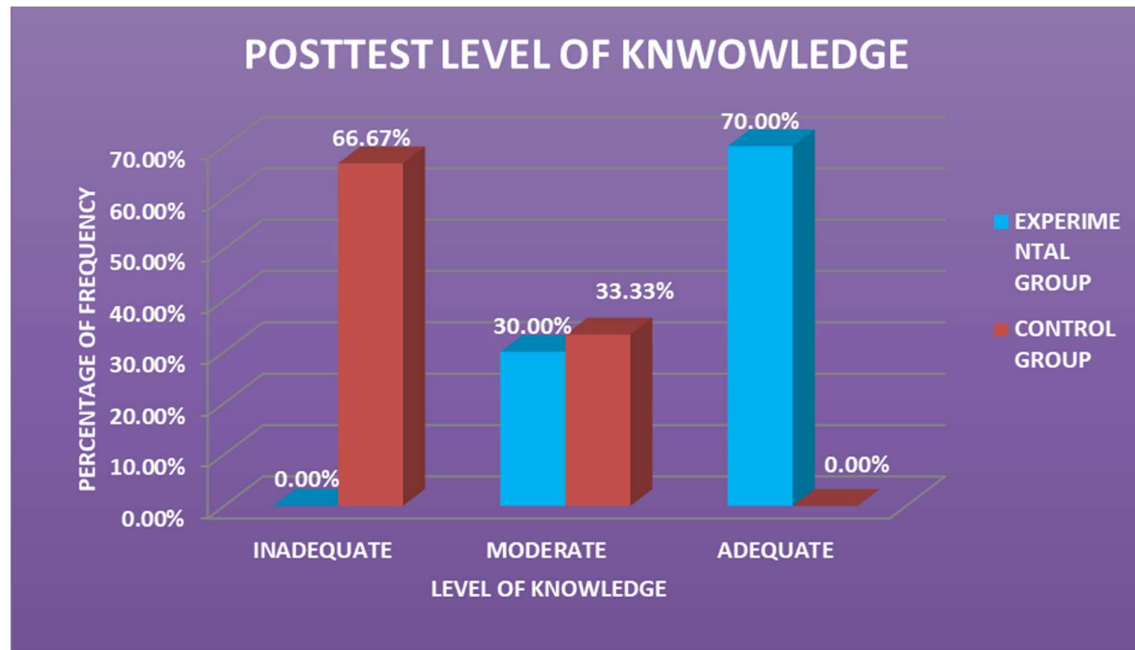
	Is there any one suffering with renal failure in your family	no	27	10.00%	27	90.00%
8.	Any previous knowledge regarding Renal failure	yes	8	26.67%	8	26.67%
		no	22	73.33%	22	73.33%
9.	Income of the family	Below 10000	3	10.00%	1	3.33%
		10000-20000	7	23.33%	14	46.67%
		20000-30000	9	30.00%	9	30.00%
		30000 and above	11	36.67%	6	20.00%
10	Type of family	Joint family	4	13.33%	4	13.33%
		Nuclear family	26	86.67%	26	86.67%



	Minimum	Maximum	Range	Mean	mean%	Std. Deviation	co-efficient of variance	Unpaired t Test Value
EXPERIMENTAL GROUP (N=30)	12	16	4	13.93	46.44%	1.20	8.62%	0.32 (NS) df=58
CONTROL GROUP (N=30)	12	16	4	14.03	46.78%	1.16	8.26%	

(NS)= NOT SIGNIFICANT $t(0.05, 58df) = 2.02$

in experimental group 76.67% of the patients had inadequate knowledge and 23.33% had moderate knowledge in the pretest. In control group 73.33% of the patients had inadequate knowledge and 26.67% had moderate knowledge in the pretest.



This figure shows in experimental group 0.00% pf inadequate knowledge, 33.00% is moderate and 70.00% of knowledge is adequate. In control group 66.67% of inadequate knowledge, 30.00% is moderate and 00.00% of knowledge is adequate.

KNOWLEDGE			FREQUENCY		FREQUENCY %	
LEVEL	SCORES	%	PRETEST	POSTTEST	PRETEST	POSTTEST
INADEQUATE	0-14	<50%	23	0	76.67%	0.00%
MODERATE	15-22	50-74%	7	9	23.33%	30.00%
ADEQUATE	23-30	≥75%	0	21	0.00%	70.00%
Total			30	30	100.00%	100.00%

Comparison of pre-test and post-test level of knowledge among renal failure patients in experimental group. (N=30)

This figure shows in pre test 76.67% inadequate of knowledge, 23.33% is moderate of knowledge, and remaining 00.00% is adequate knowledge. test 0.00% is inadequate, 30.00% is moderate of knowledge and remaining 70.00% is adequate knowledge.

ASSOCIATION BETWEEN PRE-TEST LEVEL OF KNOWLEDGE OF RENAL FAILURE PATIENTS AND THEIR SOCIO- DEMOGRAPHIC VARIABLES. (N=60)

Sl. No	Socio demographic variables	Categories	Pre-test level of knowledge		Chi square value	df	p value
			Inadequate	Moderate			
1	Age in years	21-30	1	3	9.16 (S)	3	0.027
		31-40	7	5			
		41-50	24	4			
		Above 51	13	3			
2	Gender	Male	30	8	0.86 (NS)	1	0.353
		Female	15	7			
3	Educational status	Primary education	7	2	1.21		

		High school	24	6	(NS)	2	0.545
		Degree and above	14	7			
4	Religion	Hindu	36	10	1.12 (NS)	2	0.568
		Christian	2	1			
		Muslim	7	4			
		others	0	0			
5	Type of diet	Vegetarian	8	2	0.16 (NS)	1	0.689
		Non-vegetarian	0	0			
		Mixed	37	13			
6	Occupation	Self employed	20	4	9.67 (S)	3	0.021
		Coolie worker	11	2			
		Agriculture	13	5			
		Home maker	1	4			
7	Is there any one suffering with renal failure in your family	Yes	6	0	2.22 (NS)	1	0.136
		No	39	15			
8	Any previous knowledge regarding Renal failure	Yes	13	3	0.45 (NS)	1	0.500
		No	32	12			
9	Income of the family	Below 10000	3	1	2.44 (NS)	3	0.486
		10000-20000	14	7			
		20000-30000	13	5			
		30000 and above	15	2			
10	Type of family	Joint family	5	3	0.76 (NS)	1	0.38
		Nuclear family	40	12			

(NS)= NOT SIGNIFICANT

(S) = SIGNIFICANT AT 0.05 LEVEL

Limitation
The study limits its generalizability as the SIM was tested only in a small group of participants in a single setting.

Implications

Nursing professionals shall provide SIM as part of their routine care, which will be effective in enhancing the patients' knowledge on QUALITY OF LIFE. Nurse educators shall emphasize the nursing students to teach the renal failure patients regarding the quality of life. In-service education can be planned and provided to the nursing professionals on quality of life updates. Study materials can be prepared and distributed to the nursing professionals and patients to have updates on renal failure. Nurse educators can work with the hospital authorities to draw up a special policy based on current clinical practice guidelines. Nurse administrators should plan and organize a staff development programme on effects of quality of life. Nurse researchers can develop appropriate health education tools for educating the renal failure patients regarding quality of life according to their demographic, socioeconomic, cultural, and political characteristics. Nurses should come forward to take up unsolved questions in the field of quality of life among renal failure patients and publish them for the benefit of patients, public, and nursing fraternity. The public and private agencies should also encourage research in this field through materials and funds.

Recommendations

The authors recommend organizing frequent educational interventions to motivate the renal failure patients to keep them updated with necessary knowledge regarding quality of life. Because this study was carried out on a small sample, the results can be used only as a guide for further studies. A similar study on a large sample may help to draw more results that are definite. A similar study can be conducted using descriptive exploratory approach to identify the determinants of lack of awareness on quality of life, which might generate hypothesis

for future research. A study can be conducted using different methods of teaching to determine the most effective method of teaching.

CONCLUSION

We conclude that every hospital should initiate SIM to enhance the knowledge of patients with renal failure, thereby improving the quality of their life.

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Conflicts of interest

The authors declare that they do not have any conflict of interest.

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