

Original Research Article

Effectiveness of structured teaching programme on knowledge regarding chronic kidney disease patient undergoing haemodialysis care among caregivers

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Abstract

Background: A quasi – experimental study was under taken to A study to assess the effectiveness of structured teaching programme on knowledge regarding Chronic Kidney Disease patient undergoing hemodialysis care among caregivers at NMCH, Rohtas.

Objectives: To assess the existing level of knowledge regarding chronic kidney disease patient undergoing hemodialysis care among caregivers, to implement the structure teaching programme on chronic kidney disease patient undergoing hemodialysis care among caregivers, to assess the pre test and post test level of knowledge regarding chronic kidney disease patient undergoing hemodialysis care among caregivers, to find out association between pre test knowledge score with selected demographical variables. Hypothesis: H1:- There will be significant association between pre and post test knowledge level of caregivers on chronic kidney disease patient undergoing hemodialysis care. H2:- There will be significant association between pre and post test knowledge level with selected demographic variables of caregivers.

Materials and methods: A quasi experimental study was with one pre test and one post test design was adopted for the present study. The self structured knowledge questionnaire on chronic kidney disease patient undergoing hemodialysis of care givers was developed to collect the data. The chronic

kidney disease group was selected by Purposive sampling technique. The main study conducted was on 12/02/2021 and 19/2/2021, at Narayan Medical College Hospital, Rohtas, Bihar, Sasaram and data collected, analyzed, and interpreted based on descriptive and inferential statistics.

Results: Mean – 13.84, mean percentage – 27.68 and standard deviation was 3.07299 in the pre-test knowledge of caregivers. Mean – 28.08, mean percentage – 56.16 and standard deviation was 1.93612 in the pre-test knowledge of caregivers. In comparison of pre-test and post test knowledge score, in the pre test the mean – 13.84, mean percentage – 27.68% and in post test the mean – 28.08, mean percentage – 56.16% .

Conclusion: It is concluded that structured teaching programme increased the knowledge of caregivers on chronic kidney disease patient undergoing hemodialysis. The knowledge may be utilized caregivers to have healthy life.

Key words

Chronic kidney disease, Care among caregivers, Effectiveness, Prevention, Structured teaching programme.

Introduction

Chronic kidney disease defined as gradual loss of kidney function. Hemodialysis functions as supplement of kidney function for normal resume of activity of daily living [1]. A patient at the last stage of kidney disease depends on dialysis to mechanically remove the fluid, waste products, and electrolytes from the blood [2]. Patient with ESRD are provided hemodialysis, is a lifesaving process but it is not without complication and common complications are hypotension (25 – 55%), cramps (5 – 20%), nausea (5 – 15%), headaches (5%), chest pain (2 – 5%), back pain (2 – 5%), itching (5%), fever chills (1%), and the risk of infection averages 10% in AVG 5% in transported fistulas and less than 2% in non – transposed fistula [3]. The working groups of the national kidney foundation's (NKF) kidney dialysis outcomes and quality initiative has developed a CKD classification system based on the presence of structural kidney damage and function change in glomerular filtration rate present for a period of three month or more [4]. Chronic kidney disease (CKD) is common public health problem, over 50 million people thought the world are suffering from CKD and more than 1 million require kidney replacement therapies such as dialysis and kidney transplantation [5]. Healthy people are those who live in healthy diet in an

environment equally fit for birth growth, work healing and dying. A healthy diet has a direct link to increased cognitive function and memory skis [6]. In the developed and developing countries with increase in life expectancy and change in the life style. Chronic kidney disease such as diabetes mellitus, cardiac disease and end stage kidney disease are increasing steadily. Acute and chronic kidney failure has become the most common and serious health problem [7]. Hemodialysis is a medical procedure to remove fluid and waste product from the blood and to correct electrolytes imbalance. This is accomplished using a machine and a dialyzer, also referred to as an artificial kidney [8]. The centers for disease control and prevention (CDC) in April 2001 released recommendation for preventing transmission of infections among chronic hemodialysis patients [9]. Hemodialysis can reduce the patient's energy level and affect the patient's ability to work and perform daily activities. This disrupt the normal life of the patients and their family members [10].

Problem statement

A study to assess the effectiveness of structured teaching programme on knowledge regarding chronic kidney disease patient undergoing haemodialysis care among caregivers at NMCH, Rohtas.

Objective

- To assess the existing level of knowledge regarding chronic kidney disease patient undergoing hemodialysis care among caregivers.
- To implement the structure teaching programme on chronic kidney disease patient undergoing hemodialysis care among caregivers.
- To assess the pre test and post test level of knowledge regarding chronic kidney disease patient undergoing hemodialysis care among caregivers.
- To find out association between pre test knowledge score with selected demographical variables.

Materials and methods

Research design

The researcher adopted the one group pre-test and post-test design the classification of quasi-experimental research design in the study.

Research setting

This study was conducted in Narayan Medical College Hospital, Jamuhar, Rohtas. It is multi speciality hospital with bed strength of 750. This hospital is accessible to all located in the Sasaram of the city. In the nephrology dialysis department unit is situated in the 1st floor. The hospital is 1st floor. The hospital is well equipped wing of Nephrology that consists of inpatient as well outpatient department. This hospital is 12 year old.

Population

Population of chronic kidney disease patient undergoing hemodialysis were considered as target population and among caregivers who met inclusion criteria and exclusion criteria were considered as accessible population.

Sample

The sample for this study care taker of chronic kidney disease patient undergoing hemodialysis care.

Sample size

In this study total sample size 50 caregivers. Then take two times sample 25 morning shift and 25 afternoon shifts.

Sampling technique

Purposive sampling technique was used for this study.

Inclusion criteria

- Being patient first and second degree relative.
- Caregivers who had the responsibility for care of the undergoing hemodialysis patient.
- Caregivers who write and read Hindi/English.
- Those who willing to participate in this study.

Exclusion criteria

- Being a health care worker.
- Lack of cooperation by the caregiver.
- How are not present at the time of study.
- Above 20 year.

Limitation

A study was limited to only above 20 years adolescent at NMCH, Rohtas because they were accessible to the researcher.

Data collection procedure

The data collection procedure was done for a period of one week. A written permission obtained from the nursing superintendent to conduct the study in the dialysis department NMCH, Rohtas, Bihar.

The researcher met the subjects and explained about the purpose of the research and assured confidentially and anonymity and consent was obtained from the subjects. 50 samples were selected using purposive sampling technique. The researcher adopted quasi experimental one group pre test and post test research design. The demographic variables were collected by using structured questionnaire. During pre test the care givers of chronic kidney disease patient

undergoing hemodialysis was measured by multiple choice questions. This had 16 questions for 15 minutes. Then the subjects received the Structured Teaching Programme regarding chronic kidney disease patient undergoing hemodialysis care among caregivers for 30 mins. Post test was done by researcher as lime pre test to assess the effectiveness of Structured Teaching Programme on knowledge regarding chronic kidney disease patient undergoing hemodialysis care among caregivers.

Results

The **Table - 1** indicates the age group of caregivers, 8(16%) of them belong to 20-25 years of age, 11(22%) of them belong to 26-30 years, 20(40%) of them belong to 31-45 years, 11(22%) of them belong to 46 year above.

With regard to gender of the caregivers, majority 22(44%) of them caregivers of male and 28(56%) of them were female.

While considering the occupation of the caregivers, 10(20%) of them were farmer, 9(18%) of them were business, 14(28%) of them were government job, 17(34%) of them were others.

Regarding educational status of the caregivers, 20(40%) of them were uneducated, 10(20%) of them were primary education, 11(22%) of them were higher education, 9(18%) of them were graduate and above.

Regarding marital status of caregivers, 30(60%) of them were married, 11(22%) of them were unmarried, 4(8%) of them were divorce, 5(10%) of them were widow.

Regarding family income of caregivers, 11(22%) of them were <10000-15000, 23(46%) of them were 16000-20000, 13(26%) of them were 21000-30000, 3(6%) of them were 50000 above.

Regarding duration of illness, 19(38%) of them were >1year, 12(24%) of them were 1years-2

years, 10(20%) of them were 3 years – 4 years, 9(18%) of them were <5year.

Table – 1: Distribution of demographic variables of caregivers.

Demographic variables	Frequency	%
Age (Years)		
20 – 25	8	16%
26 – 30	11	22%
31 – 45	20	40%
46 – above	11	22%
Gender		
Male	22	44%
Female	28	56%
Occupation		
Farmer	10	20%
Business	9	18%
Government job	14	28%
Others	17	34%
Education		
Uneducated	20	40%
Primary education	10	20%
Higher education	11	22%
Graduate and above	9	18%
Marital status		
Married	30	60%
Unmarried	11	22%
Divorce	4	8%
Widow	5	10%
Family Income		
< 10000 – 15000	11	22%
16000 – 20000	23	46%
21000 – 30000	13	26%
50000 above	3	6%
Duration of illness		
>1 year	19	38%
1 year – 2 year	12	24%
3 year – 4 year	10	20%
< 5year	9	18%

Table - 2 shows that the mean – 13.84, mean percentage – 27.68 and standard deviation was 3.07299 in the pre-test knowledge of caregivers.

Table - 3 shows that the mean – 28.08, mean percentage – 56.16 and standard deviation was 1.93612 in the pre-test knowledge of caregivers.

Table – 2: Knowledge regarding chronic kidney disease patient undergoing haemodialysis care among caregivers pre-test.

Knowledge variables	Mean	Standard deviation	Mean percentage
Regarding question chronic kidney disease	13.84	(S.D.) = 3.07299	27.68%

Table - 3: Knowledge regarding chronic kidney disease patient undergoing haemodialysis care among caregivers post-test.

Knowledge variables	Mean	Standard deviation	Mean percentage
Regarding question chronic kidney disease	28.08	(S.D.) = 1.93612	56.16%

Table – 4: Comparison of knowledge score on regarding chronic kidney disease patient undergoing haemodialysis care among caregivers.

Knowledge variables	Knowledge score	Mean	Mean percentage
Regarding question chronic kidney disease	PRE – TEST	13.84	27.68%
	POST – TEST	28.08	56.16%

Figure – 1: Knowledge variables.

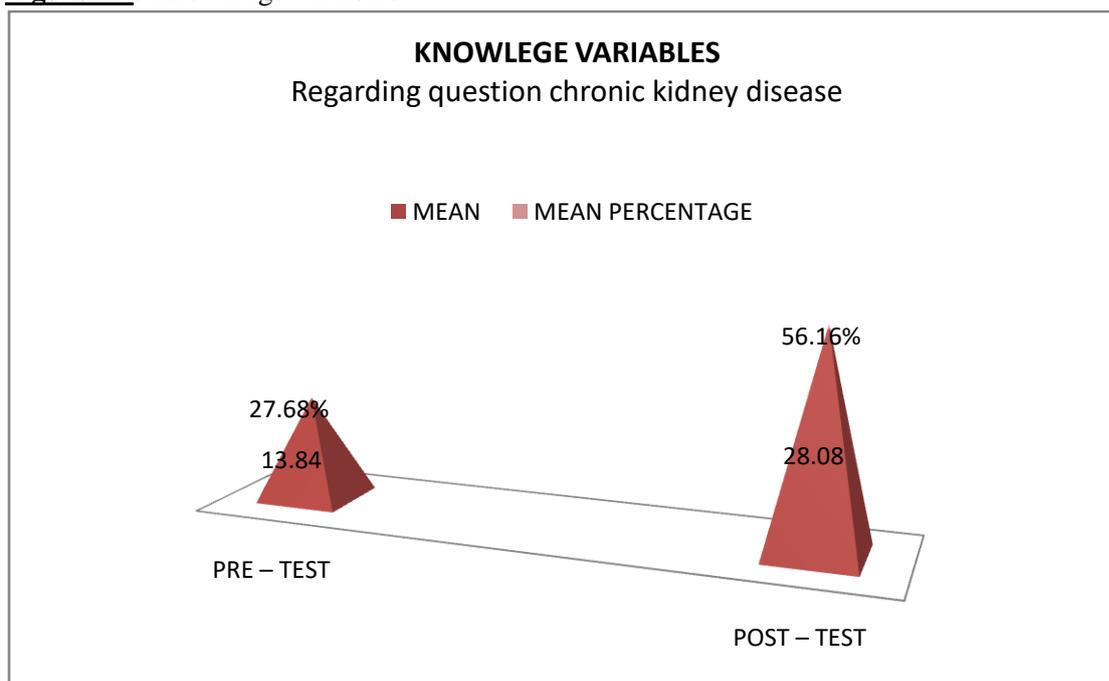


Table - 4 and Figure - 1 show that comparison of pre-test and post test knowledge score, in the pre test the mean – 13.84, mean percentage – 27.68% and in post test the mean – 28.08, mean percentage – 56.16%. Hence, it is inferred that there is deference in the pre - test and post – test knowledge score on chronic kidney disease patient undergoing hemodialysis care among care

givers at $p < 0.05$ after implementation of structured teaching programme.

Discussion

The purpose of study was to evaluate the effectiveness of structured teaching programme on knowledge regarding chronic kidney disease patient undergoing hemodialysis care among

caregivers who visited dialysis department at NMCH, Rohtas, Bihar, and Sasaram. The findings of study have been based on the finding obtained from statistical analysis of collected of data. Comparison pre-test and post test knowledge. Chi-square test was used to find out the association of selected demographic variables.

The present study was taken up in an effort to assess the exiting level of knowledge of caregivers through pre and post test method. Structured teaching programme was carried out on chronic kidney disease patient undergoing hemodialysis. Caregivers had only 27.68% of knowledge in the pre test and structured teaching programme their knowledge increased to 56.16%.

The present study supported by finding similar quasi – experimental approach one group pre-test and one group post test method using this study conducted by Lydia, et al. 2016. Totally 50 sample selected by using non-probability purposive sampling technique. A pre test was done by questionnaire and give structured teaching programme (STP) then give questionnaire was post test was conducted.

The present study was taken up in an effort to assess the pre and post test level of knowledge of caregivers through pre and post test method. Structured teaching programme was carried out on chronic kidney disease patient undergoing hemodialysis. Comparison of pre and post test caregivers had only 13.84 of knowledge in the pre test and after structured teaching programme their knowledge increased to 28.08.

Chi-square used was used to identify the association of selected demographic variables.
Section – 5 Show the association of knowledge with selected demographic variables such as age, gender, occupation, education, marital status, family income, duration of illness. The result revealed that there is an association between education and level of knowledge among chronic

kidney disease patient undergoing hemodialysis and there is no association between knowledge and other selected demographic variables.

Conclusion

The knowledge of caregivers on chronic kidney disease patient undergoing hemodialysis was significant increase in knowledge of caregivers on chronic kidney disease undergoing hemodialysis after administration of structured teaching programme.

It is concluded that structured teaching programme increased the knowledge of caregivers on chronic kidney disease patient undergoing hemodialysis. The knowledge may be utilized caregivers to have healthy life.

Recommendations

- A effectiveness of Structured Teaching Programme on knowledge regarding chronic kidney disease patient home care management and attitude among caregivers of chronic kidney disease patient undergoing hemodialysis .
- A follow of study can be done.
- Comparative study can be conducted to evaluate of caregivers.

References

1. Hardik Panday, Shalini Raj Kumawt. Effectiveness of structured teaching programme on knowledge regarding renal care (Dialysis) at home among the caregivers of renal failure patient. J Nurs Res Pract., 2020 October; 4(5): 1.
2. Trupti Saket Bhosale, Satish Vashant Kakade, Tukaram B Zagade. A study to assess the effectiveness of structured teaching programme on knowledge regarding home care management of hemodialysis subjects – A statistical approach. International Journal of Medical Science and public health, 2019 (30 March); 8(6): 404.

3. Jowel Roy, Nema Ram Gurjar, T. Bhattacharjee. Effectiveness of structured teaching programme on knowledge and practice of home based self care among patient undergoing hemodialysis, *Innovational Journal of Nursing and Healthcare*, 2017; 2(3): 83.
4. Vedanti Subhashbhai Patel, Arpita J Vaidya. Effectiveness of structured teaching programme on knowledge regarding therapeutic intervention among chronic kidney disease patient in a selected hospital of nediad city, Gujarat: A Quasi - experimental study. *Journal a clinical and Diagnostic Research*, 2021 Jan; 5(1): 9.
5. Veresh G, Chailpur, Shriharsac, Deelip S. Natekar, Namadev K. Malagi. Effectiveness of structured teaching programme on knowledge on selected post dialysis complications and its prevention among clients undergoing hemodialysis, *International Journal of Innovative Science and Research Technology*, 2018 October; 3(10): 662-663.
6. Rajeena Enoch, Janet Lobo and Arijit kumar Ghosh. A study to assess the effectiveness of structured teaching programme on renal diet on the chronic kidney disease patients attending tertiary care center. *International Journal of Medical Research & Health Sciences*, 2018; 7(4): 94-100.
7. Navneet Kaur, prof. Manjee Kaur, Mrs. Rashmi Choudhary. An exploratory study to assess the knowledge regarding post dialysis home care among caregivers of hemodialysis care patients attending selected hospital of Mohali. *Assian Journal of Nursing Education and Research*, 2015; 5(1).
8. Veena D Sakhardande, Asma Sheikh. Knowledge on home management of hemodialysis among patients receiving hemodialysis. *International Journal of Applied Research*, 2018 January; 4(1): 359.
9. Lisa Louis Philip. A study to assess the effectiveness of structured teaching programme on knowledge regarding prevention of infection among the staff nurses working in hemodialysis unit in selected hospitals in Chhattisgarh state, India. 2016 February; 5(2): 267.
10. Viraganti Nurferidh, Nursalam. Determinants of the caregivers burden of CKD patients undergoing hemodialysis. *International Journal of psychological Rehabilitation*, 2020 April; 24(7): 7628.