RESEARCH ARTICLE

"A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON RENAL DIET IN TERMS OF KNOWLEDGE AND ATTITUDE AMONG PATIENTS UNDERGOING HEMODIALYSIS IN SELECTED HOSPITAL OF GANDHINAGAR."

Dr. Hari Mohan Singh[1], Mr. Vijesh Patel[2] and Group C.[3]
1. Principal, Apollo Institute of Nursing, Gandhinagar.
2. Assistant Professor Apollo Institute Of Nursing, Gandhinagar.
3. B.Sc Nursing.

Manuscript Info

Abstract

A study to assess the effectiveness of structured teaching programme on renal diet in terms of knowledge and attitude among patients undergoing hemodialysis in selected hospital of Gandhinagar A quantitative approach was used in the study to assess the effectiveness of a structured teaching programme on assessing the knowledge and attitude on renal diet among patients undergoing hemodialysis of a selected hospital in Gandhinagar. The investigator used multi-stage simple random sampling technique for selecting 30 samples. In the view of the study structured teaching programme on renal diet in terms of knowledge and likert scale for attitude was prepared. The reliability of the structured knowledge questionnaire was 0.78. Data were analysed by using descriptive and inferential statistics. The mean pre-test knowledge score was 16.20 whereas post-test knowledge score was 23.66. The mean posttest knowledge score is significantly higher than the mean pretest knowledge score with the mean difference of 7.46 and the calculated 't' value (t =9.29). The findings of the study reveal that there is no significant association with pre-test knowledge scores and selected demographic variables of the samples except attended seminar or lecture on renal diet. Hence it is concluded that structured teaching programme was effective in improving knowledge of renal diet among patients undergoing hemodialysis.

Introduction:-

Kidney is the most important organ in the body. The kidney removes wastes and extra fluids from the body. Kidney acid is produced by the cells of the body and maintains a healthy balance of water , salts and minerals such as sodium, calcium , phosphorus and potassium in blood.[1] Renal failure in which the kidney stops working and is not able to remove waste and extra water from the blood or keep body chemicals in balance. Acute or severe renal failure happens suddenly and may be treated and cured.[2]

Chronic kidney disease involves a gradual loss of kidney function. It is a structural or functional abnormality of the kidney. It is damaged with or without decreased GFR. When chronic kidney disease develops into ESRD, dialysis or a kidney transplant is necessary to stay alive.[3] Chronic kidney disease to be more

Corresponding Author:- Dr. Hari Mohan Singh
Address:- Principal, Apollo Institute of Nursing, Gandhinagar.

common in women than in men (14% vs. 12%) Almost 10% of the population worldwide is affected by chronic kidney disease and millions people die each year.. Kidney disease affect an estimated 1, 20,000 people in the India. ESRD affect an estimated 152 million people in the india.[4] CKD affect an estimated 8.9% people in the Gujarat. According to CKD registry Kidney disease affect an estimated 5 lakh people in the Ahmedabad.[5]

Dialysis is a treatment method that replicates the function of the kidneys when they are failing. In healthy individuals, the kidneys work to filter and remove waste products, excess fluid, salts and toxins from the blood. However, in cases of kidney failure, this mechanism fails and individuals need to undergo dialysis. Dialysis can be used to treat people with chronic or acute kidney disease. [6]

There are two types of dialysis which include:
1. Hemodialysis
2. Peritoneal dialysis

Need Of The Study
A kidney -friendly diet may help to protect kidney from further damage. The purpose of this diet is to keep the levels of electrolytes, minerals, and fluid in your body balanced when you have CKD or are on dialysis.[7] a 2018 estimate number of dialysis patients about 175,000 people. Prevalence of 129 per million population.[8] People on dialysis needs this special diet to limit the buildup of waste products in the body. Limiting fluids between dialysis treatments is very important because most people on dialysis urinate very little. Without urination, fluid will build up in the body and cause too much fluid in the heart and lungs.

Renal diet is important on dialysis patients. It is to keep the level of electrolytes, minerals and fluids in the body balance when patient have CKD or are on dialysis. People on dialysis need this special diet to limit the buildup of waste products in the body. A renal diet is one that is low in sodium, phosphorus and Protein. A renal diet also emphasizes the importance of consuming high quality protein and limiting fluids.[9]

Objectives Of The Study:-
1. To assess the knowledge and attitude regarding renal diet before and after providing structured teaching program.
2. To find out association between the demographic variables.

Hypothesis
1. **Ho**: There will be a no significant difference between pretest and posttest of renal diet to check the knowledge among dialysis patients of selected areas in Gandhinagar.
2. **H1**: There will be a significant difference between pre- test effects of renal diet to check the knowledge among people of selected areas in Gandhinagar.

Operational Definition
1. **Assess:** In the study asses means to estimate the knowledge of renal diet among the patients undergoing hemodialysis.
2. **Effectiveness:** It refers to expected improvement in knowledge and attitude regarding structured teaching programme.
3. **Structured teaching:** It refers to a systematically developed instructional programme to provide information on renal diet.
4. **Knowledge:** It refers to the fact and information acquainted by the patient who take the renal diet
5. **Attitude:** Here attitude means the people think and act on renal diet.

Methodology:-
Research methodology indicates the general pattern of organizing the procedure for gathering valid and reliable data for an investigation. The content of this chapter includes research approach design description of setting and population, sampling technique, sample size, description of sample, tool selection, construction, description and rationale of the tool, procedure of data collection, and plan for data analysis

Table 1:-

| Sr. no	Demographic variables	Frequency (f)	Percentage (%)
1	**Age**		
	a) 18-34	5	16.66%
	b) 35-53	11	36.66%
	c) 54-70	14	46.66%
2	**Educational status**		
	a) Primary	6	20%
	b) Secondary	9	30%
	c) Higher secondary	9	30%
	d) Graduate	6	30%
3	**Knowledge regarding renal diet**		
	a) Yes	13	43.33%
	b) No	17	56.67%
4	**Monthly income**		
	a) 10000-15000	7	23.33%
	b) 15001-20000	8	26.67%
	c) 20001-25000	6	20%
	d) >25000	9	30%
5	**Occupational status**		
	a) Unemployed	5	16.67%
	b) Govt. employed	8	26.66%
	c) Private employed	12	40%
	d) Self employed	5	16.67%
6.	**Marital status**		
	a) Married	25	83.33%
	b) Unmarried	5	16.67%

Table 1: Shows That out of 30 samples 5(16.66%) samples are of 18-34 years, 11(36.66%) samples are in the age group of 35-53 years, 14(46.66%) sample is in 54- 70 years of age group. In educational qualification 6(20%) samples had done Primary, 9(30%). sample had done secondary and 9(30%).sample had done Higher secondary and 6(30%). sample had graduate.In monthly income of 10000-15000 rupees,7(23.33%).samples are in monthly income 15001-20000 rupees 8(26.67%). samples are in monthly income 2001-25009 rupees 6(20%).samples are in monthly income >25000 rupees 9(30%).In occupational status unemployed 5(16.67%) samples are in occupational status Govt.employed 8(26.66%) sample sare in occupational status private employed 12(40%)samples are in occupational status self employed 5(16.67%).In marital status of Married 25(83.33%) samples are in Marital status of Unmarried 5(16.67%).In knowledge regarding renal diet 13(43.33%) sample have knowledge and 17 (56.67) Samples have not knowledge about renal diet

Analysis and interpretation of the data related to the knowledge of the samples before and after administration of a structured teaching programme.

Table 2:- Pre-test and post-test knowledge of hemodialysis patients regarding renal diet. N=30

KNOWLEDGE	PRE-TEST		POST-TEST	
	Frequency	Percentage	Frequency	Percentage
Poor(score 0-10)	2	7%	0	0%
Average(11-20)	21	20%	6	20%
Good(21-30)	7	23%	24	80%

Table 2:- Shows that 02 (07 %) samples had poor , 21 (20 %) samples had average knowledge and 07 (23%) samples had good as per their pre test knowledge scores where as 06 (20 %) samples had average , 24 (80%) samples had good knowledge as per their post test knowledge scores .
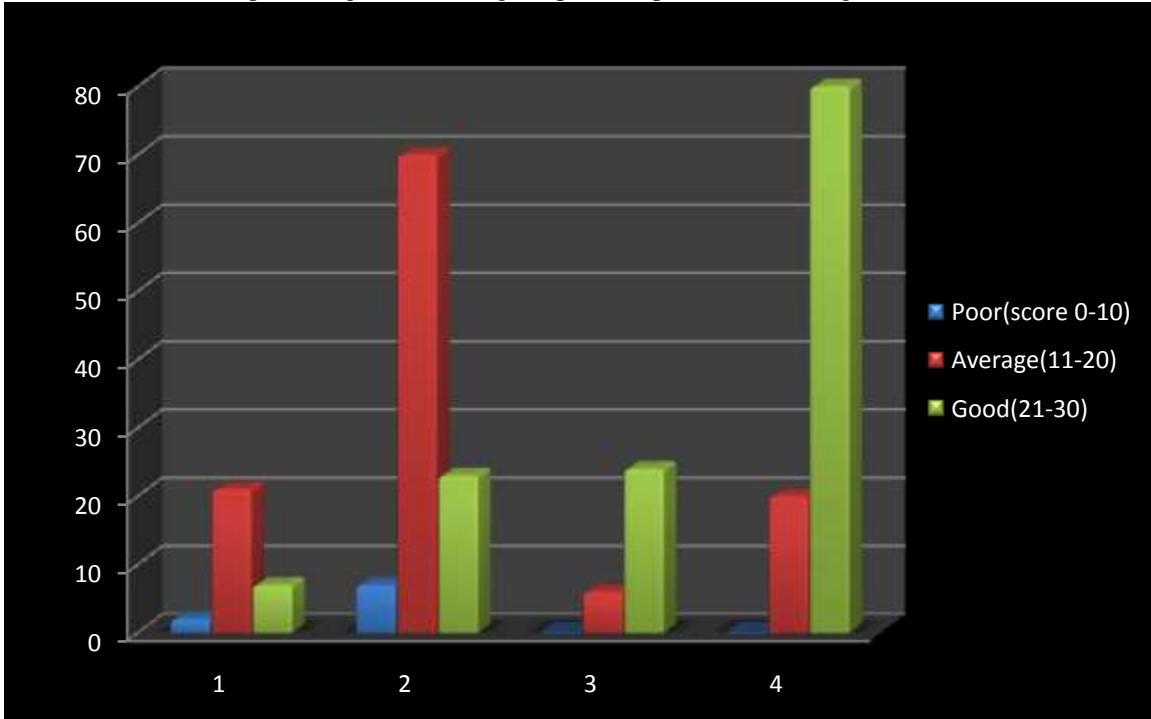
Table 3:- Analysis of attitude of hemodialysis patients about renal diet.

| Marks	Grade	Frequency	Percentage
1-5	Poor	5	5%
6-10	Average	60	60%
11-15	Good	35	35%

Table 3:- Shows that 05 (05%) of samples had poor attitude, 60 (60%) of samples had average and 35 (35%) had good attitude regarding renal diet.

Table 4:- Paired T-test for effectiveness of structure teaching programme on renal diet among the hemodialysis patients. N =30.

Knowledge score	Mean	SD	T	DF	P-value
Pre-test	16.2	5.15	9.29	29	0.0001
Post-test	23.66	3.24			

Table 4:- Mean, Mean Difference, Standard Deviation (SD) and 't' test value of the Pre-test and Post-test Knowledge scores of samples.
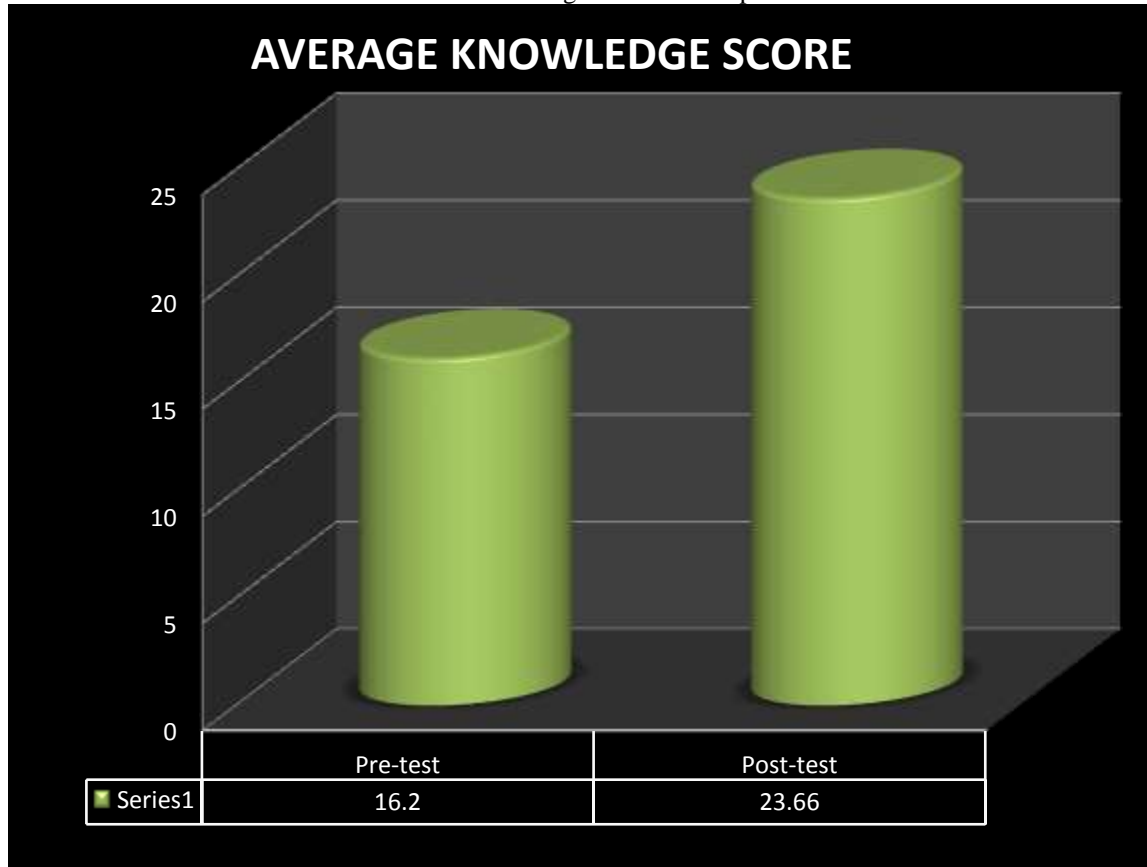
Table 4 shows the comparison between Pre – test and Post – test Knowledge scores obtained by the respondents on knowledge and attitude of renal diet. The mean Pre – test score was 16.2 and the mean post test score was 23.66. The mean difference between Pre – test and post – test Knowledge score was 7.46. The table also shows that the Standard deviation of Pre – test score of Knowledge was 5.15 and Standard deviation of post test score of knowledge was 3.24. The calculated , t " was 9,29 , P value was 0.0001 at level of significance at for 29 df.

Above table reveals that the mean post - test Knowledge score was significantly higher than the mean Pre – test Knowledge scores . Therefore the null hypothesis H01 was rejected and research hypothesis H1 was accepted and it reveals that the structuredd Teaching Programme was effective in terms of knowledge among the samples . Investigator concluded that there was significant increase in the mean post test knowledge score as compared to the mean pre test knowledge score after administration of structure teaching programme on renal diet among the hemodialysis patients.

Summary
The main aim of the study was assess the effectiveness of structured teaching programme on renal diet in terms of knowledge and attitude among patients undergoing hemodialysis in selected hospital of Gandhinagar.

Conclusion:-
The following conclusion was drawn from the finding of the present study:

The study intends to assess the effectiveness of structure teaching programme on renal diet in terms of knowledge and attitude among patients undergoing hemodialysis in selected hospital of Gandhinagar. The study reveals that the before study reveals that the before structured teaching majority of 70% of them had average, 23.3% of them had good and 7% of them had poor knowledge regarding renal diet. After structured, majority of 80% of hemodialysis patients had a good knowledge and 20% of them had average knowledge regarding renal diet. This indicates that there is marked improvement in their knowledge regarding renal diet. In case of attitude about 5% of hemodialysis patients have poor attitude regarding renal diet, whereas about 60% of people have average about 35% of hemodialysis patients have good attitude regarding renal diet.

References:-

1. Griffin P. Rodgers. How kidney works. National Institute of Diabetes and Digestive and Kidney Diseases. 2018.
   https://www.niddk.nih.gov/health-information/kidney-disease/kidneys-how-they-work#:~:text=to%20make%20urine.-,Why%20are%20the%20kidneys%20important%3F,and%20potassium%E2%80%94in%20your%20blood

2. Kidney failure
   https://www.cancer.gov/publications/dictionaries/cancer-terms/def/kidney-failure

3. End stage renal disease November 2021
   https://www.mayoclinic.org/diseases-conditions/end-stage-renal-disease/symptoms-causes/syc-20354532#:~:text=Overview,to%20meet%20your%20body's%20need

4. Jyoti gaver. Chronic Kidney disease. November 2019
   https://www.slideshare.net/JyotiGaver/ckd-ppt
   Kidney Disease: The Basics. National kidney foundation.2022.
   https://www.kidney.org/news/newsroom/fsindex

5. Over 5 lakh people in Ahmedabad fall pray to kidney diseases March 2019
   https://www.google.com/amp/s/m.timesofindia.com/city/ahmedabad/over-5l-people-in-city-fall-prey-to-kidney-diseases/amp_articleshow/68400304.cms

6. Sally Robertson. What is dialysis. February 2019
   https://www.news-medical.net/health/What-is-Dialysis.aspx

7. Diet : kidney disease
   https://medlineplus.gov/ency/article/002442.htm

8. Jacek Rysz et al. The Effect of Diet on the Survival of Patients with Chronic Kidney Disease.2017;9(5) 495**.**
   https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5452225/#idm139722506737472title
   https://kidney360.asnjournals.org/content/1/10/1143#:~:text=A%202018%20estimate%20put%20the,per%20million%20population%20(3)

9. Renal diet
   https://nephcure.org/livingwithkidneydisease/diet-and-nutrition/renal-diet/