

A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Therapeutic Diet Among Patients With ESRD Undergoing Hemodialysis in Selected Hospital of Bardoli, Surat, Gujarat

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Abstract: background : Among the various major diseases which are more prevalent in all over the world-kidney failure is one of them. At the end of 2004, some 1,783,000 people worldwide were undergoing treatment for chronic renal diseases, 1,371,000 (77%) were on HD treatment. Therapeutic diet for hemodialysis patients having ESRD is very important and it should be looked on as an integral part of their treatment along with hemodialysis. Compliance with dietary and fluid restriction has been reported to reduce the risk of symptoms and medical complications, improve the life expectancy by 20 years or above. **aims & objectives:** The aim of the study was to determine the effectiveness of structured teaching programme on knowledge regarding therapeutic diet among patients undergoing hemodialysis. **Methods:** An evaluative research approach with pre-experimental design was used. The sample comprised of 30 patients undergoing hemodialysis, at Shree Sardar Smarak Hospital, Bardoli. Sample was selected by using purposive sampling technique. Data was collected by using structured interview schedule. Data was analysed using descriptive and inferential statistics. **Results:** The result of the study showed that Majority 20 (66.7%) of the sample was of age group of 50 years and above. Majority 18 (60%) of the sample was male. Majority 18 (60%) of the sample was of primary educational background. Majority 15 (50%) of the sample was having associated illness -hypertension. Majority 15 (50%) of the sample was receiving HD treatment since 2 years. Majority 27 (90%) of the sample was receiving HD treatment twice in a week. The mean pre-test knowledge score was 29.57 and the mean post-test knowledge score was 36.70. The mean difference between pre-test and post-test knowledge score was highly significant, $t=14.97$, $p<0.05$ level. There was no significant association between the pre-test knowledge score and selected demographic variables like patient's age, gender, educational status, associated illness and duration of receiving HD treatment. **Conclusion:** The structured teaching programme on therapeutic diet was highly effective in improving the knowledge of patients undergoing hemodialysis.

Keywords: Effectiveness; knowledge; structured teaching programme; therapeutic diet.

1. INTRODUCTION:

Diet plays a vital role in HD patient's rehabilitative care. Therapeutic diet is necessary for patients having end stage renal disease to stay fit as their kidneys are no longer functioning at its full capacity. And therefore patients with renal failure must follow a therapeutic diet which restricts potassium, phosphorus, sodium and fluids. Compliance with dietary and fluid restriction has been reported to reduce the risk of symptoms and medical complications, improve the life expectancy by 20 years or above.

Most dialysis patients urinate very little or not at all and therefore fluid restriction between dialysis treatment is very important. Patients on HD need to get enough protein and adequate nutrition because they can become malnourished. The therapeutic diet is important because dialysis alone does not effectively remove all waste products and these waste products can also build up between dialysis treatments.

2. STATEMENT OF THE PROBLEM:

“A study to assess the effectiveness of structured teaching programme on knowledge regarding therapeutic diet among patients with end stage renal disease undergoing hemodialysis in Selected hospital at Bardoli.”

3. OBJECTIVES OF THE STUDY:

- to assess the pre-test knowledge of patients with ESRD undergoing hemodialysis regarding therapeutic diet
- to evaluate the effectiveness of structured teaching programme on knowledge regarding therapeutic diet among patients with ESRD undergoing hemodialysis
- to associate pre-test knowledge scores of patients with ESRD undergoing hemodialysis regarding therapeutic diet with selected demographic variables.

4. RESEARCH HYPOTHESIS:

H₁-There will be significant difference in pre-test and post-test knowledge scores regarding therapeutic diet among patients with ESRD undergoing HD at 0.05 level of Significance.

H₂- There will be a significant association between pre-test knowledge of patients regarding therapeutic diet and selected demographic variables at 0.05 level of Significance.

5. CONCEPTUAL FRAMEWORK:

Conceptual framework adopted in present study was **modified General Systems Theory** by **Ludwig Von Bertalanffy** (1968). The major concepts of the theory are: Input, Throughput & output.

6. LITERATURE REVIEW:

The related literature has been presented under the following heading:

- Studies related to ESRD
- Studies Related to Knowledge of hemodialysis patients regarding therapeutic diet.
- Studies Related to effectiveness of Structured Teaching Programme.

7. RESEARCH METHODOLOGY:

RESEARCH APPROACH	evaluative research approach
RESEARCH DESIGN	Pre-experimental one group pre-test post-test
SETTING	Shree Ssardar Smarak Hospital of Bardoli Taluka.
SAMPLE	patients with ESRD undergoing Hemodialysis
SAMPLE TECHNIQUE	Purposive Sampling technique
TOOL DEVELOPMENT	Structured interview schedule to measure the knowledge level regarding therapeutic diet.
CONTENT VALIDITY	Tool validation done from 8 experts in related field.
RELIABILITY	Inter rater method, using spearman brown formula- 0.88
PILOT STUDY	conducted on 5 patients undergoing HD in Metas hospital, Surat on 5 th June -10 th June 2012.
DATA COLLECTION PROCEDURE	Data collection period extended from 18 th June to 30 th June 2012.
SAMPLE SELECTION CRITERIA	<p>Inclusion criteria:</p> <ul style="list-style-type: none"> • Patients having ESRD and undergoing HD in shree sardar smarak hospital, Bardoli. • Patients who can understand gujarati. <p>Exclusive criteria:</p> <ul style="list-style-type: none"> • Patients who are diagnosed other than ESRD. • Patients who are terminally ill.
ETHICAL CONSIDERATION	Informed written consent taken from participants of the study. Anonymity & confidentiality of the participants have been maintained during study

8. ANALYSIS & INTERPRETATION:

SECTION 1: DESCRIPTION OF DEMOGRAPHICAL VARIABLES

Table 1: frequency and percentage distribution of the patients according to characteristics

Sr. No	Variable	Frequency(f)	Percentage
1	Age in years		
	• 20 – 30	2	6.7
	• 30 – 40	5	16.7
	• 40 – 50	3	10
2	Sex		
	• Male	18	60
	• Female	12	40
3	Education		
	• Primary	18	60

	• Secondary	7	23.3
	• Higher secondary	3	10
	• Graduate and above	2	6.7
4	Associated illness		
	• Hypertension	15	50
	• Diabetes	8	26.7
	• Hypertension and Diabetes	6	20
	• Others	1	3.3
5	Source of knowledge		
	• Newspaper	0	0
	• T.V	0	0
	• Radio	0	0
	• Health personnel	30	100
	• Others	0	0
6	Monthly income of family		
	• 15,000 Or less	14	46.7
	• 15,000 – 30,000	8	26.7
	• 30.000 and above	8	26.7
7	Duration of receiving HD treatment		
	• Since 5 months	4	13.3
	• Since 1 year	10	33.3
	• Since 2 year	15	50
	• Since 5 year	1	3.3
8	Frequency of receiving HD Treatment per week		
	• 2 days		
	• 3 days	27	90
	• 4 days	3	10
	• 5 days	0	0
		0	0

SECTION-2: ANALYSIS OF KNOWLEDGE OF THE PATIENTS WITH ESRD UNDERGOING HD REGARDING THERAPEUTIC DIET

TABLE 2: Distribution of patients according to grading of pre-test and post-test (N=30)

Score	Percentage	grade	Pre test		Post test	
			Frequency (f)	Percentage (%)	frequency (f)	Percentage (%)
Below 16	40	Poor	-	-	-	-
16 – 24	42 – 60	Average	-	-	-	-
24 - 32	60 – 80	Good	23	76.7	-	-
32 – 40	80 – 100	v. good	7	23.3	30	100

Maximum score: 40

SECTION 3: EFFECTIVENESS OF STP ON THERAPEUTIC DIET FOR PATIENTS WITH ESRD UNDERGOING HD

Table 3: shows comparison between pre-test and post-test knowledge scores of HD patients regarding therapeutic diet.

Group	Mean knowledge score		Mean difference	Standard deviation difference	‘t’ value	Level of significance
	Pre test	post test				
Patients undergoing HD.	29.57	36.87	7.30	1.3	16.03	P<0.05 Significant

‘t’ value = 2.756,

p 0.05*Significant

SECTION 4: ASSOCIATION BETWEEN BEHAVIORAL SCORES AND SELECTED DEMOGRAPHIC VARIABLES

Table 4: Association between the pre-test knowledge scores and selected Demographic variables.

Demographic Variables	Df	chi- square χ^2	P value	T value	Inference
Age 20 – 30 years 30 – 40 years 40 – 50 years Above 50 years	3	4.56	0.05	2.75	NS
Gender Male Female	1	2.51	0.05	2.75	NS
Education Primary Secondary Higher secondary Graduate and above.	3	3.95	0.05	2.75	NS
Associated illness D.M HTN D.M+HTN	3	3.54	0.05	2.75	NS
Duration Since 5 months Since 1 year Since 5 year Since 10 year	3	3.44	0.05	2.75	NS

NS = Non Significant

9. MAJOR FINDINGS OF THE STUDY:

Section 1: Description of the demographic variables

Majority 20 (66.7%) of the sample was of age group of 50 years and above. Majority 18 (60%) of the sample was male. Majority 18 (60%) of the sample was of primary educational background. Majority 15 (50%) of the sample was having associated illness -hypertension. All 30 (100%) sample got the knowledge through health personnel. Majority 14 (46.7%) of the sample's family monthly income was Rs.15,000 or less. Majority 15 (50%) of the sample was receiving HD treatment since 2 years. Majority 27 (90%) of the sample was receiving HD treatment twice in a week. All 30 (100%) sample was receiving 4 hours HD treatment in each HD session.

Section 2: Knowledge of patients undergoing HD regarding therapeutic diet

The investigators found that in the pre-test, majority 23 (76.7) patents had good knowledge, whereas in the post-test, all 30 (100%) patients go very good knowledge. The pre-test scores ranged from 26- 34 with the mean of 29.57 whereas the post-test scores ranged from 35-40 with the mean of 36.87.

Section 3: Effectiveness of STP on therapeutic diet for patients undergoing HD

It was found that the difference between the mean pre-test (29.57) and the mean post-test (36.7) knowledge score was found to be significant ('t' value=16.03. p<0.05).

Section 4: Association between the pre-test knowledge scores and the selected demographic variables

It was found that there were no significant association between the pre-test knowledge score and the selected demographic variables such as patient's age, sex, educational status, presence of associated illness and duration of receiving HD treatment at 0.05 level of significance.

10. CONCLUSION:

The comparison of pre-test and post- test knowledge score showed that there was a significant gain in knowledge scores of patients after conduction of STP at 0.05 level (t=16.03, p=0.05), this shows that STP was effective. The STP had great potential for accelerating the awareness regarding the importance of therapeutic diet.

11. RECOMMENDATIONS:

- Similar study can be replicated on a large sample.
- A study can be conducted with control group.
- A correlational study can be conducted to assess the knowledge and practice of patients undergoing HD.

- A study can be done to assess effectiveness of therapeutic diet with laboratory findings.

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