A Pre-Experimental Study to Evaluate the Effectiveness of Structured Teaching Program on Knowledge regarding "Haemodialysis Procedure" among B.Sc. Nursing IInd Year Student of Alwar Nursing College at Alwar

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Abstract: *Aim: To evaluate the effectiveness of structured teaching program on knowledge regarding "Dialysis Procedure" among B.Sc. nursing IInd Year student at Alwar Nursing College. Objective: To asses pre-test, post-test, compare pre-test and post-test knowledge, To determine the association of post-test knowledge with demographic variables Methods: An evaluatory approach with one group pre-test post-test design was used on 40 Student on haemodialysis drawn through Purposive sampling. Results. The findings of the present study are in pre-test about 33 (82.5%) students had inadequate knowledge ,moderate 5(12.5%),adequate 2(5%)regarding Hemodialysis.in post test adequate 36(90%), moderate 3(7.5%), inadequate 1(2.5%). The overall knowledge score mean percentage was 7.45% in pre test and post test mean percentage was 22.95%. It shows that the post test knowledge score mean percentage was greater than the pre test knowledge score. This indicates that the structured teaching programme was effective in improving knowledge regarding Hemodialysis among B.Sc. nursing IInd year students.*

Keywords: Haemodialysis, STP Structured Teaching Programme, X^2 Chi-square, H Hypothesis, SD Standard deviation, P Probability, D f Degree of freedom, n Sample size, M Mean, S Significant, NS Not significant

1. Introduction

Health is the extent of continuing physical, emotional, mental, and social ability to cope with "ones" environment. Good health is harder to define than bad health because it must convey a more positive concept than the mere absence of disease, and there is a variable area between health and disease. Health is defined as a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (WHO, 1946). One of the diseases which affect the kidney is chronic renal failure or End stage Renal Disease (ESRD). It is a progressive, irreversible deterioration of renal function in which the body's ability to maintain metabolic and fluid and electrolyte balance fails, resulting in uraemia.

Dialysis is an artificial process used to purify the blood. Dialysis will not cure kidney disease but it removes the waste products and excess water from the body and stabilizes the blood chemistries. Haemodialysis removes waste products and excess fluid directly from the blood by pumping it through a filter called a dialyzer, or artificial kidney. A small amount of blood is continually removed from the body, pumped through the dialyzer filter and returned to the body. Only a small amount of blood was taken outside of the body at any time because it is a continuous process. The blood is returned to the body as fast it is removed.

Dialysis is required for treatment when patient sustain enough kidney damage and moves into the 5th or final stage of chronic kidney disease, also referred as Chronic Renal Failure or End Stage Renal Disease. Haemodialysis is the treatment procedure that is done to assist the failing kidney. In case of renal insufficiency haemodialysis is done to remove waste and toxic products from the blood in which crystalline substances will pass through a semipermeable membrane. In 1884 Thomas Graham had first developed Haemodialysis and father of dialysis is considered as Dr William Koff.

Need for the study:
In India nearly 90,000 persons develop ESRD every year chronic glomerulo nephritis (3.7%) diabetic nephropathy (24%), chronic tubulo- interstitial disease (37%) and nephro-sclerosis (13%) constitutes the most frequently underlying diseases. Polycystic kidney diseases represent 4% of the incidence and multi-system and miscellaneous conditions (8%). For all these person dialysis is the only way to sustain life.

written information is tailored to a particular student's population. The investigator during her clinical experience identified that even though the students on haemodialysis are getting repetitive verbal instructions from doctors and nurses, most of them find it difficult to retain information because of the complexity of the regimen. Hence the researcher found it

There have been a number of studies highlighting the poor quality of students' knowledge regarding dialysis treatment regimen. This deficiency in knowledge appears to have two components lack of counseling by health professionals and lack of recall by students. Therefore, it is important that

imperative to develop an information STP for haemodialysis students, which will provide a source of re-enforcement and a continual reference. Thus these educated and empowered students will be more involved in their care, giving better response resulting in better health outcome. [1]

2. Objectives

Statement of the Problem
A pre- experimental study to evaluate the effectiveness of structured teaching program on knowledge regarding "Haemo Dialysis Procedure" among B.Sc. nursing IInd Year student of Alwar Nursing College.

Objectives of the Study:
1) To asses pre-test knowledge regarding dialysis
2) To asses post-test knowledge regarding dialysis
3) To compare pre-test and post-test
4) To determine the association of post-test knowledge with demographic

Hypotheses:
H1: The mean post-test knowledge score of B.Sc. nursing 2nd year students who receive teaching programme will be significantly higher than pre-test knowledge score.
H2: There will be a significant association between post-test, knowledge score and selected demographic variables.

Setting of the Study
This study will be conducted at Alwar Nursing College, Alwar.

Population: The population was B.Sc. 2nd year students of Alwar Nursing College, Alwar.

Sample And Sampling Technique Sample: Sample for the present study is B.Sc. 2nd year students of Alwar Nursing College, Alwar.

Sample Size: Sample size for the present study is 40 B.Sc. nursing 2nd year students of Alwar Nursing College, Alwar.

Sampling Technique: In the present study the use of Purposive sampling technique.

Tools for Data Collection: Structured knowledge questionnaire was used to evaluate the knowledge of regarding Dialysis and its procedure among B.Sc. nursing 2nd year students of Alwar Nursing College, Alwar.

Description of the Tool

Section-A: deals with demographic data consist of 7 Items used to collect the sample characteristics, which comprises of age, gender, religion, type of family, diet, marital status, residence related to Dialysis and its procedure.

Section-B: consists of 30 items, which has the knowledge questions about the knowledge of dialysis and its procedure using multiple choice questions.

There were 30 statements covering knowledge questions items with 4 options out of which one is the correct response. For every correct response a score of ―one‖ and for every wrong response a ―zero‖ was awarded. There were 30 knowledge questions with a maximum score is 30 and minimum score is zero.

Reliability of the Tool: The reliability coefficient was found to be 0.79. It was statistically significant and thus highly reliable.

Pilot Study: The pilot study is a small preliminary investigation of the same general character as the major study. The main aim is to assess the feasibility, practicability and assessment of measurement.

3. Results

Table 1: Frequency and Percentage Distribution of Respondents on Pre Test & Post Test Knowledge Score on Haemodialysis

Knowledge Score	Classification of Respondents			
	Pre Test		Post Test	
	Number	Percentage	Number	Percentage
Inadequate	33	82.5%	1	2.5%
Moderate	5	12.5%	3	7.5%
Adequate	2	5%	36	90%
Total	40	100%	40	100%

Table 1 reveal that pre test result shows 33(82.5%) students had inadequate knowledge, 5(12.5%) had moderate knowledge and 2(5%) had adequate knowledge. Whereas, in the post test result shows 1(2.5%) students had inadequate knowledge, 3(7.5%) had moderate knowledge and 36(90%) had adequate knowledge regarding Haemodialysis depict in figure no.14.
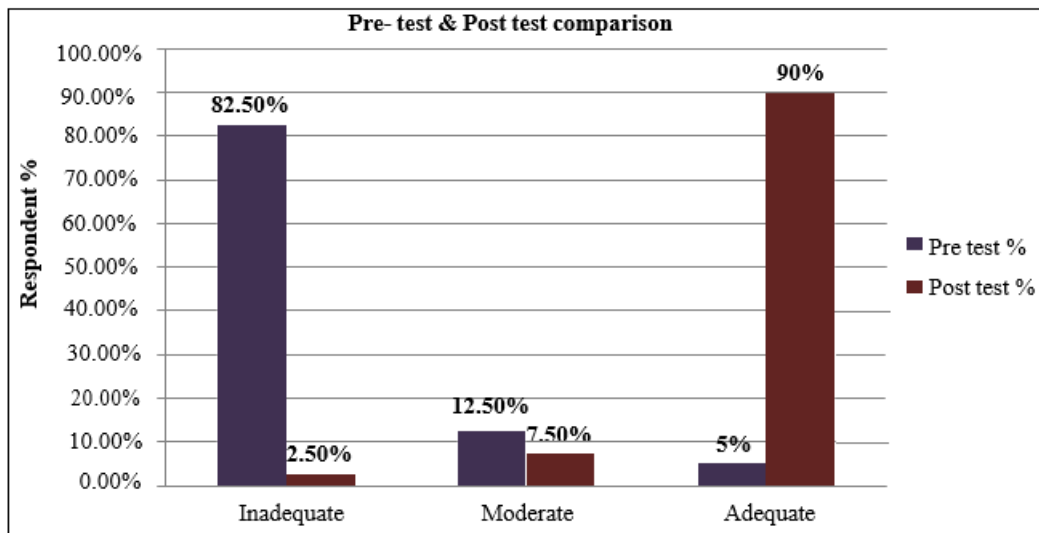
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Figure Bar Diagram Showing Frequency and Percentage Distribution of Respondents on Pre- Test & Post Test Knowledge Level on Haemodialysis.

4. Discussion

Section -1 Description of demographic characteristics of studentsMajority of students belonged to the age group of 18-22 years were 85%, and age groups of 23-25 years were 15%.Majority of students of gender 62.5% students were male and 37.5% students were female.Majority of students 75% live in nuclear family and 25% live in joint family.Majority of students 75% belongs to rural area and 25% belongs to urban area.Majority of students of diet 87.5% students were vegetarian and 12.5% students were non vegetarian. Majority of students of marital status 85% students are unmarried and 15% students are married.Majority of students of religion 85% students were Hindu and 15% students Muslim.

Section-2-Descriptionthepre-test knowledge of student regarding Hemodialysis: Majority of 33(82.5%) of student had inadequate knowledge.5 (12.5%) students had moderate knowledge.2 (5%) students had adequate knowledge.

Section-3- Description of the post-test knowledge of student regarding haemodialysis: Majority of 36(90%) of students had adequate knowledge,3(7.5%) students had moderate knowledge.1(2.5%) students had inadequate knowledge.

Section-4: -Determine the effectiveness of planned teaching program on knowledge of Hemodialysis Mean value of pre-test is 7.45 and standard deviation is(SD +_5.89).The mean value of post-test is 22.95 and standard deviation is(SD +_4.41).Post-test mean score was higher than the pre-test mean scores; the t' value is 13.58.

Section-5 Description of knowledge score with respected to the selected demographic variables of studentsThere was association found between knowledge score and selected marital status its significant.

Testing of Hypothesis
H1- There will not be a statically significant difference pre- test and post- test knowledge score on Haemodialysis among B.Sc. nursing 2nd year students.

The null hypothesis H1 stated in the study is accept since there was significant change found between the pre- test (24.83%) test and post- test (76.2%) knowledge score on Haemodialysis among B.Sc. nursing 2nd year student at (p<0.02) level. Hence the stated null hypothesis H1 is accept since there was a significant improvement in knowledge score of students after administration of STP.

H2- There will be no significant association between test knowledge score of B.Sc. nursing 2nd year student with their selected demographic variable.

The investigator rejects the stated hypothesis H2 since there is a statically significant association between one variable i.e., marital status and its knowledge score but accepts for all other demographic variable such as age, gender, diet, family type, residence and religion as there was no significant association with knowledge score.

5. Conclusion

The study was done to assess the regarding dialysis among B.Sc Nursing 2nd year students.

The objective of the study is to determine the effectiveness of structured teaching programme regarding dialysis among B.Sc Nursing 2nd year students. The result showed that there is a significant difference between pre tests and post test knowledge scores.

The main aim of the study was to assess the knowledge of students on haemodialysis regarding haemodialysis and to provide information to them about it. Information was given to the students through an STP which included various aspects of haemodialysis which will help the students to carry out better care activities after gaining thorough knowledge regarding haemodialysis.

The following conclusions were drawn on the basis of findings of the study:

The pre-test knowledge of subjects regarding haemodialysis was average.

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The introduction of the STP among the subjects helped them learn more about haemodialysis, which was evident in the post-test knowledge score.

The STP proved it to be one of the effective teaching methods of information transmission. It was well appreciated and accepted by the subjects. The study proved the path to find variety of other information regarding haemodialysis.

Nursing Implications

The findings of the study have implications in various areas of Nursing Education, Practice, Administration and Nursing Research.

6. Summary

The study was done to assess the effectiveness of structured teaching programme knowledge regarding Hemodialysis procedure among B.Sc Nursing 2nd year students. The pilot and main study conducted in the month of february 2024. The review of literature enables the investigator to develop the methodology and conceptual framework for the study and plan for data analysis. The conceptual framework adopted was based on general system theory. Sample consist of 40 students and data collection procedure was structured questionnaire. The analysis of the data was done using descriptive statistics like number, percentage, mean standard deviation, percentage mean and inferential statistics method such as 't' test.

The significant findings of the study are as follows: -
- 82.5% of the selected subjects were having inadequate knowledge, 12.5% were having moderate knowledge & have 5% adequate knowledge regarding Haemodialysis procedure in pre - test.
- 2.5% of the selected subjects were having inadequate knowledge, 7.5% were having moderate knowledge & have 90% adequate knowledge regarding Haemodialysis procedure in post- test.
- The 't' value was found to be 13.58

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