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"Effectiveness Of Planned Teaching Programme On Knowledge Of Vascular Dementia Among B.Sc. Nursing Students Of Indore (M.P.)".

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ABSTRACT

Background and Aim: Vascular dementia, a significant cause of cognitive decline, often remains under-recognized in the general population. Nursing students, as future healthcare providers, play a crucial role in early identification and management. This study aimed to evaluate the effectiveness of a planned teaching programme on knowledge regarding risk factors and prevention of vascular dementia among B.Sc. Nursing 3rd-year students.

Methods: A quasi-experimental pre-test and post-test design was adopted for the study. The sample comprised 100 B.Sc. Nursing 3rd-year students selected through simple random sampling. Data were collected using a structured questionnaire and analyzed using descriptive and inferential statistics.

Results: The findings revealed that the mean pre-test knowledge score was 49.13%, while the post-test mean score increased to 82.69%. The difference was statistically significant ($p < 0.05$), indicating the effectiveness of the teaching programme. There was also a significant association between pre-test knowledge scores and variables such as age, religion, and parental education.

Conclusion: The planned teaching programme significantly improved the knowledge of nursing students regarding vascular dementia. Integrating such educational interventions in nursing curricula can enhance understanding and awareness of dementia care.

Keywords: vascular dementia, nursing education, planned teaching programme, dementia prevention.

Introduction

Vascular dementia is the second most common type of dementia globally, characterized by impaired blood flow to the brain, leading to cognitive decline. Early recognition and prevention are crucial in reducing its burden on individuals and healthcare systems. Nursing students, as frontline caregivers, require a solid understanding of this condition.

This study aimed to assess the effectiveness of a planned teaching programme in improving the knowledge of B.Sc. Nursing 3rd-year students about vascular dementia, focusing on risk factors and prevention strategies.

Dementia is a syndrome in which there is deterioration in memory, thinking, behavior and the ability to perform everyday activities. The most common cause of dementia is Alzheimer's disease. It is a degenerative disease. Dementia is caused by other diseases and conditions as well. It hampers the cognitive skills of an individual such as- decline in memory, language and problem solving skills which ultimately diminishes the ability to perform daily activities. Although dementia mainly affects older people, it is not a normal part of ageing. Year. Alzheimer disease is the most common form of dementia and may contribute to 60–70% of cases. Dementia is one of the major causes of disability and dependency among older people worldwide. Dementia has a physical, psychological, social, and economic impact, not only on people with dementia, but also on their careers, families and society at large.

Objective

1. To assess the pre-test and posttest knowledge scores regarding vascular dementia among B.Sc. Nursing 3rd-year students.
2. To evaluate the effectiveness of the planned teaching programme in improving knowledge.
3. To identify associations between pre-test knowledge and socio-demographic variables.

Hypothesis

- **H1:** There is a significant difference in knowledge scores before and after the planned teaching programme.
- **H2:** There is a significant association between pre-test knowledge scores and socio-demographic variables.

Material and Methods

Research approach: Quantitative research approach Research design Quasi-experimental pre-test post-test design to measure the knowledge level of B.Sc. Nursing 3rd-year students on vascular dementia.

Variables

Independent variable: Planned teaching programme on vascular dementia.

Dependent variable: To the knowledge level of the B.Sc. Nursing 3rd Year Students.

Exogenous variable: Demographic data include Age, sex, education, place of residence, previous knowledge, source of information.

- Research setting: Index Nursing College, Indore (M.P.), with a total strength of 100 students.
- Population: In the present study the population for this study includes all B.Sc. Nursing 3rd-year students at Index Nursing College, Indore.
- Target population: The target population in this study comprised of all the parents of ADHD children those who are under treatment in Hospitals of Indore, M.P.
- Accessible population: The accessible population in this study was the B.Sc. Nursing 3rd-year students who were available and willing to participate in the study at Index Nursing College, Indore (M.P.).
- Sample and Sample Size: 100 B.Sc. Nursing 3rd-year students selected from Index Nursing College, Indore.
- Sampling Technique: Simple random sampling technique was used to select the sample.

Criteria for the Selection of Sample:

- **Inclusion Criteria**:
  - Students available at the time of data collection
  - Students willing to participate
  - Students who can cooperate throughout the data collection period
  - Students who know how to read and write in English
- **Exclusion Criteria**:
  - Students who are sick at the time of data collection
  - Students who have already undergone a teaching program on dementia

DESCRIPTION OF THE TOOL

The tool used for the research study was a structured knowledge questionnaire regarding vascular dementia. The tool consists of two parts:

PART I: Background Data

Background data of students consists of 11 questions seeking information on the demographic profile of the participants. The items included: Age, Gender, Religion, Educational status, Type of family, Family income, Hobbies, Previous sources of information regarding dementia

PART II: Structured Questionnaire

This section assesses the level of knowledge regarding vascular dementia among B.Sc. Nursing students. It contains 25 items, each carrying 1 mark. The highest possible score is 25, and the lowest score for each question is 0.

Section B: The table categorizes levels of knowledge based on scores and corresponding percentages. Scores from **0 to 10**, which translate to **0-50%**, indicate an **inadequate** level of knowledge, suggesting a need for significant improvement. Scores in the range of **10 to 20**, equating to **50-75%**, represent a **moderate** level of knowledge, implying a basic understanding with room for growth. Finally, scores from **20 to 30**, corresponding to **above 75%**, signify an **adequate** level of knowledge, reflecting a strong grasp of the subject matter. This scale provides a clear framework for evaluating and interpreting knowledge proficiency

Data collection procedure:

The data collection procedure began with obtaining permission through a formal letter sent to the Principal of Index Nursing College, which was duly approved. The investigator then introduced them, explained the study's purpose, and secured consent from participants. A pre-test was administered using a structured knowledge questionnaire to assess baseline knowledge, followed by a planned teaching program delivered in a structured session. A post-test was conducted seven days later on the same sample to measure changes in knowledge levels. Data collection took place in October 2023 in a comfortable and relaxed setting, with participants taking an average of 30-40 minutes to complete the questionnaire. The students demonstrated active cooperation throughout the process, and the procedure concluded with expressions of gratitude for their participation.

Results &Research Findings

Section-I: Social demographic Variables

above table shows the distribution of sample according to demographic variables.

Regarding age: 10 (10.0%) B.Sc. Nursing 3rd year students were in the age group 17-18 years, 20 (20%) B.Sc. Nursing 3rd year students were in the age group 19-20 years, 50 (50.0%) B.Sc. Nursing 3rd year students were in the age group 21-22 years and 20 (20%) B.Sc. Nursing 3rd year students were in the age group 23 years and above.

Regarding Gender: 40 (40%) B.Sc. Nursing 3rd year students were males and 60 (60%) B.Sc. Nursing 3rd year students were females, showing a female preponderance in the study.

Regarding Religion: 94 (94%) B.Sc. Nursing 3rd year students were Hindu, 04 (04%) B.Sc. Nursing 3rd year students were Muslim and 02 (02%) B.Sc. Nursing 3rd year students were Christian. Majority of the B.Sc. Nursing 3rd year students were Hindu.

Regarding Father Educational Status: 05 (05%) students Father Educational had done their illiterate, 15 (15%) students Father Educational had done their Primary education, 37 (37%) students Father Educational had done their secondary education, 43 (43%) students Father Educational were higher secondary education.

Regarding Mother Educational Status: 10 (10%) students mother Educational had done their illiterate, 24 (24%) students mother Educational had done their Primary education, 39 (39%) students mother Educational had done their secondary education, 27 (27%) students mother Educational were higher secondary education.

Regarding type of family: 52 (52%) B.Sc. Nursing 3rd year students were from nuclear family and 48 (48%) B.Sc. Nursing 3rd year students were from Joint family. Majority of the B.Sc. Nursing 3rd year students were from nuclear family.

Regarding father occupation: 89 (89%) students father were having a occupation on private job,04 (04%) students father were having a occupation on govt. job, 05 (05%) students father were having a occupation on Daily wages and 02 (02%) students father were having a occupation on other.

Regarding mother occupation: 79 (79%) students mother were having a occupation on private job,04 (04%) students mother were having a occupation on govt. job, 05 (05%) students mother were having a occupation on Daily wages and 02 (02%) students mother were having a occupation on other

Regarding family monthly income: 00 (00%) B.Sc. Nursing 3rd year students were having family income on >5000 and 56 (56%) B.Sc. Nursing 3rd year students were having 5000-10000, 34 (34%) B.Sc. Nursing 3rd year students were having 10000-15000 and 10(10%) B.Sc. Nursing 3rd year students were having <15000, Majority of the B.Sc. Nursing 3rd year students were having Family income on 5000 -10000.

Regarding previous knowledge about Vascular dementia: 04 (04%) B.Sc. Nursing 3rd year students had previous knowledge about vascular dementia yes and 96 (96%) B.Sc. Nursing 3rd year students had previous knowledge about vascular dementia no.

Section-II: COMPARISON OF KNOWLEDGE LEVEL OF B.SC. NURSING 3RD YEAR STUDENTS BEFORE AND AFTER PLANNED TEACHING PROGRAMMEON KNOWLEDGE REGARDING RISK FACTOR AND PREVENTION OF VASCULAR DEMENTIA

Table No. 1: **Comparison of pretest and posttest knowledge score**

N=100

Score	Grade	Pretest score		post test score	
		Frequency	Percentage	Frequency	Percentage
(<50%)	Inadequate	65	65%	16	16%
(50% – 75%)	Moderate	30	30%	20%	20%
(>75%)	Adequate	5	5%	64%	64%

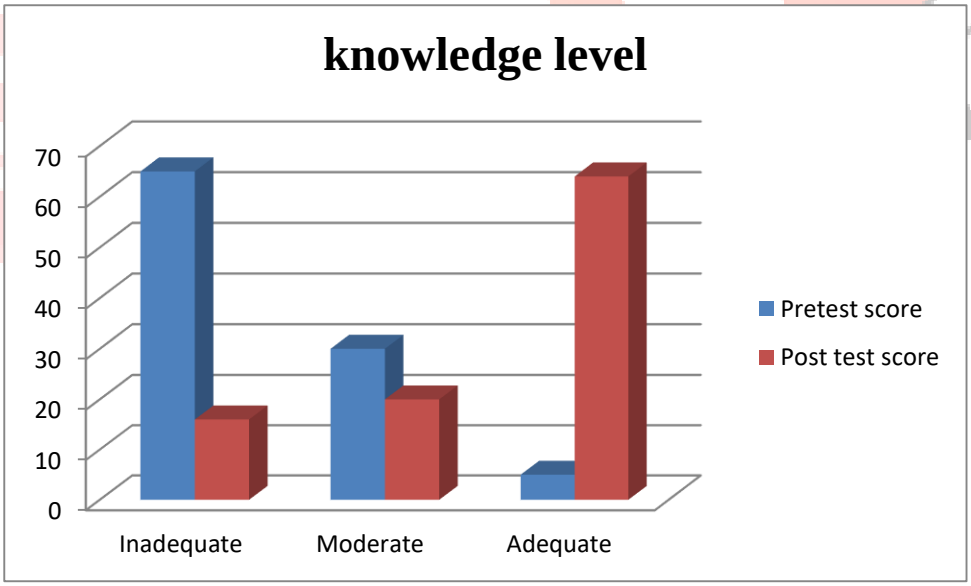

Figure no 1: shows frequency and percentage comparison of Pretest and post test knowledge score level

Comparison of mean pretest and posttest Knowledge Score

Group	No.	Knowledge Score [Mean ± SD]	't' value	P value
Pretest	100	14.74 ± 6.03	33.063 df=199	P<0.05
Posttest	100	24.69 ± 7.12		

Paired "t" test applied, P value = 0.05, Significant.

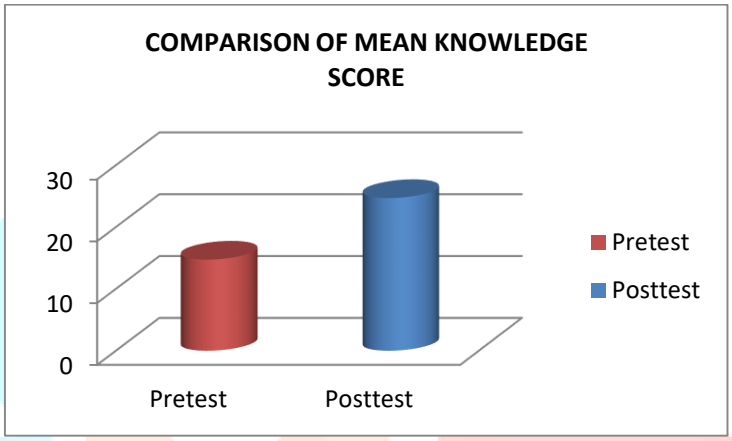

Figure no 2: shows the comparison of Mean Pretest and Posttest.

Table no 2 and figure no-2 shows the The above table shows the comparison of pretest and posttest knowledge score.

The mean pretest knowledge score was 14.74 ± 6.03, while the posttest knowledge score was 24.69 ± 7.12. The difference was found to be statistically significant (p<0.05), showing a significantly higher posttest knowledge in comparison to the pretest knowledge score.

Thus, the intervention was helpful in improving the knowledge score of the B.Sc. Nursing 3rd year students.

Table 4.5.1 Association between pretest knowledge and socio demographic variables of B.Sc. Nursing 3rd year students

N=100

S. No	Variable	Category	Pretest knowledge			χ^2
			Inadequate	Moderate	Adequate	
			No.(65)	No.(30)	No.(5)	
1	Age	17-18 Years	06	09	01	4.45*
		19-20 Years	10	09	01	
		21-22 Years	40	08	02	
		>23 Years	09	10	01	
2	Religion	Hindu	63	29	02	4.45*
		Muslim	02	01	01	
		Christian	0	0	02	
		Other	0	0	0	
3	Mother Educational Status	Illiterate	07	02	01	6.817*
		Primary	19	04	01	
		Secondary	17	20	02	
		Higher	22	04	01	
4	Previous Knowledge about vascular	Yes	00	03	01	5.31*
		No	65	27	04	

Findings shows that the chi-square (χ^2) test was used to assess the association between demographic variables and pre-test knowledge levels among participants. The analysis revealed statistically significant relationships, as indicated by the chi-square values marked with an asterisk (*), between pre-test knowledge levels and variables such as age (χ^2=4.45, p<0.05), religion (χ^2=4.45, p<0.05), mother's educational status (χ^2=6.817, p<0.05), and previous knowledge about vascular dementia (χ^2=5.31, p<0.05). These findings suggest that these variables significantly influence baseline knowledge levels in the study population.

Discussion

1. Distribution among the B.Sc. Nursing 3rd year students according to demographic variables: It consists of 11 items regarding demographic characteristics of the B.Sc. Nursing 3rd year students.

2. In present The study demonstrated a significant improvement in knowledge regarding vascular dementia after the planned teaching programme. Before the intervention, 65% of students had inadequate knowledge, whereas 64% of students had adequate knowledge following the programme. The posttest mean score percentage (82.69%) was substantially higher than the pretest mean (49.13%). The paired t-test (t = 33.06, p < 0.05) confirmed the effectiveness of the teaching programme.

3. The research hypothesis was formulated to evaluate the Planned Teaching Programme on knowledge regarding vascular dementia among B.sc. Nursing 3rd year students to improved their knowledge level

4. There will be significant difference between pretest and post test knowledge level score at the level of (p <0.05) by the researcher was accepted.

5. There was a statistically significant association seen between before intervention score and demographic variables such as the as age, religion, mother's educational status, and previous knowledge about vascular dementia.

Summary

It deal with the major finding of the study in line with objects, hypothesis, and the study shows that there was statistically significant the increase the knowledge level of the students regarding vascular dementia . where the t value is 33.063 (P= 0.001*) P= 0.05. In this study RH1 made by the investigator is accepted that one is significant difference in knowledge level increased after post test of planed teaching programme is effective.

Conclusion

Findings shows that the chi-square (χ^2) test was used to assess the association between demographic variables and pre-test knowledge levels among participants. The analysis revealed statistically significant relationships, as indicated by the chi-square values marked with an asterisk (*), between pre-test knowledge levels and variables such as age (χ^2=4.45, p<0.05), religion (χ^2=4.45, p<0.05), mother's educational status (χ^2=6.817, p<0.05), and previous knowledge about vascular dementia (χ^2=5.31, p<0.05). These findings suggest that these variables significantly influence baseline knowledge levels in the study population. These types of association are statistically significant and it was calculated using Pearson chi square test/Yates corrected chi square test.

H2: Table no.3 reveals that there is a significant association between Pretest level and selected demographic variables accepted as age, religion, mother's educational status, and previous knowledge about vascular dementia. The association was calculated by Chi square test. Therefore the research hypothesis H2 has been accepted.

There was significant difference between the mean pretest Intervention, 14.74and posttest the intervention
24.69 among B.Sc. Nursing 3rd year. Planned teaching teaching progemme was effective to improved th knowledge level.

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