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"Effectiveness of Structured Teaching Programme (STP) on Knowledge Regarding Neonatal Resuscitation with Pedagogical Framework"

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Abstract:- The health of neonates is essential to children's health and survival. Neonatal death accounts for 56% of under-5 fatalities and 69% of baby deaths in India. 45 percent of all deaths in children under the age of five occur during the first week of life. Preterm problems are the primary cause of new-born mortality, accounting for 35% of all neonatal fatalities. Major causes of mortality include birth asphyxia, congenital abnormalities, and infection. New-borns with low-birth-weight account for roughly one-third of all neonatal mortality. Aim: Aim to Assess the Effectiveness of Structured Teaching Programme on knowledge regarding neonatal resuscitation with Pedagogical Framework. Methodology: A quantitative research approach and True Experimental research design was used. The sample consists of 60 3rd year Nursing students of Sharda University by using a simple random sampling procedure. Result: Statistically significant mean difference noted in knowledge scores at post-test between the interventional group and control group. This shows that a STP is an effective intervention in improving the knowledge of Neonatal Resuscitation with Pedagogical Framework among Nursing Students. Conclusion: The difference in pre-test and post-test knowledge score on Neonatal resuscitation was used to conclude that STP was effective. Nursing students' knowledge can be improved through STP following the post-test. Nursing students, who are going to be essential personnel in managing new-borns health, expected to have adequate training and expertise on the subject. To guarantee an acceptable neonatal outcome, increasing the time and quality of training programmes will help to reduce the neonatal mortality.

Keywords:- *Knowledge Regarding Neonatal Resuscitation, Pedagogical Framework.*

I. INTRODUCTION

The transition to extrauterine life, as well as fast growth and development, characterise the new-born's era. The first 28 days of life following birth are the most dangerous. Despite accounting for less than 2% of total child mortality under the age of five, more than half of all under-5 child mortality occurs during the neonatal period. As a result, proper care increases not only children's survival but also provides the framework for healthy long-term physical and neurocognitive development.[1]

The health of neonates is essential to children's health and survival. Neonatal death accounts for 56% of under-5 fatalities and 69% of baby deaths in India. 45 percent of all deaths in children under the age of five occur during the first week of life.[2] Preterm problems are the primary cause of new-born mortality, accounting for 35% of all neonatal fatalities.[3] Major causes of mortality include birth asphyxia, congenital abnormalities, and infection. New-borns with low-birth-weight account for roughly one-third of all neonatal mortality.[4]

A. Statement of the problem:

"A Study to Assess the Effectiveness of Structured Teaching Programme (STP) on Knowledge Regarding Neonatal Resuscitation with Pedagogical Framework among nursing students at Sharda University, Greater Noida, Uttar Pradesh".

B. Objective:

- To assess pre-test knowledge scores regarding Neonatal Resuscitation with a Pedagogical framework among Nursing Students at Sharda University in the interventional and control group.
- To compare the effectiveness of STP on knowledge regarding neonatal resuscitation with a pedagogical framework in control and intervention group.
- To find out the association between the pre-test and post-test knowledge scores regarding Neonatal Resuscitation with Pedagogical Framework among nursing students in the interventional group and control group with selected demographic variables.

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C. Hypotheses:

The hypothesis will be tested at a 0.05 level of significant

- **H^{01}:** There will be no significant difference found between the pre-test and post-test knowledge scores regarding Neonatal Resuscitation with Pedagogical Framework among nursing students in the interventional group and control group
- **H^{02}:** There will be no significant association found between pre-test knowledge Score regarding neonatal Resuscitation with Pedagogical Framework among nursing students in the interventional group and control group with demographic variable
- **H^{03}:** There will be no significant association found between post-test knowledge scores regarding neonatal resuscitation with Pedagogical Framework among nursing students in the interventional group and control group

- ***Delimitations:*** The study was limited to Students of B.Sc. nursing 3rd year, GNM 2nd year who are studying at SSNSR Sharda University Greater Noida, Uttar Pradesh.

D. Research Methodology

Quantitative research approach and True-Experimental research design was used for the present study. The study was conducted at the School of Nursing Science and Research, Sharda University in which the students of GNM 2nd year (30) were taken for the control group and students of BSc 3rd year (30) were taken as the experimental group as per the inclusion criteria.

- ***Intervention:*** Structured Teaching Programme (STP).

E. Data collection and processing:

- Tool 1: Demographic characteristics
- Tool 2: Questions related to knowledge regarding Neonatal Resuscitation.

The data was organized in a master sheet and tabulated. The data analysis was done by using Statistical package EZR, version 2.4-0.

F. Ethical consideration:

- Administrative permission was taken from concerned Schools Dean to conduct the study fallowed by ethical clearance from Sharda University.
- Informed consent was taken from the participant. Participants were ensured that Anonymity and Confidentiality will be maintain.

II. RESULT

Table 1: Frequency and percentage distribution of baseline characteristics of Nursing students at Sharda University in interventional group and control group

(N =60)

S. No	DemographicVariables	Interventional Group (n = 30)		Control Group (n = 30)		Chi-square *p* Value
		n	%	n	%	
	Age in Year					
1	<20 years	9	30	15	50	χ^2 =4.44, p=0.11(NS)
	>20 years	21	70	15	50	
2	**Religion**					
	Hindu	13	43.3	20	66.7	χ^2 =12.2, p=0.79(NS)
	Muslim	9	30	7	23.7	
	Christian	6	20	3	10	
	Buddhist	2	6.7	0	0	
3	**Types of Family**					
	Nuclear	10	33.3	9	30	χ^2 =6.10, p=0.19(NS)
	Extended	15	50	16	53.3	
	Joint	5	16.7	5	16.7	
4	**Gender**					
	Female	9	30	24	80	χ^2 =3.21, p=0.07N(S)
	Male	21	70	6	20	
6	**Previous percentages**					
	>75 percentages	26	86.7	17	56.7	χ^2 =1.89, p=0.17(NS)
	<75 percentages	4	13.3	13	43.3	
7	**Area of Living**					
	Urban	11	36.7	14	46.7	χ^2 =9.18, p=0.79(NS)
	Rural	19	63.3	16	53.3	
8	**Source of information**					
	Book	6	20	9	30	
	Internet	4	13.3	3	10	χ^2 =3.78, p=0.44(NS)
	Class	20	66.7	18	60	

(p>0.05 Not Significant) NS: Non-Significant

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The data presented in table 1 shows that the majority of the nursing students were in the age group of <20 years i.e., 70.0% in the interventional group and 50.0% in the control group were equal percentages. The majority of the samples belong to the Hindu religion i.e., 43.0% in the interventional group and 67.7% in the control group. And also, the majority of them belong to extended family i.e., 56.7% in the interventional group and 60.0% in the control group. 86.5% of them got >75% in the previous percentage in interventional and 43.3% of them got <75% in the previous percentage in the control group. The majority of nursing students live in rural areas i.e 63.3% in the interventional group and 53.3% in the control group and the Majority of the students got information through class i.e., 66.7% in the interventional group and 60.0% through class in the control group. Both groups were similar (Homogenous) in their baseline characteristics (p>0.05)

Table 2: Comparison of Pre-test and Post-tests – Mean and Standard Deviation of knowledge scores among nursing students at Sharda University in interventional group and control Group.
(N=60)

Knowledge scores	**Interventional group (n=30)**	**Control group (n=30)**	**Mean Difference**	**p-value**
	Mean+ SD	Mean+ SD		
Pre-test	13.67+4.96	13.50+3.45	0.17	t=0.15, p=0.88 (NS)
Post-test	18.57+3.32	13.50+3.26	5.07	t=5.97, p= 0.00(S)

(p<0.05 significant level) S: Significant & NS: Non-Significant

Data presented in table 2 revealed that there was a statistically significant mean difference noted in knowledge scores at post-test between the interventional group and control group, Independent t-test was computed to find out the significant mean difference. This shows that a structured teaching program is an effective intervention in improving the knowledge of Neonatal Resuscitation with Pedagogical Framework amongNursing Students at Sharda university in the interventional group. Hence the researcher failed to accept the null hypothesis (H^{01}).

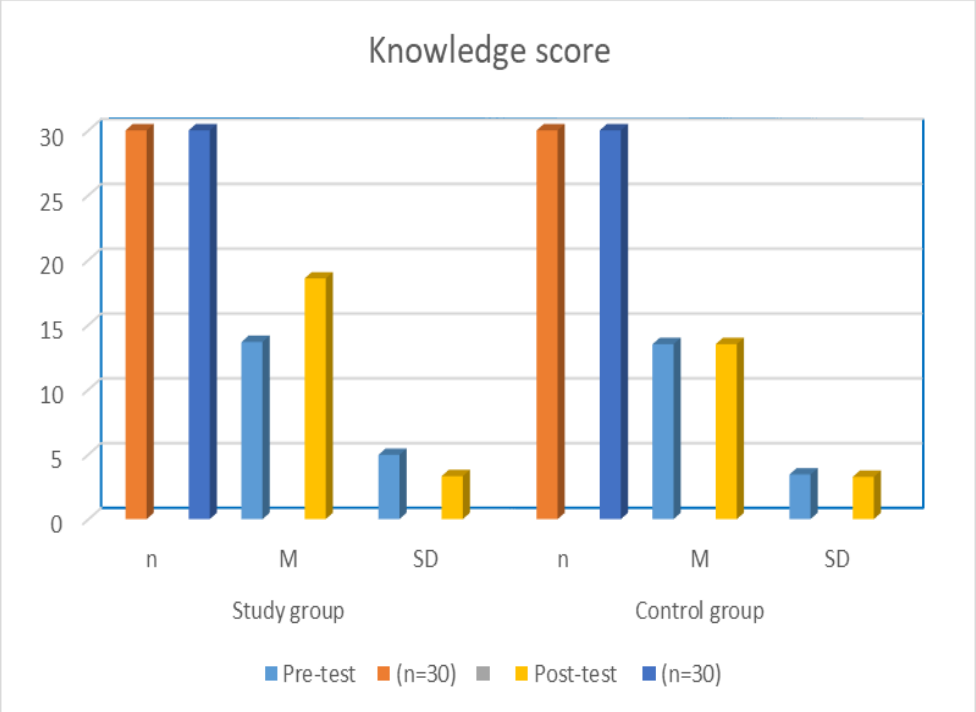

Fig. 1: Bar Diagram showing the Comparison of Pre-test and Post-tests – Mean and Standard Deviation of knowledge scores among nursing students at Sharda University in interventional group and control group

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Table 3: Association between posttest knowledge scores of interventional group with selected demographic variables. (N=60)

Demographic Variables	Knowledge scores		ANOVA	*p*-value
	n	Mean		
Age in Year				
>20 years	9	18.89 ± 3.86	0.71	0.72(NS)
<20years	21	18.73 ± 4.94		
Religion				
Hindu	13	19.62 ± 2.87	0.58	0.83(NS)
Muslim	9	17.33 ± 3.42		
Christian	6	17.00 ± 3.22		
Buddhist	2	22.00 ± 2.82		
Types of Family				
Nuclear	10	19.38 ± 3.99	1.47	0.22(NS)
Extended	15	13.41 ± 3.65		
Joint	5	14.20 ± 3.27		
Gender				
Female	9	18.35 ± 3.06	1.17	0.37(NS)

Demographicvariables	Knowledge scores		*F* value One-wayANOVA	*p*-value
	n	Mean		
Male	21	18.85 ± 3.73		
Previous Percentage				
>75 percentage	26	18.83 ± 3.61	0.61	0.81(NS)
<75 percentages	4	16.43 ± 2.14		
Area of Living				
Urban	11	18.73 ± 4.07	0.76	0.67(NS)
Rural	19	18.47 ± 2.91		
Source of information				
Books	6	16.38 ± 1.84	1.33	0.28(NS)
Internet	4	19.09 ± 3.93		
Class	20	19.64 ± 2.94		

($p<0.05$ significant level) S: Significant & NS: Non-Significant)

Table 3 shows the association between post-test knowledge scores in the interventional group with selected demographic variables of the nursing students at Sharda University. One-way ANOVA was computed to find the significant association between knowledge scores with selected demographic variables of the nursing students at Sharda University. It revealed that there was no statistically significant association ($p>0.05$) found between knowledge scores with selected demographic variables of the nursing students in the interventional group. Hence the researcher accepted the null hypothesis (H^{03}).

III. DISCUSSION

Nurses make up the vast majority of healthcare workers that are actively involved in delivering neonatal care around the world. When it comes to nursing students, the situation is not much different.[5] Structure Teaching Programme are well known for introducing more active types of lifelong learning to increase the standard of care in preservice institutions such as medical, nursing, and midwifery schools. The findings of this study indicate that a planned teaching strategy was effective in increasing students' knowledge.

Based on the mean, standard deviation, and homogeneity comparison of the baseline outcome measure among nursing students it shows that the mean pre-test knowledge scores of a nursing student at Sharda University in the interventional group and control group were 13.67 ± 4.96 and 13.50 ± 3.45 respectively. To test the homogeneity of the outcome measures (knowledge) at baseline, an independent t-test was computed and it was found that both the groups were similar in their baseline measures ($p>0.05$) The study was supported by **D. Meena et** al conducted a pre-experimental research study in 2018[6], findings of this study revealed that, the majority 68.57% of GNM 3rdyear students were between the ages of20 and 25. Females made up the majority 51.42%. The intermediate pass had the highest percentage 51.42%. A large proportion of 92.85% of GNM 3rdyear students was from nonmedical families. The majority 74.28% of GNM 3rd year students had prior CPR experience. The majority of GNM3rdyear students had average knowledgein their pre-test knowledge score, with 82.85% having average knowledge.

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Based on the comparison of pre-test and post-test on the mean and standard deviation of knowledge scores among nursing students at Sharda University in the interventional group and control group. The data revealed that there was a statistically significant mean difference noted in knowledge scores at post-test between the interventional group and control group, independent t-test was computed to find out the significant mean difference. This shows that a structured teaching program is an effectiveintervention in improving the knowledge of Neonatal Resuscitation with Pedagogical Framework among Nursing Students. Study is supported by **D. Ravivarman et al.** a quantitative pre-experimental research design[7]. Pre-test and post-test knowledge scores showed a difference of 32.65 percent in the mean percentage of a score, with the mean score during the pre-test being 8.63.07 (SD), or 43 percent of the total mean score, and the mean score during the post-test being 15.132.26(SD), or 75.65 percent of the total mean score. The estimated result of 24.89, which is above the P0.05, indicated that strongly. the significant difference between the pre-test and post-test. It proved that the structured teaching programme was highly effective to improve the students' knowledge.

IV. CONCLUSION

The difference in pre-test and post-test knowledge score on Neonatal resuscitation was used to conclude that STP was effective. Nursing students' knowledge can be improved through STP following the post-test. Nursing students, who are going to be essential personnel in managing new-borns health, expected to have adequate training and expertise on the subject. To guarantee an acceptable neonatal outcome, increasing the time and quality of training programmes will help to reduce the neonatal mortality.

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