

Effectiveness of structured teaching program on knowledge regarding management of neonatal asphyxia among staff nurses working in SKIMS Soura Srinagar Kashmir.

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Abstract – This study aimed at assessing the effectiveness of structured teaching program on knowledge regarding management of neonatal asphyxia among staff nurses. A pre-experimental one group pre-test post-test design was used. The pre-test was taken by using self structured questionnaire followed by structured teaching programme on same day and on 7th day post-test was taken. The findings revealed that the mean Post-test knowledge score (39.56 ± 4.21) was greater than the mean Pre-test knowledge score (22.84 ± 6.27) with mean difference of 16.72 at $p < 0.001$. This indicates that structured teaching program was effective in enhancing the knowledge of staff nurses. There is no association between pre-test knowledge score of study subjects with their selected demographic variables except professional qualification ($p < 0.001$).

Keywords: Assessment, Structured teaching programme, Neonatal Asphyxia, Knowledge, Management, Staff nurses, SKIMS.

Introduction

According to world health organization (WHO), birth Asphyxia is failure to initiate and sustain breathing immediately after birth. It is the third major cause of neonatal death after infections. Neonatal asphyxia in developing countries accounts for an estimated 23% of the annual 4 million neonatal deaths. WHO estimates that 120 million infants born in every year develop birth asphyxia in developing countries and require resuscitation, an estimated 900,000 die each year. The risk of dying due to birth asphyxia varies from country to country.¹

Neonatal morbidity and mortality are increasing day by day. In India mortality rate is still high as compared to developed countries. In India, between 250,000 to 350,000 infants die each year due to neonatal asphyxia, mostly within the first three days of life. Ante-partum and intra-partum asphyxia contributes to as many as 300,000 to 400,000 stillbirths. Neonatal asphyxia is the third largest cause of death after infections and preterm births. Even neonatal asphyxia is one of the leading cause of neonatal mortality, but most of the staff nurses are unaware or having inadequate knowledge & skill regarding resuscitation of the asphyxiated newborns.²

The presence of a skilled nurse during labor and childbirth significantly increases chances of infant survival in the developing world. Skilled nurses can use simple techniques to monitor labor and evaluate the health of the woman and the newborn before, during and after the birth.³

Objectives

1. To assess the pre-test knowledge score of staff nurses regarding management of neonatal asphyxia.
2. To assess the post-test knowledge score of staff nurses regarding management of neonatal asphyxia.
3. To find the effectiveness of STP on knowledge regarding management of neonatal asphyxia among staff nurses by comparing the pre and post test knowledge scores.
4. To determine the association of pre-test knowledge scores of staff nurses regarding management of neonatal asphyxia with their selected demographic variables [age, gender, professional qualification, years of experience and workshop/ inservice education program attended].

Hypotheses

1. **H₁**: There is significant increase in mean post-test knowledge score as compared to mean pre-test knowledge score of staff nurses regarding management of neonatal asphyxia at $p \leq 0.05$ level of significance.
2. **H₂**: There is significant association of pre-test knowledge score of staff nurses regarding management of neonatal asphyxia with their selected demographic variables (age, gender, professional qualification, years of experience and workshop/in-service education program attended) at $p \leq 0.05$ level of significance.

Review Literature

Kaur M, Gopal SG (2017)⁴ conducted a quasi experimental study at pediatric allied units in selected hospitals of Punjab among 60 staff nurses. The aim of the study was to assess the effectiveness of structured teaching program on knowledge regarding management of neonatal asphyxia. The finding of the study showed that the mean post test knowledge score (20.5) was higher than the mean pre test knowledge score (10) and found to be significant with a calculated 't' value of 12.68. The findings of the study also showed that there is no association of mean pre-test and post-test knowledge scores with selected demographic variables i.e. age, clinical experience, professional qualification and ward except workshop/in-service program attended.

Das R, Devi SK (2015)⁵ conducted a quasi-experimental study at Capital Hospital Bhubaneswar, Odisha among 50 staff nurses. The aim of the study was to assess the effectiveness of Video Assisted Teaching Module (VATM) on knowledge regarding prevention and management of birth asphyxia. The findings of the study revealed that in pretest, 58% of the staff nurses had very poor knowledge & 42% had poor knowledge. But in posttest majority (80%) of the staff nurses had excellent knowledge & 20% had good knowledge. There was a significant difference between pre-test and post-test knowledge ($t=59, p \leq 0.05$). The findings of the study revealed that the Video Assisted Teaching Module (VATM) was effective for improving knowledge of staff nurses regarding prevention & management of Birth Asphyxia. There was no significant association between the level of knowledge & demographic variables i.e. age, sex, professional qualification, experience as a staff nurse in NICU and previous exposure to Video Assisted Teaching Module (VATM) regarding prevention and management of birth asphyxia.

Nirmala ML (2013)⁶ conducted a pre-experimental study at selected maternity hospitals at Bangalore, Karnataka among 60 staff nurses. The aim of the study was to assess the effectiveness of self instructional module on knowledge regarding management of birth asphyxia. The finding of the study revealed that the mean post test knowledge (33.12) score was higher than the mean pretest knowledge (15.24) score and $t=13.518$ at p value 0.001. The study findings showed that the self instructional module was effective for improving knowledge of staff nurses regarding management of birth asphyxia.

Methodology

The research design selected for the study was Pre-experimental one group pre-test and post-test research design and was conducted at Pediatric areas and labour room of SKIMS among 50 staff nurses selected by Convenient Non-Probability Sampling from 15-04-2019 to 25-05-2019. Pre-test knowledge score was assessed by administering self structured questionnaire followed by administration of structured teaching programme after 15 minutes of break. Post-test knowledge score was assessed by administering same self structured questionnaire on 7th day. Data was analyzed and interpreted by deferential and inferential statistics.

Results

Data presented in table 1 revealed that most of the study subjects **19(38%)** belongs to the age group of 31-40 years and only **3(6%)** belongs to the age group of > 50 years. Majority of the study subjects **36(72%)** were females. Most of the study subjects **17(34%)** were GNM qualified. Most of the study subjects **15(30%)** were having 1-5 years of working experience and only **5(10%)** were having 11-15 years of working experience. Majority of the study subjects **44(88%)** have not attended any workshop/in-service training program and only **6(12%)** have attended workshop/in-service training program.

Table 1: demographic details of study subjects

N=50

Particulars	Category	Frequency	Percentage
Age (years)	21-30	12	24
	31-40	19	34
	41-50	16	32
	> 50	3	6
Gender	Male	14	28
	Female	36	72
Professional Qualification	GNM	17	34
	Post Basic B.Sc. (N)	8	16
	Basic B.Sc. (N)	16	32
	M.Sc. (N) & Above	9	18
Working Experience (years)	1-5	15	30
	6-10	10	20
	11-15	5	10
	16-20	10	20
	> 20	10	20
In-service training program attended	Yes	6	12
	No	44	88

Data presented in table 2 revealed that in pre-test, majority of study subjects **31(62%)** had inadequate knowledge, **18(36%)** had moderately adequate knowledge and only **1(2%)** had adequate knowledge regarding management of neonatal asphyxia and in post-test, majority of study subjects **38(76%)** had adequate knowledge, **12(24%)** had moderately adequate knowledge and none had inadequate knowledge regarding management of neonatal asphyxia.

Table 2: Comparison of study subjects according to their pre-test and post-test knowledge score.

Knowledge Score	Pre-test		Post-test	
	Frequency	Percentage(%)	Frequency	Percentage(%)
Inadequate (1-24)	31	62	0	0
Moderatelyadequate (25-37)	18	36	12	24
Adequate (38-50)	1	2	38	76

Data presented in the table 3 revealed that mean post-test knowledge score (**39.56**) was greater than the mean pre-test knowledge score (**22.84**) of study subjects with mean difference of **16.72** at **p <0.001 (significant)**. This indicates that structured teaching programme (STP) was effective for improving knowledge of study subjects regarding management of neonatal asphyxia.

Table 3: Comparison between mean pre-test and post-test knowledge score and SD of study subjects.

Knowledge assessment	Mean	Median	SD	Min	Max	Mean difference	Paired 't' test	P-value
Pre-test	22.84	22.0	6.27	13	38	16.72	33.12	<0.001*
Post-test	39.56	39.5	4.21	28	47			

Data presented in table 4 revealed that a significant association was found between professional qualification and pre-test knowledge score ($p < 0.001$). While as no significant association was found with other demographic variables such as age ($p = 0.095$), gender ($p = 0.663$), years of experience ($p = 0.238$) and workshop/in-service education program attended ($p = 0.274$) with pre-test knowledge score of study subjects ($p > 0.05$).

Table 4: Association of pre-test knowledge score of study subjects regarding management of neonatal asphyxia with their selected demographic variables.

Variable		Level of Knowledge			Chi-square	P-value	Df	Result
		Inadequate	Moderately Adequate	Adequate				
Age (years)	21-30	4	7	1	10.726	0.095	6	NS
	31-40	11	8	0				
	41-50	13	3	0				
	> 50	3	0	0				
Gender	Male	10	4	0	0.966	0.663	2	NS
	Female	21	14	1				
Professional Qualification	GNM	16	1	0	27.549	<0.001	6	S
	Post Basic B.Sc. (N)	7	1	0				
	Basic B.Sc. (N)	8	8	0				
	M.Sc. (N) & Above	0	8	1				
Working Experience (years)	1-5	5	9	1	10.296	0.238	8	NS
	6-10	7	3	0				
	11-15	3	2	0				
	16-20	7	3	0				
	> 20	9	1	0				
In-service training program attended	Yes	2	4	0	2.821	0.274	2	NS
	No	29	14	1				

Discussion

The findings of present study are supported by pre-experimental study conducted by **Nirmala ML (2013)** to assess the effectiveness of self instructional module on knowledge regarding management of birth asphyxia among 60 staff nurses at selected maternity hospitals at Bangalore, Karnataka. The finding of the study revealed that in pretest majority of the study subjects **48(80%)** had inadequate knowledge, **12(20%)** had moderately adequate knowledge and none had adequate knowledge regarding management of neonatal asphyxia. In post-test majority of study subjects **52(86.7%)** had adequate knowledge, **8(13.3%)** had moderately adequate knowledge and none had inadequate knowledge regarding management of neonatal asphyxia. The finding of the study also revealed that the mean post test knowledge score (**33.12**) was higher than the mean pre test knowledge score (**15.246**) with a mean difference of **17.874** at $p < 0.0001$. This indicates that self instructional module was effective for enhancing knowledge of study subjects regarding management of birth asphyxia.⁶

The findings of present study are supported by a descriptive study conducted by **Hubbali JG (2015)** to assess the knowledge regarding the management of birth asphyxia among 30 staff nurses working at labour room and NICU of KLES DR Prabhakar Kore Charitable Hospital Belgaum. The results of the study revealed that there was significant association between knowledge and selected demographic variable i.e. qualification at $p < 0.05$ level of significance and also, there was association between knowledge with other selected demographic variables i.e. age, gender and years of experience.⁷

The findings of present study are further supported by quasi experimental study conducted by **Kaur M, Charan SG (2017)** to assess the effectiveness of structured teaching program on knowledge regarding management of neonatal asphyxia among 60 staff nurses at pediatric allied units in selected hospitals of Punjab. The finding of the study revealed there was no significant association between pre-test knowledge score and demographic variables such as age and clinical experience.⁴

Implications

The findings of the study have implications for nursing practice, nursing education, nursing administration and nursing research.

Conclusion

The Structured Teaching Programme regarding management of neonatal asphyxia was effective in improving the knowledge of staff nurses. Educating staff nurses will help them to become more aware and competent to provide quality care to asphyxiated neonates.

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