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A quasi-experimental study to assess the effectiveness of video assisted teaching programme on knowledge regarding the neonatal resuscitation in the management of birth asphyxia among GNM 2nd year students of selected nursing college of district Kangra Himachal Pradesh

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Abstract

Introduction: Newborn babies may not breathe at birth due to many causes originating at different periods of pregnancy. A 2001 literature review suggests that birth asphyxia may primarily be due to complication occurring during the ante-partum (50%), intrapartum (40%) postpartum (10%) periods. Therefore, to reduce the incidence of birth asphyxia, intervention must be directed towards addressing the condition that occur during each of periods when birth asphyxia occurs. Mother newborn at recognized the importance of intervention that led to the prevention of birth asphyxia however, the primary focus of this issue is on the management of birth asphyxia- that is newborn resuscitation- and not on prevention.

Aim of the study: To improve the knowledge regarding the neonatal resuscitation in the management of the birth asphyxia among GNM 2nd year students of selected nursing college of district Kangra Himachal Pradesh.

Methodology: A quantitative research approach and quasi experimental research design was adopted to conduct study. The non- probability purposive sampling techniques was used to select 80 GNM 2nd year student of selected nursing college of district Kangra Himachal Pradesh. A self-structured knowledge questionnaire was used to assess the level of knowledge of GNM 2nd year students regarding neonatal resuscitation.

Result: The study shows that, out of 80 GNM 2nd year students, about 72.5% were in the age group of 20-21 years, 97.5% of GNM 2nd year students were Hindu, 71.3% GNM 2nd year students were lives in rural area, 75.0% GNM 2nd year students were not having any enrollment in neonatal resuscitation, 51.3% GNM 2nd year students were not having any previous knowledge regarding neonatal resuscitation, 38.8% having source of information from teachers. Overall mean value of pretest was low then the post test i.e. 13.36 and t value obtained was found to be statistically significant (6.592) at $p < 0.001$ level of significance, which show the effectiveness of video teaching programme. study finding revealed that out of all the selected sociodemographic variables, habitat were associated with level of knowledge of GNM 2nd year students regarding neonatal resuscitation.

Conclusion: video teaching programme was an effective strategy in improving the knowledge of GNM 2nd year students regarding neonatal resuscitation.

Keywords: Video teaching programme, neonatal resuscitation, birth asphyxia

Introduction

When the baby is born, he/she has to adopt to extra uterine life from fetal life during the fetal life the lungs are immature blood is oxygenated and exchanged for nutrients in the placenta; and it is returned to the fetus through the umbilical vein. At the birth when the umbilical cord is cut the baby has to establish its own respiration and certain changes closure of the ductus arteriosus, foramen Ovalle, and the ductus venosus takes place in the fetal circulation as these are no longer necessary. The newborn has to be helped in this transition [2].

In a previous Swedish nationwide report, we identified 177 new-born infants over a 16- year period who had suffered from severe birth asphyxia presumably due to delivery-related malpractice. The most common causes of obstetrical errors were that established guidelines

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for fetal surveillance were not followed, signs of fetal asphyxia were overlooked, misuse of oxytocin, and a non-optimal choice of mode of delivery. We concluded that fetal surveillance and attention to signs of asphyxia must be improved, that there is a need to improve cooperation between professionals in the labor unit and, to create security barriers.³

Data Collection Procedure

- The data collection procedure of the study was carried out in July, 2021.
- Written permission was taken from principal of guru

Dronacharya College of nursing Yol Cantt, Dharamshala.

- Written permission was taken from other principals of nursing colleges of district Kangra.
- Data was collected from 80 GNM 2nd year students.
- Data was collected by self-structured knowledge questionnaire.
- The researcher introduced herself to the respondent and explained the purpose of gathering the information. They were assured that their responses would be kept confidential and used only for research purpose.
- Non probability purposive sampling technique was used.

Table 1: Frequency and percentage distribution of socio demographic variable of GNM 2nd year students N=80

S.no.	Socio-demographic variables	F	%
1	Age (in years)		
	<19	11	13.8%
	20-21	58	72.5%
	22-23	09	11.3%
	>23	02	2.5%
2	Religion		
	Hindu	78	97.5%
	Muslim	01	1.3%
	Sikh	00	0.0%
	Others	01	1.3%
3	Habitat		
	Rural	57	71.3%
	Urban	23	28.8%
4	Any enrolment		
	Yes	20	25.0%
	No	60	75.0%
5	Previous knowledge		
	No	41	51.3%
	Yes	39	48.8%
6	Source of information		
	Teacher	31	38.8%
	Peer group	01	1.3%
	Mass media	05	6.3%
	Books	03	3.8%

The data presented on Table 1, depicted about frequency and percentage distribution of GNM 2nd year students according to their socio - demographic variables. The inferences made are:

With respect to age, maximum of GNM 2nd year students 72.5% were age group of 20-21 years, 13.8% were age group of <19 years, 11.3% were age group of 22-23 years, 2.5% were age group of >23 years.

With respect to religion maximum GNM 2nd year students 97.5% were in Hindu, 1.3% were in Muslim, 1.3% were in others.

According to habitat about 71.3% nursing students were belongs to rural area and 28.8% nursing students were belongs to urban area.

According to any enrolment 75.0% of were having no enrolment in neonatal resuscitation 25.0% were having enrolment in neonatal resuscitation.

According to previous knowledge 48.8% of were having knowledge about neonatal resuscitation 51.3% were not having previous knowledge about neonatal resuscitation.

38.8% GNM 2nd year students were having source of information from teachers, 6.3% having source of

information from mass media 3.8% having source of information from books, 1.3% having source of information from peer group.

Table 2: Frequency and percentage distribution of pretest knowledge score of GNM 2nd year students N= 80

Level of knowledge	Pre-test knowledge score	F	%
Good	21-30	00	00%
Average	11-20	65	81.3%
Poor	00-10	15	18.8%

Maximum score = 30

Minimum score = 00

Data presented in the table 2 depict the frequency and percentage of pre-test knowledge score of GNM 2nd year students regarding neonatal resuscitation. Maximum 81.3% of GNM 2nd year students were having average knowledge, 18.8% of GNM 2nd year students were having poor knowledge regarding neonatal resuscitation none of them was having good knowledge regarding neonatal resuscitation.

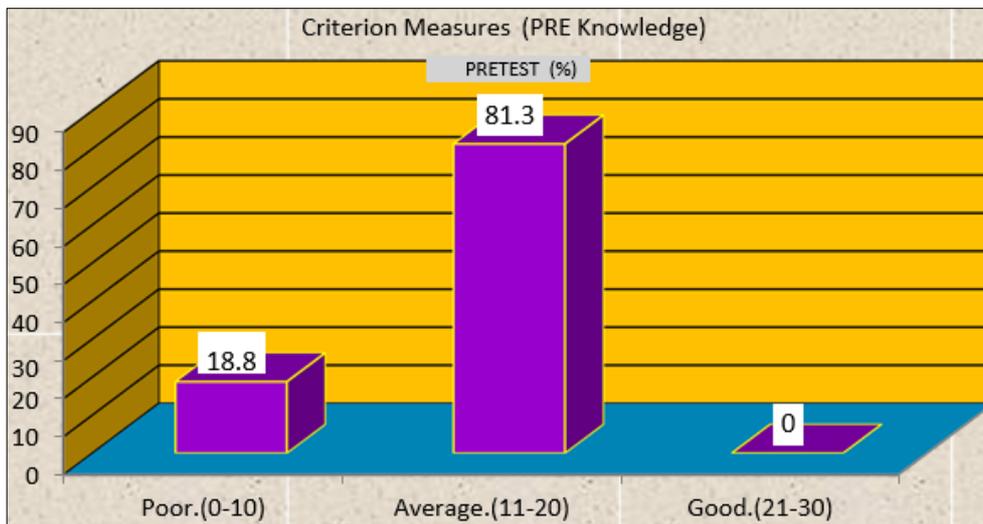


Fig 1: Bar diagram showing percentage of pre-test level of knowledge of GNM 2nd year students regarding neonatal resuscitation

Table 3: Frequency and percentage distribution of post-test scores of GNM 2nd year students regarding neonatal resuscitation N= 80

Level of knowledge	Post-test knowledge score	F	%
Good	21-30	40	50
Average	11-20	26	32.5
Poor	00-10	14	17.5

Maximum score = 30
Minimum score = 00

Data presented in the table 3 depict the frequency and percentage of post- test knowledge score of GNM 2nd year students regarding neonatal resuscitation. Maximum 50% of GNM 2nd year students were having good knowledge and 32.5% of GNM 2nd year students were having average knowledge, 17.5% of GNM 2nd year students were having poor knowledge regarding neonatal resuscitation.

Table 4: Comparison of mean pre test and post test knowledge scores of GNM 2nd year students N=80

Paired T - test	Mean ± S.D	Mean %	Range	Mean difference	Paired t- Test	Table value at 0.05
Pretest knowledge	13.36±3.421	44.50	6-20	5.490	6.592*	1.99
Posttest knowledge	18.85±6.63	62.80	4-28			

Significant =*

Non significant = NS

The data depicted in table 6 shows the effectiveness of video assisted teaching programme, on knowledge regarding neonatal resuscitation. The knowledge mean pre-test knowledge score was 13.36 and the mean post-test knowledge score was 18.85 and t value obtained 6.592 was found to be statistically very highly significant at 0.05 level

of significance.

Thus, it is established that mean posttest knowledge score was greater than mean pretest knowledge score, which shows the effectiveness of video assisted teaching programme, Hence research Hypothesis H1 is accepted and null hypothesis was rejected.

Table 5: Association of pretest knowledge scores of with selected socio-demographic variables

S.no.	Variables	opts	Average	Poor	Chi Test	df	P value
1	Age	<19 years	10	1	1.991NS	3	7.815
		20-21 years	45	13			
		22-23 years	8	1			
		>23 years	2	0			
2	Religion	Hindu	64	14	4.597NS	2	5.991
		Muslim	1	0			
		Sikh	0	0			
		Others	0	1			
3	Habitat	Rural	47	10	0.189NS	1	3.841
		Urban	18	5			
4	Any enrollment	Yes	12	8	7.904*	1	3.841
		No	53	7			
5	Previous knowledge	No	32	9	0.566NS	1	3.841
		Yes	33	6			
6	source of information	Teacher	27	4	7.558NS	3	7.815
		Peer group	1	0			
		Mass media	2	3			
		Books	3	0			

Discussion

According to objectives

Objectives 1: To assess the pretest knowledge scores regarding neonatal resuscitation among the students of GNM 2nd year.

Majority of 81.3% of GNM 2nd year students were having average knowledge, 18.8% of GNM 2nd year students were having poor knowledge regarding neonatal resuscitation none of them was having good knowledge regarding neonatal resuscitation.

Objective 2: To assess the post-test knowledge scores regarding neonatal resuscitation among the students of GNM 2nd year.

Majority of 50% of GNM 2nd year students were having good knowledge and 32.5% of GNM 2nd year students were having average knowledge, 17.5% of GNM 2nd year students were having poor knowledge regarding neonatal resuscitation.

Objective 3: To evaluate the effectiveness of the video assisted teaching programme on neonatal resuscitation among the GNM 2nd year students of selected colleges by comparing the pretest and post-test knowledge score.

The knowledge mean pre-test knowledge score was 13.36 and the mean post-test knowledge score was 18.85 and t value obtained 6.592 was found to be statistically very highly significant at 0.05 level of significance. Thus, it is established that mean posttest knowledge score was greater than mean pretest knowledge score, which shows the effectiveness of video assisted teaching programme, hence research Hypothesis H1 is accepted and null hypothesis was rejected.

Objective 4: To determine the association between pre - test knowledge score with their selected socio demographic variable.

The data revealed that there was significant association of level of knowledge with any enrollment regarding neonatal resuscitation and they were found statistically significant at 0.05 level of significance. Thus it is revealed that any enrollment regarding neonatal resuscitation had impact on level of knowledge of GNM 2nd year students.

Conclusion

From the result of the study, it was concluded that implementation of video teaching program showing effectiveness of the tool to enhance the knowledge of GNM 2nd year students regarding neonatal resuscitation. Any enrolment was significantly associated with pretest knowledge score (<0.005).

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