Original Article

Assess the effectiveness of video-assisted teaching programs on knowledge of neonatal resuscitation among B.Sc. Nursing 3rd-year students of selected nursing colleges of Rewa

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ABSTRACT

Objectives: The purpose of the study is to assess the effectiveness of video-assisted teaching on neonatal resuscitation of knowledge among B.Sc. Nursing 3rd-year students of the Government Nursing College of Rewa. **Materials and Methods:** A quasi-experimental research design, which consists of one group pre-test and post-test, was used for the study. This consists of 60 samples that were selected based on the sampling criteria set for the study. Purposive sample techniques are used in the study. **Results:** The majority of B.Sc. Nursing 3rd-year students (41.66%) were in the age group of 21 years; 85% were female, and 28.34% of them had previous experience related to neonatal resuscitation. Most students, having experience, were exposed to seminars, and the rest of them were exposed to literature. In the pre-test, 46.34% of students had average knowledge, 43.66% had poor knowledge, and 10% had good knowledge. In the post-test, 71.66% had good knowledge, and 28.34% had average knowledge. The pre-test score mean was 12±3.91, while the post-test mean was 22.04±4 showing a significant difference in knowledge level before and after the video-assisted teaching program (t-test=7.032, p≤0.05%). **Conclusion:** This study indicates that video-assisted teaching is effective in increasing the knowledge of the samples regarding neonatal care.

Key words: KMC, LBW, Neonatal resuscitation, Newborn, VATP

The healthy newborn infant born at term, between 38 and 42 weeks, cries immediately after birth, establishes independent rhythmic respiration, quickly adapts to an extrauterine environment, has an average birth weight, and has no congenital anomalies [1]. The period from birth to 28 days of life is called a neonatal period, and the infant in this period is termed a neonate or newborn baby. Newborn care is of immense importance for the development and healthy life of a baby. The newborn care takes place immediately following birth, in the transition period, and during the postnatal period. This care may be shared with the parents in the maternity unit of a hospital or an alternative birth center or assumed by parents in the home [1,2].

Until recently, there has been little effort to tackle the specific health problems of newborn babies. Most of their deaths are unrecorded and remain invisible. A lack of continuity between maternal and child health programs has meant that care of the newborn has fallen through the cracks between the mother's care and the older child's care. Neonatal resuscitation skills are essential for all health-care providers who are involved in the delivery of newborns. The transition from fetus to newborn requires intervention by a skilled individual or team in approximately 10% of all deliveries [3].

Perinatal asphyxia and extreme prematurity are the two complications of pregnancy that most frequently necessitate complex resuscitation by skilled personnel. However, only 60% of asphyxiated newborns can be predicted antepartum. The remaining newborns are not identified until the time of birth. Additionally, approximately 80% of low-birth-weight infants require resuscitation and stabilization at delivery [4-7]. For this reason, all personnel involved in the delivery room care of the newborn should be trained adequately in all aspects of neonatal resuscitation. Additionally, equipment that is appropriately sized to resuscitate infants of all gestational ages should be available in all delivering institutions, even if the institution does not care for pre-term or intensive care infants [6-8].

We planned this study to assess the knowledge of B.Sc. Nursing 3rd-year students on neonatal resuscitation and evaluate the effectiveness of video-assisted teaching on neonatal resuscitation.

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MATERIALS AND METHODS

Quasi-experimental research using the one-group pre-test and post-test design was adopted with the study. In this one-group pre-test and post-test design, only one group was observed before and after the intervention. In this study, the investigator aimed to find the effectiveness of video-assisted teaching on knowledge of neonatal resuscitation among B.Sc. Nursing 3rd-year students of selected nursing colleges of Rewa. A number of students total 60 B.Sc. Nursing 3rd-year students used a purposive sampling technique, purposive sampling, based on the inclusion criteria.

B.Sc. Nursing 3rd-year students, who were able to read, write, and understand English, and who were willing to participate in the study, were included in this study. The students, who were not available during the time of data collection or not willing to participate, were excluded. The structured questionnaire was tested in the pilot study. The final draft of 30-item structured multiple-choice questionnaires was also used to identify the stressors. The assessment of the effect of video-assisted teaching was done using a post-test conducted on the 7th day of a video-assisted teaching program. Information was collected regarding age, sex, previous experience, if yes, from where, and video-assisted teaching program.

RESULTS

Out of 60 participants, 41.66% (25) students were 21 years old, 35% (21) were 22 years old, 13.34% (8) were above 22 years old, and

Table 1: Comparison between pre- and post-knowledge of students (n=60)

Description	Mean	SD	T-test
Pre-test knowledge	12	3.91	7.032
Post-test knowledge	22.4	4	

10% (6) were 20 years old. Table 1 shows a significant difference between pre- and post-knowledge before and after the administration of a video-assisted teaching program (t-test=7.032, p≤0.05).

Most of them (85%) were female and 28.34% of them had previous experience related to neonatal resuscitation while 70.36% did not have any previous experience. Most of them, who had experience, were exposed to seminars, and the rest of them were exposed to literature. In the pre-test, the majority (46.34%) of students had average knowledge, 43.66% had poor, and 10% had good knowledge. However, in the post-test, the majority (71.66%) had good knowledge, and 28.34% had average knowledge.

Table 2 shows the association between students' knowledge about neonatal resuscitation and demographic variables and only age was found to have a significant association (t=180, p≤0.05).

DISCUSSION

Neonatal resuscitation is the primary and most important responsibility of a nurse who is posted in the labor room to save the lives of neonates who need resuscitation for survival. One of the most crucial needs felt in the nursing field is that every nurse must be trained in neonatal resuscitation. A quasi-experimental design was conducted on 60 B.Sc. Nursing 3rd-year students to assess their knowledge of neonatal resuscitation at Government Nursing College of Rewa. The post-test mean score was significantly higher than the pre-test score showing a significant improvement in the knowledge level after the video-assisted teaching program. The findings of the present study reveal that the association between students' age and knowledge regarding neonatal resuscitation was statistically significant while other demographic variables had no significant association.

Nursing education is developing rapidly, and nurses from our country can be found all over the world providing care and

Table 2: Association of pre-test knowledge of students regarding neonatal resuscitation with selected demographic variables (n=60)

Variables	Pre-test knowledge				DF	Chi-value	p-value
	Poor	Average	Good	Total			
Age							
20 years	1	3	2	6			
21 years	12	12	1	25	6	180	<0.05
22 years	13	7	1	21			
Above 22 years	0	6	2	8			
Sex							
Male	6	0	3	9			
Female	20	28	3	51	2	6.37	0.094
Previous experience							
Yes	13	2	2	17	2	3.82	0.28
No	13	26	4	43			
Source of information							
Television	0	0	0	0			
Literature	2	3	3	8	6	1.1	0.77
Seminar	3	3	3	9			
Specify, if any other	0	0	0	0			

education. The education curriculum must include imparting knowledge about the use of various audio-visual aids and teaching strategies for teaching neonatal resuscitation. The nursing teachers can use the result of the study as an informative illustration for the students. Nursing education should help inculcate values and a sense of responsibility in the student to be skillful and have knowledge regarding neonatal resuscitation.

There are certain limitations of this study such as a small sample size and non-randomized purposive sampling technique limiting the generalizability of the study findings. We could not include a control group due to the ethical consideration of studying human subjects. The assessment of the effect of video-assisted teaching was limited to one post-test conducted on the 7th day of a video-assisted teaching program. A similar study can be done on a larger sample and a study may be conducted to evaluate the effectiveness of simulation methods on neonatal resuscitation among B.Sc. 3rd year students.

CONCLUSION

This study indicates that video-assisted teaching is effective in increasing the knowledge of the samples regarding neonatal care.

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