

Original Article

Effectiveness Of Video Assisted Teaching On Danger signs in New born Of Mothers Of Preterm Baby In A Selected Hospital Of Kolar .

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Abstract

Introduction: Preterm birth is defined as childbirth occurring at less than 37 completed weeks. Educational interventions for mothers are commonly viewed as an important strategy to promote their knowledge and practice of childcare skills.

Aim: To assess and compare the effectiveness of Video Assisted Teaching on Danger signs in newborn of mothers of Preterm baby in both control and experimental group.

Materials and Methods: Quasiexperimental research design with two group pretest posttest design was used for the study. The study was conducted in Neonatal Intensive Care Unit (NICU) of RL Jallapa Hospital and Research centre at Kolar. Total of 150 mothers, 75 each in experimental and control group were selected by purposive sampling technique.

Results: The overall mean pre test knowledge score (5.62 ± 2.8) in experimental group was significantly higher ($t=2.53$; $p<.01$) than that of pre test knowledge score (4.69 ± 2.01) in control group. The overall mean post test knowledge score (15.71 ± 1.26) in experimental group was significantly higher ($t=0.14$; $p<.0001$) than that of post test knowledge score (5.04 ± 1.96) in control group.

Conclusion: Video assisted teaching had enhanced the knowledge of mothers regarding danger signs of newborn. The study highlights the importance of educational support to mothers of preterm baby.

Key words: Danger signs, Preterm baby, Video assisted teaching and Knowledge

Introduction

Nearly 27 million babies are born in India each year which accounts for 20% of global births. Of these, 1.0 million die before completing the first four weeks of life.¹ Prematurity also accounts for major cause of Neonatal mortality. Neonatal mortality occurs because a newborn can die within minutes if prompt recognition, diagnosis and treatment are not initiated.² It is stated, "each year, over 40,000 babies are admitted to a newborn intensive care unit (NICU) in the United States."³

The neonatal mortality is also very high in Kolar district in Karnataka.⁴

The danger signs of severe illness included are

- 1) history of difficulty feeding,
- 2) movement only when stimulated,
- 3) temperature below 35.5°C ,
- 4) temperature above 37.5°C ,
- 5) respiratory rate over 60 breaths per minute,
- 6) severe chest in drawings and
- 7) history of convulsions.⁵

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Mothers knowledge is essential for improving the care of their baby. Evidence suggests that preterm mothers struggle to adjust to their maternal role and to change their maternal lifestyle and also reported the need of teaching from nursery care provider.⁶ Early detection of neonatal illness is an important step towards improving newborn survival. Poor knowledge of newborn danger signs delays care seeking by the mother and most of the studies also

emphasized the need for education of mothers to reduce neonatal mortality and morbidity.⁷⁻⁹

Individual education is one of the most powerful education methods when administered by health care provider.¹⁰ To improve the survival and quality of preterm baby it is essential by increasing awareness and appropriate practices of mothers.

Objectives

1. To assess the pretest and posttest knowledge regarding danger signs of newborn among mothers of preterm baby in both control and experimental group
2. To find the effectiveness of Video Assisted Teaching Information on danger signs in newborn of mothers of preterm baby.
3. Find out the association between selected demographic variables with Post test knowledge score of mothers of Preterm baby.

Materials and Methods

A Quasi experimental two group pre-test post-test design was used for the study. The study was conducted in NICU of RL Jallapa Hospital and Research centre at Kolar. The total bed strength of the hospital is 1200 with 17 beds in NICU where inborn babies from labour room and Operation Theatre (OT) are admitted. Average admission of preterm babies is 12-18 per month. A total of 150 mothers with preterm babies were selected by purposive sampling technique. (75 each in experimental and control group) who met the inclusion criteria.

Ethical clearance was obtained from institute's ethics committee of Sri Devaraj Urs of Academy of Higher education and Research. Permission was obtained from hospital authorities before conducting the study. Informed consent was taken from the mothers of preterm baby before conducting the study. Content validity for structured knowledge questionnaire on danger signs in newborn was established by giving the tool to faculty of medical and nursing of Paediatric Department. The content validity index (CVI) was 0.92. The Video assisted Teaching was also validated by the same experts. Item analysis was done, difficulty level and discrimination index were calculated for all items. The split half reliability ($r=0.82$) and test retest reliability was done within a gap of 07 days to assess the stability of the tool ($r=0.86$). The structured knowledge questionnaire was found to be reliable and feasible. The structured knowledge questionnaire consisted of 20 items with multiple choice questions. Correct answer was scored as 01 marks and wrong answer was scored 0.

After baseline assessment the structured knowledge questionnaire was administered. Individual video assisted teaching was done by investigator for 15 minutes in the morning on the same day for the experimental group and post-test was done after 6 days.

Results

I. Description of mean age of mothers, mean gestational age and Birth Weight of Preterm baby

The mean age of mothers was 24.09 years in experimental group and 23.64 in control group, the mean gestational age of preterm baby was 33.37 weeks in experimental group and 33.92 weeks in control group and mean birthweight of preterm baby was 1.49 kilogram in experimental group compared to 1.52 kilogram in control group.

There was no significant difference among the groups in terms of mothers' age ($p=0.38$) and birth weight ($p=0.28$) of preterm baby by computing independent t test. There was significant difference between the gestational age ($p=0.02$) of preterm baby. Thus the groups were comparable only in terms of mean age of mothers and birth weight of preterm baby.

II. Description of demographic variables of mothers of preterm babies

Majority of the mothers in experimental (78.7%) and control (70.7%) belonged to Hindu religion. More than fifty percent of mothers were from rural area in both the groups. Nearly more than fifty percent in experimental group were from joint family compared to control group who were from nuclear family. Majority in both groups had completed only primary education; experimental (61.3%) and control (57.3%). More than 80% mothers were housewives in both the groups, 61.3 % mothers family income was less than Rs 5000 in experimental group whereas majority (44%) in control group had a income of Rs. 10,000 to 15, 000. There was no significant difference among the groups in terms of mother's religion ($p=0.44$), residence ($p=0.51$), education ($p=0.79$) and occupation ($p=0.86$). There was significant difference in terms of mothers' family income ($p<0.001$) and family type ($p=0.004$).

With regard to obstetric characteristics of mothers it was evident that the groups were comparable in terms of gravida ($p=0.49$), mode of delivery ($p=0.32$) and sex of preterm baby ($p=0.27$). (Table 1)

Table 1: Distribution of mothers obstetric characteristics

N= 150

Obstetric characteristics		Experimental	Control	Chi-square value,df, P value
		Frequency (Percentage)	Frequency (Percentage)	
Gravida	Primi	53 (53.3)	44 (58.7)	0.45 1 0.49
	Multi	46 (46.7)	31 (41.3)	
Mode of delivery	Normal	37(49.3)	32 (42.7)	0.95 1 0.32
	LSCS	36 (48.7)	43 (57.3)	
Sex	Male	53 (69.3)	46 (61.3)	1.18 1 0.27
	Female	23 (30.7)	29 (38.7)	

*Significance at $p < 0.05$ level

II. Knowledge on danger signs of newborn among mothers of preterm baby between experimental and control group

Table 2 shows that by applying independent t test, there was significant difference between the mean pretest knowledge scores ($p=0.01$) and with the mean

post test knowledge scores on mothers of preterm babies ($p < 0.001$). However the mean difference was very large with the post test (10.64) compared to pretest scores (0.93). Hence the VAT was effective in improving the knowledge scores of mothers in the experimental group.

Table 2 : Mean , SD, independent t value of pretest and post test knowledge scores of mothers of pre-term babies between the experimental and control group

Knowledge	Group	Mean \pm SD	M _D	Independent t value	p value
Pre-test	Exp (75)	5.62 \pm 2.8	0.93	2.53	0.01*
	Control (75)	4.69 \pm 2.01			
Post-test	Exp(75)	15.71 \pm 1.26	10.64	0.14	<0.001**
	Cont(75)	5.04 \pm 1.96			

**Highly Significant at $p < 0.001$ level

III. Effectiveness of VAT on danger signs of newborn of mothers of preterm Baby within experimental and control group

Table 3 shows that there was a statistically significant difference between the mean pretest and post test scores of mothers in both experimental and control group. The significant difference in control group could be due to influence of pretest questionnaire. In

experimental group the mean knowledge score (15.71) was very large comparatively very minimal in control group (5.04). Hence the VAT was effective in experimental group.

Table 3: Mean , SD, independent t value of pretest and post test knowledge scores of mothers of pre-term babies between the experimental and control group

Group	Test	Mean±SD	Paired t value	P Value	95% Confidence Interval	
					Lower Limit	Upper Limit
Exp	Pre-test (75)	5.62±2.8	31.24	<.001*	-9.45	-31.24
	Post-test (75)	15.71±1.26				
con	Pre-test (75)	4.69±2.01	4.91	<.001*	-.49	-.20
	Post-test (75)	5.04±1.96				

* Highly Significance at $p < 0.001$ level

V. Association of post-test knowledge on danger signs in newborn and selected demographic variables in both experimental group and control group

Chi-square test computed between the mothers post-test knowledge scores on danger signs in newborn with selected demographic variables in experimental and control group showed that there was no significant association between the level of knowledge and demographic variables like age, residence, education, income, occupation, mode of delivery, gravida and sex of baby. There was significant association of knowledge with family ($\chi^2 = 6.09$, $p = 0.03$) in experimental group.

Discussion

There was a statistically significant difference between the mean pretest and post test knowledge scores of mothers in both experimental and control group. The significant difference in control group could be due to influence of pretest questionnaire. In experimental group the mean knowledge score (15.71) was higher compared to control group (5.04).

There was also significant difference between the mean pretest knowledge scores ($p = 0.01$) and with the mean post test knowledge scores on mothers of preterm babies ($p < 0.001$). However the mean difference was very large with the post test (10.64) compared to pretest scores (0.93). Hence the VAT was effective in improving the knowledge scores of mothers in the experimental group. This was the first study conducted using control group and video assisted teaching while other studies done by Dongre AR⁷, Sandberg⁸ and Nigatu SG⁹ explored the knowledge of mothers regarding danger signs. They all stated inadequate knowledge of mothers regarding dangers of newborn. Study by kibaru¹¹ stated inadequate knowledge inspite of information provided related to dangers signs among postnatal mothers. Ekwochi U et

al¹² also found the Knowledge of more than three of the nine WHO recognized danger sign was poor among mothers. Among sociodemographic variables, type of family in experimental group was found to be significant where as other studies^{9,11} only age and education was found to be significant.

It is important to acknowledge the limitation of this study. The following limitations may influence this study. Quasi experimental design with Purposive sampling Technique was adopted for the study

Conclusion

Video assisted teaching had enhanced the knowledge of mothers regarding danger signs of newborn. The study highlights the importance of educational support to mothers of preterm baby.

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