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Assess the effectiveness of video assisted teaching in improving knowledge among mothers of preterms new-born on non - Nutritive sucking in promoting physiological stability and nutrition

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Abstract
Maintaining breast feeding for preterm newborn is a major challenge. Non - nutritive sucking has been shown to be beneficial for several important indicators during hospitalization- such as decrease length of hospitalization, transition from gavage to oral feeding, it improves digestion. The research design adopted for the study was pre- experimental. The tool for the study is consists of three parts.
Part- I consisted questions related to Socio-demographic data (mother and newborn),
Part-II consisted of video assisted teaching along with self - structured knowledge questionnaire.
Part-III observational checklist to assess the knowledge score. The data was analyzed by using descriptive and inferential statistical methods.
The most significant finding that the mean pre-test was 6±1.94 while in knowledge regarding non - nutritive sucking mothers of among preterm newborn at hospitals of Indore city. Knowledge in mean post test score was 9.7±3.6 while in knowledge regarding non-nutritive sucking among preterm infants is excellent at hospital of Indore city. It was suggested that the nurses must educate mothers of preterm newborn regarding non-nutritive sucking.

Keywords: Video assisted teaching, Non-nutritive sucking, promoting physiological stability, nutrition, mothers of preterm newborn and preterm newborn

Introduction

Non-nutritive sucking is the process of allowing a baby to suck without taking any milk. Ideally this is at the breast (after milk has been expressed), but when this is not possible, the use of a dummy may be beneficial. Non-nutritive sucking is where a baby sucks without receiving any nutrition, for example on a dummy or an empty breast. Babies of all ages find sucking soothing. Oral feeding in newborn should be efficient to preserve energy for growing. Moreover, it should be safe so as to avoid aspiration, and it should not jeopardize respiratory status. This can only be achieved provided sucking, swallowing and breathing are properly coordinated. This means that the newborn can suck efficiently and that it can swallow rapidly as the boluses are formed, thus minimizing the duration of airflow interruption but differently, an newborn oral feeding skills are reflected by its skill to organize and coordinate oral-motor functions efficiently so that it takes in enough calories to grow.
Appropriate use of non-nutritive sucking either on the breast or with a dummy in the NICU has the following advantages:

- Non-nutritive sucking reduces the experience of some pain.
- Non-nutritive sucking encourages sucking and weight gain.
- Non-nutritive sucking helps with breathing
  - Non-nutritive sucking can affect the regularity of baby's breathing so that there is an improvement in baby's oxygen level during this activity.
  - Decrease the time baby may have to spend in hospital.
  - Help to reduce 'oral aversion' where a baby dislikes having things in their mouth.

Need for the Study: Sucking is a natural reflex for babies, which begins around the 29th week of gestation. Non – nutritive sucking includes oral habits developed by babies other than breast.

Non-nutritive sucking within newborn care settings has become common practice. Recent evidence further supports the notion that improving feeding skills through the use of NNS shortens the length of hospital stay. As a component of developmentally supportive care, NNS is widely promoted though neonatal intensive care units (NICU) and other newborn care centres. Although commonly considered a benign intervention, further synthesis of the literature is required to support the ongoing use of NNS.

Problem Statement: Assess the effectiveness of video assisted teaching in improving knowledge of mothers regarding non - nutritive sucking in promoting physiological stability and nutrition among preterm newborn admitted in nicu at hospitals of Indore city.

Objectives of the Study

1. To assess the pre-test knowledge regarding non-nutritive sucking in promoting physiological stability and nutrition among mothers of preterm newborn admitted in NICU at hospitals of Indore city.
2. To assess the effectiveness of video assisted teaching on knowledge regarding non- nutritive sucking in promoting physiological stability and nutrition among mothers of preterm newborn admitted in NICU.
3. To find out the association between pre-test and post-test knowledge score regarding non- nutritive sucking

in promoting physiological stability and nutrition among mothers of preterm newborn admitted in NICU with selected demographic variables.

Hypotheses: RH_0-There will be no significant difference between pre-test and post-test knowledge score regarding non- nutritive sucking in promoting physiological stability and nutrition among mothers of preterm newborn admitted in NICU.

RH_1: There will be significant difference between pre-test and post-test knowledge score regarding non- nutritive sucking in promoting physiological stability and nutrition among mothers of preterm newborn admitted in NICU.

RH_2: There will be significant association between pre-test score and post-test knowledge score regarding non- nutritive sucking in promoting physiological stability and nutrition among mothers of preterm newborn admitted in NICU with their selected demographic variable.

Assumption

This study assumes that:-

1. Study may improve the feeding pattern of preterm infant.
2. Study may improve health status of preterm infants.
3. Study may improve nutritional status of preterm infants.
4. This study will help mothers of preterm newborn to enhance their knowledge regarding non- nutritive sucking in promoting physiological stability and nutrition.

Review of Literature-Kaya V *et al.* (2017) Effects of pacifier use on transition to full breast feeding and sucking skills in preterm infants: a randomised controlled trial. Feeding problems in preterm infants because delays in hospital discharge, extend mother-infant reunification and increase medical cost. Nutritive sucking skills of preterm infants may develop by improving non-nutritive sucking skills and increasing sucking experiences. Seventy infants were randomised into two groups: a pacifier group (n = 34) and a control group (n = 36). Pacifier use was applied in the preterm infants in the pacifier group, up to switching to full breastfeeding. The infants in the control group did not use pacifiers. Data were collected by a researcher using the Preterm Infant Introductory Information Form, the Preterm Infant Monitoring Form and the LATCH Breastfeeding Assessment Tool. For the study, ethics committee approval, official permission and written informed consents of the families were obtained. The time to transition to full breastfeeding (123·06 ± 66·56 hours) and the time to discharge (434·50 ± 133·29 hours) in the pacifier group were significantly shorter compared to the control group (167·78 ± 91·77 and 593·63 ± 385·32 hours, respectively) ($p < 0·05$). The weight at transition to full breastfeeding (1944·12 ± 275·67 g) and the weight of discharge (1956·45 ± 268·04 g) in the pacifier group were significantly lower compared to the control group (2155·58 ± 345·57 and 2159·75 ± 341·22 g, respectively) ($p < 0·05$). Sucking skills of the infants in the pacifier group at 48 hours after transition to oral feeding and before the discharge was better than in the control group ($p < 0·05$).

Methodology: The evaluative research approach was used in this study. The research design adopted for the study was pre-experimental in nature the present study aimed at increase knowledge regarding non- nutritive sucking in promoting physiological stability and nutrition among mothers of preterm newborn admitted in NICU with the help of video assisted teaching. Samples for this study are mothers of preterm newborn who are admitted in selected hospitals of Indore city. Non probability convenient sample technique was used. Sample size is 30 mothers of preterm newborn. They were given a self-structured knowledge questionnaire and observational checklist.

Analysis and interpretation: The data analysis was made on the basis of objectives. The data analysis was planned to include descriptive and inferential statistics

Table 1: Descriptive statistics such as frequency and percentage are used for demographic variables N=30

S.NO	Demographic Variable	Frequency	Percentage Distribution (%)
1.	Age (In days) 1-3 Days	21	70 %
	4-6 Days	07	23.33 %
	7-9 Days	02	06.66 %
2.	Gender Male	12	40 %
	Female	18	60 %
3.	Type of family Nuclear family	09	30 %
	Joint family	21	70 %
4.	Previous knowledge regarding NNS among mothers YES	03	10%
	NO	27	90 %
5	Educational status of mother Illiterate	02	6.66 %
	Primary education	09	30 %
	Secondary education	16	53.33 %
	Graduate & above	03	10 %
6	Area of living	12	40 %
	Rural Urban	18	60 %

Table 2: Comparison between pre-test and post-test knowledge score is non-nutritive sucking in mothers of preterm newborn

Test	Category & test score	Frequency	Percentage (%)
Pre test	Poor	04	13.33%
	Good	20	66.66%
	Excellent	06	20%
Post test	Poor	00	00%
	Good	04	13.33%
	Excellent	26	86.66%

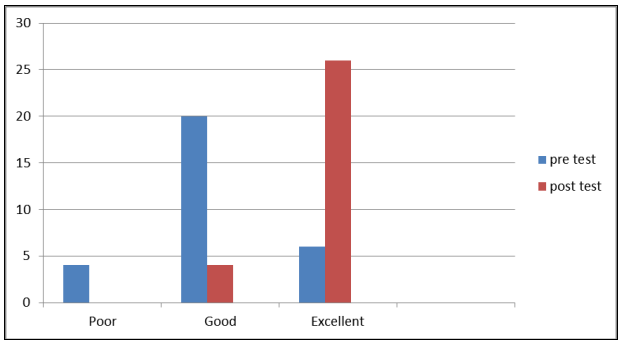

Fig 1: Comparison between pre-test and post-test knowledge score is non-nutritive sucking in mothers of preterm newborn

Table 3: Mean and standard deviation of pre-test and post-test knowledge score is non-nutritive sucking in mothers of preterm newborn

Knowledge test score	Mean	Standard deviation
Pre-test	6	1.94
Post-test	9.74	3.6

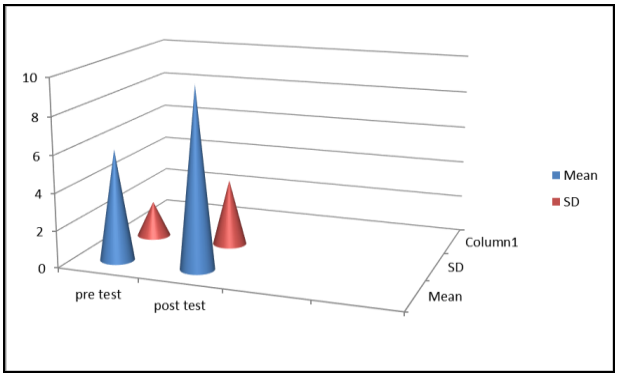

Fig 2: Mean and standard deviation of pre-test and post-test knowledge score is non-nutritive sucking in mothers of preterm newborn

Association of knowledge score between pre-test and post-test with selected demographic variable

Association of knowledge score between pre-test with selected demographic variable

There was an insignificant ($\chi_4^2 = 263.65$ *p>0.05)* association between age of preterm newborn.

There was an insignificant ($\chi_2^2 = 55.797$ *p>0.05)* association between gender of preterm newborn.

There was an insignificant ($\chi_2^2 = 61.389$ *p>0.05)* association between type of family.

There was an insignificant ($\chi_2^2 = 445.328$ *p>0.05)* association between previous knowledge regarding non-nutritive sucking.

There was an insignificant ($\chi_6^2 = 135.85$ *p>0.05)* association between educational status of mother of preterm newborn.

There was an insignificant ($\chi_2^2 = 51.01$ *p>0.05)* association between area of living.

Association of knowledge score between post-test with selected demographic variable

There was significant ($\chi_4^2 = 263.65$ *p>0.05)* association between age of preterm newborn.

There was an insignificant ($\chi_2^2 = 46.797$ *p>0.05)* association between gender of preterm newborn.

There was an insignificant ($\chi_2^2 = 63.289$ *p>0.05)* association between type of family.

There was significant ($\chi_2^2 = 25.08$ *p<0.05)* association between previous knowledge regarding non-nutritive sucking.

There was significant ($\chi_6^2 = 181.62$ *p<0.05)* association between educational status of mother of preterm newborn.

There was significant ($\chi_2^2 = 53.29$ *p<0.05)* association between area of living.

Limitations

- Mothers of preterm newborn.
- Sample size is limited to 30.

Conclusion

After the detailed analysis of this study leads to the conclusion that above findings of the study shows rejection of null hypothesis and acceptance of all selected alternative hypothesis. The objectives of the study are been fulfilled accordingly as result is drawn. Henceforth findings of the research is concluded in pre-test knowledge score of association shows insignificance and post-test knowledge score of association shows significance with selected demographic variable (age, previous knowledge, educational status and area of living). Further video assisted teaching on knowledge regarding non-nutritive sucking in promoting physiological stability and nutrition among mothers of preterm newborn may consider as a effective tool in bridging and modifying knowledge.

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