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Effectiveness of Multimedia Educational Intervention on Comprehensive Home Care for Preterm Among Postnatal Mothers of Preterm in Selected Hospital at Coimbatore

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ABSTRACT

The present study was conducted to assess A study to assess the effectiveness of multimedia educational intervention on comprehensive home care for preterm among postnatal mothers of preterm in selected hospital at Coimbatore. A quantitative approach with the pre experimental one group pretest posttest design study was conducted at Ashwin Hospital, Coimbatore. 50 postnatal mothers (18-35 years) of preterm were selected by purposive sampling technique. The investigator used self administered questionnaire tool and observational checklist to assess the pretest level of knowledge and practice among postnatal mothers of preterm regarding home care. Multimedia educational intervention was given to the postnatal mothers of preterm for a period of 30-45 minutes. The post test was assessed by using the same scale. Descriptive and inferential statistics were used to analyze the data. The analysis revealed that the level of knowledge regarding home care for preterm the pretest mean score was 7.9 and posttest mean score was 17.5. It is higher than the pretest mean score. The calculated' value 19 at df (49), which is significant at $p<0.05$ level.The finding implies that the multimedia educational intervention has significant effect in the improvement of Practice regarding comprehensive home care for preterm among postnatal mothers of preterm.Since, the obtained "t" value was higher than the table value, the above findings accepts the research hypothesis (H1). The study findings revealed that knowledge and practice was significantly improved by multimedia educational intervention among postnatal mothers of preterm and it was found be effective and beneficial strategy in creating awareness and decreasing preterm mortality rate.

Keywords: Assess, Effectiveness, Multimedia Educational Intervention, Comprehensive Home Care, Preterm, Postnatal Mothers.

INTRODUCTION

One of the most wonderful times in a postpartum mother's and family's life is the arrival of a newborn. In order to lower mortality and morbidity, the postnatal mother is primarily responsible for taking care of her newborn, a priceless gift. According to WHO (2018), a preterm baby is one who is born before 37 weeks, which is less

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than the 40 weeks needed for full gestation. 40 weeks, or 280 days, is the average gestation period. The phrase "premature birth," which is frequently used interchangeably with "preterm birth," describes the birth of a child before their growing organs are fully developed to permit normal postnatal survival. Short- and long-term consequences, such as impairments and growth and mental development barriers, are more common in preterm. Although the treatment of preterm has advanced significantly, more attention has to be paid to the unique elements of these preterm newborns' care. A baby born before 37 weeks of pregnancy is referred to as a preterm birth. It's known as "Partus Praematurus" in Latin.

Based on the weeks of pregnancy, four subgroups of preterm newborns are identified.

ϖ LATE PRETERM - Delivered amongst between 34 and 36 weeks.

ϖ MODERATELY - Delivered amongst between 32-34 weeks.

ϖ VERY PRETERM - Delivered amongst lesser than 28-32 weeks.

ϖ EXTREMELY PRETERM - Delivered earlier than 28 weeks.

Sarah Boseley states that extremely susceptible infections and birth difficulties Cause one million out of every 15 million preterm babies to either die or become handicapped. Preterm birth rates were rising in underdeveloped nations.

WHO (2013), found that primary causes of morbidity and mortality in infant survivors included diarrhea (5%) and preterm with low birth weight (35%), birth asphyxia (20%), sepsis (15%), pneumonia (6%), and congenital abnormalities (9%).India ranks 36th in the world for preterm births and has the highest rate of premature birth deaths, according to a recent survey. Out of the 27 million babies born in India each year, 3.6 million are prematurely born, and 303,600 of them die from complications. These 199 countries were included in the list.

According to data from the National Neonatology (2023), every third preterm baby born in India is premature (Times News Network, 2023) Therefore, the WHO emphasized that in order to reduce preterm death and morbidity, basic home care measures including warmth, EBM, and infection prevention are essential

According to Karen M. Edmond et al. (2011), encouraging early breastfeeding initiation has the potential to significantly increase the survival rate of preterm babies. If preterm babies were nursed from the first day of life, 16% of neonatal fatalities may be prevented. Programs that promote breastfeeding should 2 Place a strong emphasis on exclusive breastfeeding as well as early beginning. Tamil Nadu Government (2016). filed a report on a resource document about the care of premature newborns and neonates. This paper also explains that multimedia educational interventions, which may be used at home, were used to start the treatment of small, sick newborns who were born prematurely. This may lead to a rise in preterm surveillance.

Higarashi & Veronez, 2016), Ensuring that the premature newborn receives thorough treatment requires preparing the postnatal mothers for the arrival of the preterm babies at the neonatal intensive care unit (NICU). It is advised that postpartum mothers be included in every step of the procedure, starting with planning and adding their recommendations to the homecare plan, in order to ensure the success of this phase. It has been shown that the tactics employed. Barkemeyer (2015), when a preterm baby is discharged from the NICU, they need to have their unique health issues closely monitored. They also need to have their overall home care needs planned. Careful and comprehensive discharge planning can lower the risk of readmission, morbidity, and mortality—all of which are common in this patient population.

Objectives of the Study

1. To assess the pretest knowledge and practice regarding comprehensive home care for preterm among postnatal mothers of preterm. ϖ

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2. To evaluate the effectiveness of multimedia educational intervention on comprehensive home care for preterm.
3. To assess the posttest knowledge and practice regarding comprehensive home care for preterm among postnatal mothers of preterm.
4. To find out the association between the posttest knowledge and practice scores of postnatal mothers with socio-demographic variables.

Hypothesis:

HI: There will be significant difference between pretest and posttest level of Knowledge and practice scores after giving multimedia educational intervention on comprehensive home care for preterm among postnatal mothers.

H2: There will be significant association between posttest knowledge and practice scores of comprehensive home care for preterm among postnatal mothers with selected demographic variables.

MATERIALS AND METHODS

The study design selected for this study is Pre experimental One Group Pretest Posttest design. In this study, postnatal mothers of preterm, who were admitted in Ashwin hospital and who fulfilled the criteria were selected as the sample. Purposive sampling technique was used by the researcher to select the samples.

Prior to data collection, the written Permission was obtained from the principal, and Director, of Ashwin Hospital to conduct the study. As per director's direction formal permission was obtained from Head of the Department of Neonatologist prior to the data collection. The data collection was done for a period of one month.

In this study, total sample size was 50 postnatal mothers of preterm who got admission in NICU of Ashwin hospital, who fulfilled the inclusion and exclusion criteria. The investigator first established a good rapport with postnatal mothers of pre-term and explained the purpose of the study and procedure to the subjects. Oral consent was obtained from them. Secrecy was assured to the postnatal mothers to get their full cooperation Demographic variables and level of knowledge and practice assessed by self-administered Questionnaire and observational checklist. After the pretest the postnatal mothers were gathered and seated comfortably, Postnatal Mother – Preterm baby care room 30-45 minutes multimedia educational intervention done regarding comprehensive home care for Preterm baby, Thermoregulation, Breast feeding, Eye care, Umbilical cord care, Skin care, Elimination care, Immunization, prevention of infection and Follow up care were explained with the help of multimedia educational intervention. After 4 weeks, the post test was conducted to assess the level of knowledge and practice by same questionnaire.

The proposed study was conducted after the approval of the research committee of PPG College of Nursing. Permission was obtained from the hospital. The oral consent of each individual was obtained for data collection. Assurance was given to the study participants regarding the confidentiality of the data collected.

RESULTS

A total of 50 postnatal mothers who were having preterm babies participated in the study. The collected data were analyzed using descriptive and inferential statistics. The findings are presented according to the objectives of the study.

Demographic variables of mothers of preterm babies.

With respect to age 6 (12%) mothers were in the age group of 18-24years. 35 (70%) mothers were in the age group of 25-30 years and 9 (18%) mothers were in the age group of 31-35 years. Related to religion 25 (50%) mothers belongs to Hindu, 15(30%) mothers belongs to Christian, 8 (16%) mothers belongs to Muslim, 02 (4%) mothers belongs to other religion. With regard to education 8 (16%) mothers had primary education, 26

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(42%) mothers of preterm babies had secondary education, 13 (26%) mothers had higher secondary education and only 03 (06%) mothers of preterm babies were graduated. Considering the occupation 15 (30%) mothers were coolie, 21(42%) mothers belongs to business, 10(20%) mothers were professionals, and 4(8%) mothers were unemployed. Related to marital status married 29 (58%) separated 21 (42%) widow (0%) With respect to maternal illness during antenatal period diabetes mellitus 18 (36%), hypertension 7 (14%), other diseases 25 (50%) Considering family income 21 (42%) mothers were earning Rs.3, 000 – 5,000, and 19(38%) mothers were earning Rs.5, 001 - 8,000and 7 (14%) mothers were earning .8, 001- 11,000 and 03 (6%) mothers were earning more than Rs. 11,000. In regards to locality 8(16%) mothers were resides in rural area, 42 (84%) mothers were resides in urban areas. In accordance to mode of delivery 11 (22%) mothers delivered normally, 20(40%) mothers delivered through LSCS, 17 (34%) mothers had forceps delivery and 2(04%) delivered through vaccum delivery. Related to Reason for pre-term labour Maternal risk factors 15 (30%) 35 Assisted reproductive techniques 30 (60%) Both (a) and (b) 5 (10% Related to the type of family 24 (48%) mothers belong to nuclear family and 26(52%) mothers were in the joint Family. Considering the No. of preterm babies16 (32%) mothers have only one preterm baby, 32 (64%) mothers have two preterm babies and 2(4%) mothers have three preterm babies. Based on Gestational age 28-31 weeks 2 (4%) 31-33 weeks 5 (10%) 34-36 weeks 43 (86%). Related to Birth weight 1000 – 1500 gms1 (2%) 1500 - 2000 gms 10 (20%) 2000 -2500 gms 39 (78%). Considering Sex of the baby Male 22 (44%) Female 28 (56%). Related to Baby had respiratory distress soon after birth Yes 40 (80%) No 10 (20%). Based on Apgar score during birth 0-3 / minutes 0 (0%) 4-6 / minutes 15 (30%) 7-10/minutes 35 (70%).

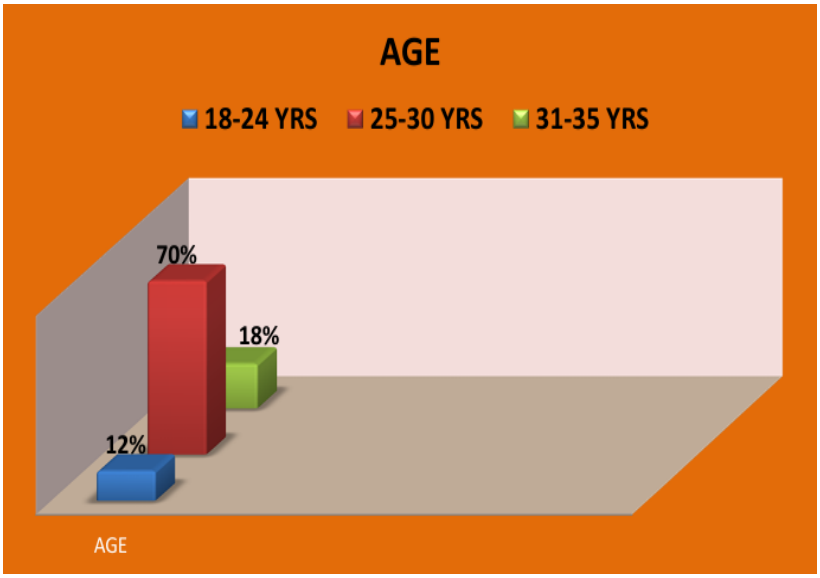


FIG 1: Frequency and Percentage Distribution of Postnatal Mothers of Preterm in Terms of Age

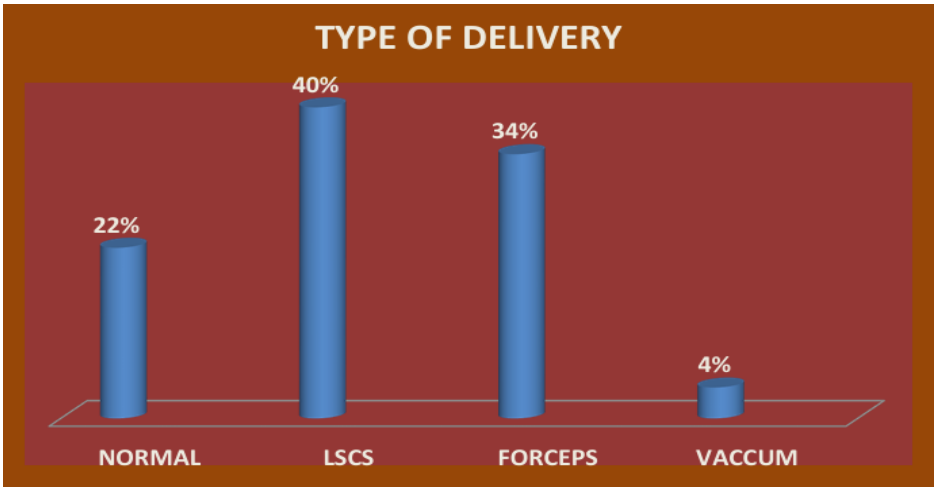


FIG 2 - Frequency and Percentage Distribution of Postnatal Mothers of Preterm in Terms of Type of Delivery

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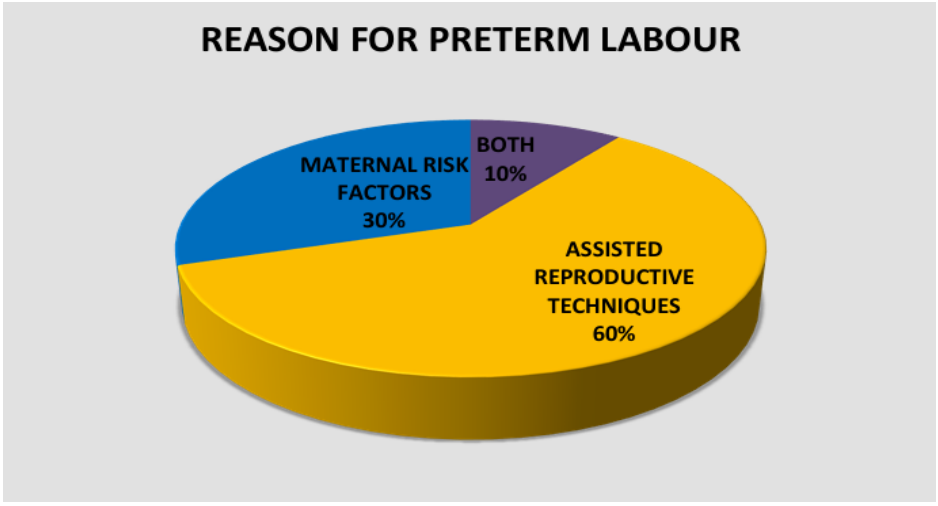


FIG 3 - Frequency and Percentage Distribution of Postnatal Mothers of Preterm in Terms of Reason for Preterm Labour

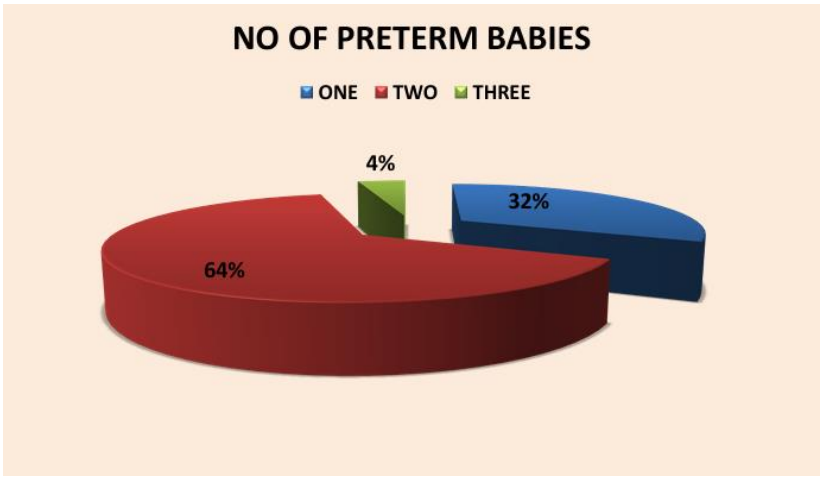


FIG 4 - Frequency and Percentage Distribution of Postnatal Mothers of Preterm in Terms of No of Preterm Babies in Family

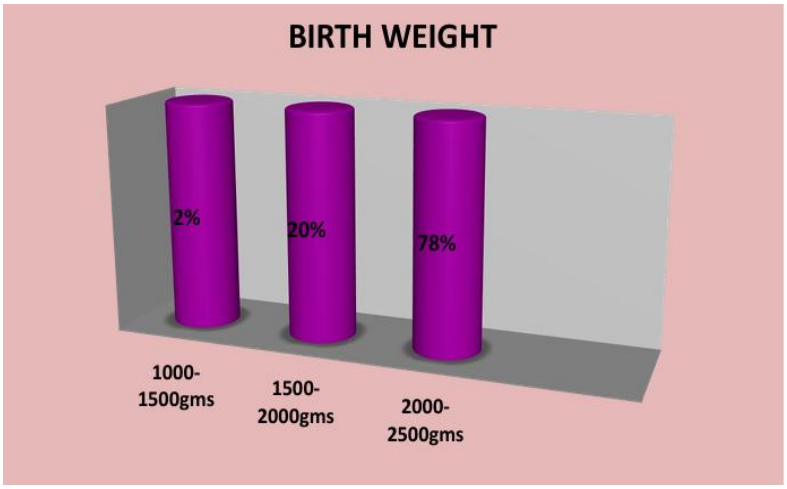


FIG 5 - Frequency and Percentage Distribution of Preterm Babies in Terms of Birth Weight

Distribution of Pretest and Posttest Level of Knowledge regarding Comprehensive Home Care for Preterm among Postnatal Mothers of Preterm.

In Pretest knowledge score 39 (78%) had Inadequate knowledge 11 (22%) had moderate knowledge and none

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of them had adequate knowledge. In posttest none of them had Inadequate knowledge, 8 (16 %) had Moderate knowledge, 42 (84%) had Adequate knowledge level.

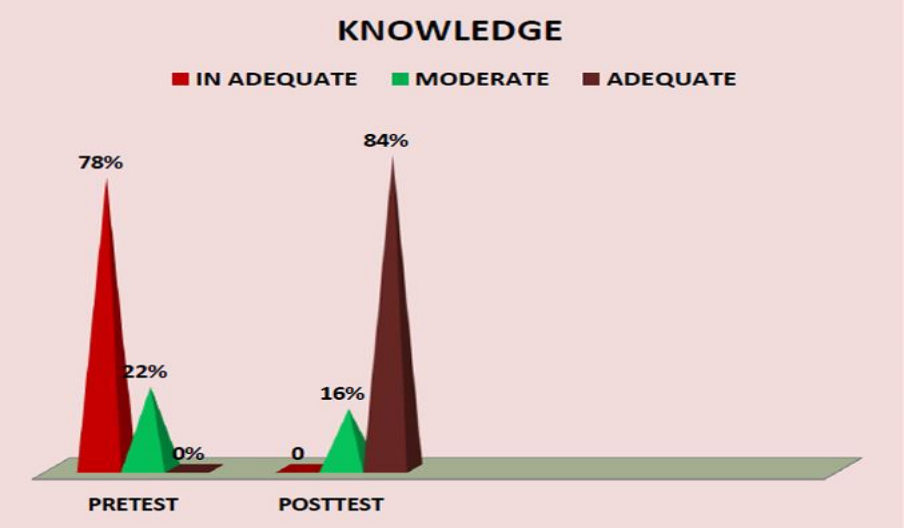
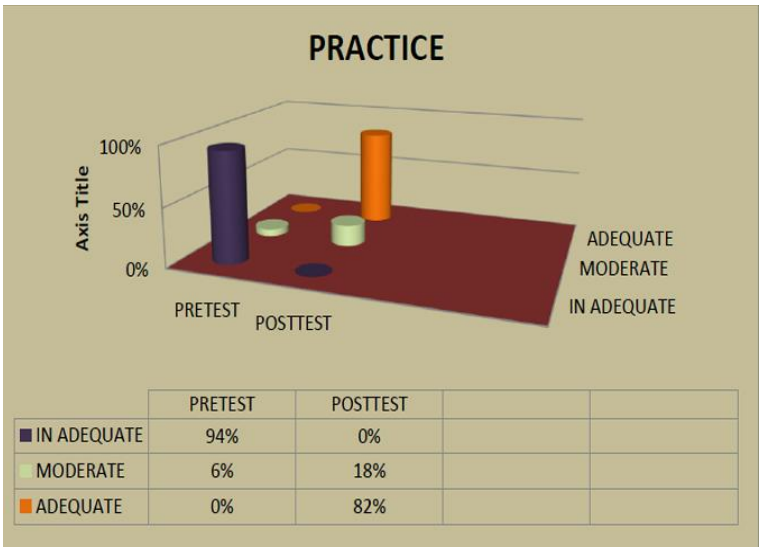


FIG 6 - Frequency and Percentage Distribution of Pretest and Posttest level of Knowledge regarding Comprehensive Home Care for Preterm Babies among Postnatal Mothers of Preterm.

Distribution of Pretest and Posttest level of Practice regarding Comprehensive Home Care for Preterm among Postnatal Mothers of Preterm

In Pretest practice score none of them had Adequate practice, 47 (94%) had Inadequate practice, 3 (6%) had moderate Practice. In posttest 41 (82%) had Adequate Practice, 9 (18%) had Moderate Practice and none of them had Inadequate Practice.



	PRETEST	POSTTEST		
IN ADEQUATE	94%	0%		
MODERATE	6%	18%		
ADEQUATE	0%	82%		

FIG 7 - Frequency and Percentage Distribution of Pretest and Posttest level of Practice regarding Comprehensive Home Care for Preterm among Postnatal Mothers of preterm

Comparison of Mean and Standard Deviation of Pretest and Posttest level of Practice regarding Comprehensive Home Care for Preterm among postnatal mothers of Preterm.

The pretests mean score 7.8 and post test score was 37.5. It is higher than the pretest mean score. The calculated' value is 42 at df (49) is significant at $p<0.05$ level.

The finding implies that the multimedia educational intervention has significant effect in the improvement of Practice regarding comprehensive home care for preterm among postnatal mothers of preterm.

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Since, the obtained "t" value was higher than the table value, the above findings accepts the research hypothesis (H1).

Association of Demographic Variables with the Posttest Score of Knowledge regarding Comprehensive Home Care for Preterm among Postnatal Mothers of Preterm.

Calculated value is less than table value, which indicates there is no significant association between age of the mother, Education, Occupation, Marital status, Maternal illness during antenatal period, Income, Type of Delivery, Reason for pre-term labour, Type of family, Birth Weight, Sex of the baby, Baby had respiratory distress soon after birth, Apgar score during birth. Some of significant association between religions, Locality, No.ofpreterm babies, Gestational age.

Association of demographic variables with the post test score of Practice regarding comprehensive home care for preterm among postnatal mothers of preterm.

Calculated value is less than table value, which indicates there is no significant association between age of the mother, religion, Education, Occupation, Marital status, Maternal illness during antenatal period, Income, Locality, Type of Delivery, Reason for pre-term labour, Type of family, No. of preterm babies, Gestational age, Birth Weight, Sex of the baby, Baby had respiratory distress soon after birth, Apgar score during birth.

DISCUSSION

Pretest knowledge score 39 (78%) had Inadequate knowledge 11 (22%) had moderate knowledge and none of them had adequate knowledge. In posttest none of them had Inadequate knowledge, 8 (16 %) had Moderate knowledge, 42 (84%) had Adequate knowledge level. Pretest practice score none of them had Adequate practice, 47 (94%) had Inadequate practice, 3 (6%) had moderate Practice. In posttest 41 (82%) had Adequate Practice, 9 (18%) had

Moderate Practice and none of them had Inadequate Practice. The pretests knowledge mean score was 7.9 and posttest knowledge mean score was 17.5. It is higher than the pretest knowledge mean score. The calculated' value 19 at df (49), which is significant at p.

CONCLUSION

The following conclusion was drawn from the study proved that the effectiveness of multimedia educational intervention on comprehensive home care for preterm among postnatal mothers of preterm, The study findings revealed that 64 Knowledge and practice was significantly improved by multimedia educational intervention.

Nursing Implications

The findings of the study have implication in various areas of nursing education, practice, administration, and nursing research. The findings of the research show the effectiveness of multimedia educational intervention on home care for preterm among postnatal mothers of preterm.

Nursing Administration

Nursing administrator should plan for making awareness of postnatal mothers on care of their preterm. Nurse administrator should facilitate funding to have adequate number of books, journals and newspaper in the library. Nurse administrator can introduce in-service education for postnatal mother who delivered pre term babies at selected hospital.

Nurse administrator should formulate protocols, guidelines and system of care in collaboration with the disciplinary team. Nurse administrator can prepare skilled nurses who can spend time with postnatal mothers to talk through some of the more troubling aspects on care of their preterm.

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Nursing Practice

The multimedia educational intervention is useful strategy in creating awareness on care of their pre-term among postnatal mothers. The finding of the study could serve as a guide to nursing students for planning the health education to improve the knowledge on care of the preterm baby. Nurses have the role to identify and guide the needs of the postnatal mothers 65 on care of their preterm babies.

Nursing Education

The nursing curriculum should emphasize the importance of teaching on care of pre-term. Nursing students need realistic preparation of identifying the problems of postnatal mothers on care of their pre-term. Student nurses must be motivated to prepare and use tools on assessing knowledge and practice of postnatal mothers on care of their pre-term

Nursing Research

The study findings encourage further studies on care of their pre-term for postnatal mothers. The results of this study can be published in nursing journals with the recommendations which will be beneficial to upcoming researchers.

Recommendations for Future Study

On the basis of the study the following recommendations were made. The study could be conducted with large samples. A comparative study can be undertaken the control group and the experimental group. Study can be conducted by using multimodal intervention Study can be conducted by specify aspects of preterm for feeding

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