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A Study to Assess the Effectiveness of Self-Instructional Module on Knowledge Regarding Care of Low Birth Weight Babies among Staff Nurses in Rohilkhand Medical College and Hospital Bareilly, UP.

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Abstract: ***Introduction: Birth weight or size at birth is an important indicator of the child's vulnerability to the risk of childhood illness and to predict the chances of survival. Low birth weight is defined by the world health organization (who) as weight at birth of less than 2.500gram. Low birth weight is considered as the single most important predictors of infant mortality, especially of deaths within the first month of life. Objectives: 1-To assess the existing knowledge of staff nurses regarding care of low birth weight baby.2-To assess the effectiveness of self-instructional module on knowledge regarding care of low birth weight baby.3-To find out the association between knowledge score with their selected demographical variables. Methodology: A pre-experimental research design with one group pre-test and post-test design with no control group. The present study was conducted in Rohilkhand medical college and hospital, in Bareilly, U. P. The target population of the present study includes The 40 staff nurses. Result: Findings regarding demographic variables showed majority were females in the age group of 31-35 years or 25-30 years. Findings related to effectiveness of SIM showed that the overall mean knowledge score in pretest is 37% and in post-test 76.4%. Significant at 9.433% level. Paired t test vale is 20.74. DF value is 39. Tabulated value is (chi-square) 2.023. Conclusion: This study concluded that SIM was effective in improving the knowledge of the staff nurses regarding care of low birth weight baby.***

Keywords: Low birth, Staff nurses, Self-instructional module, Kangaroo mother care

1. Introduction

Low birth weight is considered as the single most important predictor of infant mortality, especially of deaths with in the first months of life. These are, many problems occur during the intranatal and postnatal life of the neonates. Low Birth Weight is associated with poor nutrition, inadequate prenatal care, unemployment, overcrowding and poor housing (Gissler et al., 2009; Piekala et al., 1986; Magadi, 2006; Munjaja, 2007). Birth weight or size at birth is an important indicator of the child's vulnerability to the risk of childhood illnesses and to predict the child's future health, development, and the chances of survival.1

This special group requires extra care and positive interaction (mother-infant interaction) to minimize the risk of developmental delay and to enhance their survival. WHO strongly supports that at every birth skilled care is the foundation for preterm babies. During the first years of children effective intervention can cushion them from the negative effects of preterm birth. The most common types of interventions for low birth weight infants are parent-based interventions and early education programs.2

Factors contributing to Low Birth Weight in developing countries include inadequate weight gain during pregnancy, low pre-pregnancy weight, short stature, and malaria and other infectious diseases, hard physical work during pregnancy, social factors such as lower status of women, malnutrition, and lack of antenatal care. This is because low birth weight (LBW) has been shown to be directly related to both immediate, long-term and very long-term development and well-being.3

Among the major child health challenges facing the world at the turn of the new millennium is the problem of high neonatal mortality. The global burden of newborn deaths is estimated to be a staggering five million per annum. Only 2% (0.1 million) of these death occur in developed countries, the rest 98% (4.9 million) take place in the developing countries.4

The cause of preterm birth is often not known. Risk factors include diabetes, high blood pressure, being pregnant with more than one baby, being either obese or underweight, a number of vaginal infections, tobacco smoking, and psychological stress, among others.5

The World Health Organization defined the term "Low birth weight" as birth weight less than 2500 kilograms. It defines as the weight of an infant at birth less than 2.5 kilograms irrespective of gestational age of infant. During the first years of children, effective intervention can cushion them from the negative effects of preterm birth. The most common types of interventions for low birth weight infants are parent-based interventions and their early education programs.6

2. Material and Methods

A pre-experimental research approach with experimental research design was used for the study to assess the effectiveness of staff nurses on care of low birth weight baby. The populations comprised of nursing staff were selected from Rohilkhand medical college and hospital, Bareilly. Staff nurses who were willing to give consent and participate in the study, staff nurses who are available at the time of data collection were included in the study. The staff nurses were selected by Non probability purposive sampling technique. On the basis of standard sample size calculation total 40 subjects were recruited for the study. Self-developed structured knowledge questionnaire was used to assess the knowledge of staff nurse on care of low birth weight baby. After explaining the purpose of the study written consent was taken from the participants before starting data collection. Assurance was given to the subjects that the anonymity of each individual will be maintained.

3. Result and Discussion

Table 1: Frequency and percentage distribution of staff nurses to socio-demographic variables.

S. No	Demographic Variables	Frequency	Percentage
1	Age		
	20-25	02	5%
	25-30	17	42.5%
	31-35	18	45%
	36 or Above	03	7.5%
2	Gender		
	Male	12	30%
	Female	28	79%
3	Professional education		
	ANM	02	5%
	GNM	36	90%
	BSC (N)	01	2.5%
	Others	01	2.5%
4	Marital status		
	Married	20	50%
	Unmarried	20	50%
	Divorced	0	0
5	Years of education		
	0-3	04	10%
	3-6	18	45%
	6-9	18	45%
	9 or above	0	0
6	Previous exposure of any educational program		
	Yes	40	100%
	No	0	0

Table no 1 illustrate that approximately majority 18 (45%) were in 31-35 years and, 17 (42%) were in 25-30 age group and, 03 (7.5%) were in 36 or above age group and 02 (5%) were in 20-25 age group. Maximum number of staff nurses 28 (70%) were females and, 12 (30%) were males. Maximum number of staff nurses 36 (90%) were from GNM and, 02 (5%) were from ANM and, 1 (2.5%) were from BSc (N) and others. Majority number of staff nurses 20 (50%) were married and, 20 (50%) were unmarried and 0% were divorced. Majority of staff nurses 18 (45%) were having 3-6 years of experience and, 18 (45%) were having 6-9 years of experiences and, 4 (10%) were having 0-3 years of experience and, 0% were having 9 or above years of experience. Maximum number of staff nurses 40 (100%) were having previous exposure of any educational program and, 0% were not having previous exposure of any educational program.

Table no2 frequencies and percentage distribution of knowledge level of staff nurses on care of low birth weight baby

Level of knowledge	Pre-test knowledge score			Post-test knowledge score		
	Score	N	%	Score	N	%
Adequate	21 – 30	0	0%	21-30	24	60%
Moderate	11 – 20	28	70%	11-20	15	37.5%
Inadequate	0-10	12	30%	0-10	1	2.5%

Table no 2 revels that, the knowledge level in **pre-test** was, staff nurses were having adequate 0% of knowledge on care of low birth weight baby, 70% of staff nurses were having moderate knowledge, and, 30% of staff nurses were having knowledge on care of low birth weight baby.

In **post-test** staff nurses having adequate knowledge were 60% and, moderate knowledge were 37.5% and, inadequate knowledge were 2.5% on care of low birth weight baby.

Table 3: Association of knowledge score and demographic variables among nursing students

S. No	Demographic variables	Good	Average	Poor	Chi-square CAL TAB	DF	Significant or non-significant
1	Age 20-25 25-30 31-35 30 0r above	 0 17 18 0	 02 0 0 03	 0 0 0 0	37.81 12.59	6	S χ^2
2	Gender Male Female	 0 28	 12 0	 0 0	235.81 5.99	2	S χ^2
3	Professional education ANM GNM BSC N OTHERS	 0 36 0 0	 2 0 0 0	 1 0 1 0	1.28 12.59	6	NS χ^2
4	Marital status Married Unmarried Divorced	 20 20 0	 0 0 0	 0 0 0	40 9.49	4	S χ^2
5	Years of experience 0-3 3 – 6 6-9 9 or above	 0 18 18 0	 4 0 0 0	 0 0 0 0	4.96 12.59	6	NS χ^2
6	Previous exposure of educational program Yes No	 40 0	 0 0	 0 0	1 5.99	2	S χ^2

Table no 3 shows that there demographic variables, i.e. Age, gender, marital status, in-service educations were significant. Hence, a research hypothesis is accepted for age, gender, marital status, previous exposure of educational program demographic variables. In remaining demographic variables there were not significant factors affecting care of low birth weight baby among staff nurses with demographic variable. Hence, a research hypothesis is accepted for remaining demographic variable.

4. Conclusion

This study concluded that Self-instructional module was effective in improving the knowledge of the staff nurses regarding care of low birth weight baby.

Ethical clearance: Ethical committee permission was done obtained from the ethical committee of Rohilkhand College of nursing, Bareilly.

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Conflict of interest: Nil

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