

A Pre-Experimental Study to Assess the Effectiveness of Planned Teaching on Knowledge regarding Care of Low-Birth-Weight Baby among Postnatal Mothers from Selected Hospital

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Abstract: Introduction: This pre-experimental study was conducted to assess the effectiveness of planned teaching on knowledge regarding care of low-birth-weight baby among postnatal mothers from selected hospital. Objective: Primary objective- The main objective was to assess the effectiveness of planned teaching on knowledge of postnatal mothers regarding care of low-birth-weight baby. Research Approach: An Interventional approach was considered as appropriate for the present study. Research Design: In this study pre-experimental one group pre-test post- test research design was used. Sample: 80 postnatal mothers had participated in this study. Sampling Technique: Non probability convenience sampling technique was used for the present study. Tool:- Structured knowledge questionnaires to evaluate knowledge was used to collect information. Result: In pre-test, out of 80 postnatal mothers, 1(1.25%) of postnatal mothers had poor level of knowledge score, 28(35%) of postnatal mothers had average level of knowledge score and 51(63.75%) of postnatal mothers had good level of knowledge score. None of the postnatal mothers had, very good, excellent level of knowledge score. Mean pre-test knowledge score of the postnatal mothers was 12.95 ± 2.75 . Minimum knowledge score in pre- test was 06 and maximum knowledge score in pre-test was 17. While in post-test, out of 80 postnatal mothers the majority 47.5% of postnatal mothers in post-test had excellent level of knowledge score, 0% had poor level, average level and good level of knowledge score. 52.5% had very good level of knowledge score and 47.5% had excellent level of knowledge score. Mean post-test knowledge score of the postnatal mothers was 24.21 ± 2.67 . Minimum knowledge score in post-test was 20 and maximum knowledge score in post- test was 29. Conclusion: After the detailed analysis of the data, it was concluded that the Lecture Cum Demonstration method helps the postnatal mothers to improve their knowledge regarding care of low-birth-weight baby.

Keywords: effectiveness, planned teaching, post-natal mothers, low birth weight babies

1. Introduction

The birth weight of an infant is the single most necessary determinant of its chances of survival, growth and development. The ideal birth weight for a neonate is 2500 kg and more. As per World Health Organization low birth weight baby (LBW) is one with a birth weight of less than 2500 grams the measurement being taken within the first few hours of life, prior significant postnatal weight loss has occurred.¹

An extremely low birth weight infant is defined as one with a birth weight of lesser than 1000 gram (2 lb, 3 oz). Most extremely low birth weight infants are also the youngest of premature neonates, usually born at 27 weeks' gestational age or younger.²

The prevalence of HIV increased from 2005 to 2011 in most of the regions Ethiopia (1.4% in 2005 and 1.5% in 2011), including Dire Dawa, Addis Ababa, Gambella, South Nations, SNNPR, Benishangule Gumuz, and Somali. On the other hand, in the later 5 years duration, 2011 to 2016, the prevalence was decreased in all of the administrative regions, decreasing from 1.5% to 0.9%. the pooled prevalence of HIV in pregnant women in Ethiopia was 5.74%. Besides, subgroup analysis was done based on different regions of Ethiopia and there is significant variation in HIV prevalence between regions, the pooled prevalence among subgroups indicated 9.50% in Amhara, 4.80% in Addis Ababa, 2.14%

in SNNP, and 4.48% in the Oromia region. This pooled estimate is greater than the national HIV prevalence among the general population of Ethiopia.³

Objective of the study: Primary objective was to assess the effectiveness of planned teaching on knowledge of postnatal mothers regarding care of low-birth-weight baby. Secondary Objectives were to assess the existing knowledge regarding care of low-birth-weight baby among postnatal mothers from selected hospital, to evaluate the effectiveness of planned teaching on knowledge regarding care of low-birth-weight baby among postnatal mothers and to associate the knowledge regarding care of low-birth-weight baby among postnatal mothers with their selected demographic variables.

2. Material and Methods

80 post-natal mothers participated in this study. Interventional research approach with pre-experimental one group pre-test and post-test research design was used. Non-Probability Convenient sampling technique was used to select the sample. The data were collected from selected hospital, using socio demographic data sheet and Structured knowledge questionnaires to evaluate knowledge was used to collect information. The knowledge questionnaire consisted of 30 multiple choice questions.

Tools

Section I: Demographic Data

The investigator constructed a tool to collect the background data of the study postnatal mothers. It includes age, type of family, religion, and educational status, number of deliveries, occupation and monthly family income (Rs) respectively.

Section II: Self-Structured knowledge questionnaire

The investigator constructed 30 items to assess the knowledge of post-natal mothers. There are 30 multiple choice questions.

Statistical Analysis

Statistical analysis was done using SPSS Version 26.0 (SPSS Inc., Chicago, Illinois, USA). Continuous variables were expressed as Mean+SD and categorical variables were summarized as percentages. Chi Square test or Fisher's exact test, whichever appropriate, was used for comparison of categorical variables. Graphically the data was presented by cylindrical, conical bar diagrams. P-value of less than 0.05 was considered statistically significant. The reliability of that tool was 0.82 by using Karl Pearson's correlation coefficient and hence the tools are reliable and valid.

3. Results

Results are divided into four sections:

Section A:

This section deals with percentage wise distribution of postnatal mothers with regards to demographic variables as shown in table no. 1

Section B:

This section dealt with the assessment of level of pre-test and post-test knowledge regarding care of low-birth-weight baby among postnatal mothers from selected hospital. The level of knowledge is divided under following heading as poor, average, good and very good. In pre-test, out of 80 postnatal mothers, 1(1.25%) of postnatal mothers had poor level of knowledge score, 28(35%) of postnatal mothers had average level of knowledge score and 51(63.75%) of postnatal mothers had good level of knowledge score. None of the postnatal mothers had, very good, excellent level of knowledge score. Mean pre-test knowledge score of the postnatal mothers was 12.95 ± 2.75 . Minimum knowledge score in pre-test was 06 and maximum knowledge score in pre-test was 17. While in post-test, out of 80 postnatal mothers the majority 47.5% of postnatal mothers in post-test had excellent level of knowledge score, 0% had poor level, average level and good level of knowledge score. 52.5% had very good level of knowledge score and 47.5% had excellent level of knowledge score. Mean post-test knowledge score of the postnatal mothers was 24.21 ± 2.67 . Minimum knowledge score in post-test was 20 and maximum knowledge score in post-test was 29.

Section C:

Evaluation of effectiveness of planned teaching programme on knowledge regarding care of low-birth-weight baby among postnatal mothers from selected hospital

Table no. 2 shows the comparison of pretest and post-test knowledge scores of postnatal mothers regarding care of low-birth-weight baby. Mean, standard deviation and mean difference values are compared and student's paired 't' test is applied at 5% level of significance. The tabulated value for $n=80-1$ i.e. 79 degrees of freedom was 1.98. The calculated 't' value i.e. 31.58 are much higher than the tabulated value at 5% level of significance for overall knowledge score of postnatal mothers which is statistically acceptable level of significance. Hence it is statistically interpreted that the Planned Teaching Programme on knowledge regarding care of low-birth-weight baby among postnatal mothers was effective. Thus the H1 is accepted. The difference between pre-test and post-test knowledge score was shown in graph no. 2

Section D:

Association of level of pre-test knowledge score regarding care of low-birth-weight baby among postnatal mothers in relation to demographic variables

Analysis reveals that there is association of knowledge score regarding care of low-birth-weight baby among postnatal mothers with demographic variables found in relation to age, and educational status respectively

Analysis reveals that there is no association of knowledge score regarding care of low-birth-weight baby among postnatal mothers with demographic variables found in relation to type of family, religion, number of deliveries, occupation and monthly family income (Rs) respectively

Analysis reveals that there is association of knowledge score regarding care of low-birth-weight baby among postnatal mothers with demographic variables found in relation to gender

4. Conclusion

The investigator concludes that, according to the findings in the present study shows that the major finding revealed that planned teaching enhanced the knowledge of postnatal mothers about care of low-birth-weight baby. The overall mean of post-test knowledge score of postnatal mothers 24.21 % was apparently higher than the overall mean of pre-test knowledge score 12.95% and was significant at 0.001% level. Paired, 't' = 31.58. $p < 0.05$ indicate that planned teaching was effective in gaining knowledge of postnatal mothers on care of low-birth-weight baby.

Conflict of Interest:

The authors have no conflict of interest.

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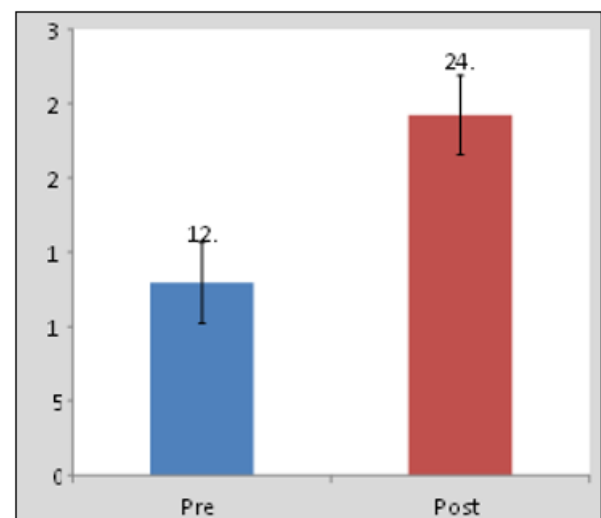
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Table 1: Percentage wise distribution of post-natal according to their demographic characteristics

Demographic Variables	Frequency	Percentage
Age (Years)		
18-23 yrs	14	17.5
24-29 yrs	48	60.0
30-35 yrs	14	17.5
36-40 yrs	4	5.0
Type of family		
Nuclear	25	31.3
Extended	31	38.8
Joint	24	30.0
Educational Status		
Primary Education	9	11.3
Higher Secondary	41	51.2
Secondary Education	18	22.5
Graduation	11	13.8
Post Graduation	1	1.3
Number of deliveries		
One	19	23.8
Two	54	67.5
Three	6	7.5
Four and above	1	1.3
Occupation		
Housewife	30	37.5
Business	26	32.5
Private Job	16	20.0
Government Job	8	10.0
Monthly Family Income (Rs)		
<10000 Rs	9	11.3
10001-20000 Rs	36	45.0
20001-30000 Rs	24	30.0
>30000 Rs	11	13.8

Table 2: Significance of difference between pre-test and post-test knowledge score regarding care of low-birth-weight baby among postnatal mothers from selected hospital

Overall	Mean	SD	Mean Difference	Calculated t-value	p-value
Pre- Test	12.95	2.75	11.26 + 3.18	31.58	0.0001 S, p<0.05
Post- Test	24.21	2.67			



Graph 2: Bar diagram showing significance of difference between pre-test and post-test knowledge score among postnatal mothers in relation to care of low-birth-weight baby among postnatal mothers from selected hospital