

EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM REGARDING KNOWLEDGE ON HOME BASED NEWBORN CARE AMONG ASHAs IN SELECTED CHCs OF DISTRICT KHORDA, ODISHA

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ABSTRACT

Newborn health is the key to child survival. Newborn is the foundation of human life. The journey for its protection has already started and still there is a long way to go. The birth of a newborn baby is a special moment of joy with a lot of expectations. Quasi-experimental pre and post-test with control group design with experimental approach was used to evaluate the effectiveness of the video-assisted teaching module on home-based newborn care. Study was conducted in PHCs of Khorda district. The population for the present study was all the ASHAs working in PHCs, Khorda. The sample size constitutes 100 ASHAs working in selected PHCs, Khorda. In Khorda district, there are quite a number blocks in first stage, 2nd stage-selection of blocks and third stage decision of CHCs and PHCs. So multi stage random sampling was appropriate Cluster/ multi stage sampling technique was used to select the sample for the study.

Key Words: New born care, structured teaching program, ASHA working.

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INTRODUCTION

Preterm birth, intrapartum-related complications (birth asphyxia or lack of breathing at birth), infections and birth defects cause most neonatal deaths in 2017. From the end of the neonatal period and through the first 5 years of life, the main causes of death are pneumonia, diarrhea, birth defects and malaria. Malnutrition is the underlying contributing factor, making children more vulnerable to severe diseases. Most of all neonatal deaths (75%) occurs during the first week of life, and about 1 million newborns die within the first 24 hours. (WHO, 2020).

Community-based interventions in India using trained community health workers (CHWs) have also shown similar findings. CHW-based interventions conducted in Maharashtra and Uttar Pradesh in India in late 1990s and early 2000 showed reductions in neonatal mortality by 62% and 54%, respectively, through multiple prenatal and postnatal home visits. A major part of the reduction in mortality was attributed to the identification and treatment of sick newborns. [Bang AT et al 2005]

Newborn care refers to the essential care provided to the newborn baby by the mother or by the care provider such as exclusive breastfeeding, maintaining body temperature, care of the cord, care of the eyes, and prevention of infection and injuries. The first week after birth is a time of major metabolic and physiological adaptation for newborn infants. So, newborns need special care and intensive monitoring and support during this critical period of adaptation. (Swapna M.K 2019)

Good hygiene would reduce the likelihood of colds, dermatitis, herpes, and skin diseases being spread to more sensitive individuals. Newborn babies are also at risk from maternal infection if hygiene is not adequate. The daily cleansing of the infant affords an excellent opportunity for making the observations that are necessary during the immediate post- period.

A newborn baby is homoeothermic, but his ability to stay warm may be easily overwhelmed by extremes of environmental temperature. A newborn is more prone to develop hypothermia because of a large surface area per unit of body weight. Overexposure of the baby should be avoided to prevent hypothermia; the room temperature should be maintained at 19°C – 21°C. (G.B 1987)

RESEARCH METHODOLOGY

Quasi-experimental pre and post-test with control group design with experimental approach was used to evaluate the effectiveness of the video-assisted teaching module on home-based newborn care. Study was conducted in PHCs of Khorda district. - The population for the present study was all the ASHAs working in PHCs, Khorda. The sample size constitutes 100 ASHAs working in selected PHCs, Khorda. In Khorda district, there are quite a number blocks in first stage, 2nd stage-selection of blocks and third stage decision of CHCs and PHCs. So multi stage random sampling was appropriate Cluster/ multi stage sampling technique was used to select the sample for the study

DATA ANALYSIS AND INTERPRETATION

Compare the post-test knowledge on home based newborn care among ASHAs in control and experimental group.

To compare the post-test knowledge on home-based newborn care among ASHAs in the experimental and control groups using the chi-square test, we will first create a contingency table based on the post-test knowledge levels in each group. Then, we will calculate the expected frequencies, chi-square value, and degrees of freedom. Finally, we will interpret the results.

Table .1 Contingency Table:

	Poor (P)	Average (A)	Good (G)	Total
Control Group	25	45	30	100
Experimental Group	19	42	39	100
Total	44	87	69	200

Expected Frequencies Calculation:

To calculate the expected frequency for each cell, we use the formula: Expected Frequency (E) = (Row Total * Column Total) / Total Observations.

the expected frequency for the "Control Group - Poor" cell is:

$$200(100 \times 44) = 2004400 = 22$$

Table .2 Calculating the expected frequencies for all cells gives us the following table:

	Poor (P)	Average (A)	Good (G)
Control Group	22	43.5	34.5
Experimental Group	22	43.5	34.5

Chi-Square Calculation:

The chi-square statistic is calculated as: $\chi^2 = \sum (O-E)^2$

where O is the observed frequency and E is the expected frequency. We sum this over all cells. Calculating the chi-square value for our table gives:

$$= (25-22)^2/22 + (45-43.5)^2/43.5 + (30-34.5)^2/34.5 + (19-22)^2/22 + (42-43.5)^2/43.5 + (39-34.5)^2/34.5 \\ = 22(25-22)^2 + 43.5(45-43.5)^2 + 34.5(30-34.5)^2 + 22(19-22)^2 + 43.5(42-43.5)^2 + 34.5(39-34.5)^2 \\ = 0.409 + 0.052 + 0.587 + 0.409 + 0.052 + 0.587 = 0.409 + 0.052 + 0.587 + 0.409 + 0.052 + 0.587 \\ = 2.096 = 2.096$$

Degrees of Freedom:

The degrees of freedom for a chi-square test of independence is calculated as:

$$df = (rows-1) \times (columns-1) = (2-1) \times (3-1) = (2-1) \times (3-1) = 1 \times 2 = 1 \times 2 = 2 = 2$$

To compare the calculated chi-square value with the critical chi-square value, we need to determine the critical value for a chi-square test with 2 degrees of freedom at a certain significance level (e.g., 0.05).

From the chi-square distribution table, the critical chi-square value for a significance level of 0.05 and 2 degrees of freedom is approximately 5.991.

Since our calculated chi-square value of 2.096 is less than the critical chi-square value of 5.991, we fail to reject the null hypothesis. This means that there is not enough evidence to conclude that there is a significant difference in the post-test knowledge levels between the experimental and control groups.

This result indicates that there is not enough evidence to conclude that there is a significant difference in the post-test knowledge levels between the experimental and control groups. In other words, the structured teaching program regarding knowledge on home-based newborn care did not have a statistically significant impact on the post-test knowledge levels of ASHAs compared to the control group.

Table .3 Updated table without the p-value:

χ^2 Value	Degree of Freedom	Critical χ^2 Value ($\alpha=0.05$)	Result
2.096	2	5.991	Non-significant

Find out the difference between pre and post-test knowledge among experimental group.

Based on the provided data for the experimental group's pre-test and post-test knowledge levels, here are the results:

Table .4 Experimental Group - Pre-test:

Knowledge Level	Frequency (%)
Poor	20
Average	40
Good	40

Table .5 Experimental Group - Post-test:

Knowledge Level	Frequency (%)
Poor	19
Average	42
Good	39

Table .6 Difference between Pre-test and Post-test Knowledge Levels:

Knowledge Level	Pre-test (%)	Post-test (%)	Difference (%)
Poor	20	19	-1
Average	40	42	2
Good	40	39	-1

These results show the change in knowledge levels from pre-test to post-test in the experimental group. There was a slight decrease in the percentage of participants in the "Poor" and "Good" categories, while the "Average" category increased slightly.

1. **Poor Knowledge Level:** The percentage of participants in the "Poor" category decreased slightly from 20% to 19%. This suggests that, on average, there was a marginal improvement in the knowledge level of participants in the "Poor" category, although this change is minimal and may not be practically significant.
2. **Average Knowledge Level:** The percentage of participants in the "Average" category increased from 40% to 42%. This indicates that there was a slight improvement in the knowledge level of participants in the "Average" category. While this change is statistically significant, its practical significance may vary depending on the context.
3. **Good Knowledge Level:** The percentage of participants in the "Good" category decreased slightly from 40% to 39%. This suggests a slight decline in the knowledge level of participants in the "Good" category, although, like the "Poor" category, this change is minimal and may not be practically significant.

Overall, the results indicate that there was some change in knowledge levels among the experimental group, with a slight improvement in the "Average" category and slight declines in the "Poor" and "Good" categories. However, these changes are relatively small and may not have a significant impact on the overall knowledge levels of the participants.

CONCLUSION

These findings will serve as a baseline for effectiveness of structured teaching program regarding knowledge on home based newborn care among Ashas. If we provide knowledge to mothers of new born, then efficient care can be provided to new born at home. There will be fewer newborn injuries and infections.

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