

Effectiveness of Structured Teaching Programme on Knowledge regarding Neonatal Jaundice among Post-Natal Women at Govt. Doon Medical College and Hospital Dehradun (U.K)

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Abstract: Background: Neonatal jaundice is a yellowish discoloration of the white part of the eyes and skin in a newborn baby due to high Bilirubin levels. Globally, every year, about 1.1 million babies develop severe hyperbilirubinaemia with or without Bilirubin encephalopathy. Objectives: To determine the knowledge, on neonatal jaundice of postnatal women in Government Doon Medical College and Hospital Dehradun (GDMH), Dehradun Uttarakhand. Material and methods: quasi-experimental research design with pre test post test control group was used in the study. purposive sampling technique was used to collect data from 60 Postnatal women with age group of 20 to 35 years above and were distributed in two groups (30 each in control and experimental group). Data collection accomplished by using self structured questions. Results: the finding shows that in both groups the test p-value was <0.001 significant. Conclusion: this study concludes that the structured teaching programme was effective in improving knowledge regarding neonatal jaundice.

Keywords: Neonatal jaundice, knowledge among postnatal women

1. Introduction

Globally 2.6million new born died in 2016 which accounted for 46% of all under 5deaths.Five countries (India, Pakistan, Nigeria, Democratic Republic of Congo and Ethiopia) accounted for half of all neonatal mortality deaths. India accounts for 24% of global neonatal mortality. In the terms of absolute numbers this translates to 640000 deaths in first four weeks of life.¹

In Developed countries reveals that blood incompatibilities are the main causes of neonatal jaundice, whereas prematurity, low birth weight, G6PD deficiency, infection, and traditional practice such as herbal consumption and application of dusting powder were causes of neonatal jaundice in developing countries.²

Neonatal jaundice affects 60% of full term infants and 80% of preterm infants, Bilirubin level greater than 5mg/dl in the first week of life and about 6% of term babies will have Bilirubin level exceeding 15mg/dl. Neonatal jaundice is a yellowing of the skin and other tissues of a newborn infant with a Bilirubin level of more than 5mg/dl.³

Most cases are physiological; but if the Bilirubin levels reach to highest value it becomes dangerous especially for central nervous system; which may lead to impairment and disabilities such as cerebral palsy, deafness, mental retardation, or gross developmental delays, especially in the developing countries. Also, it may lead to neonatal death. These severe complications may have resulted from Bilirubin accumulation in the brain tissue. So, NNJ must be carefully evaluated and prevented from progress.⁴

Focuses on the importance of monitoring and identifying those early discharged infants who are at risk for developing

complications of jaundice, by utilizing standing orders in morning babies within 24hours of discharged, Bilirubin level can be assessed in the home setting, required intervention can be implemented and unplanned emergency room visits and hospital readmission can saved.⁵

2. Material and Methods

Study design:

The study was conducted at Government Doon Medical College and Hospital, Dehradun, Uttarakhand, India, From 10 October 2021 to 7 November 2021. Quantitative Research Approach with quasi experimental design (pre-test post-test control group design) was used. Non-Probability purposive sampling technique was used for collecting the sample which comprised of 60 postnatal women (30 Experimental & 30 Control group) in between 20 to 35 years above.

Inclusion criteria:

- 1) Postnatal women admitted in the postnatal ward at the time of data collection.
- 2) Postnatal women who were willing to participate in the study and who were able to read and write Hindi and English.

Exclusion criteria:

- 1) Postnatal women who were not available at the time of data collection.
- 2) Postnatal Women who had undergone Normal delivery and Caesarean section.

Data collection tools

The tool used was **Section I:** Socio-Demographic variables. It includes Age, Education Qualification, Types of Family, Occupation, Area of Residence, Parity, Mode of Delivery and Source of Information .**Section II:** Structured

questionnaire to assess the knowledge on Neonatal jaundice the content validity of the tool were obtained by submitting the tools to 7 experts in the field of Medicine and Nursing .tools were translated to Hindi and retranslated to English by language expert. Structured questionnaire on knowledge was used to collect the data. Tools were administered to 10 postnatal women to determine the reliability by split half method. The reliability co-efficient value of tool was (r=0.80)

Statistical Analysis

Data was analyzed by using descriptive statistics (frequency and percentage, mean and standard deviation) and Inferential statistics was used that is (Paired t-test and chi square test).MS Excel and SPSS were used for Statistical analysis.

3. Results of the Study

The study was included a total of 60 Postnatal women. The post-test Mean score was higher than pre test Mean score of knowledge there is a significant difference between the pre-test and post-test values such as, the mean \pm SD score on level of knowledge in Experimental group was (9.80 \pm 3.66154) in pre-test and (17.9667 \pm 3.82806) in post –test, mean difference was (1.10) ,”t “value was (11.06) The mean \pm SD score on level of knowledge in control group was (8.70 \pm 3.06425) in pre-test and (9.066 \pm 2.21178) in post – test , mean difference was (8.900000), ‘t’ value was (1.26). Frequency and percentage distribution of demographic variables among Postnatal Women is show in Table 1.

Table 1: Frequency and Percentage Distribution of Demographic Variables among Postnatal women, N=60

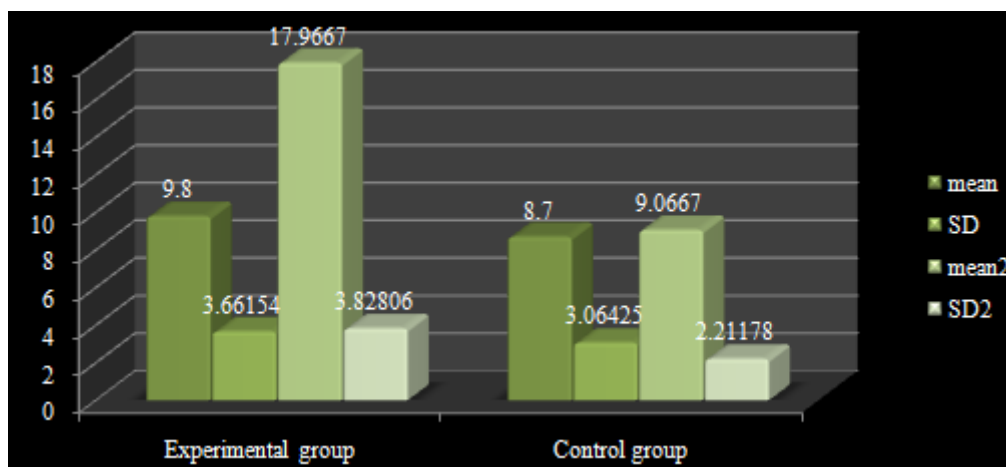
S.No	Socio- Demographic Variables		Experimental Group (N=30)	Control Group (N=30)
			n (%)	n (%)
1	Age	a. 20-24 years	14 (46.66)	17 (56.66)
		b. 25-30 years	14 (46.66)	12 (40.00)
		c. 31-35years	02 (06.66)	00 (00.00)
		d. >35 years	00 (00.00)	01 (3.33%)
2	Education Qualification	a. Illiterate	03 (10.00)	02 (06.66)
		b. Primary	02 (06.66)	03 (10.00)
		c. Secondary	13 (43.33)	15 (50.00)
		d. Graduate and above	12 (40.00)	10 (33.33)
3	Types of the Family	a. Nuclear Family	05 (16.66)	09 (30.00)
		b. Joint Family	25 (83.33)	21 (70.00)
		c. Extended family	00 (00.00)	00 (00.00)
4	Occupation	a. Private	00 (00.00)	03 (10.00)
		b. Self Employed	02 (06.66)	00 (00.00)
		c. Government	00 (00.00)	00 (00.00)
		d. House Wife	28 (93.33)	27 (90.00)
5	Area of Residence	a. Urban	17 (56.66)	16 (53.33)
		b. Rural	13 (43.33)	14 (46.66)
6	Parity	a. Primipara	21 (70.00)	21 (70.00)
		b. Multipara	09 (30.00)	09 (30.00)
7	Mode of Delivery	a. Normal delivery	15 (50.00)	16 (53.33)
		b. Caesarean Section	15 (50.00)	14 (46.66)
8	Source of Information	a. Mass Media	03 (10.00)	01(03.33)
		b. Friends	02 (06.66)	01 (03.33)
		c. Health workers	00(00.00)	02(06.66)
		d. No information	25(83.33)	26(86.66)

Table 1 show that experimental group (46.66%) of postnatal women were in the age group of 20-24 years. In the control group, (56.66%).Majority of women in experimental group (43.33%) had Secondary and control group (50%) had secondary. In the experimental group,(83.33%) of the women were from joint family and control group (70%) of f the women were belongs to the joint families. (93.33%) of them were housewife in the experimental group , whereas in the control group (90%) of the postnatal women were housewife. (56.66%) in experimental group and (53.33%) control group were Residence of urban area. Majority (70%) of subjects in both group were Primipara. (50%) in experimental group Caesarean Section and (53.33%) in control group were normal delivery. (83.33%) in the experimental group had postnatal women who had no information and (86.66%) of the postnatal women in control group had no information.

3.2. Description of pre-test and post –test knowledge score of postnatal women regarding neonatal jaundice In Pre-test, Experimental group, 8 (26.7%) of postnatal women have Good knowledge score, 15 (50.0 %) have fair knowledge score and 7(23.3%) have poor knowledge score. In Post-test, Experimental group 1 (3.3%) of postnatal women have Excellent knowledge were, 14 (46.7%) postnatal women have very good knowledge ,12 (40%) have good knowledge and 3 (10.0%) postnatal women have Fair knowledge score. In Control group during pre-test, 4(13.3%) have Good knowledge, 18 (60.0%) of Postnatal women have fair knowledge score and 8(26.7%) Postnatal women have poor knowledge score. In Post-test, 26 (86.7%) have Fair knowledge score and 4 (13.3%) Postnatal women have Poor knowledge score.

Table 2: (figure:1) Comparison between pre-test and post-test level of knowledge among postnatal women of regarding neonatal jaundice between the experimental and control groups, N=60

S. No	Level of knowledge	Experimental group (Mean \pm SD)	Control group (Mean \pm SD)	't' value (cal)	DF	p (Value)
1.	Pre-test	9.8000 \pm 3.66154	8.7000 \pm 3.06425	11.06	1.100000	0.000
2.	Post-test	17.9667 \pm 3.82806	9.0667 \pm 2.21178	1.26	8.900000	0.212

**Figure 1:** Indicates that there was no statistically significant comparison between the experimental and control group in the pre-test and post-test with $p > 0.05$. There was no such difference between the experimental and control groups in pre-test and post-test Neonatal jaundice among postnatal women.

3.4. Association between post test knowledge scores of postnatal women with selected demographical variables

No association was found between knowledge scores of experimental and control group with their selected socio demographic variables (age, education, occupation, parity, types of family, area of residence, mode of delivery and source of information).

4. Discussion

1) To assess the pre-test and post-test knowledge score on neonatal jaundice among postnatal women in experimental and control group

In Pre-test, Experimental group, 8 (26.7%) of postnatal women have Good knowledge score, 15 (50.0%) have fair knowledge score and 7(23.3%) have poor knowledge score. In Post-test, Experimental group 1 (3.3%) of postnatal women have Excellent knowledge were, 14 (46.7%) postnatal women have very good knowledge, 12 (40%) have good knowledge and 3 (10.0%) postnatal women have Fair knowledge score. In Control group during pre-test, 4 (13.3%) have Good knowledge, 18 (60.0%) of Postnatal women have fair knowledge score and 8 (26.7%) Postnatal women have poor knowledge score. In Post-test, 26(86.7%) have Fair knowledge score and 4 (13.3%) Postnatal women have Poor knowledge score.

The above findings are supported by a descriptive cross-sectional study conducted to assess among Nepalese mothers knowledge about neonatal jaundice. The result findings revealed that around half of the mothers (49.90%) had low level of knowledge (score $< 50\%$), 28.60% mothers had moderate level of knowledge score and only 22% mothers had adequate level of knowledge score ($> 75\%$) regarding neonatal jaundice.⁶

2) To assess the effectiveness of structured teaching programme on knowledge regarding neonatal jaundice among postnatal women in experimental group.

In the present study, the mean \pm SD score on level of knowledge in Experimental group was (9.8000 \pm 3.66154) in pre-test and (17.9667 \pm 3.82806) in post-test, mean difference was (1.100000), "t" value was (11.06) The mean \pm SD score on level of knowledge in control group was (8.7000 \pm 3.06425) in pre-test and (9.066 \pm 2.21178) in post-test, mean difference was (8.900000), 't' value was (1.26). There was significant difference between the pre-test and post-test knowledge score of postnatal women. The above findings are supported by a study conducted to assess the effectiveness of educational program on the knowledge and attitude of pregnant women regarding neonatal jaundice. The study findings revealed that there was statistically significant difference between level of knowledge in pre-test and post test (8.7 \pm 2.76 and 23.15 \pm 1.97 respectively with p value (< 0.001)⁷

3) To find out the association between the pre-test knowledge scores among postnatal women in experimental and control group regarding neonatal jaundice with their selected demographic variables.

No association was found between knowledge scores of experimental and control group with their selected socio demographic variables (age, education, occupation, parity, types of family, area of residence, and mode of delivery and source of information).

The above findings are supported by a study conducted to assess the knowledge regarding neonatal jaundice among mothers. The study findings revealed no association between

the selected demographic variables and the knowledge mothers regarding neonatal jaundice.

5. Conclusion

The present study showed that postnatal women had poor knowledge regarding neonatal jaundice and the structured teaching programme was effective in improving knowledge regarding neonatal jaundice

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