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EFFECT OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING NEONATAL JAUNDICE AMONG ANTENATAL MOTHERS

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INTRODUCTION

A child is the gift of God or greatest treasure of mankind. Child's health, wellbeing, safety and future are in the hands of parents from birth to death. The first year of child life is crucial laying the foundation to good health. Almost one in every three babies in the world dies before they are four weeks of life. Fifty percent of neonatal death occurs within first one week of life and majority of them within the first twenty four hours[2]

According to Sample Registration System (SRS) (2019), current Infant mortality rate in India is 33 infant deaths per thousand live births[3] During the physiological process or adaptation, for its survival of the infants life or neonates, have to face many life threatening problems such as asphyxia, hypothermia, hyperthermia, infections and hyperbilirubinemia etc. So the assessment and care of newborn is very essential.[4]

According to the National Institute for Health and Clinical Excellence (NICE) Clinical Guideline, neonatal jaundice (NNJ) is one of the most common morbidity in the 1st week of life, occurring in 60% and 80% of term and preterm newborn, respectively, and is also the most common cause of readmission after discharge from birth hospitalization.[8,9] About 10% of breast-fed babies are still suffering from neonatal jaundice during the first month of their life. It is also accountable for 70% neonatal morbidity and 10% mortality. Unconjugated hyperbilirubinemia in most of the newborns reflects a normal transitional phenomenon and results from several physiologic processes. In some infants, serum bilirubin levels may increase excessively leading to acute and chronic bilirubin encephalopathy causing irreversible brain damage. Thus, neonatal jaundice is an important preventable cause of neurological handicap and early death of affected infants. Limited and wrong parental knowledge, beliefs passed along years to mothers, perceptions and parental attitude toward the condition may possibly explain delay in seeking medical advice immediately.[10]

NEED OF THE STUDY.

Generally, many cases of neonatal jaundice which were unnoticed or identified late by mothers will cause them to be late to be presented to the hospital. These may cause several complications such as bilirubin encephalopathy, and even death . Therefore, it is important for mothers to be able to determine neonatal jaundice early so that they may seek successful educational program earlier. Nowadays, the incidence of neonatal jaundice is very high. A wide range of literature suggests that the increased incidence of neonatal jaundice is due to the lack of knowledge regarding identification and prevention. Studies support that education to antenatal mothers on neonatal jaundice will be helpful in reducing the incidence.

STATEMENT OF THE PROBLEM

A study to assess the effect of structured teaching programme on knowledge regarding neonatal jaundice among antenatal mothers in selected hospitals at Perinthalmanna.

OBJECTIVES OF THE STUDY

- Assess the level of knowledge regarding neonatal jaundice among antenatal mothers.
- Evaluate the effect of structured teaching program on knowledge regarding neonatal jaundice among antenatal mothers.

- Find the association between pretest level of knowledge regarding neonatal jaundice among antenatal mothers with their selected demographic and obstetric variables.

OPERATIONAL DEFINITIONS

ASSESS: - In this study, it is the systematic process of collecting and interpreting data from antenatal mothers regarding knowledge on neonatal jaundice as measured by structured knowledge questionnaire.

EFFECT: - It refers to changes in the level of knowledge regarding neonatal jaundice among antenatal mothers as measured by structured knowledge questionnaire.

STRUCTURED TEACHING PROGRAMME: - In this study, it refers to a systematically organized and planned teaching programme designed by a researcher to provide information regarding neonatal jaundice to the antenatal mothers with the help of structured lesson plan and power point presentation and it include definition, incidence, causes, types, risk factors, signs and symptoms, preventive measures, management of neonatal jaundice and care of newborn under phototherapy for 45 minutes, on group basis.

KNOWLEDGE: - It refers to level of awareness of the antenatal mothers about neonatal jaundice as elicited by structured knowledge questionnaire.

ANTENATAL MOTHERS: - It refers to the women who are coming to antenatal outpatient department for regular visit with 32-35 weeks of gestation.

NEONATAL JAUNDICE: - It refers to yellow discoloration of the skin and other tissues of a newborn upto 28 days due to elevated bilirubin level. It may be pathological or physiological jaundice.

HYPOTHESIS

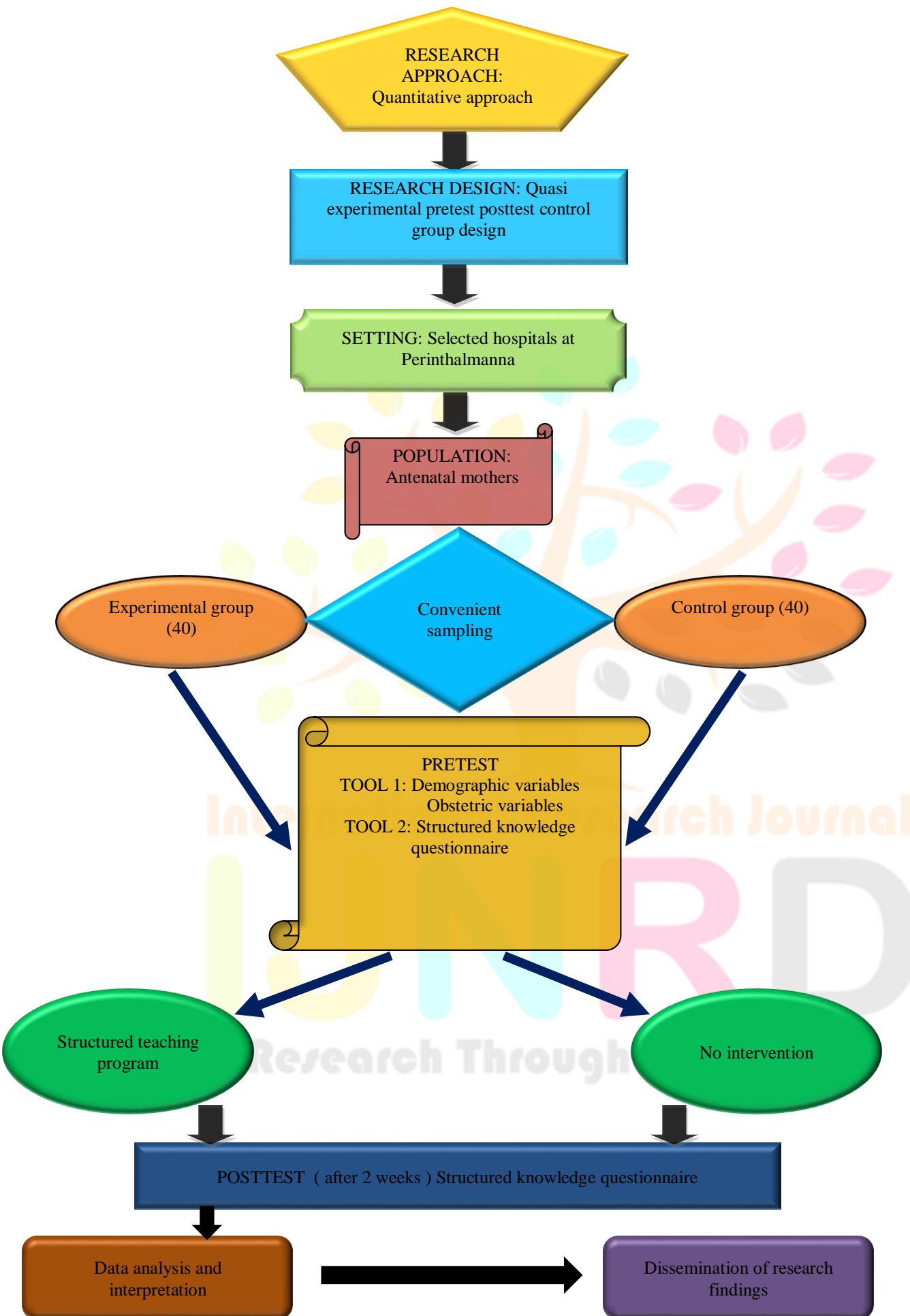The hypotheses are tested at 0.05 level of significance.
H_1: There is a significant difference between the mean pretest and posttest level of knowledge scores regarding neonatal jaundice among antenatal mothers in the experimental group.
H_2: There is a significant difference between the mean posttest level of knowledge scores regarding neonatal jaundice among antenatal mothers in experimental and control group.
H_3: There is a significant association between pretest level of knowledge scores of antenatal mothers with selected demographic variables and obstetric variables.

RESEARCH METHODOLOGY

RESEARCH APPROACH: Quantitative approach

RESEARCH DESIGN: Quasi experimental pretest posttest control group design

SETTING: Selected hospitals at Perinthalmanna

POPULATION: Antenatal mothers

Convenient sampling

Experimental group (40)

Control group (40)

PRETEST
TOOL 1: Demographic variables
Obstetric variables
TOOL 2: Structured knowledge questionnaire

Structured teaching program

No intervention

POSTTEST (after 2 weeks) Structured knowledge questionnaire

Data analysis and interpretation

Dissemination of research findings

TOOLS AND INSTRUMENTS

FIGURE 2. SCHEMATIC REPRESENTATION OF THE STUDY

Development and selection of the tool

In this study a Demographic Proforma and Structured knowledge questionnaire was used. The tools were prepared by the investigator after an extensive review and in consultation with medical and nursing experts. It was considered to be most appropriate tool to elicit response from the antenatal mothers. The data collection process was based on self reporting technique.

Description of the tool

Data collection instruments consists of following sectors.

The tools were,

Tool 1: Demographic data

It consists of 8 items. It includes age, religion, education, occupation, income, type of family, previous source of information, previous experience of care of baby with neonatal jaundice.

Tool 2: Obstetric variables

It consists of 2 items. It includes parity and period of gestation.

Tool 3: structured knowledge questionnaire related to neonatal jaundice

A structured knowledge questionnaire consists of 24 multiple choice questions with single correct answer. A score value of 1 was awarded to each correct response and for wrong response and unanswered zero was awarded. The maximum score on knowledge questionnaire was 24.

Technique: self reporting

Scoring technique

For the tool the scoring key was prepared by coding the demographic variables to assess the background of the subject and assessment of association by statistical analysis.

All the questions in the tool 2 were multiple choice questions with a single correct answer. There were 24 questions. Every correct answer was accorded a score of 1 point and every incorrect/ unanswered was accorded 0. The maximum score of knowledge questionnaire was 24. The knowledge score was arbitrarily classified into 3 groups

Scoring key

Level of knowledge	Score
Poor	1 – 8
Average	9-16
Good	17-24

DATA COLLECTION PROCESS

Data collection is the gathering of information needed to address a research problem.[51]

Data collection was done from 13/07 /2020 to 8 /08 /2020 in Perinthalmanna nursing home and Ramdas clinic and nursing home. Formal permission was obtained from the Principal Alshifa College of Nursing, and administrative sanction from selected hospitals. Based on inclusion criteria 80 primimothers were selected from the antenatal OPD. 40 mothers were conveniently assigned to the experimental group in Perinthalmanna nursing home and 40 mothers conveniently selected for control group in Ramdas clinic and nursing home. The mothers were intimated regarding the purpose of study and the consent was secured. Pretest conducted for both the experimental and control group. Structured teaching program was administered in experimental group. Posttest was conducted for both group by using same tool after 2 weeks.

RESULT

Section A: Distribution of antenatal mothers based on demographic and obstetrical variables

The characteristics of the study population were as follows:

- Regarding age, majority of antenatal mothers (45%) belonged to the age group of 21-25years in the experimental group and in the control group, majority of them (55%) also in the age group of 21-25years.
- In case of religion majority of the antenatal mothers (50%) were Hindu in experimental group and in control group majority of them (62.5%) were Muslim.
- With regard to educational status, majority of the antenatal mothers (55%) had higher secondary education and in the control group majority of them (82.5%)also had higher secondary education.
- With respect to occupation majority of the antenatal mothers (90%) were homemakers in the experimental group and in control group majority of them(90%) were also homemaker.
- In case of family income majority of antenatal mothers (90%) were having 10001-20000 rupees monthly family income and in control group majority of them (85%) were also having 10001-20000 rupees monthly family income.
- Regarding type of family majority of the antenatal mothers (95%) were lives in nuclear family in experimental group and in control group majority of them (87.5%) also lives in nuclear family.
- In case of previous source of information majority of antenatal mothers (57.5%) had previous source of information from mass media and in control group majority of them also had previous source of information from mass media.
- With respect to previous experience of care of baby with neonatal jaundice majority of them (97.5%) not had previous experience of care of baby with neonatal jaundice in experimental group and in control group all of them (100%) not had previous experience of care of baby with neonatal jaundice.
- With regard to parity in experimental group majority of antenatal mothers were parity of 1 and in control group 42.5% of antenatal mothers are nulliparous and also 42.5% of antenatal mothers were parity of 1.

- In case of period of gestation majority of antenatal mothers in experimental group were in 32 weeks of gestation and in control group majority of antenatal mothers were in 33 weeks of gestation

Section B: Assessment of pretest and posttest level of knowledge regarding neonatal jaundice among antenatal mothers

This section deals with the assessment of pretest and posttest level of knowledge regarding neonatal jaundice among antenatal mothers in selected hospitals at perinthalmanna.

In the pretest of 40 antenatal mothers of experimental group, none of them had good knowledge, 22.5% had average knowledge, 77.5% had poor knowledge. But the post test revealed that 50.00% had good knowledge and 50.00% had average knowledge. None of them had poor knowledge.

In the pretest of 40 antenatal mothers of control group, none of them had good knowledge, 22.5% had average knowledge, 77.5 % had poor knowledge. In posttest majority of the antenatal mothers 90.00 % had poor knowledge and also 10.00% had average knowledge.

Section C: Analysis of the effect of structured teaching program on knowledge regarding neonatal jaundice among antenatal mothers.

This section deals with the analysis of the of effect of structured teaching program on knowledge regarding neonatal jaundice among antenatal mothers in selected hospitals at perinthalmanna.

The comparison of posttest knowledge score between the experimental and control group showed that the mean posttest score of experimental group was 15.88 with a standard deviation of 3.84 and the mean posttest score of control group was 6.93 with a standard deviation of 1.58. The difference in the level of knowledge of the two groups were analyzed using 'unpaired t 'test. The calculated t value was 13.625 with a p value of <0.001 which was highly significant at 0.05 level, and showed that the structured teaching program was effective in improving knowledge regarding neonatal jaundice among antenatal mothers.

Section D: Association between pretest level of knowledge of antenatal mothers and selected demographic and obstetrical variables

This section deals with the association between pretest level of knowledge of antenatal mothers and selected demographic and obstetrical variables.

The present study revealed that there was a statistically significant association between the pretest level of knowledge of antenatal mothers and previous source of information. The study also revealed that, there was no statistically significant association between pretest level of knowledge of antenatal mothers and selected variables like age in years, religion, educational status, occupational status, income per month in rupees, type of family, previous experience of care of baby with neonatal jaundice, parity and period of gestation.

DISCUSSION

The purpose of the study was to assess the effect of structured teaching program on knowledge regarding neonatal jaundice among antenatal mothers in selected hospitals at Perinthalmanna.

The first objective of the study was to assess the level of knowledge regarding neonatal jaundice among antenatal mothers. In this study, assessment of pretest level of knowledge score of antenatal mothers in experimental group revealed that 77.5% had poor knowledge and the remaining 22.5% were had average knowledge. Mean pretest knowledge score was 6.55. Assessment of posttest knowledge level revealed that 50% had good knowledge and remaining 50% were had average knowledge. Mean posttest knowledge score was 15.88 hence it showed that there was a significant improvement in the post test knowledge level.

The present study was supported by the study to assess the knowledge regarding neonatal jaundice among mothers in selected villages in Nepal. The results showed that among 177 mothers around half of the mothers (49.90%) had low level of knowledge (score 75%) regarding neonatal jaundice.

The second objective of the study was to evaluate the effect of structured teaching program on knowledge regarding neonatal jaundice among antenatal mothers. The present study findings includes comparison of pretest and posttest scores of experimental and control group showed that the mean pretest knowledge score of antenatal mothers in experimental group was 6.55 and posttest knowledge score of experimental group was 15.88 with a standard deviation of 2.41 and 3.84 and that of control group was 7.10 and 6.93 with a standard deviation of 1.99 and 1.58. The calculated t value of experimental group was 15.927 was statistically highly significant at 0.05 level with a p value <0.001. Hence it is evident that structured teaching program was effective for improving knowledge regarding neonatal jaundice among antenatal mothers.

The present study was supported by the study to assess the effect of educational intervention on the knowledge and practice among parents of newborns with jaundice in Mahdieh and Mofid hospitals in Tehran- Iran. The participants were randomly assigned to the trained group (n = 192), who receiving educational programs in three sessions that each sessions was about 45 minutes and the control group (n = 192), without any educational intervention. The mean score for the level of knowledge toward neonatal jaundice was higher in educational group compared to the control group. The study concluded that training programs significantly improving the level of knowledge and practice.

The third objective was find the association between pretest level of knowledge regarding neonatal jaundice among antenatal mothers with their selected demographic and obstetric variables. The analysis revealed that there was a statistically significant association between the pretest level of knowledge of antenatal mothers and previous source of information. The study also revealed that, there was no statistically significant association between pretest level of knowledge of antenatal mothers and selected variables like age in years, religion, educational status, occupational status, income per month in rupees, type of family, previous experience of care of baby with neonatal jaundice, parity and period of gestation.

The present study was contrast with the study to assess the knowledge regarding neonatal jaundice among mothers admitted at Bharati Hospital and Research Centre of Pune city. The results showed that there is no significant association between the selected demographic variables and the knowledge of the mothers regarding neonatal jaundice i.e., age, education, occupation, number of children and history of previous children with neonatal jaundice.

NURSING IMPLICATIONS

The investigator has drawn the following implications from the study which is of vital concern to the field of nursing practice, nursing education, nursing administration and nursing research.

Nursing practice

- Nurses can give awareness among antenatal mothers regarding neonatal jaundice.
- Nurses can utilize the study findings to conduct an appropriate education program to antenatal mothers
- Nurse can conduct teaching program to both literate and illiterate antenatal mothers to enhance their knowledge about neonatal jaundice.
- Nurses can prevent the complications of neonatal jaundice by proving adequate treatment.
- Nurse can give awareness to the public about the type of neonatal jaundice and its complications

Nursing Education

- The findings will help nurse educator to update their knowledge and improve their teaching to antenatal mothers.
- The study helps the nurses to gain the knowledge in preparation of assessment tools for assessing knowledge level of antenatal mothers.
- Awareness program can be arranged to update the knowledge on different management aspects of neonatal jaundice
- Nursing curriculum should be broad enough to equip the student nurses to be aware regarding common neonatal health problems
- Nursing students should be taught about the importance of health education and develop their skill in preparing health teaching materials according to the mothers level of knowledge.

Nursing administration

- Nurse administrator should take initiation in formulating policies and protocols for short- and long-term health teaching on neonatal jaundice at hospital.
- Nursing administrators should organize educational program for the nursing students and nursing staff to update the knowledge related to neonatal jaundice and its management.
- Nurse administrators are the key persons to plan, organize and conduct in-service education programs and CNE programs regarding neonatal jaundice.

Nursing research

- The findings of present study are very helpful for nursing professionals and nursing students to conduct further studies.
- The study provides a baseline data for conducting other research studies.
- The study will be a motivation for the budding researchers to conduct similar studies in large scale.
- The study will be a reference for the research scholars

Limitations

- The study was limited to antenatal mothers in selected hospitals at Perinthalmanna.
- Sample size was limited to 80.
- Structured teaching program is limited to antenatal mothers who are in 32- 35 weeks of gestation.
- The study is limited to only antenatal mothers.

Recommendations

- A similar study can be done on a large group of sample.
- A similar study can be done by true experimental design.
- A similar study can be done to compare the level of knowledge among primigravida and multigravida mothers.

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