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***Research Article***

# A Quasi Experimental Study to Access The Effectiveness of Structured Teaching Programme on Knowledge Of Postnatal Mothers Regarding Selected Minor Disorders of New Born In Post Natal Ward of Selected Hospital at Amritsar Punjab

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**Abstract**

*Introduction:* It takes a special woman to be a mother. Neonatal period is the most crucial one in a person's life. After birth, a child's health depends upon the health care practices adopted by the family, especially by mothers. The minor disorders are most common among newborns.
*Methodology:* The study to assess the effectiveness of a structured teaching program on the knowledge of postnatal mothers regarding selected minor disorders of newborns in the postnatal ward of a selected hospital at Amritsar (Punjab) with quasi-experimental study design on sample of 100 postnatal mothers by convenience sampling technique (50 experimental group, 50 control group) with a structured knowledge questionnaire as tool to collect the data. The post-test knowledge was assessed after 1 week of intervention. The data was analyzed by using descriptive and inferential statistics.
*Result:* The result of the pre-test reveals that in the experimental group, the majority of 54% had poor knowledge, 40% had average knowledge and 6% had good knowledge. In the control group, the majority 48% had poor knowledge, 48% had average knowledge and 4% had good knowledge regarding selected minor disorders of newborns. The result on the post-test showed that in the experimental group, the majority of 70% had good knowledge and 30% had average knowledge. In the control group, 50% had average knowledge, 42% had poor knowledge and 8% had good knowledge regarding selected minor disorders of newborns. Findings showed that in the experimental group, post-test level of knowledge, the experimental group post-test mean and SD were 20.88±3.354 and the control group was 12.58±3.482 with a mean difference of 8.30 ($t = 12.11$, $df = 98$, $p = 0.001$), which indicates statistically highly significant.
*Conclusion:* This study had shown that structured teaching programs were effective in improving the knowledge of postnatal mothers regarding selected minor disorders of newborns.

## 1. Introduction

Giving birth does not make a woman a mother. It takes a special woman to be a mother. A mother is a person who is willing to take responsibility for investigating her life into another human being who is totally dependent upon her to do so. Neonatal period is the most

crucial one in a person's life. Among the almost 3.9 million newborn deaths that occur worldwide, about 30% occur in India. Children are our future and most precious resources [1]. After birth, the health of the child depends upon the health care practices adopted by the family, especially by the mothers. Information about neonatal problems and newborn care practices will help in reducing mortality and morbidity during the neonatal period. 1 The birth of a mother," which means giving birth to a new identity can be as demanding as giving birth to a baby. The birth of a neonate is one of the inspiring and emotional events that can occur in one's life. The health of the newborn is of vital importance in all societies, as children are the future citizens. Health is said to exist when a newborn can meet the physical, physiological, intellectual, psychological, and social requirements appropriate according to their growth and development. Neonatal period is the phase of life with the greatest risk of mortality [2]. They have unique health status and problems due to structural and functional immaturity of various bodyorgans depending upon their gestational age and birth weight. 2 Neonates may develop some physical or physiological problems after birth, and they can be easily treated and bear no significance. Neglecting the minor health problem is one of the factors contributing to the newborn mortality rate. Every year about 27 million babies are born in India, and almost 1.2 million die during the newborn period, accounting for 30% of the global death rate [3]. India has the deciduous distinction of having the highest number of annual neonatal deaths among all countries in the world: In order to reduce neonatal mortality, essential basic newborn care services should be available at all health care levels. Sometimes minor ailments of the newborn can cause physical disorder, and in mild conditions, if not treated timely, it may cause severe illness and even death. There, the knowledge of the mother on minor disorders of the newborn is very important. Every year, four million babies die in the first month of life, and evidence proves that a quarter of these take place in India. A package of essential newborn care practices exists that has a proven impact on reducing mortality and can be implemented in low-resource settings. In India, 50–60% of all infant deaths occur within the first five months of life. Of these, more than half may die during the first week of birth. This is because the newborn has to adapt itself rapidly and successfully to an external environment. The risk of death is the greatest during the first week after birth due to poor knowledge in the mother on newborn care [4]. UNICEF reported in its annual 'State of the World's Children ForumNearly fifty percent of Indian children who die before the age of five do not survive beyond the first 28 days. India has the single highest share of neonatal deaths in the world." Worldwide, neonatal deaths, or those of children under four weeks, make up 37 percent of under-five deaths therefore, UNICEF emphasized the need to check the reason for newborn deaths."Breast Breastfeeding alone can reduce India's mortality rate by a few points. Substantial strengthening of the Indian health system is needed. Around 25 percent of children globally were underweight, whereas in India the number was 43 percent [5]. Vomiting is the most common problem of the neonates, as complained by the mothers. Mother needs explanation about the regurgitation of feedsand vomiting. Regurgitation of milk is never ejected forcefully it just flows out of the mouth soon after feeding and usually due to faulty feeding technique and swallowed air while sucking. As the air is expelled, part of the feed comes out. Constipation is common in artificial feeding, especially with cow 's milk. Other causes may be inadequate feeds or insufficient fluid intake. Breastfed babies pass two to six times goldenyellow, sticky, semi-loose stools due to the high content of lactose. Mother should be explained about the breastfed stools. The intake of large quantities of glucose water or honey by the baby may cause diarrhea [6].

Neonates or newborns are the most delicate group among kids, as they are not able to express their feelings of happiness, sadness, pain, or discomfort, and their systems are immature, just starting to adjust to the extra uterine life. Mother plays an important role in identifying minor developmental deviations and early evidence of the disease process because she is constantly and closely watching her baby. The most common minor problems that occur in newborns are vomiting, constipation, diarrhea, breath-holding spells, crib crap, physiological jaundice, hiccups, napkin rash, abdominal colic,oral thrush, erythema toxica (new-born rash), milia, Epstein pearl, neonatalacne, neonatal conjunctivitis, etc. Neonatal infections and minor problems are one of the major leading causes of death during the neonatal period. It can contribute up to 13–15% of all deaths during the neonatal period, with the mortality rate reaching as high as 50% for infants who are not treated timely. Postnatal mothers should be aware of common minor neonatal problems. Neonatal jaundice is one of the most common conditions requiring medical attention in newborn babies; approximately 60% of term and 80% of preterm babies develop jaundice in the 1st week of life, and about 10% of breastfed babies are still jaundiced at 1 month of age. Diarrhoea remains the second leading cause of death among children under five globally. Nearly one in five child deaths—about 1.5 million each year—is due to diarrhea [7].

## Research Problem

A quasi-experimental study to assess the effectiveness of structuredteaching programme on knowledge of postnatal mothers regarding selectedminor disorders ofnewborn in postnatal ward of selected hospital at Amritsar, Punjab.

## Aim Of Study

The aim of the study is to improve the knowledge of postnatal mothers regarding the selected minor disorders of newborns. To assess the pre-test knowledge of postnatal mothers regarding selected minor disorders of newborn in postnatal ward at selected hospital of Amritsar.

## Objective

• To provide a structured teaching program regarding selected minor disorders of newborn to postnatal mothers.
• To assess post-test knowledge of postnatal mothers regarding selected minor disorders of newborns after proving selected teaching programs to postnatal mothers in selected hospitals Amritsar.
• To find out the association between pre-test knowledge of postnatal mothers regarding selected minor disorders of newborns and selected sociodemographic variables.

## Conceptual Framework

Conceptual framework means "interrelated concepts or abstractions that are assembled together in some rational scheme by virtue of their relevance to a common theme. Polit and Hungler (2006).
Input: A system imports products in a process known as input.
Throughput: A system transport, creates and organize the process known as throughput which results in reorganization of input.

Output: A system exports a product on a process known as output.

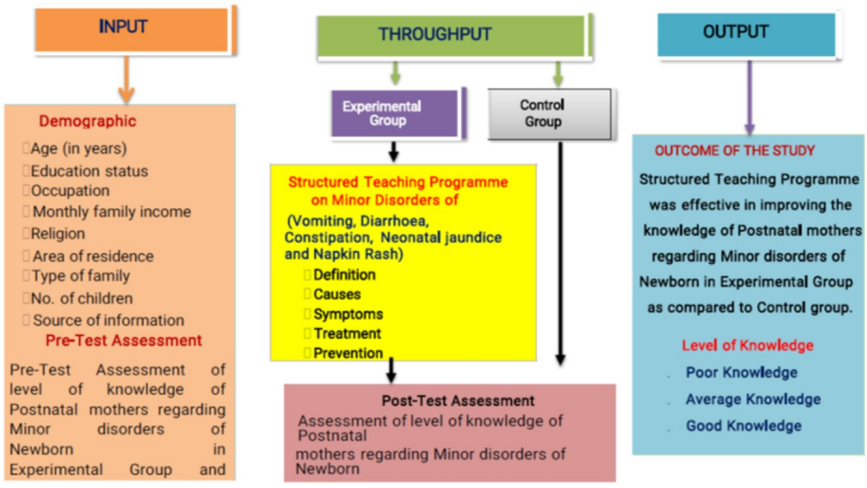


**Figure 1:** Conceptual Framework based on general system's Model by Ludwing Von Bertalanffy (1968)

## 2. Research Methodology

Research methodology is a systemic way to solve the research problem. The research methodology includes the strategies to be used to collect and analyze the data to accomplish the research objectives.

### Research Approach

A research approach is a vehicle for hypothesis testing or answering research questions. It tells the researcher as to what data is to be collected and how it is to be analyzed it also suggests possible conclusions to be drawn from the data.

### Research Design

The term research design refers to the plan and the procedure for research that span the decisions from broad assumptions to detailed methods of data collection and analysis. The central purpose of research design is to maximize the amount of control. The investigator has control over the research situation and variables. For the present study, quasi-experimental study design is utilized to achieve the objectives of the study [8].

**Table 1:** Missing

| | | | |
|---|---|---|---|
| Experimental Group | O1 | X | O2 |
| Control Group | O1 | - | O2 |

## 3. Variables Under Study

Independent variables: structured teaching program on selected minor disorders of newborns.
Dependent variables: knowledge of postnatal mothers
Demographic variables: The demographic variables under the study are age (in years), education status of father and mother, occupational status, Monthly family income, religion, number of children, and source of information.

### Research Setting

The setting is the physical location and the condition in which data collection takes place in the study. The selection of an appropriate set-up is very important, as set can influence the way people behave or feel and how they respond. The researcher needs to decide where the data will be collected according to the availability of the subject and seek approval and expectations of cooperation. The present study was conducted at a selected hospital, Amritsar.

### Population

According to Polit and Beck (2 0 0 8), "population is the entire aggregate of cases in which a researcher is interested. It is the set of individuals having some common characteristics and is interested to the researcher." For the present study, the population was postnatal mothers admitted in postnatalward after delivery [9].

### Sampling Technique

A sample is used in research when it is not feasible to study the whole population from which it is drawn. The process of sampling makes it possible to accept a generalization to the intended population based on careful observation of variables within a relatively small proportion of the population. In the present study, convenience sampling technique was used to select the postnatal mothers based on inclusion criteria of the study [10].

### Sample and Size

According to Polit and Hungler (1 9 9 5), "A sample is a small proportion of the population selected for observation and analysis." Sampling refers to the process of selecting a portion of the population to represent the entire population. The sample and sample size for the present study were 60 postnatal mothers (30).
In the experimental group and 30 in the control group.

### Sampling Technique

A sample is used in research when it is not feasible to study the whole population from which it is drawn. The process of sampling makes it possible to accept a generalization to the intended population based on careful observation of variables within a relatively small proportion of the population [11].

### Sampling Criteria

Inclusion criteria: postnatal mothers
• who are willing to participate in the study.
• who are cooperative.
• who can read/understand English or Punjabi.
Exclusion criteria: postnatal mothers
• who are not cooperative.
• who are critically ill.

### Selection and Development of Tools

The tool was developed by keeping in mind the objectives of the study and prepared after extensive review of literature, internet sources, and discussion with guides, co-guides, and opinions of various experts in the field of child health nursing.

### Description of Tool

The tool consists of 2 parts: Part A: Socio-Demographic Variables: It consists of sociodemographic variable items for obtaining information from postnatal mothers, i.e., age (in years), education status of father and mother, occupational status, monthly family income, religion, number of children, and source of information.
Part B: Self-structured knowledge questionnaire on selected minor disorders of newborns. (Vomiting, constipation, diarrhea, napkin rashes.) The tool consists of 30 questions related to definition, causes, signs, and symptoms, assessment and diagnosis, treatment, and prevention of selected minor disorders of newborns.

### Scoring Criteria

Each correct item will be given 1 mark and 0 mark for an incorrect answer.
• Scores ranging from 0-10 are considered poor knowledge.
• Scores ranging from 11-20 are considered average knowledge.
• Scores ranging from 21 to 30 are considered good knowledge.
Description of Intervention
The intervention for the present study was a structured teaching program on selected minor disorders of newborns. (Vomiting, constipation, diarrhea, napkin rashes.) This includes definition, causes, signs, and symptoms, assessment and diagnosis, treatment, and prevention of selected minor disorders of newborns.

## 4. Analysis and Interpretation

Organization and presentation of data:
The obtained data has been analyzed, presented, and organized as follows:
Section I: Frequency and percentage distribution of demographic variables in experimental and control groups.
Section II: Pre-test level of knowledge of postnatal mothers regarding selected minor disorders of newborns in the experimental and control groups.
Section III: Post-test level of knowledge of postnatal mothers regarding selected minor disorders of newborns in the experimental and control groups.
Section IV: Compare the pre-test and post-test level of knowledge of postnatal mothers regarding selected minor disorders of newborns in the experimental and control groups.

Section V: Association of pre-test and post-test level of knowledge of postnatal mothers regarding selected minor disorders of newborns with selected demographic variables in the experimental group.

**Table 2:** Frequency and percentage distribution of demographic variables In Experimental and control group .

| S.no | Demographic Variables | Experimental Group | | Control Group | |
|---|---|---|---|---|---|
| | | f | % | f | % |
| 1. | Age (in Years) | | | | |
| | a. 20-25 | 15 | 30 | 13 | 26 |
| | b. 26-30 | 19 | 38 | 21 | 42 |
| | c. 31-35 | 12 | 24 | 11 | 22 |
| | d. 36-40 | 4 | 08 | 15 | 10 |
| 2. | Educational status | | | | |
| | a. Illiterate | 05 | 10 | 07 | 14 |
| | b. Up to Primary | 10 | 20 | 12 | 24 |
| | c. Secondary | 09 | 18 | 12 | 24 |
| | d. Senior secondary | 11 | 22 | 08 | 16 |
| | e. Graduation and above | 15 | 30 | 11 | 22 |
| 3. | Occupation | | | | |
| | a. Housewife | 26 | 52 | 23 | 46 |
| | b. Employed | 15 | 30 | 18 | 36 |
| | c. Labourer | 03 | 06 | 05 | 10 |
| | d. Business | 06 | 12 | 04 | 08 |
| 4. | Monthly family income (Rs.) | | | | |
| | a. $\leq$ 5000 | 5 | 10 | 6 | 12 |
| | b. 5001-10000 | 17 | 34 | 14 | 28 |
| | c. 10001-15000 | 13 | 26 | 18 | 36 |
| | d. $>$15000 | 5 | 30 | 12 | 24 |
| 5. | Religion | | | | |
| | a. Hindu | 16 | 32 | 19 | 38 |
| | b. Sikh | 31 | 62 | 29 | 58 |
| | c. Christian | 03 | 06 | 02 | 04 |
| 6. | Area of residence | | | | |
| | a. Urban area | 23 | 46 | 20 | 40 |
| | b. Rural area | 27 | 54 | 30 | 60 |
| 7. | Type of family | | | | |
| | a.Joint Family | 29 | 58 | 31 | 62 |
| | b.Nuclear family | 21 | 42 | 3819 | |
| 8. | Number of children | | | | |
| | a. None | 05 | 10 | 08 | 16 |
| | b. One | 24 | 48 | 21 | 42 |
| | c. Two | 17 | 34 | 19 | 38 |
| | d. Three | 04 | 08 | 02 | 04 |
| 9. | Source of information | | | | |
| | a. Health personnel | 23 | 46 | 20 | 40 |
| | b. Family members | 16 | 32 | 14 | 28 |
| | c. Friends/relatives | 08 | 16 | 11 | 22 |
| | d. Mass media | 03 | 06 | 05 | 10 |

**Table 3:** Pre-test level of knowledge of postnatal mothers regarding selected minor disorders of new born in experimental and control group.

| Pre-Test Level of Knowledge | Experimental Group | | Control Group | |
|---|---|---|---|---|
| | f | % | f | % |
| Poor Knowledge | 27 | 54 | 24 | 48 |
| Average Knowledge | 20 | 40 | 24 | 48 |
| Good Knowledge | 03 | 06 | 02 | 04 |

**Table 4:** Pre-test level of knowledge of postnatal mothers regarding selected minor disorders of new born in experimental and control group.

| Pre-Test Level of Knowledge | Experimental Group | | Control Group | |
|---|---|---|---|---|
| | f | % | f | % |
| Poor Knowledge | 0 | 0 | 21 | 42 |
| Average Knowledge | 15 | 30 | 25 | 50 |
| Good Knowledge | 35 | 70 | 04 | 08 |

**Table 5:** Comparison of pre-test and post-test level of knowledge of postnatal mothers regarding selected minor disorders of new born in experimental group.

| Level of Knowledge | Mean | SD | Mean D | 't' value | df | 'p' value |
|---|---|---|---|---|---|---|
| Pre-test | 12.84 | 4.302 | 8.040 | 10.79 | 49 | 0.001* |
| Post-test | 20.88 | 3.354 | | | | |

*p<0.05 level of significance

**Table 6:** Comparison of post-test level of knowledge of postnatal Mothers regarding selected minor disorders of new born in experimental and control group.

| Level of Knowledge | Mean | SD | Mean D | 't' value | df | 'p' value |
|---|---|---|---|---|---|---|
| Experimental group | 20.88 | 3.354 | 8.300 | 12.13 | 98 | 0.001* |
| Control group | 12.58 | 3.482 | | | | |

*p<0.05 level of significance

### Major Findings from the Study

The result of the pre-test reveals that in the experimental group, the majority of 27 (54%) had poor knowledge, followed by 20 (40%) had average knowledge, and 3 (6%) had good knowledge. In the control group, the majority 24 (48%) had poor knowledge, 24 (48%) had average knowledge, and 2 (4%) had good knowledge regarding selected minor disorders of newborns.
The result of the post-test showed that in the experimental group, the majority of 35 (70%) had good knowledge and 15 (30%) had average knowledge. In the control group, 25 (50%) had average knowledge, 21 (42%) had poor knowledge, and 4 (8%) had good knowledge regarding selected minor disorders of newborns.
Findings showed that in the experimental group, the pre-test mean and SD were $12.84 \pm 4.302$ and the post-test mean and SD were $20.88 \pm 3.354$ with (t = 10.79, df = 49, p = 0.0 0 1), which indicates statistically highly significant. Regarding post-test level of knowledge in experimental group post-test mean and SD was 20.88±3.354 and in control group was $12.58 \pm 3.482$ with mean difference of 8.30 with (t = 12.11, df = 98, p = 0. 0 0 1),, indicates statistically highly significant. The structured teaching program was effective in improving the post-test level of knowledge of postnatal mothers regarding selected minor disorders of newborns in the experimental group as compared to the control group. The result showed that demographic variables such as age, education status, occupation, family monthly income, religion, area of residence, type of family, number of children, and source of information of postnatal mothers were not found to have a significant association with the pre-test level of knowledge regarding selected minor disorders of newborns in the experimental and control groups.

## 5. Conclusion

The study concludes that postnatal mothers lack knowledge regarding minor disorders of newborns and their management and prevention. Mother plays an important role in watching her baby after birth and detecting the early problems of the newborn. After the birth of a child, the health depends on the health care practices adopted by the mothers. This study had shown that structured teaching programs were effective in improving the knowledge of postnatal mothers regarding selected minor disorders of newborns. A study suggests that educational programs can be implemented in community areas and hospitals for the mothers after birth to enhance their knowledge on minor disorders of newborns and their management and prevention. Mother's knowledge is an important instrument in bringing up a healthy child.

### Recommendations

The following recommendations are made on the basis of the study:
• The study can be conducted on a large sample size.
• The study can be conducted in different settings with other study designs.
• The study can be conducted to assess the attitude and practice regarding the management and prevention of minor disorders in the newborn.
• A comparative study can be conducted to assess the knowledge of mothers on minor disorders of the newborn in urban and rural areas.
• A study can be conducted to assess the prevalence and contributing factors of selected minor disorders of the newborn.
• A study can be conducted to assess the knowledge regarding other minor disorders of the newborn among mothers.

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