A Pre-Experimental Study to Assess the Effectiveness of in formation book letregarding Prevention of Hypoglycemia in Neonates among Postnatal Mothers at Government Rajindra Hospital Patiala, Punjab

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Abstract

Research Problem: "A pre-experimental study to assess the effectiveness of information booklet regarding prevention of hypoglycemia in neonates among postnatal mothers at Government Rajindra Hospital Patiala, Punjab."

Aim of the Study:
To improve the knowledge regarding prevention of hypoglycemia in neonates among postnatal mothers.

Methodology:
A quantitative approach with pre-experimental research design was used for this study. A sample size of 30 postnatal mothers in Government Rajindra Hospital, Patiala. In this study purposive sampling technique was used. Structured questio naire was developed and admini stered to assess the effectiveness of information booklet regarding prevention of hypoglycemia in neonates.

Result:
The mean knowledge score ofpre-testwas8.67andpost-testwas17.47. There is significant difference in the pre-test and post-test knowledge score regarding prevention of hypoglycemia in neonates among postnatal mothers in Government Rajindra Hospital, Patiala. There is significant association between the levels of knowledge sources of information among postnatal mothers. There is no significant association between the level of knowledge and other demographic of resi dence, family income, and source of information.

Conclusion: Out of 30 subjects, in pre-test majority 25(83.3%) had poor knowledge score, 5(16.7%) subjects had average knowledge and the remaining 0(0.00%) had good knowledge score of postnatal mothers regarding prevention of hypoglycemia in neonates. But in the post-test postnatal mothers in Government Rajindra Hospital, Patiala, the most of 26(86.7%) had average knowledge, followed by 4(13.3%) had good knowledge and the remaining 0(0.00%) had poor knowledge. There was no association between demographic variables age / education / occupation area of residence, family income and source of information. The calculated chi-square values were less than the table value at the 0.05 level of significance.

Chapter – 1
Background of the Study
Introduction
"The childhood shows the man as morning shows the day"–JohnMilton

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World's greatest resource for a healthy future lies in the children of today. Today children are tomorrow's citizen and leaders. The resources spent on the care, upkeep and health of the young ones form investment of for the future.

It is often stated that children are the world‟s most valuable resources and assets, but their rights throughout the world are largely ignored often resulting into tragic outcomes. This is because of the vulnerability of the children from infancy through childhood, as they are dependent on adult for safety and ongoing nurturing and this puts them at risks in many form.

Glucose is the major source of energy in human beings and is transported from the mother across the placenta to the fetus. This glucose is used to support the rapid growth taking place. In the last weeks of gestation, excess glucose is stored in the liver and skeletal muscle as glycogen is converted to fatty acids and then stored as triglycerides in fat cells. Insulin is not transported across the placenta, requiring the fetus to produce insulin.

At the time of delivery, this glucose supply ceases and infants must depend on their own hepatic glycogen stores and glucose regulatory mechanism to mobilize and use glucose. With the steady source of glucose stopped by the clamping of the umbilical cord, neonates experience a decrease in glucose concentration, reaching a lowest level at 1 to 3 hours of postnatal age. The neonate's requirement for glucose is relatively high because of several factors. High energy needs postnatal result from increased metabolic and motor activity. The larger brain in proportion to body size requires glucose as its fuel source. Access to glucose is limited because of neonate's immature liver enzyme system including a decreased response to glucagon, the hormone that promotes the release of glucose from glycogen stores. Hypoglycemia is an abnormally low level of glucose (sugar) in the blood. It can result from an excessive rate of removal of

glucose from the blood or from decreased secretion of glucose into the blood. Hypoglycemia in the neonate is defined as a plasma glucose concentration to less than 40 mg/dl.

Normal blood glucose of neonates is 40–126mg/dl. Neonatal hypoglycemia is when blood glucose level is below than 40mg/dl. There are mainly three stages of neonatal hypoglycemia.

1.Mild stage: When blood glucose level is between30–40mg/dl.

2.Moderate stage: When blood glucose level is between20–30mg/dl.

3.Severe stage: When blood glucose level is below than 20mg/dl.

Although hypoglycemia is a common disorder, there is still no

universally accepted definition for this disorder. Confusion exists due to the fact that the “normal” range of blood glucose is different for each newborn and depends upon a number of factors including birth-weight, gestational age, body stores, feeding status as well as the presence or absence of disease. There is no concrete evidence to show the causation of adverse long-term outcomes by a particular level or duration of hypoglycemia. A recent consensus has been to evolve an “operational threshold”.

The operational threshold for hypoglycemia is defined as *“that concentration of plasma or whole blood glucose at which clinicians should consider intervention, based on the evidence currently available in literature”.* This threshold is currently believed to be a blood glucose value of less than 40 mg/dl (plasma glucose less than 45 mg/dl).

So survival and health of neonates is very important. The most effective management strategy for neonatal hypoglycemia is initiating breastfeeding within 1/2–1 hour of birth.

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So preventing neonatal hypoglycemia is important to prevent other complications. It can be done by adopting the measures of initiating breastfeeding within 1/2–1 hour of birth and mother should be educated regarding neonatal hypoglycemia, kangaroo mother care and promoting breastfeeding.

Need for Study

Neonate's period is very crucial. It is accurate to say that during the first few minutes especially when a risk situation exists prompt and adequate care should be carried out. Neonatal hypoglycemia remains one of most important contributors to neonatal mortality and my in both health facilities and communities of law resource settings. Neonatal health promotion programmes for home births needs to focus on behavioral changes necessary to optimize care of newborns, especially in the hours immediately after birth.

Dr. Parth Patel (2019) conducted a descriptive cross-sectional study regarding incidence of hypoglycemia in exclusively breastfeed high risk neonates was carried out in postnatal ward of Nazareth Hospital. This study showed that incidence of hypoglycemia in newborns with risk factor was 20% the incidence of hypoglycemia small for gestational age neonate was 37.5%and in large for gestational age was 18% and in LBW neonates was 24% and researcher conclude that the incidence of asymptomatic hypglycemia is faily common in the high risk neonates.

Ahmed Siddiquei (2020) conducted a hospital=based prospective longitudinal study was conducted to evaluate the prevalence and risk factors associated with hypoglycemia in low birth weight neonates at Niloufer Hospital, Hyderabad. This study showed that out of 50 neonates, 15 (30%) had one or more at episodes of hypoglycemia out of 15 hypoglycemia neonates, 8 were small for hypoglycemia and hypoglycemia was frequent among low birth weight babies more in small for gestational age in first 24 hours.

The incidence of hypoglycemia varies with the infant's gestational age at birth and appropriateness growth. In general, the incidence is 2 to 10 in 1000 live births. The incidence is much higher in SGA (small for gestational age) infants.

Prevalence of neonatal hypoglycemia in 2020 was 0.4%. Underlying cause of hypoglycemia were prematurity (61.3%), diabetic mothers (13.6%). Septicemia (9.6%), perinatal asphyxia (9.6%) stress (3.8%)and neonatal Hyper insularism (1.9%). The mortality rate was 53.8% with prematurity as leading cause of death.

WHO says that in India and other developing countries approximately 50% of infants death occurs within 24 hours of life. The existing neonatal mortality rate in India is 76/1000 live births in urban areas.

So the above statistics shows that mothers are not aware about hypoglycemia, so the investigator developed our insight to conduct the study to propagate the knowledge for prevention of hypoglycemia among mothers of neonates.

Problem Statement

A Pre-experimental study to assess the effectiveness of information booklet regarding prevention of hypoglycemia in neonates among postnatal mothers at Government Rajindra Hospital, Patiala, Punjab.

Objectives:-

1. To assess the pre-test knowledge regarding prevention of hypoglycemia in neonates among postnatal mothers.
2. To assess the post-test knowledge regarding prevention of hypoglycemia in neonates among postnatal mothers.
3. To compare the pre-test knowledge and post-test knowledge regarding prevention of hypoglycemia in neonates among postnatal mothers.
4. To find out association of post-test knowledge regarding prevention of hypoglycemia in neonates with selected socio-demographic variables.

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Operational definitions

1. **Knowledge –** It refers to level of understanding and awareness of postnatal mothers regarding prevention of hypoglycemia in neonates.
2. **Effectiveness –** It refers to gain in knowledge of postnatal mothers about prevention of hypoglycemia in neonates through information booklet.
3. **Prevention –**It refers to measures taken by postnatal mothers to prevent the occurrence of hypoglycemia in neonates.
4. **Neonatal hypoglycemia –** It refers to when blood glucose level is less than 40mg/dl is called neonatal hypoglycemia.

Stages of hypoglycemia:–

a) Mild stage: When blood glucose level is between30–40mg/dl.
b) Moderate stage: When blood glucose level is between20–30mg/dl.
c) Severe stage: When blood glucose level is below than20mg/dl.

5. **Postnatal mothers –** It refers to postnatal mothers in age group 18–35 years at Government Rajindra Hospital, Patiala.

Hypothesis

H_1: There will be significant difference in pre-test and post- test knowledge score of postnatal mothers regarding prevention of Hypoglycemia in neonates.

H_2: There will be significant relationship of post-test knowledge score of women regarding preventive measures of Hypoglycemia in neonates with selected demographic variables such as age, education, occupation, area of residency, family income and source of information.

Null Hypothesis

H_{01}: There will not be significant difference between pre -test and post- test knowledge score of postnatal women regarding prevention of Hypoglycemia in neonates.

H_{02}: There will not be significant association of post-test knowledge score of postnatal mother regarding preventive measures of Hypoglycemia in neonates with selected demographic variables.

Delimitation

1. The study is delimited to the postnatal mothers with age group of 18-35 years at Government Rajindra Hospital, Patiala.
2. This study is delimited to the postnatal mothers' who can understand Punjabi language.

Chapter - 2 Review of literature

Although the literature is widely recognized genre of scholarly writings, there is no clear understanding of what constitute a body of literature. Review of literature is a key step in research process. Review of literature refers to an extensive, exhaustive and systematic examination of publications relevant to research project.

The review of the related literature is valuable guide to define the problem, recognizing its significance, suggesting promoting data gathering devices appropriate study design and source of data. Review of literature of present study was organized as given below:-

Badri Kumar Gupta Et.al (2019) conducted a cross sectional study to see the glycaemic status and its effect on outcome of neonatal sepsisin neonatal Intensive Care Unit in Universal College of Medical Science the total 220 newnates clinically diagnosed as neonatal sepsis were studied Majority 55.9% neonates were found normoglycemic, 35.5 % were found

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hypoglycemic and 8.6% were found hypoglycemic in this study. The study found that majority of neonates with sepsis had high mortality rate when blood glucose level were either more than 145 mg/dl or less than 45mg/dl .This signifies the importance of meticulousblood glucose estimation in cases of neonatal sepsis to improve mortality outcome.

Chia Saw, Et.al (2018) conducted a retrospective study to identify modifiable risk factors for hypoglycemia at level 2 special care nursery in St.John of God Midland Public Hospital, Curtin University, Western Australia. This study showed that hypoglycemia is common in the newborn with hypoglycemia however it is difficult to ascertain which the primary condition is as a result of this study "hypoglycemia". Hypoglycemia care bundle has been developed to reduce overall neonatal admissions to the nursery from hypoglycemia and hypoglycemia.

Dr Manjunatha Et.al (2018) conducted a prospective observational study regarding incidence, clinical profile and risk factors of neonatal hypoglycemia in tertiary Care Hospital. This study showed that neonatal hypoglycemia constituted about 8.26 % of NICU admissions. Hypoglycemia in neonates can have variable presentation indicating the need for detailed and through examination for evidence of hypoglycemia in identification of risk factor of hypoglycemia and proper monitoring blood glucose level should be done to plan early treatment and prevent neurological damage.

Muhammad Said El-Mekkawy et.all (2017) conducted a prospective observational study regarding prevalence and prognostic value of Plasma Glucose abnormalities among full term and late preterm neonates with sepsis at NICU of Menoufia University Hospital .This study showed that plasma glucose abnormalities are not uncommon in neonatal sepsis. Hypoglycemia was associated with a highest mechanical ventilation rate however, these associations might not be casual.

Gladys Amponsah (2016) conducted a cross sectional study to determine the prevalence of neonatal hypoglycemia at the cape coast teaching Hospital, Ghana. Based on the findings of the study the overall prevalence of neonatal hypoglycemia was 16per1000births.Theprevalenceintheappropriateweight for gestational age was 21/ thousand births but none in small and large for gestational age groups. The prevalence of neonatal hypoglycemia in preterm, term and post term neonates were 0,18 and 15 per thousand births respectively. This study showed that neonatal hypoglycemia is common in Ghana all though the expected result of high neonatal hypoglycemia in preterm small and large for gestational age groups was not recorded in this study.

Mr. Shrishail. B. Tambakad et. al (2015) conducted a study on effectiveness of planned teaching programmes (PPT) on knowledge regarding prevention of neonatal hypoglycemia among postnatal mothers. Overall pre-test knowledge scores of mothers regarding prevention of neonatal hypoglycemia was low, which suggested that there is need for a planned teaching Programme. Post test Results Showed Thatthere is significant improvementinthe levelof knowledge

It can be concluded that the planned teaching program was an effective method of teaching the mothers to improve their knowledge regarding prevention of neonatal hypoglycemia.

Avadhesh Kumar Et.al (2015) conducted a study on knowledge and practices of newborn care among postnatal mothers in Tertiary Care Hospital of Varanasi. The study was Conducted Under certain objectives to assess the cultural practices and belief on newborn care among mothers and to associate with demographic variables. In Spite of the fact that most of the mothers were literate, harmful newborn care practices were common. Maternal education and income status play an important role in the knowledge and practices regarding newborn care.

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J. Perinatol (2014) conducted a comparative study to compare the frequency of hypoglycemia in normal neonates appropriate for gestational age delivery by LSCS and neonate delivery by normal vaginal delivery at college of Nursing University of Alabama among the postnatal mothers. Study shows that 43% incidence of hypoglycemia in neonates delivered by C-section 37% incidences in neonates delivered vaginaly. Other pre-natal or intranasal factors were not significantly associated with the development of hypoglycemia. Further study should evaluate the possible impact of prenatal anesthesia on the development of transient neonatal hypoglycemia.

Karsterr Lunge Et.al (2014) conducted a focus group discussion for prevention and management of neonatal hypoglycemia in Rural Zambia. The study reveals that household and agricultural labor responsibilities immediately provide continuous care to their newborn. The study concluded that understanding and addressing community based practices on hypoglycemia prevention and management might help to improve newborn survival in resource limited settings.

Mahama Saaka Et.al (2014) conducted a study on patterns and determinants of essential newborn care practices in rural areas of Northern Ghana. The level of coverage of essential newborn care practices in the district was generally low, suggestive of the fact that most essential neonatal interventions are not Reaching newborns; coverage of skilled attendants at delivery was very low. Birth preparedness practices were also poor and high risk newborn care practices are common place.

Saadia Gul Et.al (2014) conducted a study on newborn care knowledge and practices among mothers attending pediatric outpatient clinics of a hospital in Tamil Nadu. Antenatal coverage was good among the mothers but did not translate into optimal intrapartum and postnatal practices. There is a need to promote hygienic delivery practices for home births, delayed bathing and immediate and exclusive breastfeeding. Maternal education and income status play an important role in their knowledge and practices regarding newborncare.

Haftom Gabrehiwot Misgna Et.al (2014) conducted a study on knowledge, practice and associated factors of essential newborn care at home among mothers in Golomekada District, Eastern Tigray, and Ethiopia. The finding about essential new born care, knowledge and practice of mothersrevealedthat80.4% had good knowledge and 92,9% had good practice. Most mothers had good knowledge on hypoglycemia and breastfeeding initiation .In addition to their knowledge, almost all mothers practiced the main essential newborn care and breastfeeding. Knowledge of essential newborn care, place of residence and occupation are significantly associated with mother's practices of essential newborn care

Luthfine Mufidati Et.al (2013) conducted a nested case control study to identify the risk factor of neonatal hypoglycemia focusing on the role of asphyxia in neonatal hypoglycemia at maternal perinatal unit Dr. Sardjito General Hospital among postnatal mothers. This study reveals that the total of 1562 live birth were required to the study 33.3% were excluded due to major congenital abnormality and incomplete data. 22.5% newborns with hypoglycemia and 36.9% newborn with asphyxia. By Using simple randomizingmethod researchers had 52 newborn with hypoglycemia on the case group and 104 newborn without hypoglycemia on the control group. This means the birth weight and gestational age of newborn with hypoglycemia was lower as compared to newborn without hypoglycemia. Asphyxia is risk factor for neonatal hypoglycemia as well as LBW and early onset of neonatal sepsis. **Taygen Edwards Et.al** (2013)

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conducted a study to assess the risk factors of neonatal hypoglycemia among postnatal mothers. In this study the group of babies at highest risk of hypoglycemia are well defined. However, the optimal frequency and duration of screening for hypoglycemia as well as the threshold at which treatment would prevent brain injury, remains uncertain. Continuous interstitial glucosemonitoring in a research setting provides a useful information about glycemic control, Including the duration, frequency and severity of hypoglycemia. However it remains unknown whether continuous monitoring is associated with clinical benefit or harm. Oral dextrose gel is increasingly being recommended as a first line treatment for neonatal hypoglycemia.

Suraiya Begum Et.al (2012) conducted a cross sectional study regarding neonatal hypoglycemia in IDMs in tertiary Care Hospital at postnatal ward in Bangladesh among postnatal mothers. This study revealed that total 363 IDMs and 43.2% mothers of hypoglycemic IDMs. Had GDM and 56.8 % had pre-GDM about 85% IDMs developed hypoglycemic within 6 hours of birth and majority were 68% at two hours of age. Hypoglycemic

Doctor Rajiv Aggarwal (2015) conducted a study regarding linked hypoglycemia to long-term adverse outcome in a retrospective multicenter study though this study has major limitations in the absence of any subsequent and better study. It would seem prudent to follow-up all infants who had confirmed hypoglycemia in the high risk category. Special attention shall be paid to neuro developmental outcome, overall IQ, reading ability, arithmetic proficiency and motor performance over the long term

Sorcha A Collins Et.al (2017) conducted a retrospective cohort study regarding neonatal hypoglycemia and the study showed that term-NRF newborns had a higher neonatal hypoglycemia incidence than previously reported, similar to that for at risk newborn, possibility due to the CPTIAP479Lvariant.Since only newborn From kivalliq are screened for neonatal hypoglycemia further the study of long- term outcomes of neonatal hypoglycemia in this population and the role of the P479L variant are warranted to determine if neonatal BG screening is indicated in all neonatal newborns.

David Mukunya Et.al (2014) conducted a cross sectional study to determine the prevalence and risk factors of neonatal hypoglycemia in Lira district, Northern Uganda. This study showed that the prevalence of blood glucose concentration of < 47 mg/dl was 22% and the risk factors for neonatal hypoglycemia were delayed breastfeeding and child age of 3days or less. Therefore researcher suggest that targeted screening and management of neonatal hypoglycemia amongneonatesbefore3daysof age and those who are delayed in the onset of breastfeeding.

Ruban Bromiker, Et.al (2015) conducted and observational study to determine the true incidence of early neonatal hypoglycemia and to confirm the potential risk of risk factors at Shaare zedak Medical Centre. This study showed that 4000 newborns are admitted and 3595 were analyzed. 124newborn had blood glucose level below 40 mg/dl and 435 had below 47 mg/dl. Researches showed that univariate analysis revealed that gestational age, maternal diabetes low birth weight less than 2500g and twin delivery associated with neonatal hypoglycemia. Researchers showed that the high occurrences of early hypoglycemia in normal newborns using Universal screening and strongest risk factors was early gestational age.

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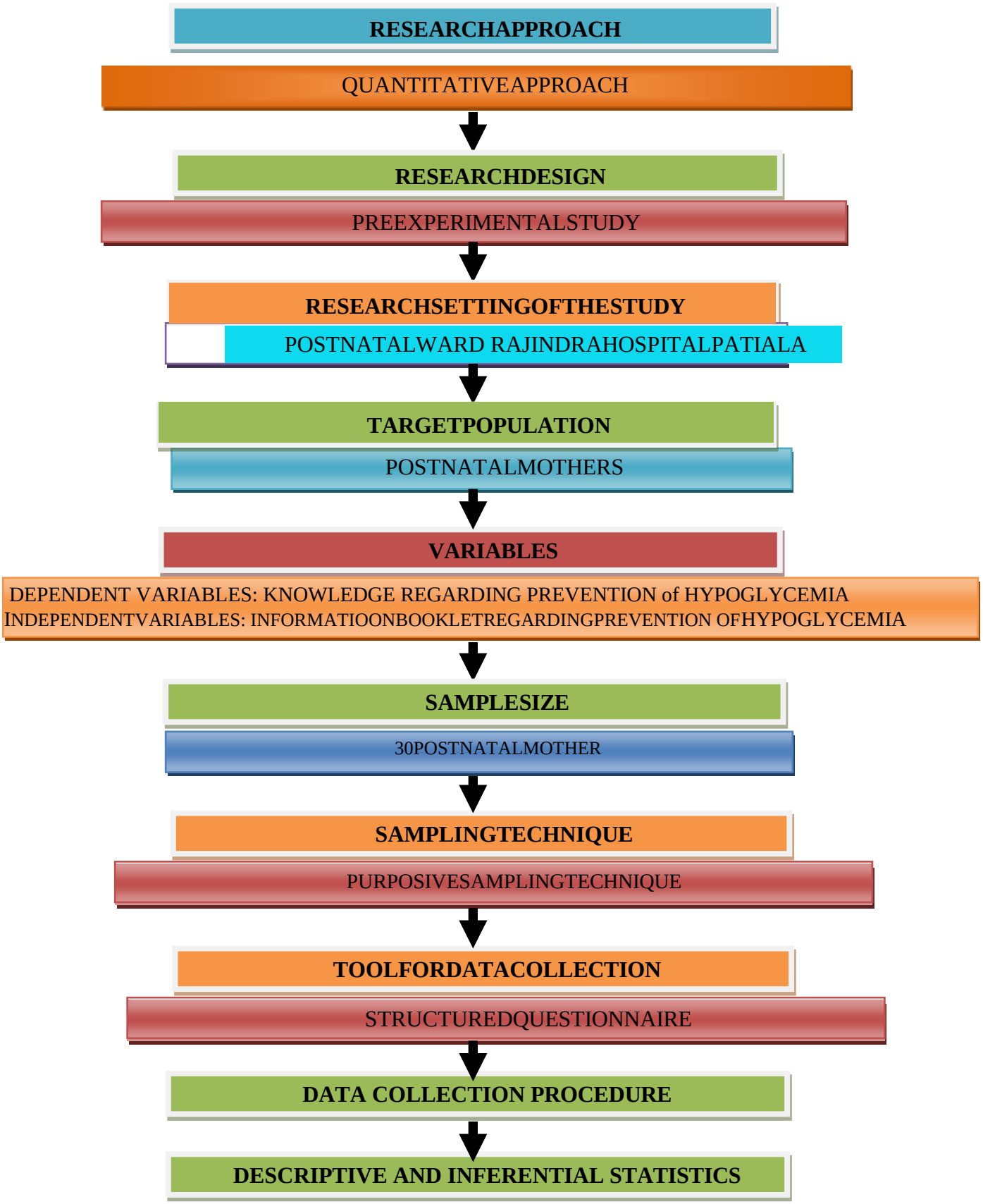
Chapter-3 Methodology

Schematic Representation oMethodology



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Methodology

This chapter deals with the methodology adopted for the study to assess the effectiveness of information booklet regarding prevention of hypoglycemia in neonates' among postnatal mothers at Rajindra hospital Patiala.

This chapter include the description of the:-

1. **Research approach:-**
   In this study Quantitative research approach was adopted.
2. **Research design:-**
   Pre-experimental one group pre-test and post-test design was used.
   Experimental group→ Pretest→ Treatment→ Posttest [No control group]
3. **Research setting:-**
   Postnatal mothers admitted at Rajindra hospital Patiala. This hospital have super-specialty department s which provide tertiary level care to patients.
4. **Target Population:-**
   The target population was postnatal mother so of neonates at Rajindra hospital, Patiala.
5. **Sample size:-**
   The sample size of the study was comprises to 30 postnatal mothers.
6. **Sampling technique:-**
   Purposive sampling technique was used in the study.

7. Research variables:-

1.Dependent variables:- Knowledge regarding prevention of hypoglycemia.
2.Independent variables:- Information booklet regarding prevention of hypoglycemia.
3.Extraneous variables:- Demographic variables: Age, Education, Occupation, area of residence, family income, source of information.

8. Criteria for sampling selection

Inclusioncriteria:-Inclusion criteria are characteristics that the prospective subjects must have if they are to be included in the study.

1. Postnatal mothers willing to participate in the study.
2. Postnatal mothers Present during data collection.
3. Postnatal mothers who have alive childbirth.
4. Postnatal mothers who are able to understand Punjabi

9. Selection and development of tool

The tool was developed on the basis of literature review and personal experience of the investigation in the Pediatric.

The tool was used for collecting the background information include age, education, occupation, area of residence, family income, source of information. The structured knowledge questionnaire will be administered as a tool for the present study. Tool was selected after reviewing the related literature and after the consultation with experts in concerned field.

10.Description of tool:-

Structured questionnaire which consist of two parts:-

Part 1:-This section was the first section seeking information in socio demographic status: - age, education, Occupation, area of residence, family income, and source of information.

Part 2:-Structured questionnaire on knowledge regarding prevention of hypoglycemia. This consist of questions to assess the knowledge regarding prevention of hypoglycemia in neonates.

11.Content validity:-

The content validity of tool was confirmed by the5 experts'. Selected from fields of specialization in child health and child health nursing and obstetrics nursing.

12.Pilot study:-

The pilot study was conducted with 10% of total sample population in labor room at Rajindra hospital Patiala

13.Reliability of tool:-

It was conducted by using split half technique:

Tool Reliability:

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14.Ethical consideration:-

Prior to the study ethical clearance was obtained from the concerned authorities, Medical superintendent of Rajindra hospital Patiala.

15.Data collection:-

Identification of subjects and the precise systematic gathering of information relevant to the research purpose or specific objectives, questions or hypothesis of a study.

- Formal permission was obtained from concerned authorities.
- The investigator had introduced the group and purpose of the study.
- The investigator had obtained written consent from study participants.
- Demographic data was assessed.
- Knowledge regarding prevention of hypoglycemia was assessed by using structured questionnaire.

16.Data Analysis

Descriptive statistics: - Descriptive statistics was used to describe the basic features of the data in study. It provides simple summaries about the sample and the measures. Together with simple graphic analysis, they form the basis of virtually every quantitative analysis of data.

Frequency, percentage distribution was used for describing socio demographic variables and level of knowledge.

- Mean percentage and standard deviation was used to describe the knowledge
- Paired T test was used to check knowledge of postnatal mothers regarding prevention of hypoglycemia.

Inferential statistics:-

Non-parameter chi-square test was used to find out the association between demographic variables and knowledge of postnatal mothers.

17.Summary

This chapter include the research approach, research design, research setting, target population, sample size, sampling technique, research variables, and criteria for sampling selection, selection and development of tools, description of tool, content validity, pilot study, and reliability of tool, ethical consideration, data collection and data analysis.

Chapter–4

Analysis and interpretation of data

This chapter deals with analysis and interpretation of data collected from a sample of 30 postnatal mothers at Government Rajindra Hospital, Patiala, Punjab.

The analysis and interpretation was done in accordance with the objectives laid down for the study. The data was analyzed by calculating the score in terms of mean, mean percentage, standard deviation and paired' test. Chi square was used to assess the association of knowledge score with demographic variables. The level of significance chosen was $p<0.05$.

Objectives

1. To access the pre-test knowledge regarding prevention of regarding hypoglycemia in neonates among postnatal mothers.
2. To access the post-test knowledge regarding prevention of regarding hypoglycemia in neonates among postnatal mothers.
3. To compare the pre-test and post-test knowledge regarding prevention of hypoglycemia in neonates among postnatal mothers.
4. To find our association of post-test knowledge regarding prevention of regarding hypoglycemia in neonates with selected socio-demographic variables.

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Section–I

Socio-demographic data of subjects Table 1

Frequency and percentage distribution of subjects according to socio- demographic variables

Sample characteristics	Experimental group	
	F	%
Age(in years)		
Below20	1	3.33%
21–25	7	23.33%
26–30	15	50%
Above30	7	23.33%
Education		
Under matric	10	33.33%
10–12th	11	36.66%
Graduation	7	23.33%
Post-Graduation	2	6.66%
Occupation		
Housewife	20	66.66%
Private Job	06	20%
Government Job	04	13.33%
Any other field	0	0%
Area of Residence		
Slum	1	3.33%
Rural	10	33.33%
Urban	19	63.33%
Family Income(per month)		
<Rs.10000/-	10	33.33%
Rs.10000–20000	6	20%
Rs.20000–30000	6	20%
>Rs.30000/-	8	26.66%
Source of information		
Family/friends/relatives	04	13.33%
Mass media	0	0%
Health personals	23	76.66%
Newspaper	03	10%

Table 1 shows the frequency and percentage of distribution of subjects are to socio-demographic variables.

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According to age, majority of the subjects i.e. (50%) was in the age groupof26-30 year, followed by7 (23.33%) was in the age group of 21-25and for above 30 remaining 1 (3.33%) was in the age group of below 20 years.

In relation to education, majority of the subjects i.e. 11 (36.66%) was educated up to (10–12th) followed by 10 (33.33%) of subjects was education up to metric level, 7 (23.33%) of subjects was educated up to graduation and remaining 2 (6.66%) are graduate or above.

In respect to occupation / majority of Rs. 30000, 6 (20%) of subjects was in group of (Rs. 10,000-20,000) and remaining 6 (20%) of subjects was in income group of Rs. 20,000 - 30,000.

In relation to source of information, majority of subjects 23 (76.66%) had acquired information from Health personnel's, 4 (13.33%) has acquired information from family/friends/relatives, 3(10%) has acquired information from newspaper and 0% of information acquired from mass media.

subjects i.e. 20(66.66%) are house wife, followed by6 (20%) of the subjects was in private job, 4 (13.33%) of the subjects was in government job and 0% was in other field.

In terms of area of residence / majority of subject 19 (63.33%) was from the urban areas followed by 10 (33.33%) was in rural areas and remaining 1(33.33%) of the subjects was in slum area.

As per monthly income of family 10 (33.33%) subjects was in income group of <Rs. 10000/-, 8 (26.66%) of subjects was in income group of income

Section–II

Objective 1: To assess the pre-test knowledge regarding prevention of Hypoglycemia in neonates among postnatal mothers.

Table2.1 Pre-test knowledg
eregardingpreventionofHypog
lycemiaamongpostnatal
mothers

Level of knowledge	Knowledge score	F	%
Poor	0–10	25	83.3%
Average	11–20	5	16.7%
Good	21–30	0	0%

Maximum score=30
Minimum score = 0

Table 2.1 Depicts the pre-test knowledge regarding prevention of hypoglycemia in neonates among postnatal mothers. In pre-test, majority of postnatal mothers 25 (83.3%) have poor knowledge followed by 5 (16.7%)who had average knowledge and no subjects had good knowledge regarding prevention of hypoglycemia in neonates.

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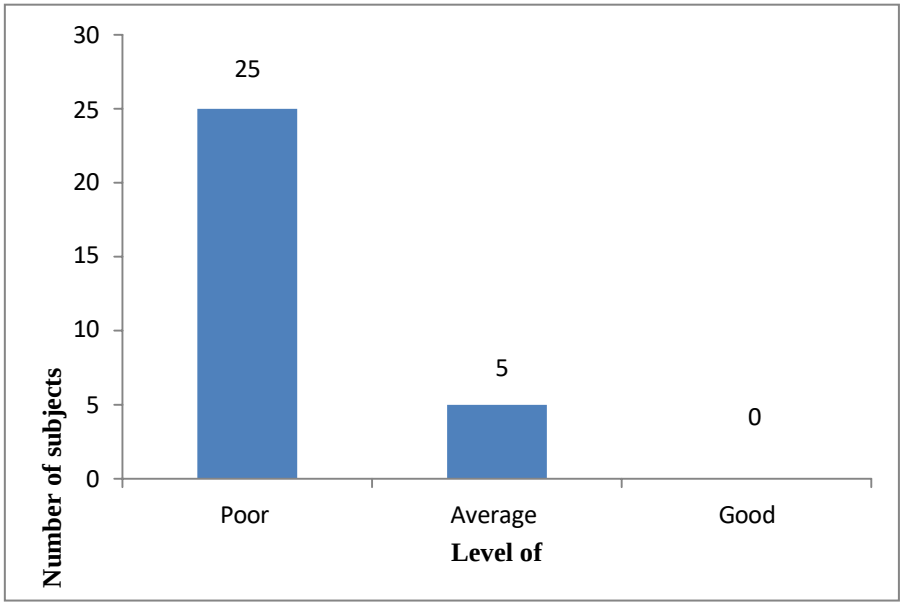

Fig. no. 2.1 Bar graph showing percentage distribution of pre-test level of knowledge regarding prevention of hypoglycemia in neonates among postnatal mothers.

Objective 2: To assets the post-test knowledge regarding prevention of hypoglycemia in neonates among postnatal mothers.

Table2.2
Post-test knowledg eregarding prevention of Hypoglycemiaamong postnatal mothers.

Level of knowledge	Knowledge score	F	%
Poor	0–10	0	0%
Average	11–20	26	86.7%
Good	21–30	4	13.3%

Maximum score=30
Minimum score = 0

Table 2.2 shows that in post- test majority of postnatal mothers 26 (86.7%) had average level of knowledge, followed by 4 (13.33%) had good level of knowledge and no one had poor level of knowledge regarding prevention of hypoglycemia in neonates in post-test.

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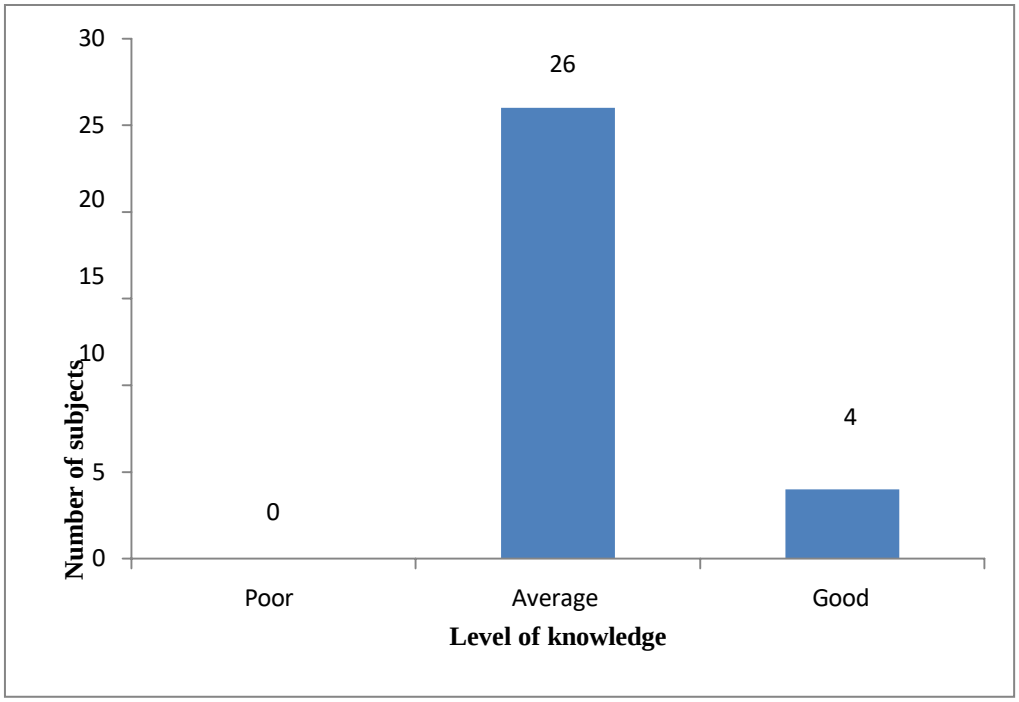

Fig. no. 2.2 Bar graph showing frequency distribution of post-test level of knowledge regarding prevention of hypoglycemia in neonates among postnatal mothers.

Objective 3: The pre-test and post-test knowledge regarding prevention of hypoglycemia in neonates among postnatal mothers.

Table3.1

Comparison of pre-test and post-test knowledge levelregar dingprevention of hypoglycemia in neonates among postnatal mothers.

Level of knowledge	Knowledge score	Pre-test group knowledge		Post-test group knowledge	
		F	%	F	%
Poor	0–10	25	83.3%	0	0%
Average	11–20	5	16.7%	26	86.7%
Good	21–30	0	0%	4	13.3%

Maximum score=30
Minimum score = 0

Table 3.1 This table shows that in pre-test 25 (83.3%) majority subjects had poor level of knowledge but in post-test 0(0%) had poor level of knowledge. In pre-test 5(16.7%) had average level of knowledge but in post-test 26(86.7). In pre-test 0 (%) had good level of knowledge but in post-test 4 (13.3%) had good knowledge.

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Hence it was concluded that after providing the information booklet maximum subjects had average level of knowledge.

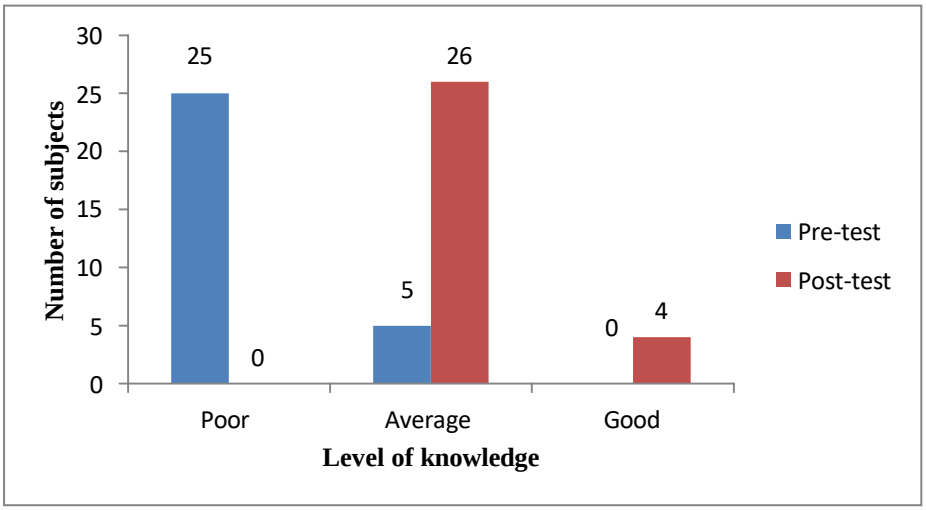

Fig. no. 3.1 Bar graph showing the comparison of percentage of pre-test and post-test knowledge level regarding prevention of hypoglycemia in neonates among postnatal mothers.

Table3.2
Comparison of pre-test and post-test knowledge score regarding prevention of hypoglycemia in neonates among postnatal mothers.

T-test		Mean score	S.D.	T-test	Table Value at 0.05	Result
Knowledge score	Pre-test	8.67	1.9	15.658	2.05	Significant
	Post-test	17.47	2.909			

Maximum score = 30
Significance level–0.05 Minimum score = 0

TableNo.3.2showsthatT-testvalueis15.65morethantablevaluethatwas
2.05 at the 0.05 level of significance and the mean score of pre-test knowledge was 8.67 and the mean score of post-test knowledge was 17.47. There was significance difference in pre-test and post-test knowledge regarding prevention of hypoglycemia in neonates among postnatal mothers at Government Rajindra Hospital, Patiala, Punjab.

Section–III
Objective 4: To find out the association of post-test knowledge regarding prevention of Hypoglycemia in neonates among postnatal mothers with selected socio-demographicvariables
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Table4.1
Association between demographic variables and level of knowledge regarding prevention of Hypoglycemia in neonates among postnatal mothers

Variables	Level of knowledge			Chi square	Df	Table value	Result
	Good	Average	Poor				
Age(in years)							
Below20	0	0	1				
21–25	0	7	0	2.18	3	7.815	Not Significant
26–30	2	12	0				
Above30	2	6	2				
Education							
Under matric 10	1	9	0				
– 12th	1	10	0	1.982	3	7.815	Not Significant
Graduation	2	5	0				
Post-Graduation	0	0	2				
Occupation							
Housewife Private	2	18	0				
Job Government Job	1	5	0	0.721	2	5.991	Not Significant
Self employed	1	3	0				
	0	0	0				
Area of Residence	0	1	0				
Slum Rural	2	7	0	0.962	2	5.991	Not Significant
Urban	2	18	0				
Otherstate	0	0	0				
Family Income (per month)							
<Rs.10000/-	0	4	0				
Rs. 10000 –	0	0	0	1.405	2	5.991	Not Significant
20000	4	19	0				
Rs.20000–30000	0	3	0				
>Rs.30000/-							
Source of information							
Family/friends/	1	9	0				
relatives	0	6	0	2.431	3	7.815	Not Significant
Mass media	2	5	0				
Health personals	1	6	0				
Newspaper							

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*p<0.05S (Significant)NS=Not significant

Table 4.1 shows the association between the level of knowledge and socio- demographic variables. There was no association between demographic variables age / education / occupation area of residence, family income and source of information. The calculated chi-square values were less than the table value at the 0.05 level of significance.

Chapter–5 Discussion

The present study had been undertaken with a view to evaluate the knowledge of postnatal mothers regarding prevention of Hypoglycemia in neonates. This chapter relates the findings of the present study in accordance with the studies done earlier. The findings of the present study have been discussed in accordance with the objectives of this study.

In the first section of analysis socio-demographic variables of postnatal mothers showed that majority of postnatal mothers were in age group of 26– 30yrs 15(50%). Most of subjects were educated up to 10–12th 11(36.66%). Most of postnatal mothers were housewife 20(66.66%). Majority of subjects had family monthly income < Rs. 10,000/- 10(33.33%). Maximum of subject had acquired information from health personals 23(76.66%). Most of the subjects' area of residence was urban area 19(63.33%)

Dr. Manjunatha (2016) conducted a cross sectional study to assess the knowledge and practices towards selected aspects of essential newborn care among postnatal mothers at Juba Teaching Hospital. The study reveals that mean age of the mothers was 26.2 (50+6.3) years. Only 45 (11%) mothers attained tertiary education. The antenatal history revealed (66%) mothers had at least 4 ANC only 70 (18-20%) mothers knew that umbilicus should be left uncovered. More than 346(91.1%) mothers knew of breast feeding on demand, 309(80.5%) mothers knew of exclusive breast feeding and use of colostrum's was known by (83.9%) mothers. The study concluded that adequate knowledge was found towards breastfeeding with knowledge gaps existing in cord care.

In the second section of analysis, pre-test knowledge among married women was assessed and it was found that majority18(60.00%)of subjects had poor level of knowledge regarding prevention of Hypoglycemia in neonates and minimum 12 (40.00%) had average level of knowledge and 0(0.00%) subjects had good knowledge regarding prevention of Hypoglycemia in neonates.

Mr. J. Perinatol (2010) conducted a study to evaluate the effectiveness of structured teaching programme on knowledge regarding prevention of Hypoglycemia among mothers of neonates admitted in selected Pediatric hospital Bangalore. In the pre-test maximum mothers had (63%) average knowledge where as in the post test (93%) mothers had good score (77). AV aids was an effective strategy in imparting knowledge to postnatal mothers in prevention of Hypoglycemia.

In the third section of analysis, it was found that among postnatal mothers the pre-test knowledge score (mean was 10.02) and post-test knowledge score (Mean was20.30).It is concluded that the difference in the knowledge score among post-natal mothers in the pre-test and post-test was statistically significant at < 0.005.(The T-test value was 10.1)

In the fourth section of analysis, there was significant association between post-test knowledge among postnatal mothers with the source of information (the chi-square value was 11.27 that was more than table value 2.45).But there was no association between post-test knowledge among postnatal mothers with the age, education, occupation, area of residence and family income.

Dr. Mohammed Abdul Saleem and Dr Abrar Ahmad Siddique (2018) conducted study to evaluate the prevalence and risk factors associated with hypoglycemia in low birth weight infants. The study reveals that out of 50 neonates, 15(30%) has one or more episodes of hypoglycemia, overall 22 episodes were recorded out of 15 hypoglycemic neonates 8(53.3%) were small for gestational age (SGA) and 7(46.7%) were AGA. Sepsis was significantly noticed after hypoglycemia. The pattern of blood glucose level was significantly different among hypoglycemic neonates and normal glycemic neonates over the first 72 hours

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Chapter–6
Summary,Conclusion and recommendations

This chapter gives a brief account of the study undertaken including conclusion drawn from the findings, limitations, implication of the study and recommendation for the future research.

Research problem:

"A pre-experimental study to assess the effectiveness of information booklet regarding prevention of hypoglycemia in neonates among postnatal mothers at Government Rajindra hospital Patiala, Punjab."

Objectives:

1. To assess the pre-test knowledge regarding prevention of hypoglycemia in neonates among postnatal mothers.
2. To assess the post-test knowledge regarding prevention of hypoglycemia in neonates among postnatal mothers.
3. To compare the pre-test and post-test knowledge regarding prevention of hypoglycemia in neonates among postnatal mothers.
4. To find out association of post-test knowledge regarding prevention of-hypoglycemia in neonates with selected socio-demographic variable.

Hypothesis

H_1: There is a significant difference in pre- test and post-test knowledge score of postnatal mothers regarding prevention of Hypoglycemia in neonates.

$H_{2:}$ **There** is a significant association of posttest knowledge score of post-natal mothers regarding prevention of hypoglycemia in neonates with selected demographic variables.

Nullhy pothesis

H_{01}: There is not a significant difference between pre-test and post-test knowledge score of regarding prevention of hypoglycemia in neonate's postnatal mothers

H_{02}: There is not a significant association of post-test knowledge score of postnatal mother regarding prevention of hypoglycemia in neonates with selected demographic variables.

Conclusion

Out of 30 subjects, in pre-test majority 25(83.3%) had poor knowledge score, 5(16.7%) subjects had average knowledge and the remaining 0(0%) had good knowledge score of post-natal mothers regarding prevention of hypoglycemia in neonates. But in post-test majority of subjects 26(86.7%) had average knowledge, followed by 4(13.3%) had good knowledge and 0(0%) had poor knowledge score. There was no significant association of demographic variables and between the levels of knowledge of postnatal mothers.

Implication of the study:

The study findings have certain very important implication for the nursing profession that is nursing education, nursing practice, nursing administration and nursing research.

Nursing Education

The present study has implications on nursing education. The study findings reveled that there is a deep impact of health awareness through information booklet on the level of knowledge of postnatal mothers. The nursing curriculum should lay stress on prevention of hypoglycemia in neonates. The health awareness program developed during this study may be used by the student nurses as a tool to carry out health education session in the Hospital.

Nursing Services

The tool developed during this study further helps to identify the knowledge level of postnatal mothers regarding prevention of hypoglycemia in neonates. The health personnel and nursing student can educate the postnatal mothers regarding prevention of hypoglycemia in neonates.

Nursing Administration

The need of well-organized health awareness is felt to promote the Knowledge Among Postnatalmothersre gardingpreventionofhypoglycemiain Neonates. The nursing administration should organize information booklet to educate the postnatal mothers regarding prevention of hypoglycemia in neonates.

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Nursing Research

The information contained in present study can be valuable source of data for further researches. It can help them in conducting research with large sample size. Nursing students should actively conduct research in this field so as to become aware of the prevention of hypoglycemia in neonates and will help to educate the postnatal mothers regarding prevention of hypoglycemia in neonates.

Recommendations

1.The study can be replicated on large sample to validate and generalize its findings.

2.A comparative study can be carried out between subjects in postnatal mothers at Government Rajindra hospital, Patiala.

3.An exploratory study can be done to assess the knowledge and practices of postnatal mothers regarding prevention of hypoglycemia in neonates.

4.A true experimental study by randomization can be done to further substantiate the results obtained.

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