

Level of Knowledge among Postnatal Mothers Regarding Newborn care at Selected Hospital of Ranchi, Jharkhand: A Descriptive Study

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Abstract

Essential care of the normal healthy neonate can be best provided by the mothers under supervision of nursing personnel or basic primary health care provider. About 80% of the newborn baby should be kept with their mothers rather than in a separate nursery.

Objectives:

1. To assess the level of knowledge among postnatal mothers regarding newborn care at selected hospital.
2. To find the association between level of knowledge among postnatal mothers regarding newborn care with their selected Socio-demographic variables.

Design and Method: A quantitative approach using non-experimental research design. 40 Postnatal mothers were selected using simple random probability sampling at selected hospital, Ranchi, Jharkhand. Self-structured multiple choice questionnaire on socio-demographic variables and knowledge regarding newborn care were used for data collection.

Result: The study reveals that no postnatal mother (0%) has poor knowledge, 8(20%) has average knowledge, 25(62.5%) has good knowledge and 7(17.5%) has excellent level of knowledge. The chi-square value in number of child is 15 at degree of freedom 4, which is greater than the Table value 9.49 at 0.05 level of significance and previous knowledge is 7.92 at degree of freedom 3, which is greater than Table value 7.82 at 0.05 level of significance whereas; age, education, family type, family income and area of residence is found to be not-significant. Hence, the null hypothesis is rejected for previous knowledge about newborn care and number of child, while accepted for others.

Discussion: The present study concluded that the postnatal mothers' had an average knowledge level regarding newborn care.

Keywords: Assess; Knowledge; Postnatal mothers, Newborn, Newborn care.

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INTRODUCTION

Good quality of antenatal care, safe delivery and optimal care at birth, prevention and early treatment of hypothermia and bacterial infection and promotion of exclusive breastfeeding, are the essential components of newborn care.

The principle of essential newborn care is simple, requiring no expensive high technology equipment, resuscitation, warmth to avoid hypothermia, early



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breastfeeding, hygiene, support for the mother, newborn-relationship and early treatment for low birth weight or sick infant. (Hawken Berry and Wilson 2005)

Neonatal sepsis contributes significantly to neonatal morbidity and mortality and is a major public health challenge around the world. Depending on the mode of occurrence, a distinction is made between maternal-transmitted infection and that acquired in the postnatal period. Although the etiologies maternally transmitted diseases are well understood, those of postnatal acquired infection are variable depending on the epidemiology of each hospital environment.

It is amazing that a newborn baby with a birth weight of 1 kg had a mortality risk of 95% in 1960 and now has a 95% probability of survival. Neonatology has evolved from a state of passive or "hands-off years" through aggressive or "heroic years" and has reached a phase of "experienced years" by promoting evidence-based neonatology.

The health problems of newborn babies are unique and distinctive compared to disease of infants and older children. Neonates are prone to develop health problems due to transition from dependent fetal to independent neonatal physiology, disorders due to structural and functional immaturity of various body organs and a variety of iatrogenic disorders due to aggressive use of technology in the NICU.

"It is important to remember that the aim and goal of newborn care is not only to reduce neonatal mortality but more important to ensure their intact survival. The health and well-being of the fetus are dependent upon the health and nutrition of the mother (not the father) because she is both the seed as well as the soil where in baby is nurtured for nine months."

According to Meharban Singh (2017).

Therefore, this study conducted on this context and, the objectives of which were to assess knowledge of postnatal mother and to determine the various newborn care.

METHODS

Hypothesis made for this study are mentioned below:

H₀ - There will be no association between level of knowledge among postnatal mothers regarding newborn care.

H₁ - There will be a significant association between level of knowledge among postnatal mother regarding newborn care with their selected socio-demographic variables.

Assumptions made for this study are:

- Postnatal mothers' possess some knowledge regarding newborn care.
- Proper knowledge regarding newborn care reduces newborn care.
- Mothers may have varying level of knowledge regarding newborn care.

Limitations

The study was limited to:

- ✓ Postnatal mothers at Sadar Hospital, Ranchi, Jharkhand.
- ✓ Sample size of 40.
- ✓ Those who understands either Hindi or English.
- ✓ Those who were present at the time of data collection.
- ✓ Postnatal mothers who were interested to participate in research study.

The present study aims to assess the level of knowledge among postnatal mothers regarding newborn care. The conceptual framework for this study was based on Peplau's theory (1952).

Research Approach

A quantitative research approach was considered to be the most appropriate for the present study as it aimed at assessing the knowledge regarding newborn care among postnatal mothers.

Research Design

Keeping in the view the objectives of the study, the research design for the present study is non-experimental quantitative research design.

In the study we have chosen to focus on knowledge among postnatal mothers regarding new born care.

Setting of the Study

The present study was conducted on knowledge regarding newborn care among postnatal mothers at Sadar hospital, Ranchi.

Population

The present population includes postnatal mothers of Sadar hospital, Ranchi, Jharkhand.

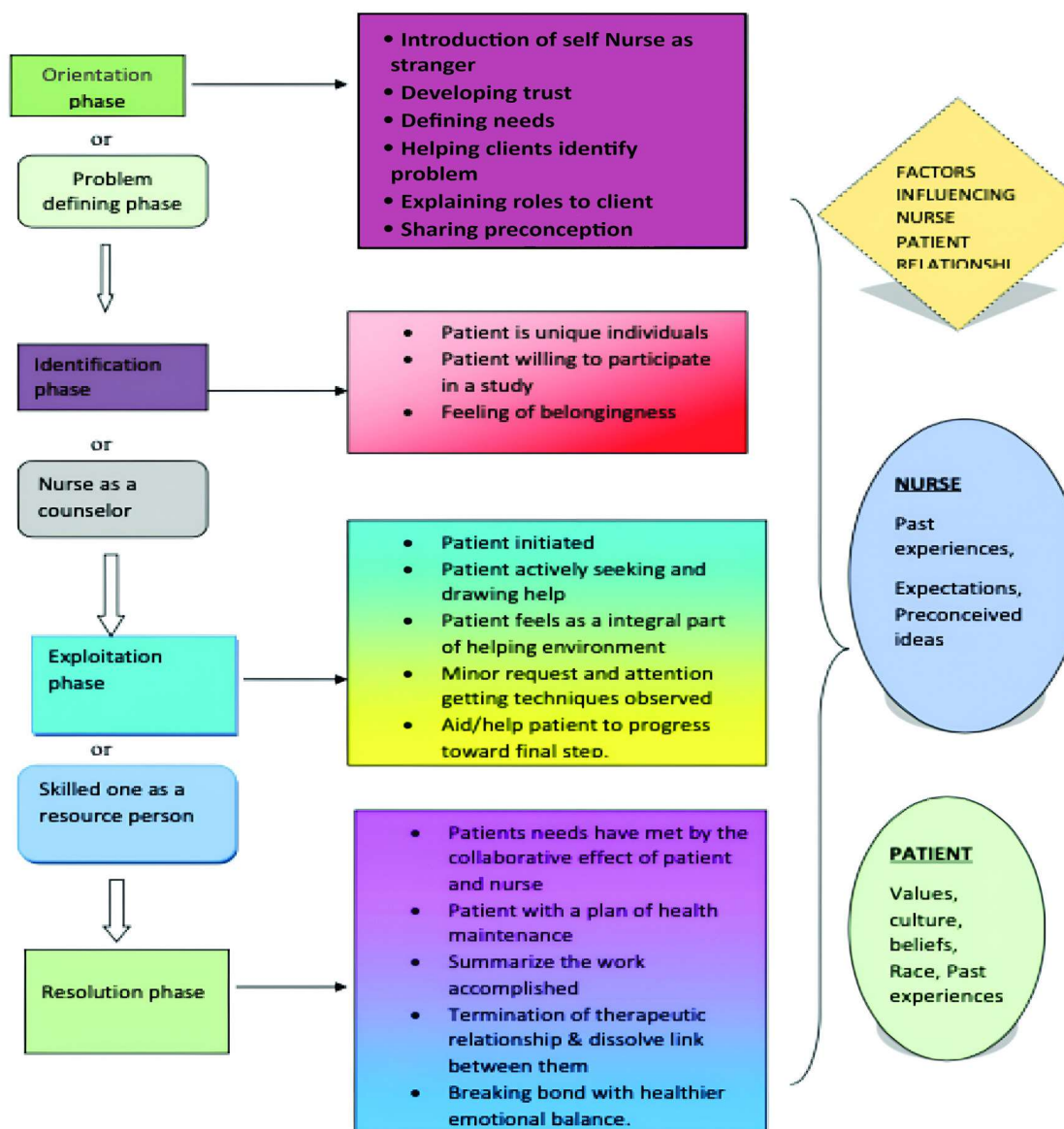


Fig. 1: Modified conceptual framework of peplau's Theory

Sample and Sampling Technique

A total of 40 postnatal mothers who satisfied the inclusion criteria were present during the study and used simple random probability sampling technique.

Inclusion Criteria

- Postnatal mothers with their neonate.
- Postnatal mothers present during data collection.
- Who are willing to participate in the study.
- Primipara or multipara mothers.

Exclusion Criteria

- Postnatal mothers who were not present at the time of data collection.
- Who are not willing to participate
- Relatives of postnatal mothers
- Age less than 20 years

Data collection

Data collection was carried at Sadar Hospital, Ranchi with 40 postnatal mothers. Prior consent was taken from mothers for their participation in

the research study. The data was collected using a questionnaire focusing on knowledge regarding newborn care among postnatal mothers. The first part of questionnaire consists of demographical data such as age, family income, place of living, source of knowledge etc. These cond part asks question about knowledge regarding newborn care. The knowledge scale contains 32 questions. The evaluation of knowledge gained by; For correct response =1 mark; For incorrect or no response =0 mark.

by using descriptive and inferential statistics.

The analysis of data is organized and presenting under the following broad headings:

Section I: Description of socio demographic variables in frequency and percentage.

Section II: Overall analysis of knowledge through mean, mean % and standard deviation.

Section III: 10 Chi-square analyses for association

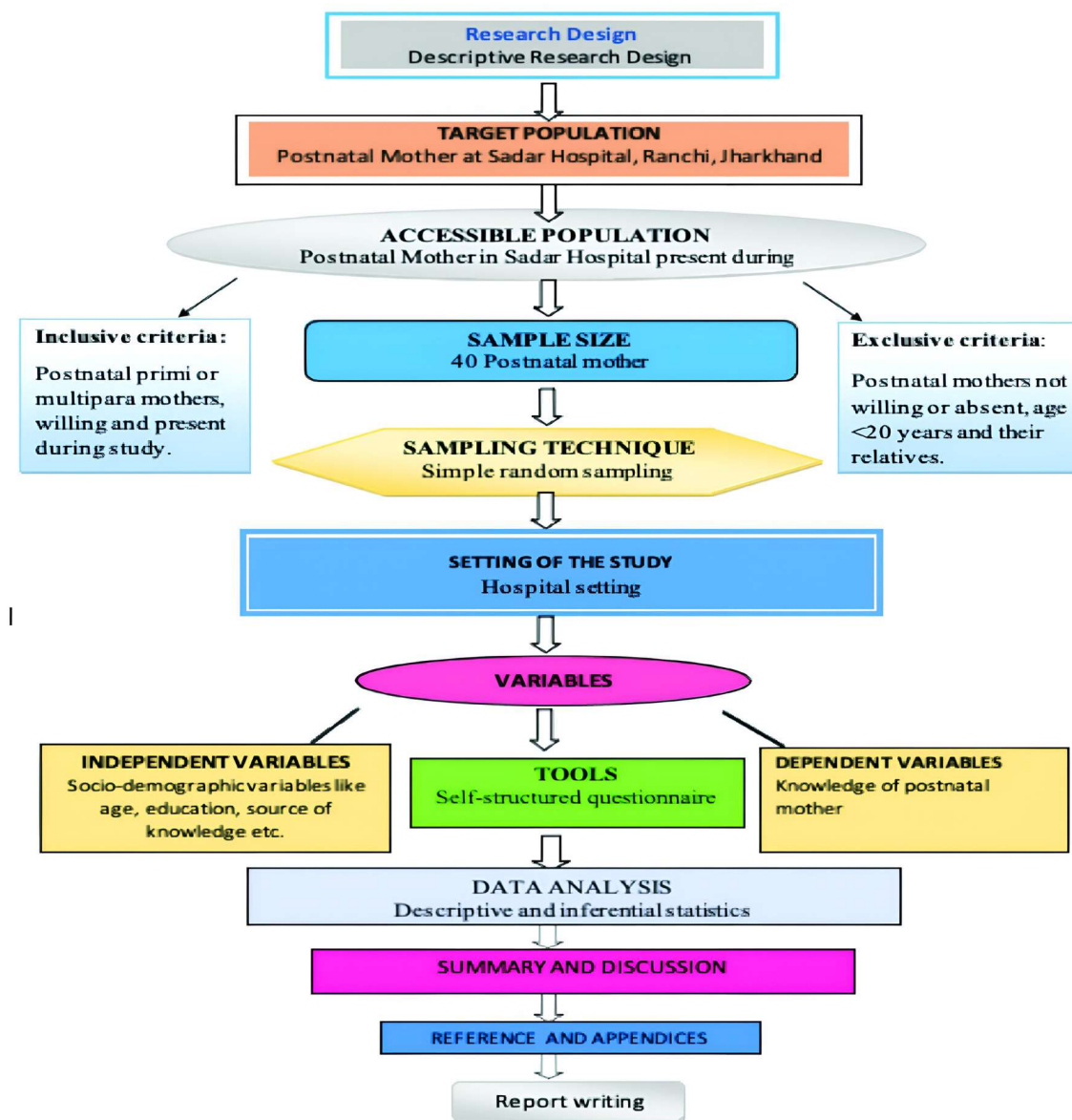


Fig. 2: Schematic representation of research design

Data Analysis and Interpretation

The analysis and interpretation of data of this study is based on the data collected using structured questionnaire method. The results were computed

between the level of knowledge with selected socio demographic variables.

Distribution of Subjects According to Socio Demographic Variables

Percentage Distribution According to Age

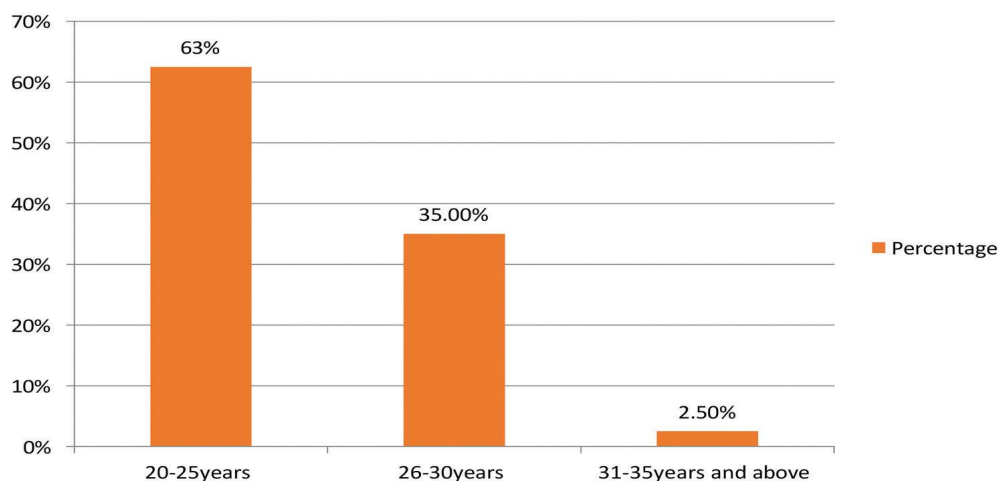


Fig. 3: Bar diagram showing the frequency and percentage distribution according to age group

Table 1: Distribution of subjects according to age groups in years

(N=40)		
Age group	Frequency	Percentage (%)
20-25 years	25	62.5%
26-30 years	14	35%
31-35 years and above	1	2.5%

Table 1 (Fig 3) represent that majority of post-natal mothers 62.5% (25) belong to age group 20-25 years, 35% (14) belong to 26-30 years, 2.50% (1) belong to 31-35 years and above

Table 2: Distribution of subject according to education status

(N=40)		
Education status	Frequency	Percentage (%)
Illiterate	5	12.5%
Primary	15	37.5%
Secondary or more	20	50%

Table 2 (Fig. 4) represents that majority of post-natal mothers 12.5% (5) are illiterate, 37.5% (15) have done primary education, 50% (20) have done secondary education and more.

percentage distribution according to education status

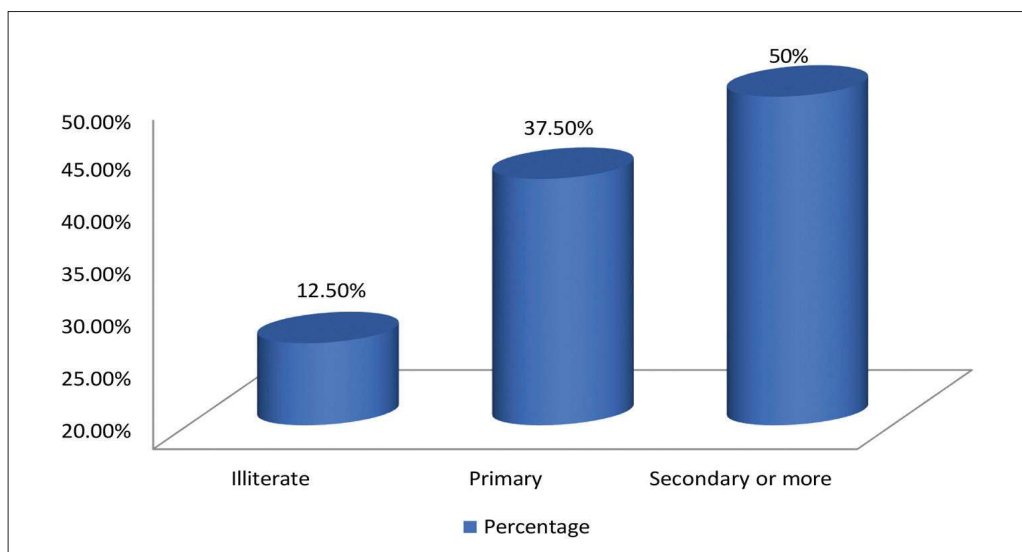
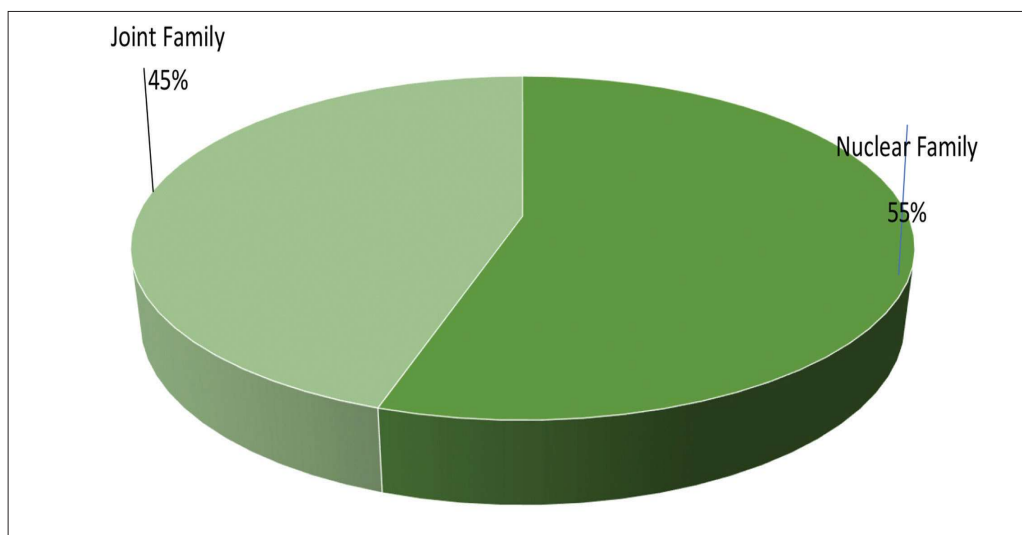


Fig. 4: Cylinder diagram showing the frequency and percentage distribution according to education status

Percentage distribution according to family type**Fig 5:** Pie diagram showing the frequency and percentage distribution according to family type**Table 3:** Distribution of subject according to family type

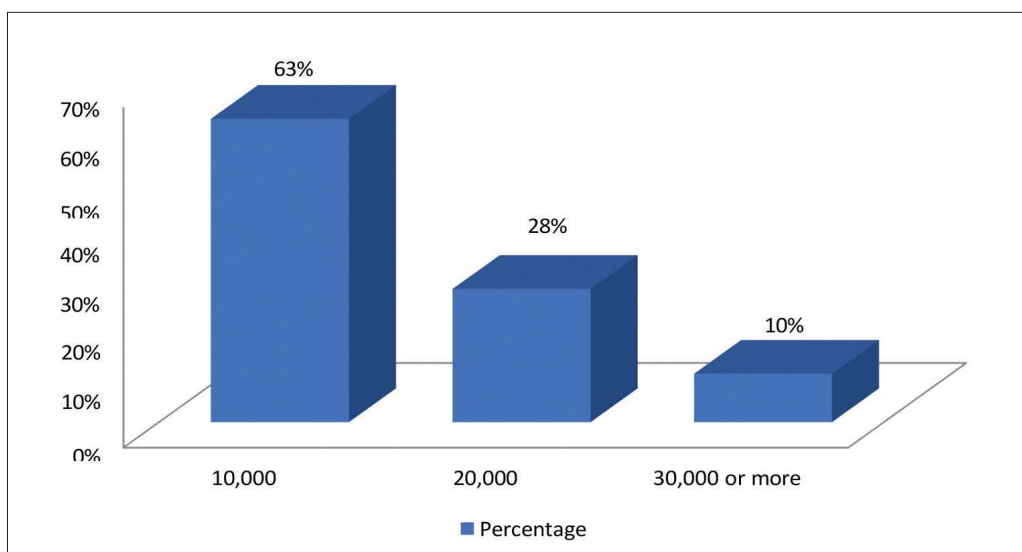
(N=40)		
Family type	Frequency	Percentage (%)
Nuclear family	22	55%
Joint family	18	45%

Table 3 (Fig. 5) represent that majority of postnatal mothers 55% (22) belongs to nuclear family, 45% (18) belongs to joint family.

Table 4: Distribution of subject according to family income

(N=40)		
Family income	Frequency	Percentage
10,000-20,000	25	62.5%
20,000-30,000	11	27.5%
30,000 or more	4	10%

Table 4 (Fig. 6) represent that majority of postnatal mothers 62.5% (25) have 10,000 income, 27.5% (11) have 20,000 income and 10% (4) have 30,000 or more income.

Percentage distribution according to family income**Fig 6:** Bar diagram showing frequency and percentage distribution according to family income

Percentage distribution according to number of children

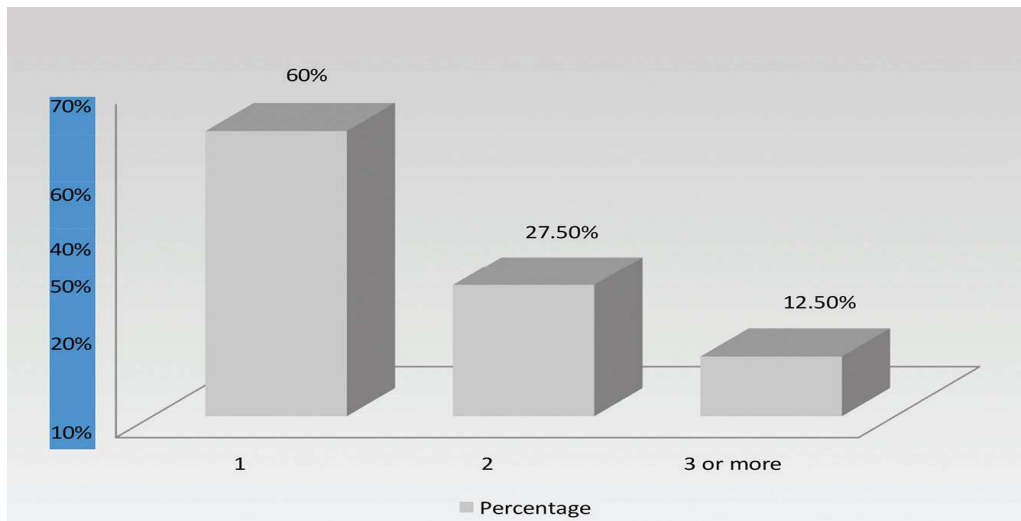


Fig. 7: Bar diagram showing frequency and percentage distribution according to number of children

Table 5: Distribution of subject according to number of child (N=40)

Number of child	Frequency	Percentage (%)
1	24	60%
2	11	27.5%
3 or more	05	12.5%

Table 4 (Fig 7) represent that majority of postnatal mothers 60% (24) have single-child, 27.50% (11) have 2 children and 12.50% (5) have 3 or more children.

Table 6: Percentage distribution of subject according to knowledge about newborn care (N=40)

Previous Knowledge	Frequency	Percentage (%)
Yes	34	85%
No	06	15%

Represent that majority of postnatal mothers 85% (34) have knowledge about newborn care and 15% (6) have no knowledge about newborn care.

Percentage distribution according to previous knowledge about newborn care

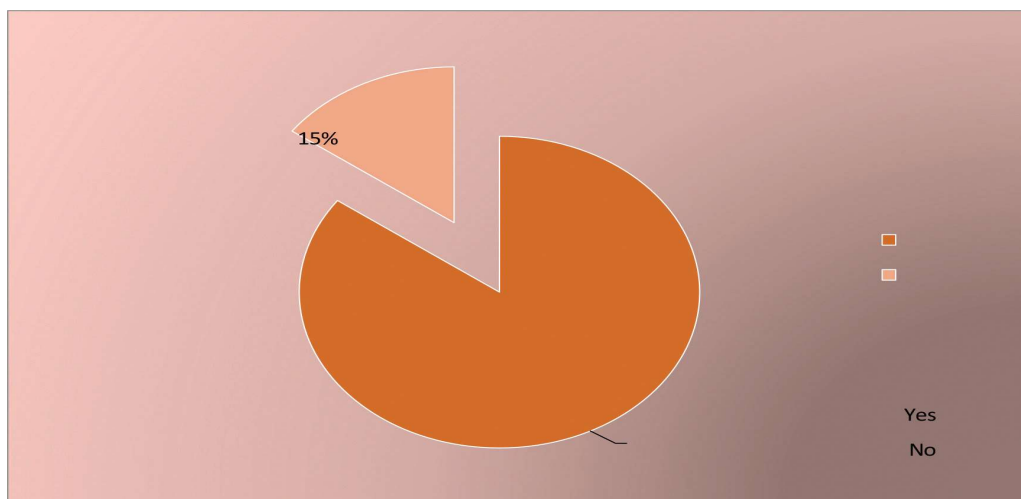


Fig. 8: Pie diagram showing frequency and percentage distribution according to knowledge about newborn care

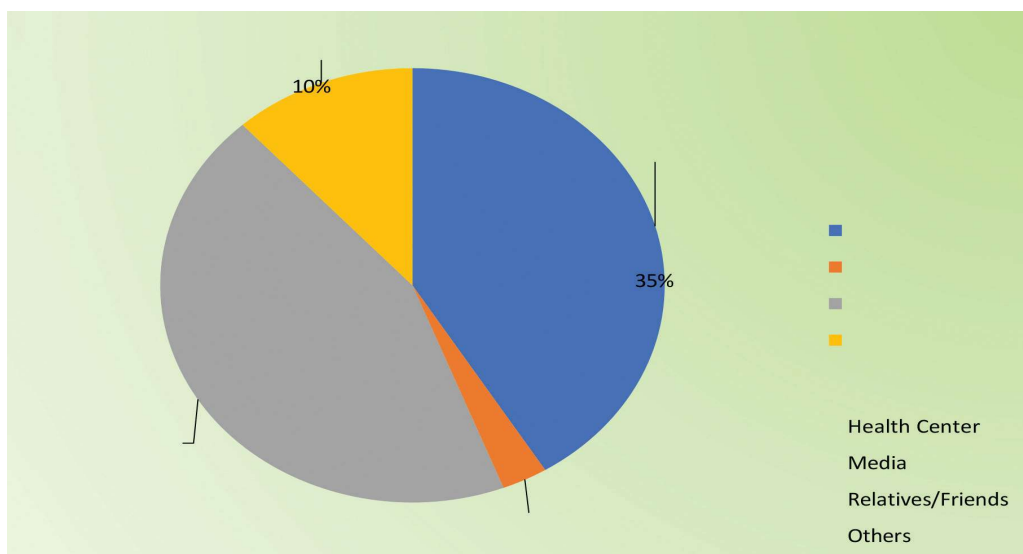
Percentage distribution according to knowledge about newborn care and source of information

Fig. 9: Pie diagram showing frequency and percentage distribution according to knowledge about newborn care

Table 7: Distribution of subject according to Source of information

Source of information	Frequency	Percentage (%)
Health center	14	41.1%
Media	01	2.9%
Relative/Friends	15	44.1%
Others	04	11.7%

Table 7 (Fig. 9) represent that majority of postnatal mothers 85% (34) have knowledge about newborn care and the source of information of majority of postnatal mothers 35% (14) from health center, 2.50% (1) from media 37.50% (15) from relatives/friends and 10% (4) from other sources and 15% (6) have no knowledge about newborn care.

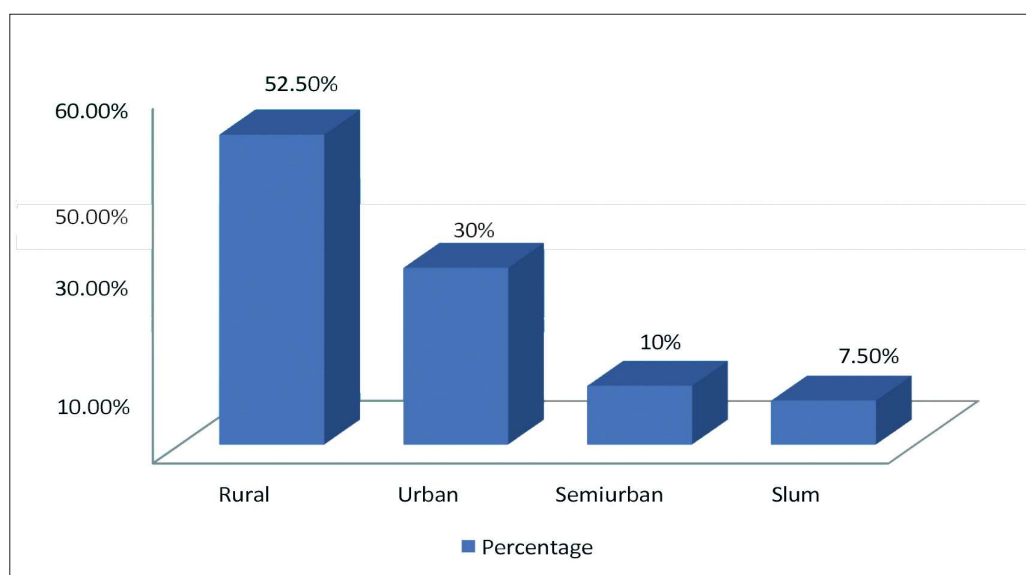
Percentage distribution according to area of residence

Fig. 10: Bar diagram showing the frequency and percentage distribution according to area to residence

Table 8: Percentage distribution according to area of residence

Area of residence	Frequency	Percentage
Rural	21	52.5%
Urban	12	30%
Semi Urban	04	10%
Slum	03	7.5%

Table 8 (Fig 10) represent that majority of postnatal mothers 52.50% (21) belong to rural area, 30% (12) belong to urban area, 10% (4) belong to semi urban area and 7.50% (3) belong to slum.

Section III

Table 11: Chi-square analysis for association between the level of knowledge with selected socio demographic variables

Demographic variable	Category	Frequency	Level of knowledge			D F	Table value	χ^2	Significance
			Poor	Good	Excel				
Age	20 -25 yrs.	25	8	10	7	4	9.89	5.11	NS
	26-30 yrs.	14	0	9	5				
	31-35 yrs.	1	0	1	0				
Education	Illiterate	5	1	2	2	4	9.89	11.3	S
	Primary	15	5	6	4				
	Secondary or more	20	2	12	6				
Family type	Nuclear	22	5	14	3	2	5.99	7.7	S
	Joint	18	3	6	9				
Family income	10,000- 20000	25	5	12	8	4	9.89	4.1	NS
	20,000- 30,000	11	2	7	2				
	More than 30,000	4	1	1	2				
Number of children	1	24	6	13	5	4	9.89	10.2	S
	2	11	2	3	6				
	3 or more	5	0	4	1				
Previous knowledge	Yes	34	5	18	11	2	5.99	6.48	S
	No	6	3	2	1				
Area of residence	Rural	21	3	12	6	6	12.59	4.5	NS
	Urban	12	3	4	5				
	Semi-Urban	4	1	2	1				
	Slum	3	1	2	0				

Table 11 Reveals that there is association with the knowledge score and selected socio-demographic variables. The chi-square value in number of children is 9.49 at degree of freedom 4, which is greater than the Table value 15 at 0.05 level of significance and previous knowledge is 7.92 at degree of freedom 3, which is greater than Table value 7.82 at 0.05 level of significance whereas; age, education, family type, family income and area of residence is found to be not significant. Hence, the

Section II

Table 9: Overall analysis of knowledge through mean, mean % and standard deviation

Analysis of knowledge level	Mean	Mean %	Standard Deviation
Values	19.8	49.5%	5.5

Table 10: Overall analysis of knowledge according to knowledge level among postnatal mothers

Analysis through knowledge level	Poor (0-11)	Good (12-22)	Excellent (23-32)
Frequency	8	20	12
Percentage	20%	50%	30%

null hypothesis rejected for previous knowledge and number of child while accepted for others.

DISCUSSION

Majority of post-natal mothers *i.e.*, 62.5% (25) belongs to age group 20-25 years, 35% (14) belong to 26-30 years, 2.50% (1) belong to 31-35 years and above.

Majority of post-natal mothers i.e., 12.5% (5) are illiterate, 37.5% (15) have done primary education, 50% (20) have done secondary or more education. Majority of post-natal mothers i.e., 55% (22) belongs to nuclear family, 45% (18) belongs to joint family. Majority of postnatal mothers i.e., 62.5% (25) have 10,000-20,000 income, 27.5% (11) have 20,000-30,000 income and 10% (4) have more than 30,000 incomes. Most of postnatal mothers i.e., 60% (24) have 1 child, 27.50% (11) have 2 children and 12.50% (5) have 3 or more children. Most of postnatal mothers i.e., 85% (34) have knowledge about newborn care and the source of information of majority.

Majority of postnatal mothers 52.50% (21) belong to rural area, 30% (12) belong to urban area, 10% (4) belong to semi urban area and 7.50% (3) belong to slum.

The analysis of overall knowledge level through mean (19.8), mean percent (49.5%), standard deviation (± 5.5) and the analysis of knowledge according to criteria of knowledge level represent the postnatal mothers of 20% (08) were having poor knowledge, 50% (20) having good knowledge and 30% (12) having excellent knowledge level.

There is significant association between socio-demographic variables and knowledge score as the calculated Chi-square value is 15 ($df=4$) for number of children is greater than the Table value 9.49 at 0.05 level of significance respectively.

There is significant association between socio-demographic variables and knowledge score as the calculated Chi-square value is 7.92 ($df=3$) for previous knowledge of newborn care is greater than the Table value 7.82 at 0.05 level of significance respectively.

There is significance association between education status and knowledge score as the calculated Chi-square value is 11.3 ($df=4$) is more than Table value 9.49 at 0.05 level of significance.

There is significance association between family type and knowledge score as the calculated Chi-square value is 7.7 ($df=2$) is more than Table value 5.99 at 0.05 level of significance.

There is significance association between number of child and knowledge score as the calculated Chi-square value is 10.2 ($df=4$) is more than Table value 9.49 at 0.05 level of significance.

There is significance association between previous knowledge score as the calculated Chi-square value is 6.48 ($df=2$) is more than Table value 5.99 at 0.05 level of significance.

There is no significance association between area of residence and knowledge score as the calculated Chi-square value is 4.5 ($df=6$) is less than Table value 12.59 at 0.05 level of significance.

There is no significance association between age group and knowledge score as the calculated Chi-square value is 5.11 ($df=4$) is less than Table value 9.49 at 0.05 level of significance.

There is no significance association between area of residence and knowledge score as the calculated Chi-square value is 4.5 ($df=6$) is less than Table value 12.59 at 0.05 level of significance.

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