

A Study to Assess the Effectiveness of Planned Teaching Programme on Knowledge Regarding Selected Neonatal Infections and their Prevention among Primi Gravida Mothers Attending H.S.K Medical College Hospital and Research Center. Bagalkot

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Abstract

➤ *Background of the study*

‘Motherhood’ is the most beautiful experience in life without which a woman is incomplete. Birth of a healthy newborn is one of the finest gift of nature and also the most awe-inspiring and emotional event in one’s life time.⁽³⁾ The period after childbirth is a critical time for the health of mother and her baby. Newborns are particularly susceptible to infection much more than the older children, because their new immune system is not sufficiently developed to fight the bacteria, viruses and parasite that cause infection.⁽⁴⁾

Neonatal survival is a very sensitive indicator of population growth and socio-economic development. Each year in India over one million newborns die before they complete their first month of life, accounting for 30% of the world’s neonatal deaths². India’s current neonatal mortality rate of 44 per 1000 live births represents 1.2 million children who die each year. Neonatal mortality is higher in rural areas at 49 per 1000 live births (vs 27/1000 in urban areas). There are important rural-urban and socioeconomic differences in the NMR. The NMR in rural areas is about one and a half times of that in urban areas (42.5 vs. 28.5 per 1,000 live births). Bagalkot district in Karnataka has a population of 2,35,380 out of which 1,08,976 are residing in rural areas and 1,26,404 in urban areas. And Bagalkote (47%) has the lowest level of institutional deliveries in the state and only 63% percentage of pregnant women who had a minimum of three antenatal care visits.

More than 86 percent of all newborn deaths are caused by 3 factors; infection, asphyxia and preterm birth. Infection alone – namely Sepsis, Neonatal tetanus, and Umbilical cord infection- accounts for 32 percent of all

Neonatal mortality.⁽⁶⁾ In India 1.5 percent of total children become blind due to Ophthalmia neonatorum.⁽⁷⁾ So today we are going to discuss regarding neonatal infections like umbilical cord infection, neonatal tetanus, Ophthalmia neonatorum (eye infection) and neonatal septicemia and their prevention.

➤ *Objectives of the Study:*

- To assess the knowledge of primigravida mothers regarding selected neonatal infections and their prevention.
- To assess the effectiveness of planned teaching programme on knowledge regarding selected neonatal infections and their prevention.
- To find out the association between pretest knowledge of Primigravida mothers and selected socio demographic variables.

➤ *Conceptual Framework*

The conceptual framework of the study is based on modified pender’s health promotion model.

➤ *Method*

This was quasi experimental study with 40 subjects were selected through convenient sampling technique. One group pre test post test design was used. Data was collected by means of a structured interview schedule which was divided into 3 sections (socio- demographic data, knowledge regarding selected neonatal infections and knowledge regarding prevention of selected neonatal infections). The reliability of the tool was established by Split Half method. The Karl Pearson’s coefficient of correlation $r = 0.835$. Planned teaching programme on selected neonatal infections and their prevention was developed. After content validity of the tool was established by five experts.

Data was analyzed by using descriptive and inferential statistical in terms of mean, frequency distribution, percentage ‘t’ test and chi-square test.

➤ **Result**

It was proved that there was increase in the knowledge level of primigravida mothers after implementing planned teaching programme, thus planned teaching programme on selected neonatal infections and their prevention was effective. Out of 40 subjects 21(52.50%) of subjects had inadequate knowledge, 11(27.50%) subjects had medium and only 8(20%) had adequate knowledge regarding selected neonatal infections and their prevention before teaching programme (pre test). However after teaching programme (post test) about 14(35%) subjects had an adequate knowledge and 21(52.50%) subjects had medium knowledge and only 5(12.50%) had inadequate knowledge regarding selected neonatal infections and their prevention.

The purpose of analysis is to reduce the data to intelligible and interpretable forms so that the relation of problems can be studied and tested. The interpretation of tabulated data can bring to light these real meaning of the finding of the study.^{56 pr.}

Analysis and interpretation of data for the present study is based on data collected from 40 primigravida mothers attending H.S.K medical college hospital and research centre Bagalkot. The data collected were tabulated, analyzed and interpreted by using descriptive and inferential statistics. The data themselves do not provide us answers to our research questions. The amount of data collected in a study is too expensive to be reliably described by mere perusal. In order to meaningfully answer the research questions, the data must be processed and analyzed in some order. The data is analyzed on the basis of the objectives and hypothesis of the study.

Keywords:- Primigravida mothers, selected neonatal infections and their prevention, planned teaching programme.

I. INTRODUCTION

➤ **Organisation Of Findings**

The collected information was organized and presented in 3 sections as follows:

- Section I : Description of socio-demographic characteristics of sample.
- Section II : Evaluation of the effectiveness of the PTP on selected neonatal infections and their prevention among primigravida mothers.
- Section III : Association between pretest knowledge scores of primigravida mothers regarding selected Neonatal infections and their prevention and selected socio demographic variables.

A. Section I: Description of socio-demographic characteristics of sample

This section describes the distribution of sample

according to baseline variables such as age, educational status, Occupation, family monthly income, Place of Residence, Source of Information, Gestational age at the time of data collection and Whether taken TT immunization
The data collected was organized, tabulated, analyzed and interpreted by means of statistical tables and graphs and is presented under the following headings.

N=40

Socio-Demographic variables	No of respondents(f)	% of respondents
Age (in years)		
18-22	22	55.00
23-27	14	35.00
28 & above	4	10.00
Educational status		
No formal education	2	5.00
Primary	12	30.00
Secondary	6	15.00
PUC	10	25.00
Diploma	2	5.00
Degree	6	15.00
Post Graduation	2	5.00
Occupation		
House wife	10	25.00
Coolie	16	40.00
Government employee	6	15.00
Private employee	8	20.00
Family Income(monthly)		
Rs. 1000/--Rs.2000/-	2	5.00
Rs.2001/--Rs.4000/-	24	60.00
Rs.4001/--Rs.6000/-	6	15.00
Rs.6001/--and above	8	20.00
Place of Residence		
Urban	18	45.00
Rural	22	55.00
Source of Information		
News paper	4	10.00
Mass media	10	25.00
Magazine	6	15.00
Others	20	50.00
Gestational age at the time of data collection		
Below 3 months	1	2.5
3-5 months	19	47.5
6-8 months	13	32.5
8 months and above	7	17.5
Whether taken TT immunization		
Yes	19	47.5
No	21	52.5
Total	40	100.00

Table 1:- Frequency and percentage distribution of socio-demographic variables

➤ **AGE:** The following diagram represents the percentage distribution of study subjects by age groups. Out of 40 subjects, 22(55%) of the subjects belong to 18-22 years, followed by 14(35 %) in the age group of 23-27 years and 4(10 %) were 28 and above years of age.

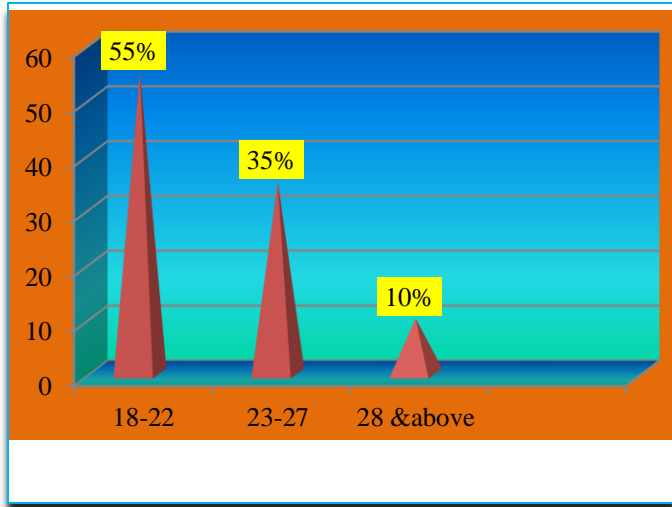


Fig 1:- Pyramid diagram depicting distribution of study subjects according to age.

➤ **EDUCATIONAL STATUS:** The following diagram represents the percentage distribution of study subjects by educational status. Out of 40 subjects, 2(5%) of the subjects had no formal education, 12(30%) up to primary education, 6(15%) had secondary education, 10(25%) had PUC, 2(5%) had diploma, 6(15%) had degree and remaining 2(5%) of the subjects had post graduation.

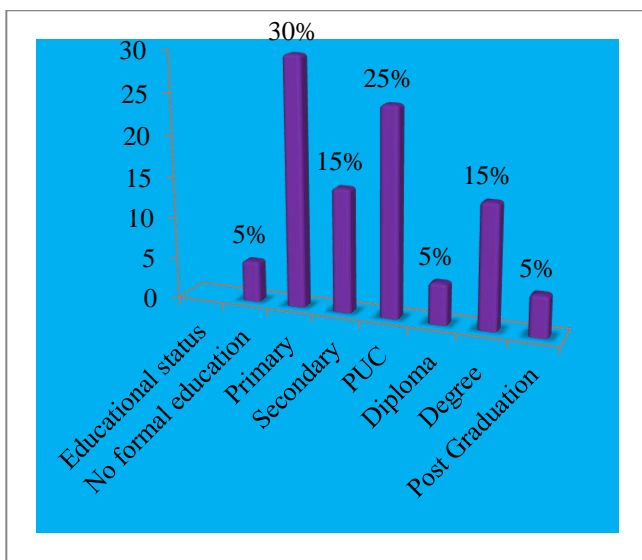


Fig 2:- Bar diagram depicting distribution of study subjects according to the educational status

➤ **OCCUPATION:** The following diagram represents the

percentage distribution of study subjects by occupation. Out of 40 subjects, 10(25%) of the subjects, were housewives, 16(40%) were coolie, 6(15%) were government employee, and remaining 8(20%) of the subjects were private employee.

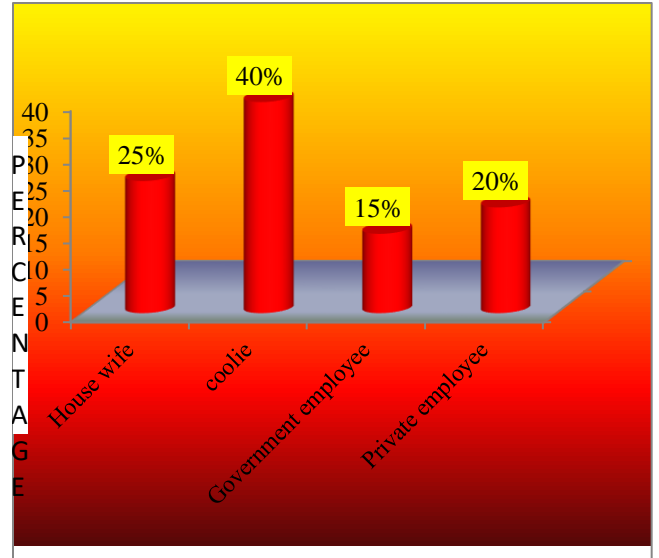


Fig 3:- cylindrical diagram depicting distribution of study subjects according to Occupational status distribution

➤ **FAMILY MONTHLY INCOME:** The following diagram represents the percentage distribution of study sample by monthly income. 2(5%) subjects had an income of Rs.1000/-Rs2000/-, followed by 24(60%) subjects with income between Rs. 2001/-4000/-, 6(15%) had about Rs 4001/- -6000 and 8(20%) had about Rs.6001/-and above.

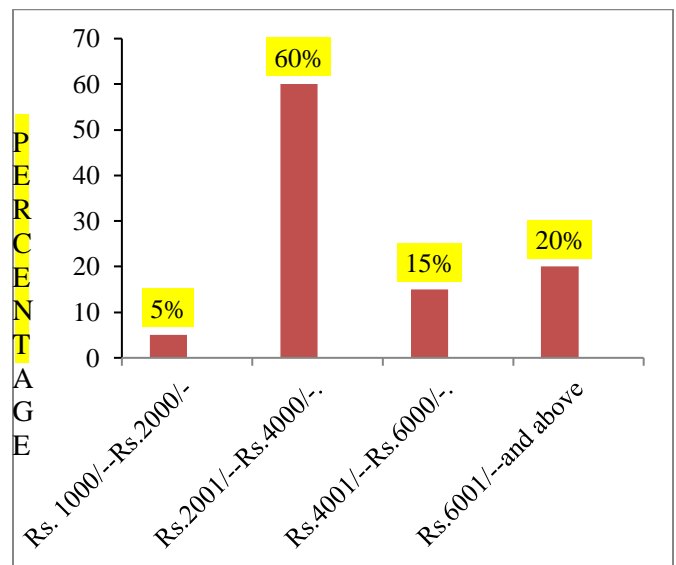


Fig 4:- Bar diagram depicting distribution of study subjects according to Family monthly income.

➤ **PLACE OF RESIDENCE:** Majority 22 (55%) of subjects were staying in rural area and remaining 18(45%) were in urban area.

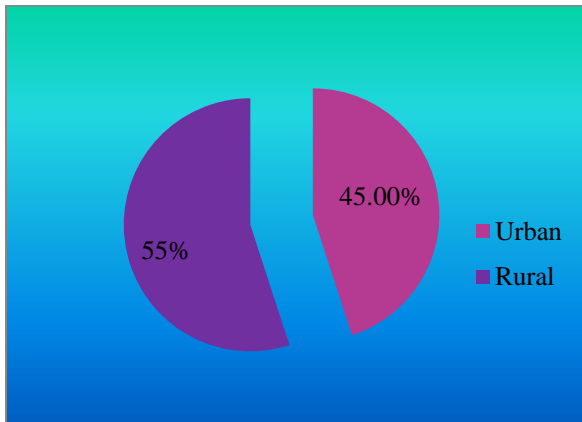


Fig 5:- Pie diagram depicting distribution of study subjects according to Place of residence.

➤ **SOURCE OF INFORMATION REGARDING HEALTH:** The following diagram represents the percentage distribution of study sample by source of information regarding health. 4(10%) subjects were getting information from news paper, followed by 10(25%) subjects were getting from mass media,6(15%) were getting from magazine and 20(50%) were getting from others like friends, neighbours, relatives, etc.

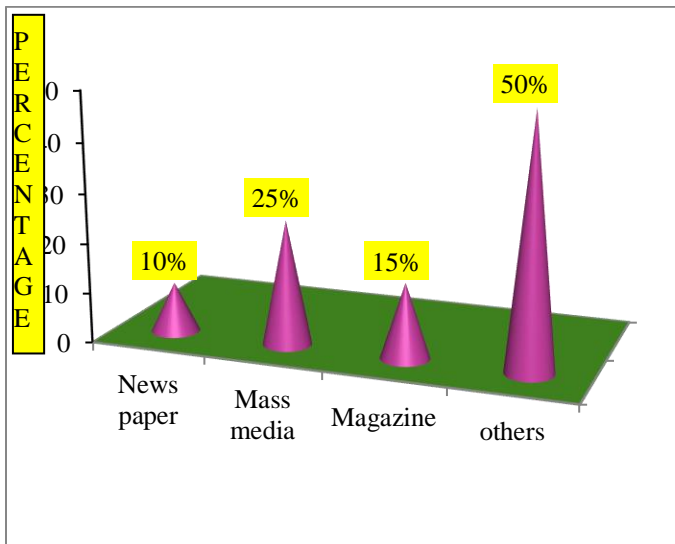


Fig 6:- Cone diagram depicting distribution of study subjects according to Source of information

➤ **Gestational Age At The Time Of Data Collection:** Represents the percentage distribution of study sample by duration of pregnancy. out of 40 subjects 1 (2.5%) was below 3months, followed by 19 (47.5%)of them were in between 3-5months of gestation and 13(32.5%) were 6-8 months of gestation and remaining 7(17.5%) were 8months & above of gestation.

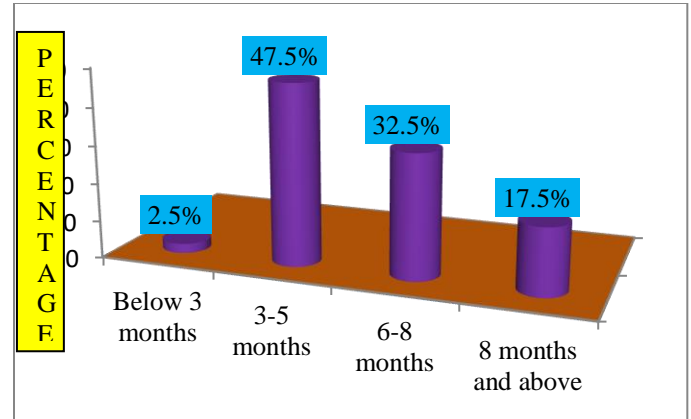


Fig 7:- Cylindrical diagram depicting distribution of study subjects according to Gestational age distribution

➤ **IMMUNIZATION STATUS;** The following diagram represents the percentage distribution of study sample by immunization status ie; TT injection. Out of 40 subjects, 19 (47.5%) were immunized and remaining 21 (52.5%) were unimmunized.

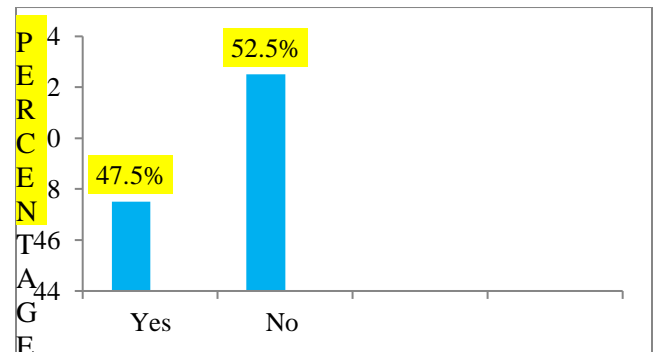


Fig 8:- Bar diagram depicting distribution of study subjects according to the immunization status

B. Section II: Evaluation of the effectiveness of the PTP on selected neonatal infections and their prevention among primigravida mothers.

• **Part-I: Comparison of level of knowledge of primigravida mothers in pre-test and post-test**

Test	Levels of knowledge	Number (f)	Percentage (%)
Pre test	Inadequate	21	52.50
	Medium	11	27.50
	Adequate	8	20.00
	Total	40	100.00
Post test	Inadequate	5	12.50
	Medium	21	52.50
	Adequate	14	35.00
	Total	40	100.00

Table 2:- Distribution of study subjects according to levels of knowledge in pretest and post test

➤ *Assessment of pre-test and post test knowledge level:*

• *Level of knowledge:*

Table represents the result of pre test and post test. In pre test, out of 40 subjects 8 (20%) had adequate knowledge followed by 11 (27.50%) subjects with medium and 21 (52.50%) with inadequate knowledge regarding selected neonatal infections and their prevention. However after teaching programme (post test) 21(52.50%) subjects had medium knowledge followed by 14 (35%) with adequate knowledge and 5 (12.50%) subjects with inadequate knowledge regarding selected neonatal infections and their prevention.

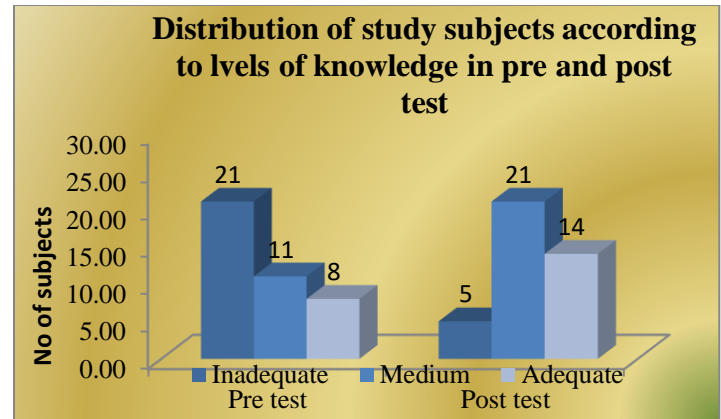


Fig 9:- Comparison of level of knowledge of primigravida mothers in pre-test and post-test

• *Part-I I: Area wise effectiveness of the PTP on selected neonatal infections and their prevention*

N=40

Area wise analysis	Max. score	Pre test(O ₁)			Post test(O ₂)			Effectiveness O ₂ -O ₁	
		Mean	Std. Dev.	Mean (%)	Mean	Std. Dev.	Mean (%)	Mean ±S.D	Mean (%)
Knowledge about neonatal infections	20	7.175	3.96	35.88	11.25	4.12	56.25	4.075± 1.55	20.37
Knowledge about prevention of neonatal infections	16	6.475	3.92	40.47	11.03	3.295	68.94	4.56±1.35	28.47
Total knowledge	36	13.65	7.88	38.18	22.28	7.42	62.595	8.64±2.9	24.42

Table 3:Area wise mean, S.D and mean percentage of the knowledge scores in pretest and post test

Comparison of mean percentage of the knowledge scores of the pretest and posttest reveals an increase of 24.42 percent in the mean knowledge score of the primigravida mothers after PTP. Comparison of area wise mean and SD of the knowledge scores in the area of “neonatal infection” shows that the pretest mean percentage of the knowledge score was 35.88 percent with mean and SD 7.175±3.96 whereas post-test mean percentage of knowledge score was 56.25 Percent with mean and SD 11.25±4.12.This shows an increase of 20.37 percent in the mean percent of knowledge scores Of primigravida mothers.

In the area of knowledge on “preventive measures of neonatal infections”, pre-test mean percentage of knowledge score was 40.47 with mean and SD 6.475±3.92 where as post-test mean percentage of knowledge score was 68.94 percent with mean and SD 11.03±3.295 showing an effectiveness of 28.47 percent.

The overall findings reveal that the percentage of post-test knowledge score was more when compared to the pre-test knowledge score. Hence it indicates that the PTP was effective in enhancing the knowledge of primigravida mothers on selected neonatal infections and their prevention

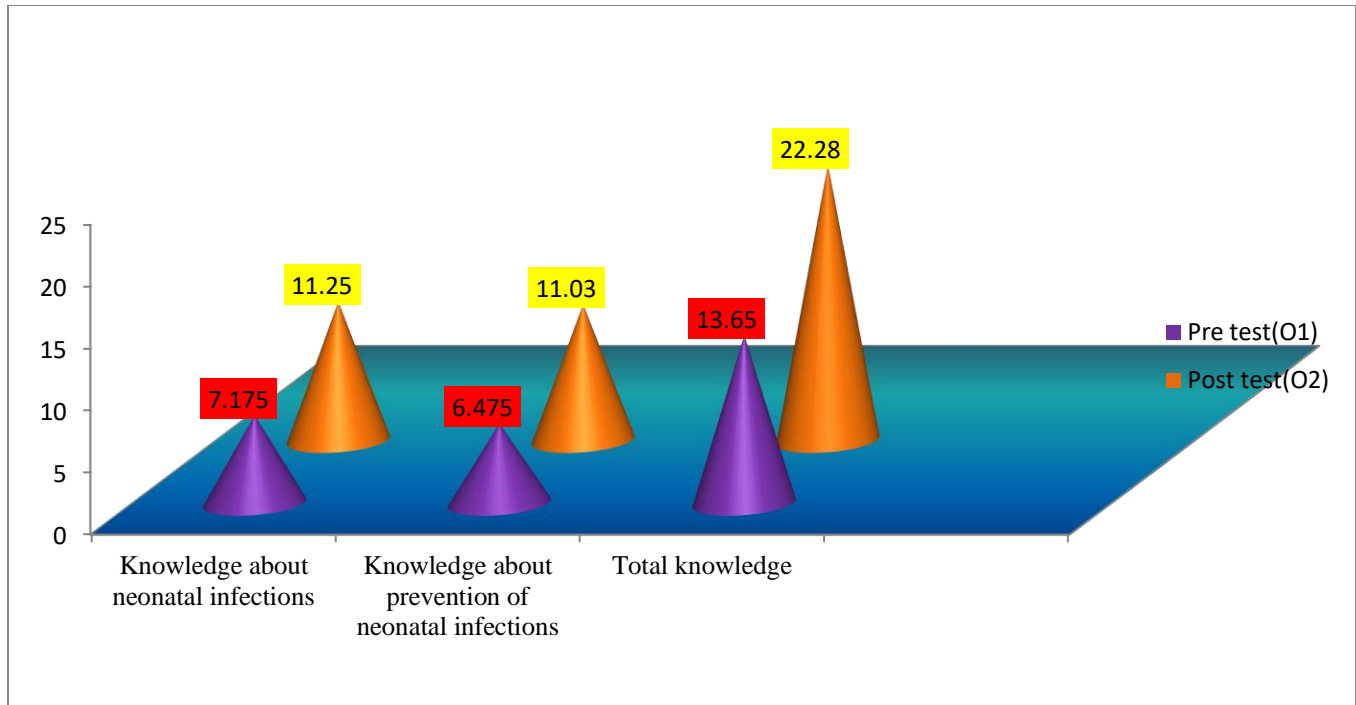


Fig 10:- comparison of mean of pre-test and post-test knowledge scores of primigravida mothers

• Part-III: Testing of Hypothesis:

To evaluate the effectiveness of planned teaching programme a research hypothesis was formulated.

H₀₁:- There is no significant difference between the pretest knowledge and post test knowledge scores of primigravida mothers regarding selected Neonatal infections and their prevention.

Paired ‘t’ test was used to find out the significance of the differences between the pretest knowledge and post test knowledge scores of primigravida mothers regarding selected Neonatal infections and their prevention.

Test	Mean	Std. Dv.	Mean Diff.	SD Diff.	Paired t-value	Table value
Pre test	13.65	7.88	8.64	2.89	19.07	2.26
Post test	22.28	7.42				

Table 4: significant difference between the pretest knowledge and post test knowledge scores of primigravida

The calculated value (19.07) were much higher than table value (2.26). Hence The H₀₁-there is no significant difference between the pretest knowledge and post test knowledge scores of primigravida mothers regarding selected Neonatal infections and their prevention is rejected. Findings revealing the presence of significant difference between pre-test and post-test knowledge scores, hence the planned teaching programme is proved to be effective.

C. Section III: Association between pretest knowledge scores and selected socio demographic variables.

Sl. No	Socio demographic variables	Df	Chi-square value	Table value	Level of significance
1.	Age	1	3.523	3.84	0.05
2.	Educational status	1	12.2	3.84	0.05
3.	Occupation	1	7.29	3.84	0.05
4.	Family income	1	6.532	3.84	0.05
5.	Place of residence	1	0.174	3.84	0.05
6.	Source of information regarding health	1	2.434	3.84	0.05
7.	Gestational age at the time of data collection	1	0.902	3.84	0.05
8.	Immunization status	1	19.56	3.84	0.05

Table 5: Association between pretest knowledge scores and selected socio demographic variables

The calculated χ^2 value was 3.523 and table value of χ^2 at 5% level of significance with degree of freedom 1 is 3.84. As the calculated value was less than the table value the research hypothesis related to Age of the sample and pre test knowledge score was accepted. Hence no significant relationship was observed between the Age of the primigravida mothers and their pre test knowledge score on selected Neonatal infections and their prevention.

The calculated χ^2 value was 12.2 and table value of χ^2 at 5% level of significance with degree of freedom 1 is 3.84. As the calculated value was more than the table value the research hypothesis related to Educational status of the sample and pre test knowledge score was rejected. Hence significant association was observed between the Educational status of the primigravida mothers and their pre test knowledge score on selected Neonatal infections and their prevention.

The calculated χ^2 value was 7.29 and table value of χ^2 at 5% level of significance with degree of freedom 1 is 3.84. As the calculated value was more than the table value the research hypothesis related to occupation of the sample and pre test knowledge score was rejected. Hence significant association was observed between the occupation of the primigravida mothers and their pre test knowledge score on selected Neonatal infections and their prevention.

The calculated χ^2 value was 6.532 and table value of χ^2 at 5% level of significance with degree of freedom 1 is 3.84. As the calculated value was more than the table value the research hypothesis related to family income of the sample and pre test knowledge score was rejected. Hence significant association was observed between the family income of the primigravida mothers and their pre test knowledge score on selected Neonatal infections and their prevention.

The calculated χ^2 value was 0.174 and table value of χ^2 at 5% level of significance with degree of freedom 1 is 3.84. As the calculated value was less than the table value the research hypothesis related to place of residence of the sample and pre test knowledge score was accepted. Hence no significant relationship was observed between the place of residence of the primigravida mothers and their pre test knowledge score on selected Neonatal infections and their prevention.

The calculated χ^2 value was 2.434 and table value of χ^2 at 5% level of significance with degree of freedom 1 is 3.84. As the calculated value was less than the table value the research hypothesis related to source of information of the sample and pre test knowledge score was accepted. Hence no significant relationship was observed between the source of information of the primigravida mothers and their pre test knowledge score on selected Neonatal infections and their prevention.

The calculated χ^2 value was 0.902 and table value of χ^2 at 5% level of significance with degree of freedom 1 is 3.84. As

the calculated value was less than the table value the research hypothesis related to gestational age at the time of data collection of the sample and pre test knowledge score was accepted. Hence no significant relationship was observed between the gestational age at the time of data collection of the primigravida mothers and their pre test knowledge score on selected Neonatal infections and their prevention.

The calculated χ^2 value was 19.56 and table value of χ^2 at 5% level of significance with degree of freedom 1 is 3.84. As the calculated value was more than the table value the research hypothesis related to immunization status of the sample and pre test knowledge score was rejected. Hence significant association was observed between the immunization status of the primigravida mothers and their pre test knowledge score on selected Neonatal infections and their prevention.

With regard to the above findings, significant association was found between the pre test knowledge score of the primigravida mothers and their attribute variables like Educational status, occupation, Family income and immunization status. The pre test knowledge score was not associated with remaining attribute variables like Age, place of residence, Source of information and gestational age at the time of data collection regarding selected Neonatal infections and their prevention.

II. CONCLUSION

The study proved that Planned teaching programme on selected neonatal infections and their prevention among primigravida mothers was scientific, logical and cost effective strategy.

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