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Knowledge and Practice Regarding Prevention of Puerperal Sepsis among Postnatal Mothers in Selected Areas of Kamrup (M), Assam

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Abstract: ***Background: Postpartum period or puerperium is the period following childbirth during which the body tissues especially the pelvic organs revert back approximately to the prepregnant state both anatomically and physiologically. Each mother has to adjust the physical changes in her own body due to involution and lactation as well as puerperal complication which may occur.***
Title of the study: A study to assess the knowledge and practice regarding prevention of puerperal sepsis among postnatal mothers in selected areas of Kamrup (M), Assam.
Methodology: A quantitative survey approach was adopted to assess the knowledge and practice regarding prevention of puerperal sepsis among postnatal mothers in selected areas of Kamrup (M), Assam. 81 postnatal mothers were selected using multistage simple random sampling technique from selected areas (Lalganesh, Bank Colony, Adagudam, Sankar Nagar, Kailashpur, Sreebhumi Nagar, Hillview Road, Odalbakra, Gobinda Nagar under Odalbakra MPHC of Dhirenpara zone) Kamrup(M), Assam. A structured interview questionnaire and checklist were used to assess the knowledge and practice of the postnatal mothers regarding prevention of puerperal sepsis.
Result: The result reveals that majority 63(77.8%) of the postnatal mothers has moderately adequate knowledge, 11(13.6%) has adequate knowledge and 7(8.6%) has inadequate knowledge regarding prevention of puerperal sepsis among postnatal mothers. Knowledge mean is 12.02 and SD is 3.384. Majority 62(76.5%) of the postnatal mothers has average practice, 10(12.3%) has good practice and 9(11.2%) has poor practice regarding prevention of puerperal sepsis among postnatal mothers. Practice mean is 8.01 and SD is 2.261.There was a moderately positive correlation between knowledge and practice regarding prevention of puerperal sepsis among postnatal mothers. There was significant association between the knowledge level and demographic variables i.e., parity and previous source of information. And also significant association between the practice level and demographic variables i.e., parity and type of present delivery.
Conclusion: Majority of the mothers had moderately adequate knowledge and average practice regarding prevention of puerperal sepsis. There was a moderately positive correlation between knowledge and practice regarding prevention of puerperal sepsis among postnatal mothers. Significant association was found between the knowledge and demographic variables i.e., parity and previous source of information. Significant association was also found between the practice and demographic variables i.e., parity and type of present delivery.
Keywords: Assess, Knowledge, Practice, Prevention, Puerperal sepsis, Postnatal mothers.

I. INTRODUCTION

Puerperium is the period following childbirth during which the body tissues especially the pelvic organs revert back approximately to the prepregnant state both anatomically and physiologically which lasts for approximately six weeks. Puerperal infection is a dreadful disease and puts economic burden on family as well as on society. According to 2019 GBD (Global Burden of Disease) data estimated almost 21 million incident cases and 17 thousand deaths from maternal sepsis and other maternal infections worldwide. India has the highest number of maternal deaths (50,000 maternal deaths in 2013), and within India, the north-eastern state of Assam has a high maternal mortality ratio (MMR= 301/10,000) live births in 2012-2013, higher than the national average (MMR=178/10,000) live births in 2010-2012. Considering the present statistical scenario made the student researcher felt the need to assess the knowledge and practice of postnatal mother regarding prevention of puerperal sepsis.

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A. *The Statement of Problem*

A study to Assess the Knowledge and Practice regarding Prevention of Puerperal Sepsis among Postnatal Mothers in Selected Areas of Kamrup (M), Assam.

B. *Specific Objectives*

1) To assess the level of knowledge regarding prevention of puerperal sepsis among postnatal mothers in selected areas of Kamrup (M), Assam.
2) To assess the level of practice regarding prevention of puerperal sepsis among postnatal mothers in selected areas of Kamrup (M), Assam.
3) To find out the correlation between knowledge and practice regarding prevention of puerperal sepsis among postnatal mothers in selected areas of Kamrup (M), Assam.
4) To find out the association between knowledge regarding prevention of puerperal sepsis among postnatal mothers with selected demographic variables in selected areas of Kamrup (M), Assam.
5) To find out the association between practice regarding prevention of puerperal sepsis among postnatal mothers with selected demographic variables in selected areas of Kamrup (M), Assam.

C. *Hypotheses*

H_1 : There is significant correlation between knowledge and practice regarding prevention of puerperal sepsis among postnatal mothers at 0.05 level of significance.

H_2 : There is significant association between knowledge regarding prevention of puerperal sepsis among postnatal mothers with selected demographic variables at 0.05 level of significance.

H_3 : There is significant association between practice regarding prevention of puerperal sepsis among postnatal mothers with selected demographic variables at 0.05 level of significance.

II. RESEARCH METHODOLOGY

A quantitative survey approach was used for the study. Descriptive correlational research design was adopted for the study. In this study, multistage simple random sampling technique was adopted to select 81 samples for the study. The tools used for the study were demographic variables, structured interview questionnaire and checklist. The analysis was done by using descriptive and inferential statistics in terms of frequency and percentage distribution, mean, mean percentage and standard deviation, Karl Pearson correlation coefficient and Chi-square.

III. RESULTS

A. *Findings Related to demographic data*

Table 1: Frequency and percentage distribution of the postnatal mothers according to their demographic variables

n=81

Demographic variables	Frequency (f)	Percentage (%)
1) Age (in years)		
• 21-25	20	24.7
• 26-30	29	35.8
• 31-35	25	30.9
• Above 35	7	8.6
2) Religion		
• Hindu	45	55.6
• Islam	30	37
• Christian	6	7.4
• Others	-	-

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3) Educational qualifications		
• Illiterate	10	12.3
• Primary school certificate	25	30.9
• Middle school certificate	15	18.5
• High school certificate	20	24.7
• Intermediate or diploma	6	7.4
• Graduate	5	6.2
• Profession or honors	-	-
4) Occupational status		
• Professional	-	-
• Semi-profession	6	7.4
• Clerical/shop/farm	11	13.6
• Skilled worker	-	-
• Semi skilled worker	4	4.9
• Unskilled worker	25	30.9
• Unemployed	35	43.2
5) Parity		
• 1	25	30.9
• 2	30	37
• 3	18	22.2
• 4 and above	8	9.9
6) Type of present delivery		
• Normal vaginal delivery	30	37
• Cesarean delivery	51	63
7) Family type		
• Joint family	29	35.8
• Nuclear family	47	58
• Extended family	5	6.2
8) Monthly family income		
• ≤ 9226	10	12.3
• 9232 – 27648	33	40.7
• 27654 – 46089	31	38.3
• 46095 – 68961	7	8.6
• 68967 – 92185	0	0
• 92192 – 184370	0	0
• ≥18,4376	0	0
9) Previous source of information		
• Health personnel	41	50.6
• Social media	17	21
• Relatives and friends	15	18.5
• All of the above	8	9.9

The data table 1 shows the frequency and percentage distribution of selected demographic variables of the postnatal mothers. Majority of the postnatal mothers i.e., 29(35.8%) were from the age group of 26-30 years, Majority were Hindus i.e., 45(55.6%), Majority i.e., 25 (30.9%) postnatal mothers were primary school certificate, Majority were Unemployed i.e., 35(43.2%), Majority of postnatal mothers were parity 2 i.e., 30(37%), Majority i.e., 51 (63%) of the postnatal mothers had caesarean section, Majority of the postnatal mothers were from nuclear family i.e., 47(58%), Majority i.e., 33(40.7%) belonged to monthly family income group of 9232 – 27648 and majority i.e., 41(50.6%) of the postnatal mothers had received the previous source of information from health personnel.

B. Finding related to level of knowledge regarding prevention of puerperal sepsis among postnatal mothers

The knowledge of postnatal mothers regarding prevention of puerperal sepsis were assessed through Structured interview questionnaire. The overall knowledge was categorized into inadequate knowledge, moderately adequate knowledge and adequate knowledge. The frequency and percentage distribution is presented on fig 1.

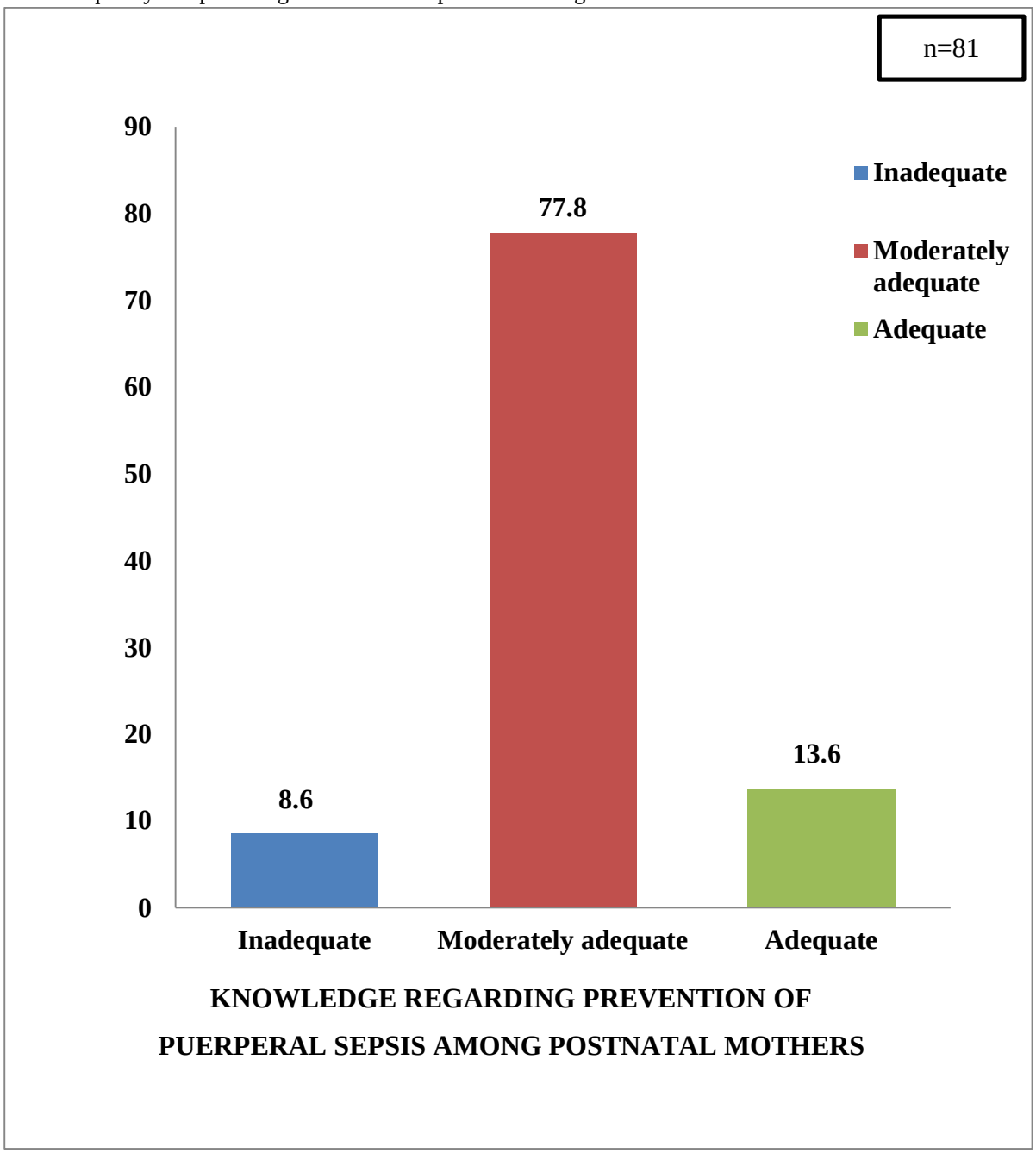

Figure 1
Bar Diagram Showing Distribution Of Level Of Knowledge Regarding Prevention Of Puerperal Sepsis Among Postnatal Mothers

The data presented on the figure 1 depicts that majority i.e., 63(77.8%) of the postnatal mothers had moderately adequate knowledge, 11(13.6%) had adequate knowledge and 7(8.6%) of postnatal mothers had inadequate with median score of 12, mean knowledge score of 12.02 and SD of 3.384.

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C. Findings Related to Level of Practice Regarding Prevention of Puerperal Sepsis Among Postnatal Mothers

The practice of postnatal mothers regarding prevention of puerperal sepsis were assessed through checklist. The overall practice was categorized into poor practice, average practice and good practice. The frequency and percentage distribution is presented on fig 2.

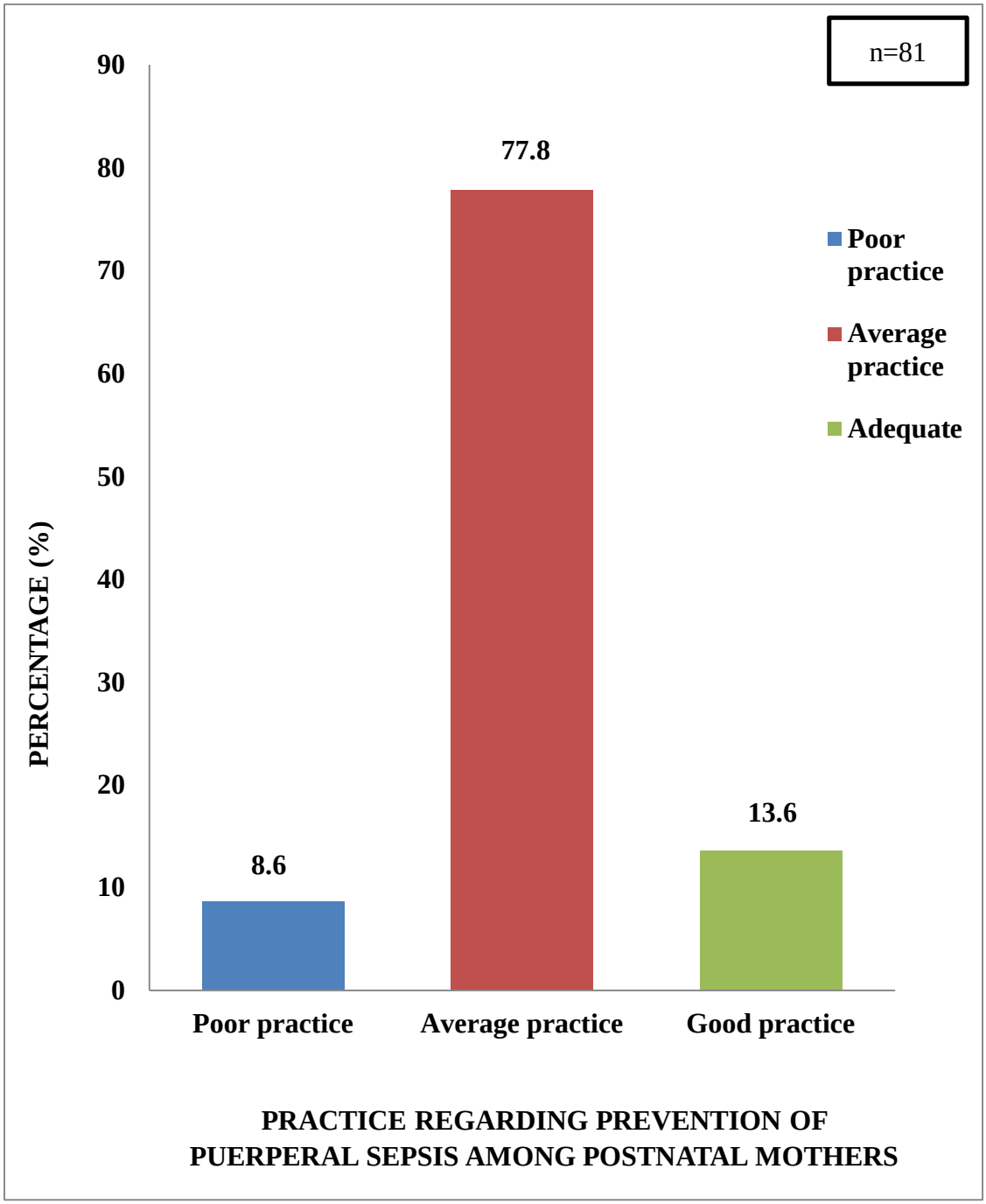

FIGURE 2
Bar Diagram Showing Distribution Of Level Of Practice Regarding Prevention Of Puerperal Sepsis Among Postnatal Mother

The data presented on the figure 2 depicts that majority i.e., 62(76.5%) of the postnatal mothers had average practice, 10(12.3%) had good practice and 9(11.2%) had poor practice with median score of 8, mean knowledge score of 8.01 and SD of 2.261.

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D. Table 2: Findings related to correlation between knowledge and practice regarding prevention of puerperal sepsis among postnatal mothers

It presents the correlation between knowledge and practice regarding prevention of puerperal sepsis among postnatal mothers.

The null hypothesis H_{01} was formulated against the stated research hypothesis H_1.H_{01}: There is no correlation between knowledge and practice regarding prevention of puerperal sepsis among postnatal mothers at 0.05 level of significance. karl pearson correlation co-efficient was computed to determined the correlation between knowledge and practice regarding prevention of puerperal sepsis among postnatal mothers.

n=81

*p<0.05 level of significance

VARIABLES	MEAN	SD	'r' VALUE	'p' VALUE
Knowledge	12.02	3.384	0.390	0.001*
Practice	8.01	2.261		

Data presented on the table 2 depicts the values of 'r' 0.390 and 'p' 0.001 which indicate moderately positive correlation between knowledge and practice regarding prevention of puerperal sepsis among postnatal mothers and was found to be statistically significant at p<0.05 level of significance.

The investigator found that there was a correlation between knowledge and practice regarding prevention of puerperal sepsis among postnatal mothers at 0.05 level of significance. Hence, the null hypothesis H_{01} is rejected and the research hypothesis H_1 is accepted.

E. Table 3: Association between knowledge regarding prevention of puerperal sepsis among postnatal mothers with selected demographic variables

The null hypothesis H_{02} was formulated against the stated research hypothesis H_2.

H_{02}: There is no significant association between knowledge regarding prevention of puerperal sepsis among postnatal mothers with selected demographic variables at 0.05 level of significance.

Chi square was computed to determined the significant association between knowledge regarding prevention of puerperal sepsis among postnatal mothers with their selected demographic variables

n=81

Sl No	Demographic Variables	Knowledge			χ^2	df	'p' value	Tabulated value	Inferences
		Inadequate	Moderately adequate	Adequate					
1.	Age (in years)								
	21-25	3	14	3	5.207	6	0.518	12.59	NS
	26-30	2	21	6					
	31-35	1	22	2					
	Above 35	1	6	1					
2.	Religion								
	Hindu	3	35	7	1.283	4	0.864	9.49	NS
	Islam	3	24	3					
	Christian	1	4	1					
	Others	-	-	-					

3.	Educational qualifications								
	Illiterate	1	8	1	14.26	10	0.161	18.31	NS
	Primary school certificate	1	21	3					
	Middle school certificate	2	12	1					
	High school certificate	-	14	6					
	Intermediate or diploma	2	4	-					
	Graduate Profession or honors	1 -	4 -	- -					
4.	Occupational status								
	Professional	-	-	-	19.448	8	0.306	15.51	NS
	Semi-profession	1	5	-					
	Clerical/shop/ farm	2	8	1					
	Skilled worker	-	-	-					
	Semi skilled worker	-	2	2					
	Unskilled worker	1	19	5					
	Unemployed	3	29	3					
5.	Parity								
	1	2	21	2	24.08	6	0.001	12.59	S
	2	1	26	3					
	3	-	13	5					
	4 and above	4	3	1					
6.	Type of present delivery								
	Normal vaginal delivery	5	21	4	3.923	2	0.141	5.99	NS
	Cesarean delivery	2	42	7					

7.	Family type Joint family Nuclear family Extended family	 2 3 2	 23 37 3	 4 7 -	7.026	4	0.135	9.49	NS
8.	Monthly family income (in rupees) ≤ 9226 9232 – 27648 27654 – 46089 46095 – 68961 68967 – 92185 92192- 184370 ≥18,4376	 1 2 4 - - - -	 8 25 24 6 - - -	 1 6 3 1 - - -	2.572	6	0.860	12.59	NS
9.	Previous source of information Health personnel Social media Relatives and friends All of the above	 1 1 2 3	 32 15 11 5	 8 1 2 1	13.47	6	0.036	12.59	S

*p<0.05 level of significance S-Significant NS-Non significant

Overall statistical findings of data presented on the table 3 shows that there is significant association between knowledge regarding prevention of puerperal sepsis among postnatal mothers with demographic variables such as parity (χ^2 24.08 and 'p' 0.001) and previous source of information (χ^2 13.47 and 'p' 0.036) and there is no association between knowledge regarding prevention of puerperal sepsis among postnatal mothers with demographic variables such as age, religion, educational qualification, occupational status, type of present delivery, family type and monthly family income. Hence, the null hypothesis H_{02} is rejected and the research hypothesis H_2 is accepted in demographic variables such as parity and previous source of information. The null hypothesis, H_{02} is retained for the demographic variables such as age, religion, educational qualification, occupational status, type of present delivery, family type and monthly family income.

F. Table 4: Association between Practice regarding prevention of puerperal sepsis among postnatal mothers with selected demographic variables

The null hypothesis H_{03} was formulated against the stated research hypothesis H_3.

H_{03}: There is no significant association between practice regarding prevention of puerperal sepsis among postnatal mothers with selected demographic variables at 0.05 level of significance.

Chi square was computed to determined the significant association between practice regarding prevention of puerperal sepsis among postnatal mothers with selected demographic variables.

n=81

Sl No	Demographic Variables	Practice			χ^2	df	'p' value	Tabulated value	Inferences
		Poor	Average	Good					
1.	Age (in years)								
	21-25	4	13	3	4.355	6	0.629	12.59	NS
	26-30	3	22	4					
	31-35	2	20	3					
	Above 35	-	7	-					
2.	Religion								
	Hindu	4	36	5	0.857	4	0.931	9.49	NS
	Islam	4	22	4					
	Christian	1	4	1					
	Others	-	-	-					
3.	Educational qualifications								
	Illiterate	2	8	-	10.35	10	0.410	18.31	NS
	Primary school certificate	1	22	2					
	Middle school certificate	1	10	4					
	High school certificate	3	13	4					
	Intermediate or diploma	1	5	-					
	Graduate Profession or honors	1	4	-					
		-	-	-					

4.	Occupational status								
	Professional								
	Semi-profession	-	-	-	6.716	8	0.568	15.51	NS
	Clerical/shop/	2	4	-					
	farm	1	9	1					
	Skilled worker								
	Semi skilled worker	-	-	-					
	Unskilled worker	1	2	1					
	Unemployed								
		1	20	4					
		4	27	4					
5.	Parity								
	1	2	22	1	13.97	6	0.029	11.07	S
	2	4	22	4					
	3	-	13	5					
	4 and above	3	5	1					
6.	Type of present delivery								
	Normal vaginal delivery	6	23	1	6.523	2	0.038	5.99	S
	Cesarean delivery	3	39	9					
7.	Family type								
	Joint family	5	19	5	4.296	4	0.367	9.49	NS
	Nuclear family	3	39	5					
	Extended family	1	4	-					
8.	Monthly family income (in rupees)								
	≤ 9226	1	8	1	3.317	6	0.768	12.59	NS
	9233 – 27648	6	23	4					
	27654 – 46089	2	25	4					
	46095 – 68961	-	6	1					
	68967 – 92185	-	-	-					
	92192- 184370	-	-	-					
	≥18,4376	-	-	-					
9.	Previous source of information								
	Health personnel	6	30	5					
	Social media	1	15	1	2.832	6	0.830	12.59	NS
	Relatives and friends	1	11	3					
	All of the above								
		1	6	1					

*p<0.05 level of significance S-Significant NS-Non significant

Overall statistical findings of data presented on the table 7 shows that there is significant association between practice regarding prevention of puerperal sepsis among postnatal mothers with demographic variables such as parity (χ^2 13.97 and *'p'* 0.029) and type of present delivery (χ^2 6.523 and *'p'* 0.038) and there is no significant association between practice regarding prevention of puerperal sepsis among postnatal mothers with demographic variables such as age, religion, educational qualification, occupational status, family type and monthly family income, previous source of information. Hence, the null hypothesis H_{03} is rejected and the research hypothesis H_3 is accepted in demographic variables such as parity and type of present delivery. The null hypothesis H_{03} is retained for the demographic variables such as age, religion, educational qualification, occupational status, family type and monthly family income, previous source of information.

IV. CONCLUSION

The findings revealed that most of the postnatal mothers had moderately adequate knowledge and average practice regarding prevention of puerperal sepsis. There was a moderately positive correlation between knowledge and practice regarding prevention of puerperal sepsis among postnatal mothers. There was significant association between the knowledge regarding prevention of puerperal sepsis among postnatal mother and demographic variables i.e., parity and previous source of information. And also there was significant association between the practice regarding prevention of puerperal sepsis among postnatal mother and demographic variables i.e., parity and type of present delivery.

V. RECOMMENDATION

1) The study can be replicated on a larger sample to have more valid generalization.
2) A study can be conducted to assess the effectiveness of structured teaching program on knowledge and practices regarding prevention of puerperal sepsis among postnatal mothers.
3) A study can be conducted on assessment of level of knowledge and practice regarding home management of common illnesses during puerperium period among postnatal mothers.

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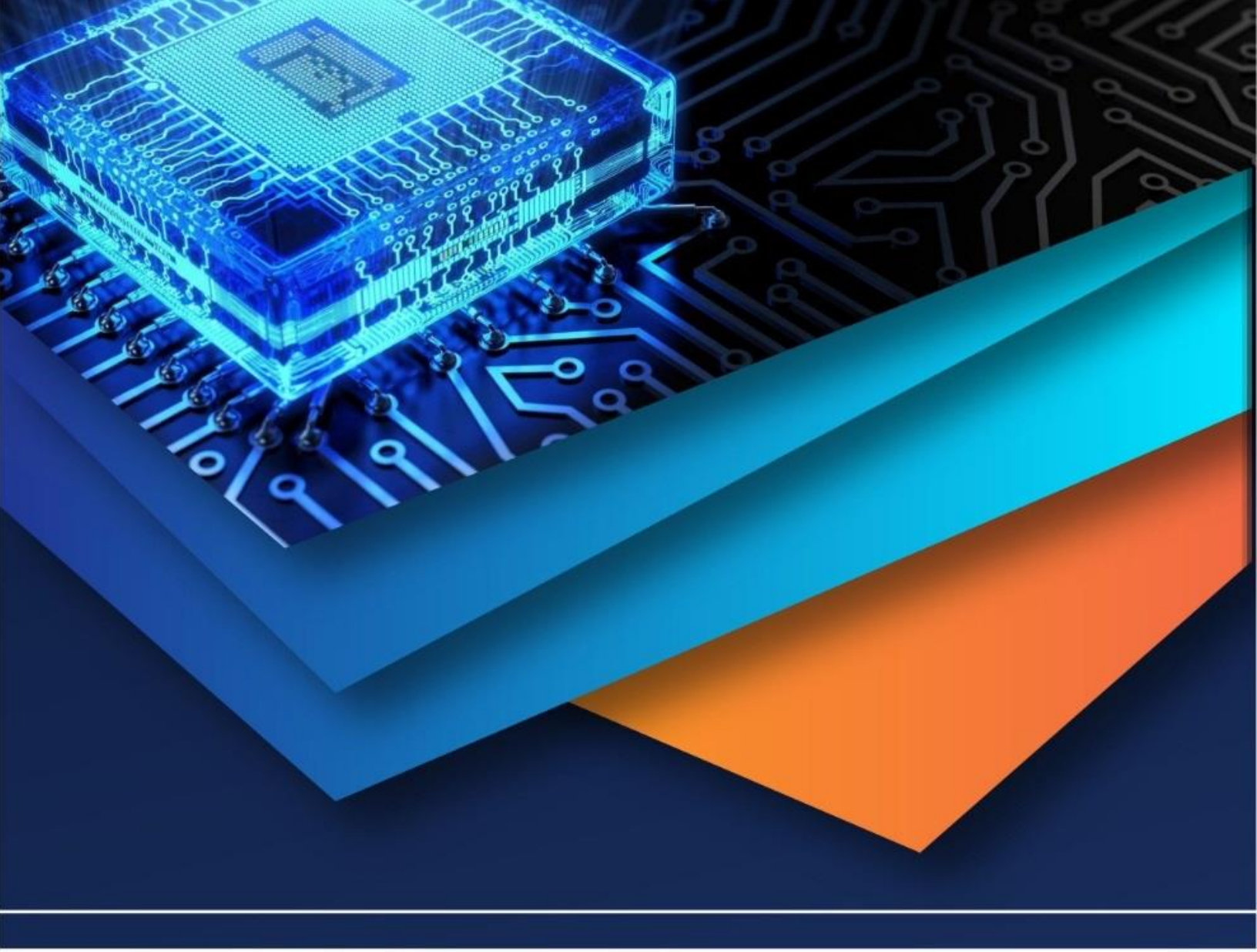

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