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A Study to Assess the Knowledge and Practice in Prevention and Management of Selected Puerperal Sepsis among Staff Nurses at SMVMCH, Puducherry

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ABSTRACT:

Introduction: Postpartum infections, also known as childbed fever and puerperal fever, are any bacterial infections of the female reproductive tract following childbirth or miscarriage. Puerperal sepsis is a common pregnancy-related condition that could eventually lead to obstetric shock or even death in some cases. **Objectives of the study**: The main objective of the study to assess the level of knowledge and practice regarding the prevention and management of puerperal sepsis among staff nurses and associate the level of knowledge regarding the prevention and management of puerperal sepsis among staff nurses with their demographic variables. **Methodology:** A quantitative research approach and descriptive design was selected for the present study. The sample size consists of 30 staff nurses working in SMVMCH, Puducherry. A convenient sampling technique was used to select the sample for the present study. **Results:** The present study revealed that, majority 23 (76.7%) of them had moderate knowledge, 7 (23.3%) of them had adequate knowledge regarding the prevention and management of puerperal sepsis among staff nurses. Regarding the finding shows that, majority 17 (56.7%) of them had moderate adherence, 12 (40%) of them had good adherence and 1 (3.3%) had low adherence regarding the prevention and management of puerperal sepsis among staff nurses. **Conclusion:** The study findings concluded that majority of the staff nurses had moderate knowledge and moderate adherence regarding the prevention and management of puerperal sepsis among staff nurses.

Keywords: Postpartum infections, Knowledge, Practice, Puerperal sepsis

INTRODUCTION:

Puerperal sepsis is a genital tract infection that can lead to obstetric shock or even death. It is defined by the International Classification of Diseases (ICD-10) as a temperature rise above 38.0°C (100.4°F) maintained over 24 hours or recurring during the period from the end of the first to the end of the tenth day after childbirth or abortion. The World Health Organization (WHO) reports that puerperal sepsis is the second most cause of maternal mortality in developing countries. Symptoms include pain in the pelvic bones, pale, clammy skin, steady-filled vaginal drainage, and faster heartbeat. Preventive measures include maintaining strict hygiene practices during childbirth, ensuring aseptic techniques during medical procedures, and promptly treating any infections. Management typically involves a multidisciplinary approach, with healthcare providers playing a pivotal role in educating pregnant individuals about postpartum hygiene and infection detection.

NEED FOR THE STUDY

Puerperal sepsis is a leading cause of maternal deaths worldwide, with 75,000 deaths occurring annually. In the U.S., at least 1.7 million adults develop sepsis each year, resulting in nearly 270,000 deaths. The overall postpartum infection rate is 6.0%, with rates of 7.4% following cesarean section and 5.5% following vaginal delivery.

In 2018, the CDC estimated that 17.3 females died from pregnancy-related complications in the U.S., with heart and blood circulation problems being the highest causes. Postpartum infections were the second highest cause of pregnancy-related death at 13.9%.India has the highest maternal mortality rate globally, with 17.01% of total births and 25% of maternal deaths. A retrospective study conducted at N.S.C.B Medical College, Jabalpur, found that the incidence of death in primi gravidas was high in rural areas, with sepsis contributing 13.40% to 15.10% of maternal deaths. Harpreet Kaur et al. (2023) found that the incidence of puerperal sepsis among women was 6.37 per 100 population at-risk.

Maternal education and empowerment are two most important tools to reduce maternal mortality as an educated woman is more likely to accept contraception and small family norm, is more likely to eat nutritious diet and is more amenable to receive antenatal and labour care. Considering the present statistical scenario and the experience made the researcher to assess the knowledge and practice in prevention and management of selected puerperal sepsis among staff nurses at SMVMCH, Puducherry.

STATEMENT OF THE PROBLEM

A study to assess the knowledge and practice in prevention and management of selected puerperal sepsis among staff nurses at SMVMCH, Puducherry.

OBJECTIVES OF THE STUDY

1. To assess the level of knowledge and practice regarding the prevention and management of puerperal sepsis among staff nurses.
2. To correlate the level of knowledge and practice regarding the prevention and management of puerperal sepsis among staff nurses
3. To associate the level of knowledge regarding the prevention and management of puerperal sepsis among staff nurses with their demographic variables.

RESEARCH METHODOLOGY:

A quantitative research approach and descriptive design was selected for the present study. The present study was conducted at SMVMCH. The study population comprised of all the staff nurses working in SMVMCH, Puducherry. The sample of the study consist of all women of age group between 35 to 45 years who meet the inclusion criteria. The sample size consists of 30 staff nurses who was working SMVMCH, Puducherry. Using a convenient sampling technique the samples were selected for the present study. The tool consists of demographic data, knowledge and practice questionnaire. The outcome of the study was evaluated by using descriptive and inferential statistics.

Inclusion criteria:

- Staff nurses working in SMVMCH, Puducherry
- Staff nurses who were present during the data collection.
- Staff nurses who could speak Tamil / English.

Exclusion criteria:

- Staff nurses who were not willing to participate in this study.
- Staff nurses who were not present during the data collection.

SECTION A: Demographic variables include Age, educational status, Occupation, Religion, Income per month, area of residence, past history of puerperal sepsis, history of hospitalisation for puerperal sepsis, number of children and mode of delivery.

SECTION B: The structured knowledge questionnaires consist of 25 items regarding knowledge on puerperal sepsis. Each correct response is graded as “1” and wrong response is graded as “0”.

SCORING INTERPRETATION:

S.NO	SCORE	INTERPRETATION
1	> 10	Inadequate knowledge
2	11 - 20	Moderate knowledge
3	> 20	Adequate knowledge

DATA ANALYSIS AND INTERPRETATION

The collected data were coded and analyzed using descriptive and inferential statistics. Descriptive statistic was used to find the mean, standard deviation, and frequency percentage of staff nurses.

Chi-squared test was used to find out the association between the level of knowledge and practice in prevention and management of selected puerperal sepsis among staff nurses with their selected demographic variables.

Table 1: Frequency and percentage distribution of demographic variables of staff nurses

N = 30

S.No	Demographic variables	Frequency	Percentage
1	**Age in years**		
	a) 21-25 years	19	63.3%
	b) 26-30 years	5	16.7%
	c) 31-35 year	3	10%
	d) >35 years	3	10%
2.	**Education status**		
	a) uneducated	1	3.3%
	b) Primary level	2	6.7%
	c) Higher secondary	2	6.7%
	d) Graduation	25	83.3%
3.	**Occupation**		
	a) Government employed	2	6.7%
	b) Unemployed	2	6.7%

	c) Self employed	0	0%
	d) Private employed	26	86.7%
5.	**Religion**		
	a) Hindu	24	80%
	b) Muslim	3	10%
	c) Christian	1	3.3%
	d) Others	2	6.7%
5.	**Income per month**		
	a) Below Rs. 9000/-	10	33.3%
	b) Rs. 9001/- to Rs.15000/-	16	53.3%
	c) Rs. 15000/- to Rs.20000/-	3	10%
	d) Above Rs.20000/-	1	3.3%
6.	**Area of residence**		
	a) Rural	17	56.7%
	b) Urban	13	43.3%
7.	**Past history of Puerperal sepsis**		
	a) Yes	4	13.3%
	b) No	25	83.3%
8.	**History of hospitalization for puerperal sepsis**		
	a) Yes	4	13.3%
	b) No	26	86.7%
9.	**No of children's**		
	a) 1	16	53.3%
	b) 2	14	46.7%
	c) >2	0	0%
10.	**Mode of delivery**		
	a) Normal Vaginal	18	60%
	b) LSCS	10	33.3%
	c) Instrumental	2	6.7%

The above table shows frequency and percentage-wise distribution of demographic variable of staff nurses. Regarding the age in years, the majority 19 (63.3%) were in the age group of 21-25 years, 5 (16.7%) were in the age

group of 26-30 years and 3(3%) were above 35 years. In the aspect of education status, majority 25 (83.3%) were completed graduation and 2 (6.7%) were completed higher secondary.

In the aspect of occupation status majority, 26 (86.7%) were private employed, 2 (6.7%) were government employed and 2 (6.7%) were unemployed. In the aspect of religion majority, 24 (80%) were Hindu, 3 (10%) were Muslim and 1 (3.3%) were Christian. Regarding income per month, the data shows that 10 (33.3%) come under below Rs.9000 and 16 (53.3%) were come under Rs. 9001/- to Rs.15000/-. With regards to area of residence majority, 17(56.7%) were in rural area and 13 (43.3%) were in urban area. With regards to past history of puerperal sepsis majority 25 (83.3%) said no and 4 (13.3%) said no past history.

In the aspect of History of hospitalization for puerperal sepsis majority 26 (86.7%) said no and 4 (13.3%) said yes past history. Regarding number of children majority 16 (53.3%) had one and 14 (46.7%) had two children. With regard to mode of delivery 18 (60%) had normal vaginal delivery, 10 (33.3%) had LSCS and 2 (6.7%) had instrumental delivery.

Table 2: Frequency and percentage distribution of level of knowledge regarding the prevention and management of puerperal sepsis among staff nurses. N = 30

S.NO	LEVEL OF KNOWLEDGE	FREQUENCY (n)	PERCENTAGE %
1.	Adequate	7	23.3%
2.	Moderate	23	76.7%
3.	Inadequate	0	0%

The above table reveals the frequency and percentage-wise distribution of level of knowledge regarding the prevention and management of puerperal sepsis among staff nurses. The finding shows that, majority 23 (76.7%) of them had moderate knowledge, 7 (23.3%) of them had adequate knowledge regarding the prevention and management of puerperal sepsis among staff nurses.

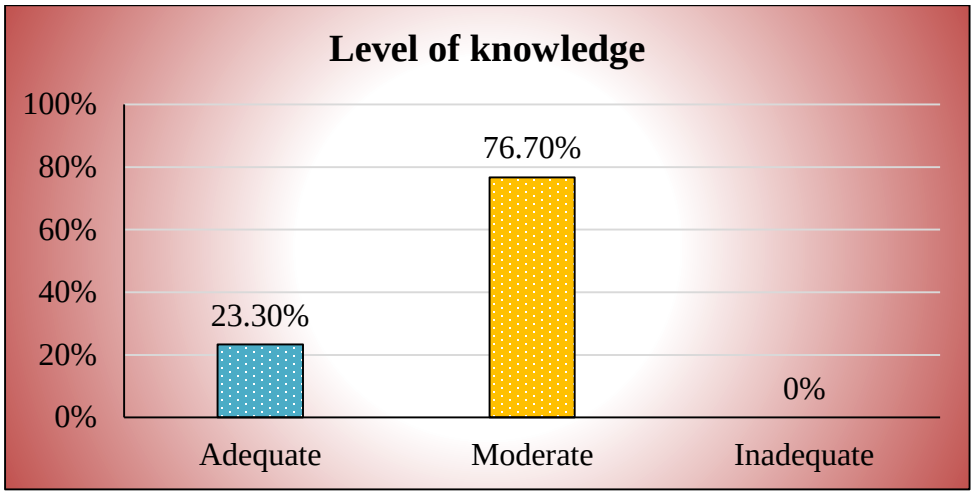

Figure 1: Percentage wise distribution of level of knowledge regarding the prevention and management of puerperal sepsis among staff nurses

Table:3 Correlation between level of knowledge and practice regarding the prevention and management of puerperal sepsis among staff nurses.

Correlation between	Mean gain score Mean±SE	Karl Pearson Correlation coefficients
Level of knowledge	15.2 ± 2.18	r = 0.578 P=0.001*
Level of practice	15.63 ± 4.20	

The above table shows correlation between the level of knowledge and practice regarding the prevention and management of puerperal sepsis among staff nurses. There is a significant positive moderate correlation between the level of knowledge and practice regarding the prevention and management of puerperal sepsis. It means that if level of knowledge increases their practice level also increases. There is a significant positive fair correlation between the level of knowledge and practice.

Table 4: Association of the level of knowledge regarding the prevention and management of puerperal sepsis among staff nurses with their selected demographic variables N = 30

S.No	Demographic variables	LEVEL OF KNOWLEDGE						X^2 value
		Adequate		Moderate		Inadequate		
1	Age in years	N	%	N	N	%	N	
	a) 21-25 years	4	13	15	50	0	0	X^2 = 1.912
	b) 26-30 years	2	7	3	10	0	0	p = 0.591
	c) 31-35 year	0	0	3	10	0	0	(NS)
	d) >35 years	1	3	2	7	0	0	

2.	**Education status**							$X^2 = 1.826$ p = 0.609 (NS)
	a) uneducated	0	0	1	3	0	0	
	b) Primary level	0	0	2	7	0	0	
	c) Higher secondary	0	0	2	7	0	0	
	d) Graduation	7	23	18	60	0	0	
3.	**Occupation**							
	a) Government employed	0	0	2	7	0	0	$X^2 = 1.405$ p = 0.495 (NS)
	b) Unemployed	1	3	1	3	0	0	
	c) Self employed	0	0	0	0	0	0	
	d) Private employed	6	20	20	67	0	0	
4.	**Religion**							
	a) Hindu	7	23	17	57	0	0	$X^2 = 2.283$ p = 0.516 (NS)
	b) Muslim	0	0	3	10	0	0	
	c) Christian	0	0	1	3	0	0	
	d) Others	0	0	2	7	0	0	
5.	**Income per month**							
	a) Below Rs. 9000/-	2	7	8	27	0	0	
	b) Rs. 9001/- to Rs.15000/-	5	17	11	37	0	0	$X^2 = 1.840$ p = 0.606 (NS)
	c) Rs. 15000/- to Rs.20000/-	0	0	3	10	0	0	
	d) Above Rs.20000/-	0	0	1	3	0	0	
6.	**Area of residence**							
	a) Rural	5	17	12	0	0	0	$X^2 = 0.810$ p = 0.368 (NS)
	b) Urban	2	7	11	37	0	0	
7.	**Past history of Puerperal sepsis**							$X^2 = 0.317$ p = 0.854 (NS)
	a) Yes	1	0	3	0	0	0	
	b) No	6	20	20	67	0	0	
8.	**History of hospitalization for puerperal sepsis**							$X^2 = 0.007$ p = 0.933

	a) Yes	1	0	3	0	0	0	(NS)	-
	b) No	6	20	20	67	0	0		
9.	**No of children's**								
	a) 1	5	0	11	0	0	0	$X^2 = 1.201$	
	b) 2	2	7	12	40	0	0	p = 0.273	
	c) >2	0	0	0	0	0	0	(NS)	
10.	**Mode of delivery**								
	a) Normal Vaginal	3	0	15	0	0	0	$X^2 = 7.081$	
	b) LSCS	2	7	8	27	0	0	p = 0.029	
	c) Instrumental	2	7	0	0	0	0	**(S)***	

***p<0.05 Significant; p<0.01 - Highly Significant**

The above table shows that there is significance association between mode of delivery with level of knowledge regarding the prevention and management of puerperal sepsis among staff nurses where p<0.05.

CONCLUSION

The study findings concluded that there is significance association between mode of delivery with level of knowledge regarding the prevention and management of puerperal sepsis among staff nurses where p<0.05.There is a significant positive fair correlation between the level of knowledge and practice.

RECOMMENDATIONS:

1. Same study can be conducted with large samples.
2. Same study can be conducted in community area among public.

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