



Assess the knowledge regarding risk factors and prevention of puerperal sepsis among antenatal mothers admitted in Dr. V V P Pravara Rural Hospital, Loni Bk

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Abstract Background: The postpartum period, particularly the first six weeks after delivery, is a vulnerable time for maternal infections, with puerperal sepsis being a major contributor to maternal morbidity and mortality. Globally, it accounts for 10–15% of postpartum deaths, with the highest burden in low- and middle-income countries. Puerperal sepsis is a genital tract infection occurs after delivery, characterized by fever, pelvic pain, and foul-smelling vaginal discharge etc. The risk factors include poor hygiene, prolonged labor, frequent vaginal exams and preexisting infections. Understanding and improving awareness on puerperal sepsis among antenatal mothers is vital for effective prevention and improved maternal outcomes. **Objectives:** To assess the knowledge regarding risk factors and prevention of puerperal sepsis among antenatal mothers. To find out the association between knowledge regarding risk factors and prevention of puerperal sepsis among antenatal mothers with their selected socio demographic variables. **Material & methods:** A descriptive non experimental research design was used in this study. The sample consisted 100 antenatal mothers admitted in Dr. V V P Pravara Rural Hospital, Loni Bk was selected by using non probability purposive sampling technique. Ethical permission obtained from IEC-PIMS (DU). Data collected by using structured questionnaire. The results were analyzed by descriptive & inferential statistics (frequency, percentage, mean, standard deviation, chi square) **Result:** The findings revealed that the highest percentage of sample having good knowledge that is 54% followed by average knowledge 39% and poor knowledge 7% (13.51±3.05). Chi square analysis showed that there was no association between knowledge regarding risk factors and prevention of puerperal sepsis among antenatal mothers with their selected demographic and clinical variables like age, religion, educational status, occupation, monthly income, type of family, week of gestation and parity. **Conclusion:** The study concluded that the majority of the antenatal mothers having good knowledge and they are more likely to adopt healthy practices to reduce puerperal sepsis. Recommendations include reinforce health education programs, peer support, staff training and regular follow-up.

Key words: knowledge, risk factors, prevention, puerperal sepsis, antenatal mothers.

1. INTRODUCTION:

Puerperal sepsis, a severe postpartum infection of the genital tract, remains a leading cause of maternal morbidity and mortality worldwide, accounting for 10–15% of maternal deaths. It typically occurs within 42 days postpartum and is characterized by fever, pelvic or abdominal pain, and foul-smelling vaginal discharge.¹ Despite improvements in obstetric care, puerperal sepsis continues to pose a major public health challenge, particularly in low- and middle-income countries, due to inadequate infection control, limited access to healthcare, and poor hygiene practices. Key risk factors include prolonged labor, frequent vaginal examinations, cesarean delivery, and preexisting infections.² The most common causative organisms are *Streptococcus pyogenes*, *Staphylococcus aureus*, *Escherichia coli*, and anaerobes.³ Understanding maternal and healthcare-related risk factors is critical for effective prevention strategies and improving maternal outcomes.⁴ According to the World Health Organization (WHO), puerperal sepsis is responsible for approximately 10% of maternal deaths globally, making it one of the leading causes of preventable maternal mortality.⁵ In low-resource settings, especially in sub-Saharan Africa and South Asia, puerperal sepsis accounts for a substantial proportion of maternal deaths, with many of these deaths being attributed to inadequate maternal care,



poor hygiene during delivery, and a lack of awareness regarding prevention and risk factors.⁶ In contrast, high-income countries have made significant strides in reducing maternal mortality rates by improving healthcare services, promoting skilled birth attendance, and enhancing infection prevention measures.⁷

Statement of the problem:

“Assess the knowledge regarding risk factors and prevention of puerperal sepsis among antenatal mothers admitted in Dr. Vitthalrao Vikhe Patil Pravara Rural Hospital, Loni Bk.”

Objectives

- To assess the knowledge regarding risk factors and prevention of puerperal sepsis among antenatal mothers.
- To find out the association between knowledge regarding risk factors and prevention of puerperal sepsis among antenatal mothers with their selected socio demographic variables.

2. MATERIAL AND METHODS:

A Descriptive non-experimental study was conducted to assess the knowledge regarding risk factors and prevention of puerperal sepsis among antenatal mothers admitted in Dr. Vitthalrao Vikhe Patil Pravara Rural Hospital Loni Bk. The setting of the present study was Dr. Vitthalrao Vikhe Patil Pravara Rural Hospital Loni Bk, is a 1275 bedded multidisciplinary, super specialty tertiary hospital located in Loni Bk, Ahilyanagar, Maharashtra, India. The sample were 100 antenatal mothers admitted in hospital. The 100 participants of the study were selected by non-probability purposive sampling technique, which fulfilled eligibility criteria. The level of knowledge assessed by using structured knowledge questionnaire which included two sections, Section A with socio-demographic and clinical variables and Section B with structured knowledge questionnaire included 20 questions on risk factors and prevention of puerperal sepsis. Data was collected by an interview schedule. It took 20-30 minutes for each participant. The tool for the present study were validated and approve by the renowned expert from the nursing profession.

Data collection procedure:

The procedure of data collection was done over a period of 3 weeks in Dr. Vitthalrao Vikhe Patil Pravara Rural Hospital, Loni Bk, from 14/05/2025 to 03/06/2025.

Ethical approval was obtained from the Institutional Ethical Committee (IEC)/Institutional Research Committee (IRC), Smt.Sindhutai Eknathrao Vikhe Patil College of Nursing, Loni Bk, Pravara Institute of Medical Science (DU), Loni (Bk) with Reference number- PIMS/SSEVP/CON/(R)/IEC/UG/2025/410(02).

An official permission for the conduction of study was obtained from the Principal, Smt. Sindhutai Eknathrao Vikhe Patil College of Nursing, Loni Bk, Medical Superintendent, Nursing Superintendent and HOD of Obstetrics and Gynaecology Department, Dr. Vithalrao Vikhe Patil Pravara Rural Hospital, Loni Bk. The inform written consent from the participants was taken before data collection.

Statistical method :

Descriptive and inferential statistics was used for data analysis. The collected data was organized, tabulated and analysed by using descriptive statistics like frequency, percentage, mean and standard deviation. The inferior statistics like chi square test was used. The demographic and clinical variables was analysed by using descriptive statistics (frequency and percentage). To assess the level of knowledge regarding risk factors and prevention of puerperal sepsis among antenatal mothers was analysed by mean and standard deviation. Association between knowledge regarding risk factors and prevention of puerperal sepsis among antenatal mothers and their selected demographic and clinical variables was analysed by using chi square test. The p value for statistical analysis was set at p 0.05 with a confidence interval of 95%.

3. RESULT:

Table 01: showing the frequency and percentage wise distribution of socio-demographic and clinical variables.

n=100

Sr.No.	Socio-demographic and clinical variables	Frequency	Percentage
1	Age		
	A) 18-25 years	57	57%
	B) 25-30 years	35	35%

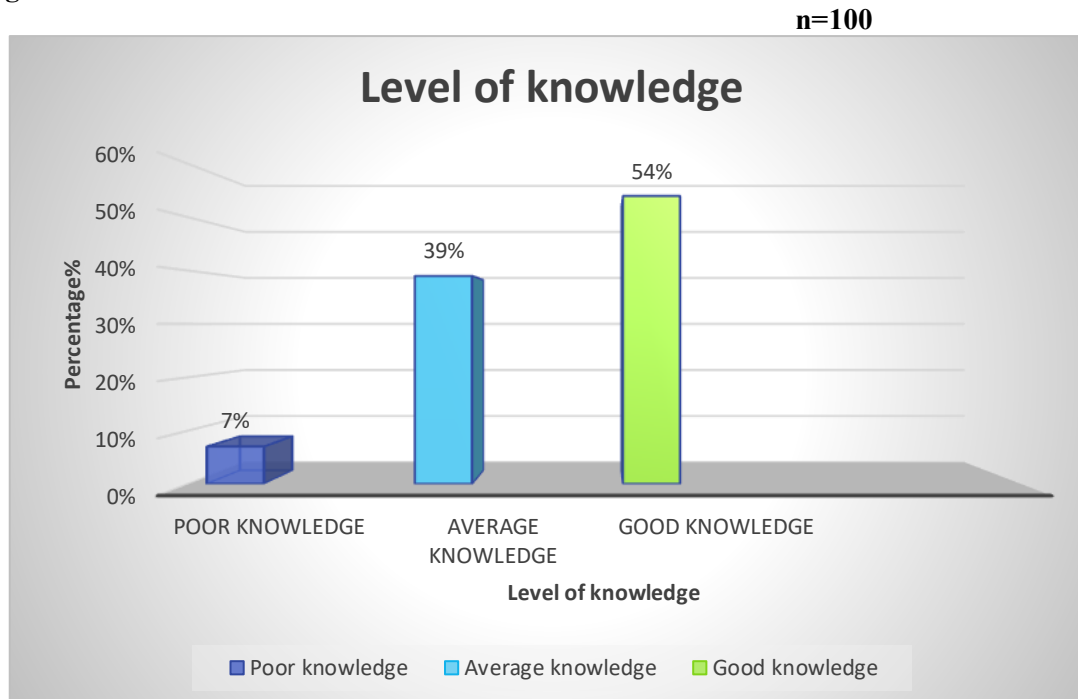


	C) 30-35 years D) Above 36 year	06 02	06% 02%
2	Religion A) Hindu B) Muslim C) Others	85 12 03	85% 12% 03%
3	Educational status A) No formal education B) Primary education C) Secondary education D) High school E) Graduation and above	01 26 19 35 19	01% 26% 19% 35% 19%
4	Occupation A) Home maker B) Daily wager C) Private sector D) Government sector E) Agriculture	69 06 08 1 16	69% 06% 08% 1% 16%
5	Monthly income A) Rs.5000-Rs.10000 B) Rs. 10001-Rs.15000 C) Rs. 15001-20000 D) Rs. 20000 and Above	39 23 18 20	39% 23% 18% 20%
6	Type of family A) Nuclear family B) Joint family C) Extended family	71 19 10	71% 19% 10%
7	Week of gestation A) 0-12 weeks B) 12-24 weeks C) 24-36 weeks D) Above 36 weeks	11 23 53 13	11% 23% 53% 13%
8	Parity A) 1 st B) 2 nd C) 3 rd D) 4 th	46 41 10 03	46% 41% 10% 03%

Above table depicts the the distribution of participants based on demographic variables. The majority of antenatal mothers (57%) were in the age group of 18–25 years, followed by (35%) in the 25–30 years group. Regarding religion, most participants (85%) were Hindu, followed by (12%) who were Muslim. In terms of education, (35%) had completed high school, while (26%) had primary education. A large proportion of participants (69%) were homemakers, followed by (16%) engaged in agriculture. When considering monthly income, (39%) earned between Rs.5,000–Rs.10,000, followed by (23%) earning between Rs.10,001–Rs.15,000. Most participants (71%) lived in nuclear families, while (19%) belonged to joint families. With respect to gestational age, (53%) were between 24–32 weeks, and (23%) were between 12–24 weeks. As for parity, (46%) of the antenatal mothers were 1st parity while (41%) were in their 2nd parity.



Figure 01: Bar diagram showing percentage of level of knowledge of risk factors and prevention of puerperal sepsis among antenatal mothers.



Above Figure shows the level of knowledge regarding risk factors and prevention of puerperal sepsis among antenatal mothers, with a mean (13.51±3.05). In that majority of sample having good knowledge that is 54%, average knowledge with 39% followed poor knowledge with 07%.

Table 02: Association between knowledge score and socio-demographic & clinical variables.

n=100

Sr. No.	Demographic and clinical data	Chi square value calculated (x ²)	Chi square value table value (x ²)	Degree of freedom (df)	Level of Significance
1	Age	7.93	12.59	6	Non-significant
2	Religion	0.61	12.59	6	Non-significant
3	Educational status	8.73	15.50	8	Non-significant
4	Occupation	4.35	15.50	8	Non-significant
5	Monthly income	4.79	12.59	6	Non-significant
6	Type of family	1.04	9.48	4	Non-significant
7	Week of gestation	11.79	12.59	6	Non-significant
8	Parity	5.96	12.59	6	Non-significant

Level of significance at 95%, p<0.05 level

The above Table No.02 depicts the association between knowledge regarding risk factors and prevention of puerperal sepsis among antenatal mothers with selected socio-demographic and clinical data. Chi square analysis was used to find out the association. The findings revealed that there was not any significant association between knowledge regarding risk factors and prevention of puerperal sepsis among antenatal mothers with selected demographic and clinical variables such as age, religion, educational status, occupation, monthly income, type of family, week of gestation, parity of antenatal mothers.



4. DISCUSSION

The present study conducted to assess the knowledge regarding risk factors and prevention of puerperal sepsis among antenatal mothers and to find out the association between knowledge regarding risk factors and prevention of puerperal sepsis and selected socio-demographic and clinical variables. It shows that the majority majority of sample belongs to age group 18-25 year that was 57% followed by 25-30 year with 35%. It was consistent with the study conducted by Priyadarshini Jana et al. in 2018, that the majority of participants belongs to 28-32 years that is 31.1% followed 33-37 year with 26.4%. Higher percentage of sample belongs to Hindu religion that was 85% followed by Muslim with 12%.¹¹ One similar study was conducted by Poonam Thakur and Kranti devi in 2024 the religion was comparable.¹² The majority of participants belongs to Hindu that is 86% followed Muslim with 14%. Majority of sample belongs to high school that was 35% followed by primary education with 26%. It was supported by the study conducted by Dorice B. Nchimbi et al in 2022, that the majority of participants belongs to high school that is 45% followed by primary education with 31%.¹³ Higher percentage of sample belongs to home maker that was 69% followed by agriculture with 16%. One similar study was conducted by Taskin T. et al. In 2016 the occupation of antenatal mothers was comparable.¹⁴ The majority of sample belongs to home maker that is 74% followed by agriculture with 15%. Majority of sample belongs to Rs. 5000- Rs.10000 monthly income that was 39% followed by RS. 10001- RS. 15000 with 23%. It was consistent with the study conducted by Rita sarkar et al in 2019, that the majority of sample belongs to Rs.<5000 that is 66% and Rs.5001-Rs.10000 that is 30% followed by Rs.10001-Rs.15000 with 3.3%.¹⁵ Higher percentage of samples belongs to nuclear family that was 71% followed by joint family with 19%. One similar study was conducted by Shirin sultana et al. in 2018.¹⁶ The type of family of antenatal mothers was comparable. The majority of sample belongs to nuclear family that is 60.7% followed by joint family with 39.3%. Majority of sample belongs to 24-36 weeks of gestation that was 53% followed by 12-24 weeks with 23%. Parity of antenatal mothers in that majority of sample belongs to 1st parity that is 46% followed by parity 2nd with 41%. It was supported by a study conducted by Amin et al in 2023, that was the majority of sample belongs to 1st parity that is 56% followed by parity 2nd with 44%.¹⁷ The level of knowledge regarding risk factors and prevention of puerperal sepsis among antenatal mothers in that majority of sample having good knowledge that is 54%, average knowledge that is 39% followed by poor knowledge with 07%. The mean is 13.51± 3.05. The present study was supported by a study conducted by Desa et al in 2021 published in the international journal of reproductive health. It showed that the majority of antenatal mothers had good knowledge regarding risk factors and prevention of puerperal sepsis, that was 56%, 38% had average knowledge followed by poor knowledge with 6%¹⁸.

5. CONCLUSION:

Puerperal sepsis remains a significant public health challenge worldwide.¹⁹ In India, it continues to threaten the health of postpartum mothers, contributing to maternal morbidity and mortality, and placing both mother and newborn at risk of serious complications.²⁰ In the present study researchers investigated the level of knowledge regarding risk factors and prevention of puerperal sepsis among antenatal mothers admitted in Dr. Vithalrao Vikhe Patil Pravara Rural Hospital, Loni Bk and concluded that majority of antenatal mothers are having good knowledge regarding the risk factors and prevention of puerperal sepsis. The findings also revealed that there was No significant association between knowledge score and socio-demographic and clinical variables like age, religion, educational status, occupation, monthly income, type of family, gestational age and parity.

Conflict of interest:

No Conflicts of interest declared by the authors.

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