

A Study to Assess the Knowledge Regarding Puerperal Sepsis and its Prevention among Postnatal Mothers Admitted in Postnatal Ward of Selected Hospitals in a View to Develop Information Booklet

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Abstract: ***Background of study:** Puerperal sepsis is one of the five leading causes of maternal mortality worldwide, and accounts for 15% of all maternal deaths. Puerperal sepsis is among the preventable conditions in developing and developed nations. Global risk factors that contribute to infections are caused by poor hygiene practices during delivery and postpartum. This is related to repeated manipulation of patients during delivery, prolonged time of labour or rupture of amniotic sacs, as well as poor sanitary conditions and poor services within health care facilities. Mothers are less aware of their health while taking care of newborn baby and also many alarming complications can arise due to lack of knowledge in preventive measures. So it is necessary to assess the knowledge regarding puerperal sepsis and its prevention among postnatal mothers admitted in postnatal ward of selected hospitals in a view to develop information booklet. **Objectives of the study:** 1. To assess the existing level of knowledge regarding puerperal sepsis and its prevention among the postnatal mothers. 2. To find out the association between level of knowledge with their selected socio-demographical variables regarding puerperal sepsis and its prevention among the postnatal mothers. 3. To develop an information booklet on puerperal sepsis and its prevention. **Methodology:** The quantitative research approach, descriptive research design was used to assess the knowledge regarding puerperal sepsis and its prevention among postnatal mothers admitted in postnatal ward of selected hospitals in a view to develop information booklet. The sample size was 100 postnatal mothers. Non probability purposive sampling technique was used to select the samples. Structured knowledge questionnaire given to postnatal mothers and assessed knowledge of postnatal mothers and provided information booklet to each mother. **Result:** Result showed that, mean percentage of knowledge was 28.33 with mean and SD of 8.5±1.8. The median was 8, range was 6-13 and mode was 7.0. 39(39%) postnatal mothers had poor knowledge, 42(42%) were had average knowledge and 19(19%) had good knowledge. Chi square test was used to find out the association between levels of knowledge scores with selected socio-demographic variables of postnatal mothers. Age and educational qualification of postnatal mothers were found significant association with level of knowledge regarding puerperal sepsis and its prevention among postnatal mothers. Other socio-demographic variables such as parity, mode of delivery, occupation, residence, type of family, religion and diet were not significant. **Conclusion:** After the present study to assess the knowledge regarding puerperal sepsis and its prevention among postnatal mothers admitted in postnatal ward of selected hospitals in a view to develop information booklet, study concluded that there is a need to improve the knowledge of postnatal mothers regarding puerperal sepsis and its prevention. So, information booklet that has been provided to the samples to improve the knowledge regarding puerperal sepsis.*

Keywords: Postnatal mother, Puerperal sepsis, Information Booklet, Prevention

1. Introduction

Puerperium is the time following delivery during which pregnancy-induced maternal anatomical and physiological changes return to the non-pregnant state. Puerperium begins as soon as the placenta is expelled and lasts for approximately 6 weeks when the uterus regress almost to the non-pregnant size¹. The WHO defined puerperal sepsis in 1992 as an infection of the genital tract occurring at any time between the rupture of membranes or labor and the 42nd day post-partum; in which, two or more of the following are present: pelvic pain, fever, abnormal vaginal discharge and delay in the reduction of the size of the uterus.²

The risk of developing puerperal sepsis are, 1-3% in normal vaginal deliveries, 5-15% in scheduled caesarean deliveries performed before labor begins, 15-20% in Non-scheduled caesarean deliveries performed after labor begins. Additional factors include obesity, bacterial vaginosis, monitoring fetus internally, young age and colonization of the vaginal tract with Group B Streptococcus bacteria. The main clinical features of puerperal sepsis are fever, lower abdominal pain or pelvic, foul smelling vaginal discharge, pallor, chills, feeling of discomfort or illness and increased heart rate.³

Need for Study

Maternal mortality is used as a measure of quality of health care in a community. India still has a high maternal mortality rate of 167 per 100000 live births and those who

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survive suffer from severe maternal morbidity. Puerperal sepsis despite being preventable is one of the leading causes of maternal mortality and morbidity. In India about 15% maternal mortality are caused by puerperal sepsis. Factors leading to puerperal sepsis are varied and may differ in different region and type of medical received during delivery and thereafter.⁴

Puerperal sepsis causes 11% of all global maternal deaths and is a significant contributing factor of maternal deaths. It is also the third leading cause of direct maternal mortality in developing nations. It has been estimated that 30 million patients are affected by puerperal sepsis and nearly 6 million among them die. One in 10 maternal deaths worldwide are attributed to sepsis.⁵

Sample Registration System (SRS), India estimated that 16% and 11% maternal deaths in the year 1998 and 2001-2003 respectively were due to puerperal sepsis. In the population-based study in rural Maharashtra Puerperal sepsis was the second major cause of maternal mortality (13.2%) after postpartum hemorrhage. Puerperal sepsis is preventable with provision of adequate antenatal care, referral and timely treatment of complications of pregnancy, promotion of institutional delivery and postnatal care.⁶

2. Problem Statement

A Study to Assess the Knowledge Regarding Puerperal Sepsis and its Prevention among Postnatal Mothers Admitted in Postnatal Ward of Selected Hospitals in a View to Develop Information Booklet

3. Objectives of the Study

- 1) To assess the existing level of knowledge regarding puerperal sepsis and its prevention among the postnatal mothers.
- 2) To find out the association between level of knowledge with their selected socio-demographical variables regarding puerperal sepsis and its prevention among the postnatal mothers.

4. Assumption

- Postnatal mothers may have some knowledge regarding puerperal sepsis and its prevention.
- Information booklet may help them to gain knowledge regarding puerperal sepsis and its prevention.

5. Methodology

1) Research Approach

A quantitative research approach was adopted for this study to assess the knowledge regarding puerperal sepsis and its prevention among postnatal mothers.

2) Research Design

Research design used for this study was descriptive research design to assess the knowledge regarding puerperal sepsis and its prevention among postnatal mothers.

3) Research Setting

The setting selected for this study was postnatal ward of selected hospitals.

4) Population

The population selected for this study was postnatal mothers admitted in postnatal ward of selected hospital.

5) Sample

The samples selected for this study were postnatal mothers admitted in postnatal ward of selected hospitals.

6) Sampling Technique

Non probability purposive sampling technique was used for this study.

7) Sample Size

Sample size is the number of elements of the populations to be sampled. The sample size decided for this study was 100 postnatal mothers admitted in postnatal ward of selected hospitals.

8) Eligibility Criteria

Inclusion Criteria: Postnatal mothers those who are,

- Both Primipara and Multipara
- Both delivered by normal vaginal delivery and by caesarean section.
- Willing to participate in the research study.
- Able to understand and write English, Hindi and Marathi language.

Exclusion Criteria: Postnatal mothers those who are,

- Not present at the time of data collection.

Variables

- **Research variables:** Research variable in this study is the knowledge regarding puerperal sepsis and its prevention among postnatal mothers.
- **Socio-demographic variables:** The socio-demographic variables in this study were age, parity, mode of delivery, religion, educational qualification, occupation, residence, type of family and diet.

6. Description of the Tool

Section I: It consists of socio-demographic variables such as age, parity, mode of delivery, religion, educational qualification, occupation, residence, type of family and diet.

Section II: This part of the tool consists of items related to the assessment of knowledge of postnatal mothers regarding puerperal sepsis and its prevention. It consists of 30 multiple choice questions. Each correct response has been scored with one mark. Total score was 30.

Level of knowledge score was classified as,

Sr. No.	Level of Knowledge	Score
1	Good knowledge	11-30
2	Average knowledge	8-10
3	Poor knowledge	0-7

Section III: It consists of preparation of Information booklet regarding puerperal sepsis and its prevention.

Section I

Deals with analysis of socio-demographic variables of postnatal mothers in selected hospitals in term of frequency and percentage.

7. Analysis And Interpretation of Data

Table 1: Frequency and percentage distribution of socio-demographic variables of postnatal mothers in selected hospitals. (n= 100)

Sr. No.	Socio-demographic variable	Groups	Frequency (F)	Percentage (%)
1	Age (in years)	20-25	35	35
		26-31	54	54
		32-36	11	11
		Above 36	0	0
2	Parity	Primi	47	47
		Multi	53	53
3	Mode of delivery	Normal vaginal delivery	58	58
		Cesarean section	42	42
4	Education	Primary	31	31
		Secondary	36	36
		Higher secondary	30	30
		Graduation & above	3	3
5	Occupation	Housewife	79	79
		Daily wedges	15	15
		Private	6	6
		Government employee	0	0
6	Residence	Rural	74	74
		Urban	26	26
7	Type of family	Nuclear	47	47
		Joint	53	53
		Extended Family	0	0
8	Religion	Hindu	82	82
		Muslim	18	18
		Christian	0	0
		others	0	0
9	Diet	Veg	37	37
		Non-Veg	20	20
		Mixed	43	43

Table no. 1 revealed that out of 100 postnatal mothers, maximum 54 (54%) postnatal mothers were between 26-31 years of age, 35 (35%) postnatal mothers were between 20-25 years of age, 11 (11%) were between 32-26 years of age and none of were from age group of above 36 years of age. In relation to the parity, most of the postnatal mothers 53(53%) were multiparous and least of them 47(47%) were primiparous.

With regard to mode of delivery of mother, maximum 58(58%) of postnatal mothers had undergone normal vaginal delivery and minimum 42(42%) had undergone cesarean section. In relation to educational qualification of postnatal mothers, maximum 36(36%) had secondary education, 31(31%) had primary education, 30(30%) had higher education and minimum 3(3%) were graduates and above.

With regard to occupation, most of the postnatal mothers 79(79%) were housewives, 15(15%) postnatal mother's

occupation related with daily wedges, 6(6%) had private job and none of had government job. In relation to the residence, maximum 74(74%) postnatal mothers were from rural area and minimum 26(26%) were from urban area. In relation to type of family, most of the postnatal mothers 53(53%) belonged to joint family, 47(47%) were in nuclear family and none of them were from extended family.

With regard to religion, maximum 82(82%) postnatal mothers were Hindu, 18(18%) were Muslims and none of them were Christians and other religion. In relation with the diet, most of the postnatal mothers 43(43%) preferred mixed diet, 37(37%) postnatal mothers were vegetarian and least of postnatal mothers 20(20%) were non-vegetarian.

Section II

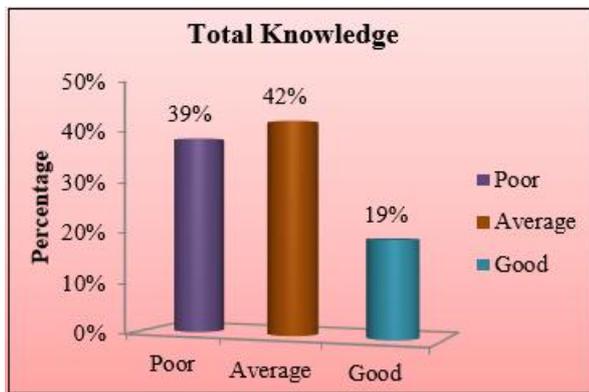
Analysis of data related to assessment of the knowledge regarding puerperal sepsis and its prevention among postnatal mothers in terms of frequency and percentage.

Table 2: Mean, SD and Mean percentage of knowledge regarding puerperal sepsis & its prevention among postnatal mothers, n=100

Knowledge	No of items	Range		Knowledge score				
		Min.	Max	Mean	SD	Median	Mean %	Mode
Total Knowledge	30	6	13	8.5	1.8	8.0	28.33	7.0

Table no. 2 depicts that mean percentage of knowledge was 28.33 with mean and SD of 8.5±1.8. The median was 8, range was 6-13 and mode was 7.0.

Graph no 1 reveals that classification of postnatal mothers according to levels of knowledge. In this 39(39%) postnatal mothers had poor knowledge, 42(42%) had average knowledge and 19(19%) had good knowledge.



Graph 1: Cylinder graph showing percentage distribution of postnatal mothers according to level of knowledge.

Section III

Association between knowledge score with selected socio-demographic variables regarding puerperal sepsis and its prevention among postnatal mothers.

Table 4: Association between knowledge score with selected socio-demographic variables

Variable	Groups	F	Knowledge Score			Chi Square	d.f.	p value	Significance
			Poor	Average	Good				
Age (in years)	20-25	35	22	11	2	18.600	4	0.01	Significant
	26-31	54	17	23	14				
	32-36	11	0	8	3				
	Above 36	0	0	0	0				
Parity	Primi	47	24	16	7	5.433	2	0.066	Not significant
	Multi	53	15	26	12				
Mode of delivery	Normal vaginal delivery	58	22	24	12	0.261	2	0.878	Not significant
	Cesarean section	42	17	18	7				
Education	Primary	31	20	10	1	21.416	6	0.002	Significant
	Secondary	36	14	15	7				
	Higher secondary	30	5	16	9				
	Graduation & above	3	0	1	2				
Occupation	Housewife	79	30	33	16	3.503	4	0.477	Not significant
	Daily wedges	15	6	8	1				
	Private	6	3	1	2				
	Government employee	0	0	0	0				
Residence	Rural	74	31	29	14	1.147	2	0.564	Not significance
	Urban	26	8	13	5				
Type of family	Nuclear	47	22	16	9	2.724	2	0.256	Not significance
	Joint	53	17	26	10				
	Extended Family	0	0	0	0				
Religion	Hindu	82	33	34	15	0.332	2	0.847	Not significance
	Muslim	18	6	8	4				
	Christian	0	0	0	0				
	others	0	0	0	0				
Diet	Veg	37	15	15	7	0.184	4	0.996	Not significance
	Non-Veg	20	7	9	4				
	Mixed	43	17	18	8				

The table no 4 described the association between the levels of knowledge score with selected socio-demographic variables of postnatal mothers. The Chi square test was used to find out the association between the knowledge score and socio-demographic variables.

8. Conclusion

The present study assessed the knowledge regarding puerperal sepsis and its prevention among postnatal mothers admitted in postnatal ward of selected hospitals in a view to develop information booklet.

The study concluded that in the test, mean percentages of knowledge was 28.33 with mean and SD of 8.5±1.8. The median was 8, range was 6-13 and mode was 7.0. Out of 100 postnatal mothers, 39(39%) postnatal mothers had poor knowledge, 42(42%) had average knowledge and 19(19%) had good knowledge. There was significant association between age (18.600, df=4, P=0.01) and educational qualification (21.416, df=6, p=0.002) of postnatal mothers with the level of knowledge regarding puerperal sepsis and its prevention. To improve the level of knowledge regarding puerperal sepsis and its prevention among postnatal mothers, the information booklet was given to each mother.

9. Nursing Implications

The investigator has drawn the following implication for the study which is vital concern in the field of nursing practice, nursing education, nursing administration and nursing research. Some of the implications for the present study in various areas as follows:

Nursing Practice:

- The nurses working in the health care services should update their knowledge about puerperal sepsis and its prevention.
- Various educational programmes on puerperal sepsis are to be scheduled in the maternity department.
- Information booklet should be distributed to the all postnatal mothers who admitted in ward as well as visited to the OPD of hospital.

Nursing Education:

- Conference, workshops and seminars can be held to impart and update the knowledge and thus bringing the changes in the attitude.
- In-service education for updating the knowledge and skills in various health care setting can be given.
- Nursing curriculum has to focus on enabling the nursing students to develop skill in identify cases of puerperal sepsis and to manage and prevent further complication.
- Every student can be motivated to plan and give health education for postnatal mothers especially on puerperal sepsis.
- Provide adequate clinical exposure for students to give effective and safe nursing care in reducing the incidence of puerperal sepsis.

Nursing Administration:

- Collaborative with governing bodies to formulate standard policies and protocols to emphasize nursing care in the postnatal mothers.
- Ensure and conduct workshops, conferences, seminars on puerperal sepsis to prevent the incidence and its complications.

Nursing Research

- As a nurse researcher, promote more research on postnatal complications.
- Nurses are encouraged to conduct the interventional study regarding knowledge.
- Promote effective utilization of research finding on reducing puerperal sepsis among postnatal mothers.

10. Limitations

- Only limited literature and studies were obtained from the Indian context.
- The study was limited to postnatal mothers admitted in postnatal ward of selected hospitals.

11. Recommendations

The study recommends the following future research.

- 1) A similar study can be conducted with large sample in different setting for better generalization.

- 2) A study can be conducted to assess the effectiveness of information booklet on knowledge regarding puerperal sepsis and its prevention among postnatal mothers.
- 3) A study can be conducted to assess the knowledge regarding puerperal sepsis among antenatal mothers visited to outpatient department of hospitals.
- 4) A study can be conducted to assess the effectiveness of structured teaching programme on knowledge regarding puerperal sepsis and its prevention among the postnatal mothers.
- 5) Comparative study can be conducted between urban and rural postnatal mothers.

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