

A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Prevention of Puerperal Infection Among 4th Year B.Sc Nursing Students Inselected College of Nursingat Bangalore

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ABSTRACT

Puerperium refers to the six weeks period following child birth during which time anatomical and physiological changes restore the women to pre-pregnant stat. Most women go through puerperium without any complications and emerge as happy mothers. Some women however may face unexpected complications. Puerperal infection is the third most common cause of maternal death worldwide as a result of child birth after hemorrhage and abortion in low and middle income countries puerperal infections are the sixth leading cause of disease burden in women during their reproductive years. Hence the focus of this study was to assess the effectiveness of structured teaching programme on Prevention of puerperal infection among 4th year BSc Nursing Students in Selected College of Nursing, Bangalore.

Keywords: puerperal infection, Structured Interview Schedule, Knowledge, 4th year BSc Nursing Students, Prevention of puerperal infection, Demographic variables.

INTRODUCTION

“Our Prayers Should Be For A Sound Mind In A Healthy Body.”

Juvenal

Women who is pregnant will require regular health care visit with an obstetrician and midwife, throughout their pregnancy known as prenatal care. These prenatal visits are important because they may help physician to prevent pregnancy complications or increase their awareness of potential problem¹.

Puerperal infection is the third most common cause of maternal death worldwide as a result of child birth after hemorrhage and abortion in low and middle income countries puerperal infections are the sixth leading cause of disease burden in women during their reproductive years. Postpartum infections also known as childbed fever and puerperal fever².

Puerperium refers to the 6 weeks period following child birth during which time anatomical and physiological changes restore the women to pre-pregnant stat. Most women go through puerperium without any complications and emerge as happy mothers. Some women however may face unexpected complications. Some are emergency situations needing prompt attention and treatment; this occurs

mostly within 24 hours of child birth. Most of the other problems occur in the first week but some may be delayed up to 2-3 weeks. Major risk factor for wound infections are poor surgical technique, extended duration of labor and ruptured membranes, obesity, pre existing infection such as chorioamnionitis etc, and the principal causative organisms are staphylococcus aureus, aerobic streptococci and aerobic and anaerobic bacilli³.

Most Puerperal period is often seen as a smooth, uneventful time that follows, the anticipation of pregnancy and the excitement and work of labor and birth and often it is important for a nursing students to be aware of problems, that may develop post partly due to soft tissue trauma .Which provide an ideal environment for pathogenic organisms which may lead to puerperal infection and increase the maternal morbidity and mortality⁴.

The maternal mortality rate in India for the period 2000 -2015 was 174/100,000 live births, inspite of all the scientific discoveries in terms of treatment and drugs .This indicates there are social causes like socio-economic health practices, medical causes like sepsis, infection that are responsible for maternal mortality rate in India¹.

A study reported that puerperal pyrexia and sepsis are highly preventable problems occurring among the leading causes of maternal morbidity and mortality not only in the developing countries but also in developed countries as well. Common predisposing factors leading to puerperal sepsis are anaemia, prolonged labour, frequent vaginal examinations in labour under unsterilized circumstances, premature rupture of membranes for prolonged period⁵.

Puerperal sepsis results from infection contacted during child birth and this is one of the commonest causes of maternal mortality in the developing countries. Despite the discovery of antibiotics over eighty years ago, there is still a strong need for their proper and prophylactic utilization. Some developing countries have experienced increased use of health facilities for labour and delivery care but there is a lack of proper monitoring or checks and balances and there is a possibility that this trend could lead to rising rates of puerperal sepsis. Drug and technological developments needs to be combined with effective health system intervention to reduce infection including puerperal sepsis⁶.

Postpartum infections are a subset of maternal infections occurring between delivery and the 42nd day postpartum. The most common postpartum infections include endometritis (puerperal sepsis), urinary tract infections, surgical site infections, blood stream infection and wound infections. The causative microorganisms are generally polymicrobial with beta-haemolytic streptococci group A (GAS) often being the cause of severe cases of puerperal fever. The single most important risk factor for postpartum infection seems to be caesarean section, and prophylactic antibiotics during the procedure substantially reduce the infection risk⁷.

The puerperal infection requires special attention. There should be no excuse for delaying targeted, global action to implement and evaluate infection control measures during labour and delivery for the prevention and reduction of puerperal sepsis and other related conditions. The choice of the specific combination of components to be evaluated could be informed by what is known from the wider infection control literature, from exciting information on ways to improve quality in maternity care and by tailoring strategies to address underlying problems of infection control⁸

REVIEW OF LITERATURE

“Good research does not exist in vacuum”¹⁷.

Review of literature refers to the activities involved in identifying and searching for information on a

topic and developing a comprehensive picture of the state of knowledge on that topic. Researchers undertake a literature review to familiarize themselves within that knowledge base. Research is an ongoing process that builds on previous knowledge.

A review of related literature gives an insight into various aspects of the problem under study. The review serves as an integrated function that facilitates the accumulation of knowledge. Hence review of literature is important to a research in order to know what has been established and documented. The investigator carried out an extensive review of literature on the research topic in order to gain deeper insight into the problem and to collect maximum relevant information for building the foundation for the study.

Vitamin A therapy given before child birth has increased the resistance of the genital – urinary tract to invasion by microorganisms. This is supported by the study conducted among 550 women attending antenatal clinics in Sheffield who were investigated. Alternate women (275) were given a supply of a preparation rich in vitamin A and D during the last month of pregnancy, the remaining women were not given any supplement. No vitamin preparation was given any patient after entering Hospital. No instructions were given as to diet in any case. The women at full term were brought in to hospital and delivered, the attending doctors having no idea of previous therapy. After discharge from the hospital, all the notes of the patients were collected and analyzed. The results were as follows: The morbidity rate in the puerperium using the B.M.A. standard was 1 percent. In the vitamin group and 4-7 in the control group, a difference of 3-6 percent. Which is twice the standard error (1-4) and therefore statistically significant²¹.

Hand disinfections are the central factor in prevention of puerperal mastitis. This is supported by the incidence of puerperal mastitis which was evaluated in the course of 12 months periods with and without additional hand disinfections at the bedside in a universal teaching hospital at German. The survey reports stated that out of 1095 mothers 32 mothers developed mastitis without additional disinfections at the bedside the incidence of mastitis was 29% when additional bedside disinfections were available, mastitis dropped to 8 cases per 12 months. The survey recommendation emphasizes, that puerperal women should practice strict hygiene in her post partum period²⁰.

Puerperal infections are of great importance also under the conditions of obstetrics. There is a close connection with the problematic nature of hospitalism. The prospective study from 1,409 patients shows 19.0% of the patients meet the criteria of a “standard puerperal morbidity.” The incidence of puerperal infections is influenced by predisposing factors dominated by the mode of accouchement. Ampicillin and chloramphenicol are the most useful antibiotics. The preventive and therapeutic application of antibiotics is discussed²³.

A descriptive study was conducted to identify new and underutilized technologies to reduce maternal mortality related puerperal sepsis in developing countries. The literature indicates that infection control protocols and evidence based procedures including prophylactic antibiotics should be widely adopted. Operational research on promising developments like vaginal cleansing with antiseptics, vitamin A supplementation and prophylactic antibiotics in high risk women is needed. Sepsis management continues to depend on good implementation of established technologies. Program based approaches are required to improve intake⁴⁰.

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An observational prospective Cohort study was conducted to determine the risk factors and complications of puerperal sepsis at Liaquat University of Medical & Health Sciences Jamshoro/Hyderabad. During this study period, all the women who delivered in this hospital or referred to this hospital within 42 days after delivery with puerperal pyrexia/sepsis diagnosed on clinical examination as well as with relevant investigations were included in the study. Results showed that during this period there were 3316 obstetrical admission and out of these 129(3.89%) women had puerperal sepsis. Most of these women 84(65.11%) were aged 31 years and above, multiparous 101 (78.29%), and unbooked 98 (75.96%) cases. Common risk factors found were absent membranes in 108(83.72%) of the women, delivered or undelivered and mismanaged, referred cases 95(73.64%), are being delivered in this hospital 34(26.35%). Morbidities seen were septicemia in 35 (27.13%) cases, and disseminated intra vascular coagulation in 23(17.82%) cases, while 11 (8.52%) of the women died²⁶.

A prospective cohort study conducted among 1075 breast feeding women with questionnaires and telephone follow up was conducted at New Castle and were followed up at home for six months. 1075 breast feeding women were sent follow up questioners at three, eight and 26 weeks post-delivery. The findings revealed that mastitis occurred in 20% of women during the first six-months. Factors that were statistically, significantly and independently related to mastitis were Past history of mastitis, blocked ducts, cracked nipples and use of creams on nipples particularly papaya cream, alternate breast on consecutive feeds³⁴.

A retrospective study by means of multi variant discriminate analysis was performed on 496 deliveries, 250 vaginal and 246 caesarean section women were identified risk factors for puerperal infections. The infection rates by type of delivery were vaginal 3.6%, elective caesarean section 6.0%, primary caesarean section 22.2% and emergency caesarean section 38.4%. The four statistically significant risk factors for puerperal infections were duration of labor, number of pre-operative vaginal examinations; membranes were ruptured prior to delivery and Post-operative anemia ³⁵.

OBJECTIVES

1. To assess the knowledge regarding prevention of puerperal infection among 4th year BSc Nursing students at Selected College of Nursing, Bangalore.
2. To develop and administer structured teaching programme among 4th year BSc Nursing students regarding prevention of puerperal infection.
3. To assess the effectiveness of structured teaching programme on knowledge regarding prevention of puerperal infection among 4th year BSc Nursing students at Selected College of Nursing, Bangalore.
4. To determine the association between pre test knowledge of 4th year BSc Nursing Students regarding prevention of puerperal infection with selected demographic variables.

METHODOLOGY

This chapter deals with the methodology adapted to assess the effectiveness of structured teaching programme on knowledge regarding prevention of puerperal infection among 4th year BSc Nursing students in selected college of Nursing, Bangalore.

In the present study the one group pre test and post test (Quasi experimental) design was adapted. A total number of 60 samples at selected college of nursing, Bangalore were selected by using purposive sampling technique that fulfils inclusion criteria such as 4th year BSc Nursing Students who are willing to participate in the study. Variables of the present study are Independent variable: Structured teaching programme regarding Prevention of puerperal infection, Dependent variables: knowledge of 4th year BSc Nursing Students regarding the Prevention of puerperal infection along with demographic variables.

DATA ANALYSIS

**Association between knowledge of 4th year BSc nursing students and the selected demographic variables
N=60**

Variables	Below Median	Median & above	Chi square	Df	P value (0.05)	Inference
Age in years						
21 years	5	1	7.749	2	0.021	S
22 years	19	26				
23 years and above	1	8				
Gender						
Male	7	8	0.206	1	0.650	NS
Female	18	27				
Religion						
Hindu	15	26	1.921	2	0.383	NS
Christian	9	7				
Muslim	1	2				
Family type						
Nuclear Family	23	24	4.716	1	0.030	S
Joint Family	2	11				
Family income						
Less than Rs.10000	2	5	0.393	3	0.942	NS
Rs.10001-15000	17	23				
More than Rs. 15001	6	7				
Living area						
Urban	16	20	0.286	1	0.593	NS
Rural	9	15				
Attended clients with puerperal infections						
Yes	7	8	0.206	1	0.650	NS

No	18	27				
Source of information						
Mass media	1	3	12.073	3	0.007	S
Family	3	3				
News paper	3	18				
Academics	18	11				

Table shows X^2 value computed between the knowledge level of 4th year BSc Nursing Students and selected demographic variables. Variables such as age, Family type and source of information were significant at 0.05 level of significance. Thus the hypothesis stated there is significant association between the pre test knowledge of 4th year BSc Nursing Students regarding Prevention of puerperal infection and selected demographic variables is accepted.

CONCLUSION

The focus of this study was to explore the knowledge level of 4th year BSc Nursing Students regarding Prevention of puerperal infection at selected College of Nursing Bangalore. A Quasi experimental one group pre test post test design and evaluative approach was used in the study. The data was collected from 60 samples through purposive sampling technique. The total difference in the mean of overall knowledge score was 5.55 with the 't' value of 10.978 and found to be significant at the level of $p < 0.01$. There was a statistically significant association between the knowledge score of 4th year BSc Nursing Students with demographic variables such as age, Family type and source of information at the probability level of $p < 0.05$.

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