A Study to Assess the Effectiveness of Nurse Intervention Programme on Knowledge Regarding Prevention of Puerperal Infection among Post Natal Mothers in KLE Prabhakar Kore Hospital at Belagavi Karnatak

BelgundkarB.[1], Heikham G.[1]

[1]Lecturer, OBG Department KLE Academy of Higher Education and Research, Institute of Nursing Sciences, Belgaum

"Healthy Mothers, Healthy babies, Healthy Nations"

Abstract

Introduction: Pregnancy and childbirth are normal physiological process and outcomes of the pregnancies are mostly good. However, a few pregnancies and childbirth expose mothers at risk. Puerperal sepsis or pyrexia is one of the risks, which will develop after delivery, which is often, and unpredictable.

Material and Method: The study was conducted on post natal mothers Pre-validated structured questionnaire was used for the selection of sample. Pre-test was conducted by using questionnaire. The questionnaire had two sections. First consists of eight responses of social demographic variables, second consisted of structured questionnaire about prevention of puerperal infection, intervention was given after five days followed by post test. The collected data was tabulated and analyzed according to the objectives of the study using descriptive and inferential statistics.

Results: Findings revealed that the total mean knowledge score is increased by 70.29 with mean ±SD of 19.47±9.93, after the administration of nurse intervention programme (NIP). Paired 't' test was used to find the effectiveness of nurse intervention programme (NIP). The calculated 't' value in knowledge (38.38 $p<0.05$), was greater than the table value. This showed that the gain in the knowledge was significant after administering nurse intervention programme (NIP).

Keywords: *Knowledge, puerperal infection, post natal mothers.*

Introduction

Becoming a mother is one of the most exciting times in a woman's life. The transition from a woman to a mother is an eventful experience.. Motherhood is a beautiful experience which can turn into a tragedy when the family loses the most precious member of the family, the mother. Each year, more than half a million women die in the world from complications of pregnancy and millions suffer from permanent disabilities following these complications[1]. The period of pregnancy, delivery and puerperium is considered as a physiologic process that affects the woman physically and emotionally[1] 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, They require special care during these periods for a safe motherhood and healthy living.

Postpartum period or puerperium is the period following childbirth and is a time of physiologic stress and major psychological transmission [1]. Puerperium is of great importance for both mother and baby as it is an aspect of maternity care, where which has received relatively less attention compared with pregnancy and delivery. Majority of alarming complications arise immediately following delivery[2]. Energy depletion, fatigue of late pregnancy and labour soft tissue trauma and blood loss during delivery increase the woman's vulnerability to complications. Puerperal infection is one among the complications and occurs at any time between deliveries of the fetus till 42 days after deliver[3]. Puerperal

pyrexia and sepsis are among the leading causes of preventable maternal mortality and morbidity not only in developing countries but in developed countries as well. Most postpartum infections take place after hospital discharge, which is usually 24 hours after delivery. In the absence of postnatal follow up, as is the case in many developing countries, many cases of puerperal infections can go undiagnosed and unreported[4]. Puerperal sepsis, which is a serious form of septicemia contracted by women during or shortly after the childbirth, if untreated, is life threatening[2]. Historically; a puerperal infection has been a common pregnancy-related condition, which could eventually lead to obstetric shock or even death. During the 19th century, it took on epidemic proportions, particularly when home –practice changed to delivery in lying-in hospitals, as there still was a total ignorance of a infection often it is important 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 mortality [4].

The genital tract infection continues to present a life-threatening problem to women, most virulent organism is beta hemolytic streptococcus but more commonly Chlamydia, Eschechria coli and other gram negative bacteria will be the infective agents. The breast should be examined for sign of breast infection, breast abscess formation is very unusual until after the 14th postnatal day. Urinary tract infection is a common infection in puerperium following the frequent use of catheterization during labor. Some women will also develop urinary retention and require indwelling catheters, so Escherichia coli is commonest pathogens.[6].

By updating the recent knowledge on prevention of puerperal infection, we can save the life of the women. Postpartum infection is a clinical infection of the genital canal that occurs within 28 days after abortion or child birth. Infection may result from bacteria commonly found within the vagina or from the introduction of pathogens from outside the vagina. The infectious process may remain localized in the reproductive or genital area, urinary tract or breast or it may progress resulting in mastitis, endometritis, peritonitis such infections are a major cause of maternal death [10]

Physicians and nurses are involved in the prevention, diagnosis, and treatment of puerperal infection. Good prenatal care is essential for avoiding the risk of infection after childbirth. Post-partum nurses assess patients for signs and symptoms of infection and educate patients about these signs and symptoms prior to discharge. A mother who is unfamiliar with prevention of puerperal complications during puerperal period may be disappointed about her health status. Only a healthy mother can bear a healthy baby. Taking advantage of such a phenomena the nurse can play a vital role to encourage the mothers to be more active and take active participation in her own care. Home health nurses making follow-up visits assess patients for signs and symptoms of infection. Emergency physicians are seeing an increasing number of post-partum patients presenting with a fever or evidence of infection due to earlier discharge from the hospital after childbirth.

Objectives of the Study:

1. To assess the knowledge regarding prevention of puerperal infection
2. To design and conduct a nurse intervention programme on knowledge regarding prevention of puerperal infection among post natal mothers.
3. To assess the post –test knowledge score regarding prevention of puerperal infection among post natal mothers
4. To identify the association between knowledge level with selected demographic variables.

Methodology

In view of the nature of the problem under study and to accomplish the objectives of the study evaluative approach was found to be appropriate to describe the nurse intervention programme on knowledge regarding prevention of puerperal infection. Pre-experimental, i.e., one group pre-test post-test design was adopted for the study. Here only one group was observed twice, before and after introducing the independent variable. The effect of treatment would be equal to the level of the phenomenon after the treatment minus the level of phenomenon before treatment, the sample for the present study consists of 40 post natal mothers Non probability convenient sampling technique was found appropriate to select 40 post natalmothers. In this study, the tools used by the researcher to collect data were structured questionnaire on knowledge regarding prevention of puerperal infection.

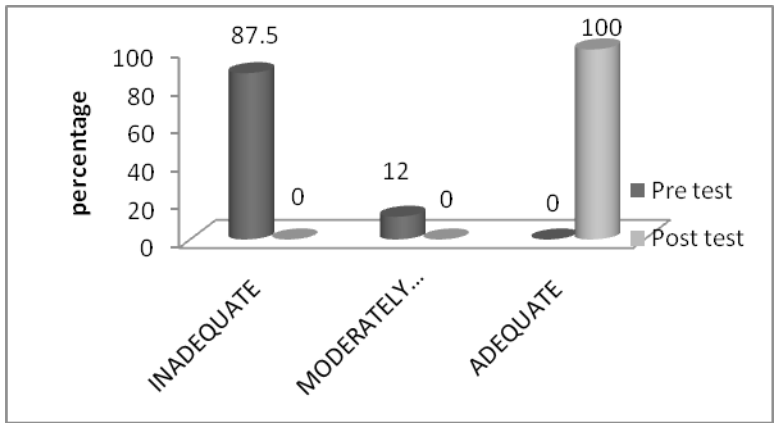
Data Collection: Prior permission was obtained from the concerned authority. Keeping in mind, the ethical aspect of research data was collected after obtaining

informed consent from the subjects. The respondents were assured the anonymity and confidentiality of the information provided by them. The researcher himself has collected data from the sample. Pre-test was conducted by using structured questionnaire followed by structured teaching programme. Lecture cum discussion was the method of instruction. LCD projector was used as an AV aid. The duration of the session was 45 minutes. After 7 days a post-test was conducted using the same structured questionnaires to evaluate the effectiveness of the structured teaching program

Results and Discussion

Variables		Inadequate (0- 10 %)		Moderately Adequate (10- 20%)		Adequate (21 – 30 %)	
		F	%	F	%	F	%
Knowledge	Pre	35	87.5%	5	12.5%	0	0
	Post	0	0	0	0	40	100

Table 1: Frequency and percentage distribution of knowledge score. (N=40)



In pre-test, 87.5%of post natal mothers had inadequate knowledge, 12% had moderate knowledge and 0% had adequate knowledge. In post- test 0% of mothers had inadequate knowledge, 26.66% had moderate knowledge and 73.33% had adequate knowledge.

Effectiveness of nurse intervention programme (NIP) on Knowledge regarding prevention of puerperal infection:

Table 2: Comparison of pre-test with posttest Knowledge scores. (N=40)

Knowledge	Mean	Mean %	SD ±	Minimum score	Maximum score
Pre-test	9.725	27.005	13.16	2	17
Post-test	29.2	97.30	3.23	26	30

The pre-test mean percentage of knowledge was 27.005% with a mean ± SD of 9.725± 13.16 with minimum and maximum scores 2 and 17 respectively. The posttest mean percentage of knowledge was 97.30% with a mean ± SD of 29.2± 3.23 with minimum and maximum scores 26 and 30 respectively.

Table 3: Effectiveness of nurse intervention programme (NIP) on prevention of puerperal infection. (N=40)

	Pre-Test			Post- Test			Effectiveness			Paired 't' value
	Mean	Mean%	SD±	Mean	Mean%	SD±	Mean	Mean%	SD±	
Part A Knowledge	9.725	27.005	13.16	29.2	97.30	3.23	19.74	70.29	9.93	38.38

The data presented in the above table shows that the total mean knowledge score is increased by 97.30% with mean ±SD of 29.2±3.23, Hence the NIP was found to be effective in terms of knowledge.

Conclusion

The following implications in the various fields of nursing have been stated based on the findings of the study.

The finding of this study was the need of nurse to conduct training programme for the post natal mothers to enhance the knowledge of post natal mothers regarding prevention of puerperal infection

The study proves that post natal mothers gained knowledge level remarkably when compared to their previous knowledge prior to the administration of nurse intervention programme, through these knowledge post natal mother will prevent upcoming complication and problems regarding I puerperal infection

Implications for Nursing Practice: The findings of the present study would help nurses and other healthcare personnel to know the need for educating post natal mothers about the significance regarding. prevention of puerperal infection The education programme conducted by nursing personnel in the hospital and community will help in identifying the needs of post natalmother and prevent the future complication in puerperium . The education programme will help the post natal mother to gain knowledge regarding prevention of puerperal infection

Implications for Nursing Education: The findings suggest that there is increased need for education regarding prevention of puerperal infection in order to be prepared the children in positive way for any instances in future. Nursing education should prepare nurses with potential for imparting health information effectively. The nursing curriculum is a means through which future nurses are prepared. It should include content areas regarding various method by which health information on prevention of puerperal infection can be disseminated effectively, i.e., by adopting different strategies like lecture, discussion etc. The present study intended to be a formal and informal teaching programme for nursing professionals in the hospital so that they can help the post natal mothers to increase the knowledge regarding prevention of puerperal infection.

Implications for Nursing Research: Research is a systematic attempt to obtain answers to meaningful questions about phenomena or events through the application of scientific procedures. It is an objective, impartial, empirical, logical analysis and recording of controlled observations that may lead to the development of generalizations, principles or theories resulting to some extent in prediction and control of events that may be consequences of or causes of specific phenomena Based on the findings of this study, nurse researchers can undertake extensive studies among post natal mother on prevention of puerperal infection to assess the knowledge, attitudes and practices. Present study would help the nurse to understand the level of knowledge and to plan health education at hospital communities and other settings regarding prevention of puerperal infection.

Implications for Nursing Administration: The nurse administrator has a role in planning the policies for imparting health information to a target population. Nurse administrators need to organize nursing education programmes for the nursing personnel and to motivate them to educate the post natal mother in hospital and community set up regarding the importance puerperium and puerperal infection how it can be prevented which would benefit post natal mothers and the community. Planning and organising such work requires efficient team spirit, planning for manpower, money, material, method, time and goodwill to conduct successful education programmes. The nurse administrators will be able to take the initiative in imparting health information through different effective teaching method. They may utilise the findings of the study for awareness programmes and periodic educational sessions to improve the health knowledge.

Implications in General:

- The present study would help to understand the level of knowledge of the post natal mother regarding prevention of puerperal infection.
- The structured teaching programme can be utilized by other health professionals in improving the knowledge of post natal mother regarding prevention of puerperal infection.

Discussion

India boasts of its cultural heritage and perhaps is the only country in the world to worship women goddesses, yet has perhaps the highest maternal mortality rate. India

has 17.01% of total births globally and 25% of maternal deaths. Several community based studies in different parts of the country have found maternal mortality to be as high as 500-600/1, 00,000 (ICMR 2003). Thus a woman in India has 1 in 70 lifetime risk of dying in pregnancy or childbirth.[6]

The present study finding portrays that there is a significant difference between the pre-test and post-test median scores. In pre-test, 87.5%of post natal mothers had inadequate knowledge, 12% had moderate knowledge and 0% had adequate knowledge. In post-test 0%of mothers had inadequate knowledge, 26.66% had moderate knowledge and 73.33% had adequate knowledge. The pre-test mean percentage of knowledge was 27.005% with a mean ± SD of 9.725± 13.16 with minimum and maximum scores 2 and 17 respectively. The posttest mean percentage of knowledge was 97.30% with a mean ± SD of 29.2± 3.23 with minimum and maximum scores 26 and 30 respectively. Indicated that there is an increase in knowledge and practice among post natal mothers regarding prevention of puerperal sepsis after administration of NIP

it is important to reduce the maternal mortality and morbidity through mothers own effort and mothers can put effort when she has enough knowledge and hence can be improve by educating them. Similar finding was revealed by a descriptive study on puerperal infection was conducted at Obstetrical Department of the General Hospital 2A the Mexican Institute of social security to know the real puerperal infection incidence in hospital and to take specific measures in puerperal infection control. The cumulated rate of general puerperal infection was 1.2%. By stratification, the calculated rate of infection after caesarean section, vaginal delivery and miscarriage were 5.4% 0.8% and 0.3% respectively. The puerperal infection was present principally in primiparous and in patients with one previous caesarean section. There was predominance of infection after caesarean section, infection after vaginal delivery and after miscarriage. The five most frequent clinical situations were endometritis alone, endometritis combined with wound abscess, endometritis with urinary infection, complicated enodmetritis & wound abscess alone. No death was registered among the patients with puerperal infection.

Conflict of Interest: I Mrs Babita. Bconfirms that this manuscript is original and has not been published elsewhere and is not under consideration by any other journal. I agree with submission to International Journal of Nursing Education. I have no conflict of interest to declare.

Source of Funding: There has been no significant of financial support forth is work that could have influenced its outcomes.

Ethical Clearance: Informed consent was obtained from the Clinical Administrators, Principal and participants of the respected hospital before conducting data collection and maintained the confidentiality and anonymity of the subjects and information gathered.

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