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Knowledge on Practice of Aseptic Technique During Delivery Among Health Professionals in Selected Government hospitals of Sikkim

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Abstract

Pregnancy and childbirth are the most important events of women's life. Women health and development are the indicators of National health and development. Pregnancy and childbirth are the major cause of maternal mortality and morbidity. Inadequate and inappropriate knowledge on practice of aseptic technique during delivery may have serious health consequences and significant impact on the maternal and child health. The investigators conducted a survey study to assess the knowledge on practice of aseptic technique during delivery. Investigators adopted a descriptive survey design where 60 health personnel were selected by non-probability convenient

sampling technique from selected hospitals, Sikkim. Validated structured questionnaire were used to collect the data. The findings of the study reveals that knowledge regarding Bio-medical waste management(87%),definition of asepsis, aseptic technique, infection(86%), aseptic technique in labour room(77%) and asepsis in stages of labour(59%) was found to be better whereas asepsis during delivery(57%) was found to be less. There was a significant association between knowledge on practice of aseptic technique during delivery with years of experience in labour room as seen by chi square value ($p < 0.05$). The knowledge regarding asepsis during delivery needs more emphasis, as lack of knowledge on practice of aseptic technique during delivery can increases the chances of puerperal sepsis leading to maternal death.

Keywords : Knowledge, health personnel, Aseptic technique, Delivery

Introduction

Women health and development are the indicators of National Health and Development. Similarly, mother's health is the bulwark of her family, the foundation of community and social progress. Pregnancy and childbirth are the major cause of maternal mortality and morbidity.¹ WHO reported that every minute a mother dies from complication of pregnancy and child birth.² In developed countries, the maternal mortality ratio is about 27 per 100,000 live births and in the developing countries the ratio is 20 times higher. It varies between 480 and 1000 per 100,000 live births depending on the regions.³

India with its billion populations contributes to about 20% of all maternal deaths in the world. Maternal mortality remains one of the major problems in the developing countries today and studies have revealed that the major cause of maternal mortality is lack of intrapartum care.⁴ The aim of modern management of labour should be to ensure optimum condition for the mother and the fetus during and after delivery as well as emotional satisfaction of all involved. The place of delivery plays an important role in child survival and safe motherhood. The child born in unhygienic condition is more prone to get infection. A properly assisted delivery with skilled personnel and following aseptic precaution is highly advantageous to both mother and fetus during delivery.⁵

Puerperal sepsis is the 2nd leading cause for maternal mortality i.e. 19.2% of maternal death due to puerperal sepsis. Worldwide the puerperal sepsis rate is 15%. In our India the puerperal sepsis rate is 11%.⁴ Harley conducted a study on “labour and delivery” where he emphasized that there is a particular need for compliance with universal precaution although it must be recognized that some midwives may feel uncomfortable in using these precautions at such a sensitive time. The findings of the research suggesting that retention of skills and knowledge quickly deteriorates if not used or updated regularly. Therefore, this research supports the importance of infection control strategies refresher courses on a regular basis.⁶ The investigator was observed that, many a times staff nurses fail to practice aseptic techniques in labour room. Practice of hand washing which are the single most important measures in prevention and spread of infection from one person to other is not being done often. Another important area of concern is where staff nurses should be careful in doing vaginal examination and conducting delivery. Aseptic precaution is very important to prevent introduction of infection for the mother. The recognition of ignorance is the beginning of wisdom’s.⁷

Hence keeping the above points in mind the researcher felt the need to assess the knowledge of labour room staffs on the practices of aseptic technique during delivery.

Objectives

The study aimed to (1) Assess the knowledge among health personnel on practice of aseptic technique during delivery (2) Identify association between knowledge among health personnel on practice of aseptic technique during delivery with selected variables.

Operational Definitions

- Knowledge- It refers to the correct responses of health personnel on practice of aseptic technique during delivery as assessed by structured knowledge questionnaire.
- Health personnel- It refers to the staff nurses who are registered with General Nursing & Midwifery, Auxiliary Nurse Midwives by qualification and working in labour room.
- Aseptic Technique- It refers to a set of specific practice and procedure performed in labour room to minimize or prevent infection for safe delivery.

Materials and Methods

The research approach adopted was non-experimental survey research approach with one group Descriptive Survey design. The Research variable was Knowledge on practice of aseptic technique during delivery which was assessed among health professionals available in Labour room. as shown in Figure 1.

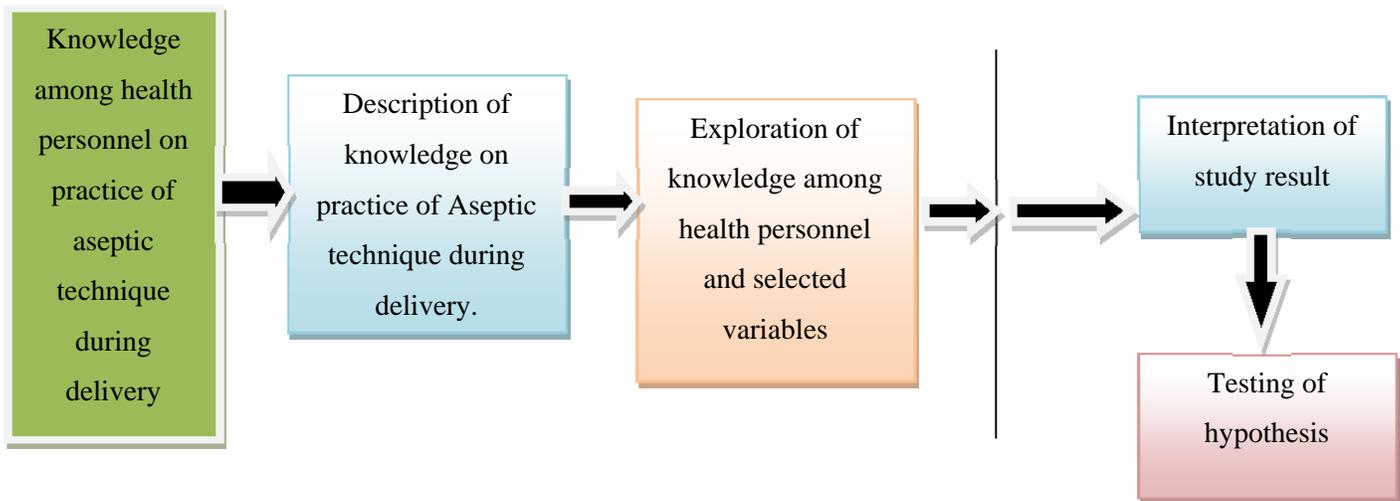


Fig 1: Schematic representation of Descriptive Explorative Design

The study was conducted in four district hospitals that are Singtam district hospital, Gyalsing district hospital, Mangan district hospital and Namchi district hospital, Sikkim. The population under study consisted of 60 staff nurses working in labour room selected by non probability Convenient sampling technique from Singtam district hospital, Gyalsing district hospital, Mangan district hospital and Namchi district hospital Sikkim, who were willing to participate in the study, who are GNM and ANM by qualification and working as a Registered nurse in labour room for more than 6 months. The instrument used for data collection was a structured knowledge questionnaire validated by seven experts in the field. In this study the structured knowledge questionnaire, was a questionnaire that was filled up by respondents.

The structured knowledge questionnaire had two sections. Section I was composed of 10 items to collect the information regarding personal characteristics included age, marital status, employee

of, professional qualification, year of completion of course, total years of experience in clinical area, experience in labour room, approximate deliveries conducted in years, present designation type, experience of attending any previous educational programme on Aseptic technique an Section II consisted of 30 items with multiple choice questions. Each correct response was scored 1 to collect the information from health personnel's regarding knowledge on practice of aseptic technique during delivery.

Data collection procedure

- The formal administrative and ethical permission was sought from the Principal, S.M.C.O.N ,Medical Superintendent, C.R.H and Pro Vice Chancellor, S.M.U
- The consent was taken from the participants
- Self introduction and establishment of rapport with the participants was done.
- The purpose of the study was explained to each participant separately and the participants were assured about the confidentiality of their responses
- The data collection was done at labour room of Singtam district hospital, Gyalsing district hospital, Mangan district hospital and Namchi district hospital Sikkim

Results and Discussion

In the present study, Majority (100%) of the participants were employee of government hospital. Most (65%) of case conducted per year was more than or equal to 31. About 65% of total health personnel are GNMs by qualification. About 58 % of health personnel have more than 10 years of total clinical experience. About 58% of health personnel have experience of attending previous educational programme on aseptic technique. About 50% of health personnel were between the age group of 31-40 years. Only 37% of health personnel have more than 10 years of experience in labour room.

In figure 2 it shows that among 60 participants, 3 health personnel (5%) were sister incharge, 4(7%) were senior staff nurse, 33 (55%) were staff nurse and rest 20(33%) were ANM by designation. The data also revealed shows that among 60 participants, 7 (12%) has completed

their course in 1980-1984,3(5%) in 1985-1989, 8(13%) in 1990-1994,11(18%) in 1995-1999,10(17%) in 2000-2004,14(23%) in 2005-2009 and 7(12%) has completed after 2010.

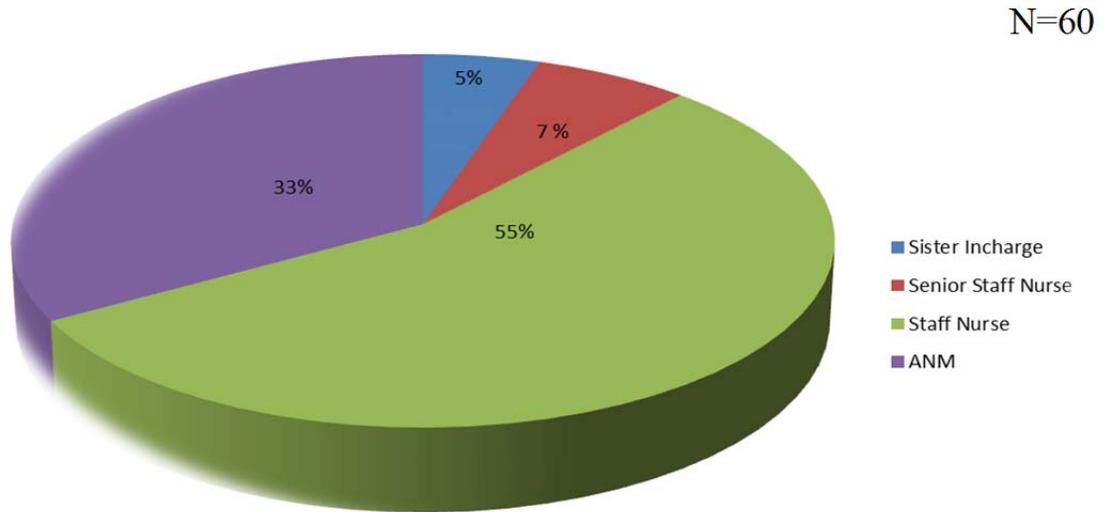


Fig 2: Distribution of present designation of health personnel

Table 1: Shows the distribution of health personnel based on their knowledge regarding practice of aseptic technique during delivery

N=60			
Category of score	Score	Frequency	Percentage (%)
Excellent Knowledge	24-30	17	28%
Good Knowledge	18-23	38	63%
Average Knowledge	12-17	5	9%
Poor Knowledge	<12	0	0%

Data presented in table 1 shows that 17 health personnel (28%) possessed excellent knowledge where as 38(63%) had good knowledge and 5 (9%) possessed average knowledge.

Table 2 represents the association between knowledge scores regarding practice of aseptic technique during delivery and selected demographic data.

The findings of the present study shows that there is no significant association of knowledge on aseptic technique with the age, total clinical experience, experience of attending previous

educational programme which is equivalent with the findings of the study of Leodoro J. Labraguel et.al⁸ where the result showed nurses regardless of their age and number of training attended are not determinants of the knowledge on sterile technique.

Variables	>median	< median	χ^2	df	P value
N=60					
<hr/>					
Age in year					
• More than 30	24	17	2.4	1=3.84	P>0.05
• Less than or equal to 30	7	12			
Professional qualification					
• ANM	10	11	0.19	1=3.84	P>0.05
• GNM	21	18			
Experience in labour room					
• More than 6 months	1	2	5.82*	1=3.84	P* <0.05
• 1 to 5	8	14			
• 5 to 10	10	3			
• more than 10	12	10			
Deliveries conducted per year					
• 11 to 20	5	2	1.97	2=5.99	p>0.05
• 21 to 30	5	8			
• more than or equal to 31	20	20			
Total experience in clinical area					
• 2 to 5	4	9	2.88	2=5.99	p>0.05
• 6 to 10	7	5			
• more than 10	20	15			
Previous education					
• Yes	13	12	0.002	1=3.84	p>0.05
• No	18	17			

The findings of the present study shows that 63 % had good knowledge on aseptic technique, 9 % had average knowledge. The study was limited only to 60 health personnel and confined to only to labour room whereas other OBG ward was not included. The study was confined to 4 district hospital only; therefore, generalization of the findings was limited to population under

the study. The actual practice of maintenance of aseptic technique during delivery was assessed only through questionnaire but was not observed directly. On the basis of the study findings the following recommendations can be offered for future research.

- Can be replicated on large sample.
- Can be conducted with different population, group of B.Sc. nurses and doctors.
- Comparative study can be done on ANM and GNM nurses regarding knowledge on practice of aseptic technique.
- Pre-experimental study can be conducted on aseptic technique during delivery.

Formulation of Hypothesis

The present study contributed in the development of following hypothesis

H₁ There is a significant association between the knowledge among health personnel on practice of aseptic technique during delivery with years of working experience in labour room at 0.05 level of significance.

Conclusion

All the participants in the study were government hospital employee and majority of them were GNMs. Most of them were in their fourth decade of life. More than half of them have a clinical experience of ten years or more and a similar number of them have attended some educational programme previously. A slight more than one third of health personnel had an experience of more than ten years in labour room. Majority of the participants had good knowledge about biomedical waste management. Age was not a factor influencing the knowledge regarding practice of aseptic technique during delivery. No association could be established between the knowledge on practice of aseptic technique during delivery and professional qualification of health personnel. The level of knowledge on practice of aseptic technique during delivery was not found to be associated with the number of deliveries conducted in a year. Cumulative experience of health personnel over years as well as their labour room experience was associated with a better knowledge on practice of aseptic techniques during delivery and the finding was

statistically significant. However, attending a previous educational programme was not found to increase the level of knowledge of health personnel on practice of aseptic technique during delivery.

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