



Assess The Knowledge Regarding Infection Prevention And Control Measures Among Nurses Working In Maternity Units

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Abstract:

Introduction: Many People are getting hospital acquired infection. Infection Prevention control is approach which help to prevent health care workers and patients from being affected by the infections which are avoidable. **Aim of the study:** To assess the knowledge and factors impacting adherence towards infection prevention control measures among nurses working in maternity units from selected hospitals of Pune city. **Objectives of the study** are to assess the level of knowledge related to infection prevention and control measures among nurses and to associate the level of knowledge score with selected demographic variables. **Material and method:** Quantitative research approach and Non experimental research group design was used. 220 staff nurses were selected by Non probability purposive sampling technique. Data collected through self made tool. Reliability was done by using Test-Retest method. r value for knowledge Questionnaires tool is 0.96, tools are found reliable for the study as r value was more than 0.7. **Result:** Majority (26.8%) were from 25-30 years of age group. Maximum nurses were from GNM(51.8%) professional qualification. Most of the sample's designation was staff nurse(86.4%). Maximum nurses(41.8%) had 1-5 years of total years of experience. Majority of the nurses (45.5%) had total 1-5 years of experience in maternity units. Among all the staff nurses majority had hospital training(64.5%) as any exposure of training related to infection prevention and control measure. 63.6% of them had average knowledge. The demographic variables age, professional qualification, designation, total year of experience and total years of experience in maternity units were found to have a significant association with the knowledge among nurses working in maternity units regarding infection prevention and control measures as p value is less than 0.05. **Conclusion:** The study concluded that staff nurses had average knowledge of infection prevention and control measures.

Keywords: Knowledge, Infection Prevention Control Measures

Introduction

As per the Centre of Disease Prevention and Control CDC, 2007. The risk of health care associated infections is higher in developing countries as compared to developed countries. Proper control measures like hand hygiene, application of basic elements, invasive procedures must be followed by the staff nurses. The health care worker should be educated and made behavioural change to increase the compliance with standard measures. Standard precautions are defined as set of precautions that must be followed to avoid the healthcare associated infections or hospital acquired infections. Standard precautions are applied irrespective of the confirmed diagnosis of infection or presumed infection and regardless of the health condition of the patient.¹

Infection Prevention Control defined by WHO, It is approach with evidence which help to prevent health care workers and patients from being affected by the infections which are avoidable. It is impossible to provide quality of health care without IPC implementation.²

It is important for health care workers, nurses to maintain hand hygiene during labour and delivery in maternity units. it is reported that one in 13 neonates in middle income and lower income countries acquire bacterial



infections during birth in hospitals. One in 11 maternal deaths are also caused due to hospital acquired bacterial infection.

As per WHO, Hundreds of millions of people are getting hospital acquired infection. 100 out of 15 patients get HAI after admitted to the hospitals. 1 out of 10 patients die because of HAI in developed country.³ Shaalan et.al(2018) In contact with the biological fluid like blood, semen, saliva, secretions etc or suspect of any contamination, absence of visible blood or any other contamination precautionary measures must be taken.⁴

Need Of The Study

Nair et al..(2020) Puerperal infections are the sixth leading cause of diseases Infection in women during reproductive years in middle and low income countries. Infections and sepsis cause 15% of maternal death according to WHO. According to the published reports, staff nurses have inadequate knowledge and inappropriate practices regarding prevention of infection during procedures in operation theatres.⁵

Geberemariam et.al (2018) Health care associated infections causes major healthcare burden to the developing countries. Limitation of trained nurses, and non-compliance to the standard procedures affect the hygiene of the entire hospital. There must strict adherence to the infection prevention and the control measures. This is the fundamental to quality of care. Improvement of compliance by 10% can reduce the overall HAIs by 6% and 14% reduction in infections. Thus effective implementation of infection prevention will lead to reduction in Infections by 30%. The preventive measures are relatively cheap and easy to follow like proper hand washing and proper handling of specimen.

Many infections can occur during the labour process. One of the leading causes of maternal death is puerperal infection. A lack of intrapartum care and a dirty labour table can result in genital tract infections. Contaminated hands are a source of infection. Hand hygiene and standard precautions should be followed everywhere in hospitals. During Clinical posting in different areas of OBG, it is observed that there is lack of knowledge regarding the infection prevention and the control measures. Like nurses have not adequate time, one nurse has to provide care to so many patients, not proper source of water, sanitizer and mask. In labour room there is need to follow strict infection control guidelines which will help to reduce maternal and infant mortality and morbidity rate.

Aim Of The Study

To assess the knowledge of infection prevention and control measures among nurses working in maternity units from selected hospitals of Pune city and to associate the level of knowledge score with selected demographic variables.

Research Methodology

Quantitative research approach and Non experimental research group design was used. It was carried out on 220 staff nurses, Non probability purposive sampling technique was used. Tool was given to 25 experts from different departments, validation was received from 19 experts with their valuable suggestion and comments on the study. Total 30 samples were taken for the reliability. Informed consent was taken from the participants. The r value for knowledge Questionnaires tool was 0.96. Thus the tool was found reliable for the study. Total 30 samples were selected for pilot study. No any major problems were faced by the investigator.

Results

Section I : Description of samples (nurses working in maternity units) based on their demographic variables

Majority (26.8%) were from 25-30 years of age group. Maximum nurses were from GNM (51.8%) professional qualification. Most of the sample's designation was staff nurse(86.4%).Maximum nurses(41.8%) had 1-5 years of total years of experience. Majority of the nurses(45.5%) had total 1-5 years of experience in maternity units. Among all the staff nurses majority had hospital training (64.5%) as any exposure of training related to infection prevention and control measures.

Section II Analysis of data related to knowledge related to infection prevention and control measures among nurses working in maternity units



12.3% of the nurses working in maternity units had poor knowledge (score 0-8), Majority 63.6% of them had average knowledge (score 9-17) and 24.1% of them had good knowledge (score 18-25) regarding infection prevention and control measures.

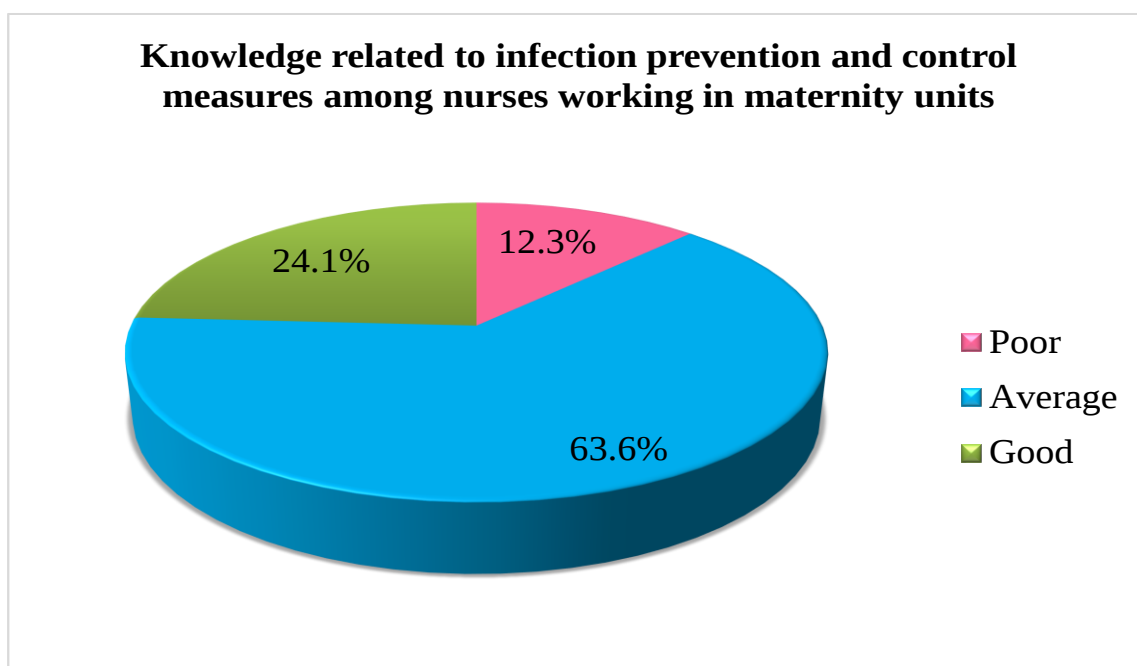


Figure 1: Pie graph showing knowledge related to infection prevention and control measures among nurses working in maternity units.

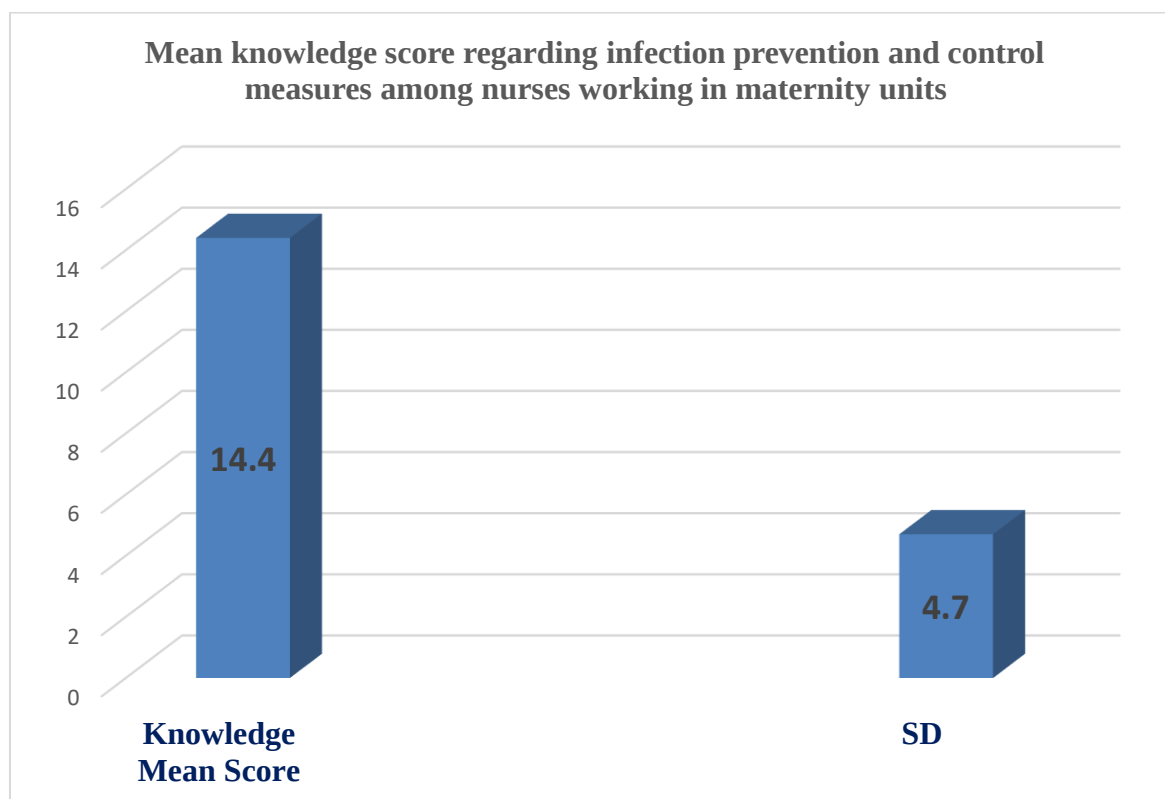


Figure 2: Bar graph showing Mean Knowledge Score and SD related to infection prevention and control measures among nurses working in maternity units.



Table no. 1 Knowledge related to infection and control measures among nurses.

N=220

SECTION III : Analysis Of Data Related To The Association Of The Knowledge Among Nurses Working In Maternity Wards With Their Demographic Variables

Knowledge	Freq	%	Mean	SD
Poor (score 0-8)	27	12.3%	14.4	4.7
Average (score 9-17)	140	63.6%		
Good (score 18-25)	53	24.1%		

Since the p-values corresponding to demographic variables age, professional qualification, designation, total year of experience and total years of experience in maternity units were small (less than 0.05), the demographic variables age, professional qualification, designation, total year of experience and total years of experience in maternity units were found to have a significant association with the knowledge among nurses working in maternity units regarding infection prevention and control measures.

Discussion

The findings the study shows that 12.3%(27 samples) of the nurses working in maternity units of different hospital had poor knowledge (score 0-8), Majority 63.6% (140 samples) of them had average knowledge (score 9-17) and 24.1%(53 samples) of them had good knowledge (score 18-25) regarding infection prevention and control measures. Mean Knowledge score is 14.4 and SD is 4.7. Study results show that most of the nurses have average knowledge and donning and doffing and other factors like lack of time, not maintaining nurse patient ratio, more workload, lack of resources related to infection control and training on Infection prevention affecting impacting adherence towards infection prevention and control measures.

Knowledge Study findings are supported by a cross sectional study conducted by Dr.Imad Fashafsheh et.al(2015) aimed to assess knowledge and practices of nursing staff regards to infection control measures .Author used self structured questionnaire among samples of 271 nurses through purposive sampling technique. Data was collected and then analyze by SPSS version 20. Results concluded most of that is 53.9% had fair knowledge and 91.1 % had good practices. Association was found between Practice score and gender, females being prevalent. The results of this study that is majority of nurses 53.9% had fair knowledge which is incorrespondance to the results of the presently conducted study where by most of the nurses 63.6% had average knowledge operationally defined by test score 9-17 out of 25. That indicates authenticity of the present study supported by the similar results of previously conducted and published researches.⁷

Conclusion

The present study was conducted to assess the knowledge of infection prevention and control measures among nurses working in maternity units from selected hospitals of Pune city and to associate the knowledge score with selected demographic variables . A Non- experimental descriptive design was used for the study. The tool was found reliable after the content validity and reliability was done. Pilot study was conducted among 30 participant, analysis of the pilot study revealed that it was feasible to conduct the main study. 220 participants were selected for final data collection. Analysis was done using descriptive and inferential statistics. The data analysis was done after computing the mean, standard deviation, frequency, percentage, fisher's exact tests was used.

The study concluded that majority 63.6% (140 samples) of them had average knowledge (score 9-17) ,24.1%(53 samples) of them had good knowledge (score 18-25) and 12.3%(27 samples) of the nurses working in maternity units of different hospital had poor knowledge (score 0-8) regarding infection prevention and control measures average knowledge And reject the null hypothesis(H_0) for association on age, professional qualification, designation, total year of experience and total years of experience as p value is less than 0.05. The study concluded that continuing education programmes are needed to improve the knowledge regarding the



infection prevention and control measures among nurses as well as continuous surveillance in each department and for the health personnel must be followed by the CDC (Centres For Disease Control) recommendations.

Recommendations

The study can be extended to the multiple centers and also comparison between private and public sectors to understand the knowledge and factors of infection prevention among nurses.

CONFLICT OF INTEREST:

The authors certify that they have no involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this paper.

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