

Assessment of Health Care Workers' Perception Toward Infection Control in Neonatal Intensive Care Units

Thesis

*Submitted for Partial Fulfillment of the Requirements of
the Master Degree in Pediatric Nursing*

By

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2017*

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2017*



*First and foremost, I feel always indebted to **Allah**, the most kind and the most merciful for all countless gifts I have been offered. One of these gifts is accomplishing this research work.*

*I would like to express my deep thanks and appreciation to assist Dr. **Prof. Iman Ibrahim Abd Al-Moniem**, Professor of Pediatric Nursing and Vice Dean of Community Service and Environment Development Affairs, who devoted much of her time, effort generous advice for the completion of this thesis. Words can never express my hearty thanks and indebtedness to her valuable advice experienced guidance and encouragement.*

*I would like to express my deep thanks and appreciation to assist Dr. **Salma El-Sayed Hassan**, Assistance Professor of Pediatric Nursing, Faculty of Nursing - Ain Shams University, for her continuous supervision, guidance and support and ultimate help through hour this study.*

*Finally, I want to offer special thanks to **all nurses** working in Pediatric Intensive Care Units in Maternity & Gynecological Hospital and Children's Hospital of Ain Shams University.*

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List of Abbreviations

AAOPC	American Academy of Pediatrics Committee
CDC	Centers for Disease Control
CNO	.....	College of Nurses of Ontario
CNS	.....	Central Nervous System
CPC	.....	Complete Blood Count
CRP	.....	Reactive Protein
CSF	.....	Cerebrospinal Fluid
CT	.....	Computerized Tomography
ESR	.....	Erythrocyte Sedimentation Rate
GIT	.....	Gastrointestinal Tract
HAI	.....	Hospital Acquired Infection
HCAI	.....	Health-Care-Associated Infection
HCWs	.....	Health Care workers
HHD	.....	Hygienic Hand Disinfection
HIV	.....	Human Immunodeficiency Virus
HW	.....	Hand Washing
IM	.....	Intramuscular
IV	.....	Intravenous
LP	.....	Lumbar puncture
NEC	.....	Necrotizing Enterocolitis
NHAMR	.....	National Health and Medical Research
NI	.....	Nosocomial Infection

List Of Abbreviations

NIAID	National institute of allergy and infection diseases
NICU	Neonatal Intensive Care Unit
PICC	Peripherally Inserted Central Catheter
PPE	Personal Protective Equipment
PPE	Personal Protective Equipment
RCN	Royal College of Nursing
RT	Respiratory Tract
SHD	Surgical Hand Disinfection
UTI	Urinary Tract Infection
VAP	Ventilator Associated Pneumonia
WBC	White Blood Cell
WHO	World Health Organization

Abstract

Aim of this study was to assess health care workers' perception toward infection control in neonatal intensive care units. **Research design:** A descriptive design was used. **Settings:** This study was conducted in Maternity & Gynecological Hospital and Children's Hospital affiliated to Ain Shams University Hospitals. **Subjects:** A purposive sample composed of eighty three neonatal nurses working in previously mentioned settings. **Tools for data collection:** three tools. A questionnaire sheet to assess nurse's knowledge, observation checklists to assess the performance and attitude rating scale to assess nurse's perception toward neonatal infection control. **Result:** This study revealed that less than half were satisfactory knowledge, more than three quarters had positive attitude, and two third were competent regarding infection control. **Conclusion:** The study concluded that nurses perception about infection control still in need for upgrading as less than half only had the satisfactory knowledge, and the marital status and nurses experience, age, qualification in education level play role as the perception. **Recommendations:** The study recommended for upgrading neonatal nurses perception through upgrading knowledge and modified the attitude and performance by administration of continuous in service education guideline & protocol for neonatal infection control.

Keywords: Perception- Infection control - Health care workers.

INTRODUCTION

Infection is the most common cause of neonatal morbidity and mortality despite the availability of anti-microbial agents. Worldwide, about 30 million neonates developed infection in the neonatal period and five neonates die from neonatal infection every minute. In Egypt, the neonatal mortality rate due to sepsis constitutes about 30.42% (*Ministry of health [MOH], 2012*).

Infection is used to describe any infectious process caused by bacterial, fungal, protozoal, or viral agents in the neonatal. Meanwhile, infection of the neonates may be acquired through several routes, crossing the placenta or ascending the birth canal (antenatal infections) and infections which is acquired shortly after birth, while still in the neonatal period (acquired or nosocomial infections) (*Bell et al., 2012*).

The neonatal bacterial infection is a common pediatric problem in Egypt as any developing country suffering from unfavorable socio-economic conditions and poor culture standards. Although the considerable progress in anti-microbial therapy and supportive treatment, however invasive infections remain an important causes of morbidity and mortality in neonates (*Golden et al., 2012; Bryant et al., 2014*).

Most Nosocomial Infection (NI) is thought to be transmitted by the hands of Health Care Workers (HCWs). It has long been known that hand hygiene among HCWs play a central role in preventing the transmission of infectious agents. Hand Washing (HW) is the most effective way of preventing the spread of infectious diseases (*Anderson, Berry et al., 2014*).

The role of HCWs is to follow the infection control universal standard precautions of infection control which include hand washing, use of barriers, and care with devices, personal protective equipment and clothing used during care, and environmental control (*Sangwan, 2012*).

The level of practice of universal precautions by HCWs may differ from one category of health care workers to another. The differences in knowledge of HCWs may be influenced by their different types of training. The nurse must follow general guidelines for controlling infection and follow policy. In addition to barriers protection must prevent occurrence of infection for neonate and themselves (*Pyrek, 2014; Shiva & Ghotbi, 2011*).

Nursing intervention of newborn with infection involves early recognition of problems, administration of effective and appropriate antibiotic therapy with optimal supportive care. Nurse can play a vital role in preventing the transmission of NIs

and maintaining all phases of contact of isolation or standard precautions for infection (*Elkin et al., 2014*).

Operational definition:

Health care workers:

Health care workers of infection control committee should include representative of the following hospital administration, internal medicine, x-ray technicians, pediatricians and nurses. In addition, representative of other departments might be include, such as blood bank, property control supply, HCWs, housekeeping, and visitors (*Association Of Operating Room Nurses, 2010*)

Health care worker including nurses and medical microbiologists. They have an important role in teaching and training of staff in their neonatal infection control unit. The team needs to developing and standing of the work of various sectors of health care staff, and appreciate their partial problems and needs in relation to infection control procedures (*Aylifee et al., 2010*)

Perception:

Perception has long been recognized as a concept of importance in nursing, but the meaning of the term has often

been ambiguous and unclear. This paper considers the historical definitions of perception and explores ways the term is used in current philosophical and psychological writings. A synthetic definition of perception is proposed, using the critical characteristics of sensation, selection, assimilation, and interpretation. Four nursing frameworks, those of King, Levine, Orem, and Roy, are analyzed in relation to the concept of perception as presented in each theory. (*World Health Organization [WHO], 2010*)

Perception and attitude are two factors that influence a person's everyday life including their workplace and organizational performance. An example of a negative attitude would be a person leaving work early or taking extra-long breaks. However, this person might not see this activity as a negative attitude towards work because they may have perceived the work to be dull or their situation at their workplace to be unfair due to long hours or perhaps low pay (**Young et al., 2014**).



Significance of the Study:

Infection is the most common cause of morbidity and mortality in neonatal intensive care unit. Worldwide, neonatal infection is one of the major leading cause of death in the first month of newborn's life. Infections is a common pediatric problem in Egypt as any developing country suffering from unfavorable socio-economic conditions and poor culture standards. (*Ghioryhis, 2015*)