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**Nurses' Knowledge versus their Performance
Regarding Infection Control Measure
for Children at Burn Unit**

Thesis

Submitted for Partial Fulfillment of Master Degree
in Pediatric Nursing

By

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2022**

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List of Abbreviations

<i>Abbrev.</i>	<i>Full term</i>
CNS	: Clinical Nurse Specialist's
HWSI	: Health Worker Safety Initiative
NACNS	: National Association of Clinical Nurse specialty
NI	: Nosocomial infections
PPE	: Personal protective equipment
SD	: Standard deviation
SPSS	: Statistical package for social science
TBSA	: Total body surface area
WHO	: World Health Organization

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Abstract

Nosocomial infections are one of the most common complications affecting hospitalized burnt children and contribute to excess morbidity and mortality. Nurse's knowledge and skills that the nurses acquired enable them to translate it into a positive attitude and good performance in preventing and controlling infection. **Aim:** the aim of study was to assess nurses' knowledge versus their performance regarding infection control measure for children at burn unit. **Research design:** A descriptive correlational research design was utilized. **Settings:** The study was conducted at two burn units in El Menoufia governorate; Ashmoon hospital and Shipeen El-Kome teaching hospital, are affiliated to Ministry of Health. **Subject:** A purposive sample of thirty nurses as the previous mentioned setting who were responsible for providing direct care for children in burn units regardless to age, educational level and year of experience. **Data collection:** two tools were used observation checklists to assess nurses' performance and questionnaire sheet to assess nurses' knowledge regarding infection control measure. **Results:** revealed that nurses performance not based on knowledge for the items of hand washing, instruments / equipment processing and environmental cleaning and disinfection while studied nurses performance was based on knowledge for the items of personal protective equipment, safe injection, cough etiquette, safe waste disposal, linen handling and wound care and there was a statistically significant relation between nurses knowledge and education level, years of experiences and attendance the training course. **Conclusion:** nurses' performance not at the acceptable standard for caring of children at burn unit, most of nurses' performance not based on their knowledge regarding infection control measures, there was a statistically significant relation between total level of knowledge of the studied nurses and their educational qualification, years of experience and attending courses related to burn but there was a statistically significant relation between total level of performance of nurses and their age, educational qualification and years of experience. **Recommendation:** the study recommended that enhancement nurses' knowledge and performance periodically regarding standard infection control in burn unit through implementation of in-service education training program and continuing education for nurses.

Keywords: Nurses, Knowledge, Performance, Burn, Infection Control Measure, Children

Introduction

The burn is an injury to the skin or other organic tissue which is primarily due to heat. Also, it may be caused by radiation, radioactivity, electricity, friction or contact with chemicals. The size of a burn can be estimated by using the "rule of nines." which divides a child's body surface area into percentages (**Jeschke, et al., 2020**).

The burns are one of the most dramatic events that may negatively affect person's life with short-term and long-term impacts on child psychological well-being and the burden, it has on the society for their treatment and rehabilitation (**Taha, et al., 2018**). In Egypt, 17% of children with burns have a temporary disability and 18% have a permanent disability (**WHO, 2018**).

Unintentional, burn injury has now become the leading killer of children and it is interesting to note that for every child who dies of a burn injury, survivors live with varying degrees of disability and psychological scarring (**GadAllah, 2019**).

Children are particularly vulnerable to burns. Burns are the fifth most common cause of non-fatal childhood injuries. While a major risk is improper adult supervision, a considerable number of burn injuries in children result from child maltreatment. Children are usually burned in domestic kitchens,

from upset receptacles containing hot liquids or flames, or from cook stove explosions (**Kay, et al., 2021**).

Burns are a global public health problem, accounting for an estimated 180.000 deaths annually. Additionally, approximately 90% of burn injuries occur in low middle income countries. Also, almost two thirds occur in the African and South-East Asia regions. The rate of child deaths from burns is currently over 7 times higher in low and middle income countries than in high-income countries (**Holtz, 2021**).

Nosocomial infections are one of the most common complications affecting hospitalized burnt children and contribute to excess morbidity and mortality. Its risk in children with burn is high due to their destroyed skin barrier and suppressed immune system, prolonged hospitalization and invasive procedures. Nosocomial microorganisms can originate from the children themselves, from hospital environment and may be acquired by health personnel working in the facility (**Garzon, et al., 2019**).

Burn injuries are considered immediately or potentially life threatening so burnt children requires special care that should be given by a knowledgeable and skillful nurse who is able to make accurate decisions to reverse and to minimize the effect of burn injury and prevent complications as infection which may end child's life (**Callaway and Burstein, 2020**).