



000000

تم رفع هذه الرسالة بواسطة / سنوي محمود عقل

بقسم التوثيق الإلكتروني بمركز الشبكات وتكنولوجيا المعلومات دون أدنى

مسئولية عن محتوى هذه الرسالة.

ملاحظات:



Nurses' Performance toward Patients with Fever at Intensive Care Unit: Recommended Guidelines

A Thesis

Submitted for Partial Fulfillment of the Requirement of
Master Degree in Medical Surgical Nursing
(Critical Care Nursing)

By

Samia Gamal Abdelbadeea

BSc. In Nursing Science
Faculty of Nursing, Ain Shams University

**Faculty of Nursing
Ain Shams University
2022**

Nurses' Performance toward Patients with Fever at Intensive Care Unit: Recommended Guidelines

A Thesis

Submitted for Partial Fulfillment of the Requirement of
Master Degree in Medical Surgical Nursing
(Critical Care Nursing)

Under Supervision of

Dr. / Manal Salah Hassan

Professor of Medical Surgical Nursing
Faculty of Nursing, Ain Shams University

Dr. / Samar Faltas Marzouk

Assistant Professor of Critical Care Nursing
Faculty of Nursing, Ain Shams University

**Faculty of Nursing
Ain Shams University
2022**

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سبحانك لا علم لنا
إلا ما علمتنا إنك أنت
العليم العظيم

صدق الله العظيم

سورة البقرة الآية: ٣٢



Acknowledgments

*First and foremost, I feel always indebted to **Allah**, the **Most Beneficent** and **Merciful** who gave me the strength to accomplish this work,*

*My deepest gratitude to **Prof. Dr. / Manal Salah Hassan**, Professor of Medical Surgical Nursing, Faculty of Nursing, Ain Shams University, for her valuable guidance and expert supervision, in addition to her great deal of support and encouragement. I really have the honor to complete this work under her supervision.*

*I would like to express my great and deep appreciation and thanks to **Assist. Prof. Dr. / Samar Faltas Marzouk**, Assistant Professor of Critical Care Nursing, Faculty of Nursing, Ain Shams University, for her meticulous supervision, and her patience in reviewing and correcting this work, I greatly appreciate her efforts.*

*Special thanks to my **Parents**, my **Husband** and all my **Family** members for their continuous encouragement, enduring me and standing with me.*

* **Samia Gamal Abdelbadeea***

List of Contents

| <i>Subject</i> | <i>Page No.</i> |
|-----------------------------------|------------------------|
| List of Abbreviations..... | i |
| List of Tables..... | X |
| List of Figures | iv |
| Abstract | v |
| Introduction | 1 |
| Aim of the Study | 5 |
| Review of Literature | 6 |
| Subjects and Methods | 40 |
| Results..... | 49 |
| Discussion | 82 |
| Conclusions | 93 |
| Recommendations | 94 |
| Summary | 95 |
| References | 99 |
| Appendices | |
| Protocol..... | |
| Arabic Summary | — |

List of Abbreviations

| <i>Abbr.</i> | <i>Full-term</i> |
|---------------|--|
| ABCs | : Airway, Breathing, and Circulation |
| ABG | : Arterial Blood Gases |
| ARDS | : Acute Respiratory Distress syndrome |
| BP | : Blood Pressure |
| CBC | : Complete Blood Count |
| CLABSI | : Central line Associated Blood Stream Infection |
| CNS | : Central Nervous System |
| CO | : Cardiac Output |
| CT | : Computed Tomography |
| CVP | : Central Venous Pressure |
| DIC | : Disseminated Intravascular Coagulopathy |
| FUO | : Fever of Unknown Origin |
| HR | : Heart Rate |
| ICU | : Intensive Care Unit |
| MCQs | : Multiple Choice Questions |
| OTC | : Over The Counter medication |
| PCR | : Polymerase Chain Reaction |
| SD | : Standard Deviation |
| SPSS | : Statistical Program for Social Science |
| UTI | : Urinary Tract Infection |
| VAP | : Ventilator Associated Pneumonia |

List of Tables

| Table No. | Title | Page No. |
|-------------------|---|-----------------|
| Table (1): | Frequency and percentage distribution of demographic characteristics of the nurse under study..... | 50 |
| Table (2): | Frequency and percentage distribution of nurses' knowledge related to fever causes, symptoms, and stages | 53 |
| Table (3): | Frequency and percentage distribution of nurses' knowledge related to complication, nursing care and guidelines of fever..... | 55 |
| Table (4): | Frequency and percentage distribution of nurse's practice regarding patient assessment before providing care | 58 |
| Table (5): | Frequency and percentage distribution of nurse's practice regarding measuring oral and axillary temperature..... | 60 |
| Table (6): | Nurse's practice regarding cold application and tepid sponge bath measures to lowering body temperature..... | 62 |
| Table (7): | Nurse's practice regarding administration of Oral and IV antipyretic medication..... | 64 |
| Table (8): | Nurses practice after providing care for patients with fever | 66 |
| Table (9): | Nurses' level of practices toward patients with fever at intensive care units | 67 |

| | | |
|--------------------|--|----|
| Table (10): | Frequency and distribution of nurses ' attitude toward patients with fever at intensive care units | 69 |
| Table (11): | Relation between nurses' knowledge and their demographic characteristics | 72 |
| Table (12): | Relation between nurses' practices and their demographic characteristics..... | 74 |
| Table (13): | Relation between nurses' attitude and their demographic characteristics..... | 76 |
| Table (14): | Correlation between nurses' knowledge, practices, and attitude | 78 |
| Table (15): | Best fitting multiple linear regression model for nurses' knowledge score..... | 79 |
| Table (16): | Best fitting multiple linear regression model for nurses' practices score | 80 |
| Table (17): | Best fitting multiple linear regression model for nurses' attitude score. | 81 |

List of Figures

| <i>Figure No.</i> | <i>Title</i> | <i>Page No.</i> |
|--------------------|--|-----------------|
| Figure (1): | Frequency and distribution of nurses, ratio for patients with fever at intensive care unit (n=70)..... | 52 |
| Figure (2): | Frequency and percentage distribution of total nurses' level of knowledge toward patient with fever at intensive care units (n=70). | 57 |
| Figure (3): | Frequency and percentage distribution of total nurses' level of practice toward patient with fever at intensive care units (n=70)..... | 68 |
| Figure (4): | Frequency and percentage distribution total nurses' level of attitude toward patients with fever at intensive care units (n=70) | 71 |

Nurses' Performance toward Patients with Fever at Intensive Care Unit: Recommended Guidelines

Samia G. Abdelbadeea; Manal S. Hassan ⁽¹⁾; Samar F. Marzouk ⁽²⁾

(1) Department of Medical Surgical Nursing, (2) Department of Critical Care Nursing

Faculty of Nursing, Ain Shams University

Abstract

Background: Fever is a common problem in ICU patients, it is a medical condition when there is an uncontrolled rise in the body temperature, measured as above 37.5 degrees Celsius. **Aim of the study:** This study aimed to assess nurse's performance towards patients with fever at intensive care units. **Study design** A descriptive exploratory design. **Setting** intensive care units at Nasser General Hospital, affiliated to Ministry of Health. **Study subject:** A convenience sample of all available nurse's **Tools:** **I** Self – administration questionnaire, **II** nurses' practice observational checklist, **III-** Nurses' attitude rating scale. **Results:** revealed that the mean age of the studied nurses were 26.1 ± 4.4 , 62.9% of the studied nurse's had satisfactory level of knowledge, there was 75% of them had satisfactory level of practices and 55.7% of nurses under study had positive attitude toward patients with fever at intensive care units. Furthermore, there was a positive correlation between attitude and their practices, there is a statistically negative correlation between knowledge and attitude of studied nurses regarding patient with fever at intensive care units. **Conclusion:** More than two thirds of the studied nurses had satisfactory level of knowledge, three quarter of them had satisfactory level of practices regarding patients with fever at intensive care units, and more than half of the studied nurses had positive attitude toward patients with fever at intensive care units. Also, there is high significant relation between nurses' knowledge, practice & their demographic characteristics. **Recommendations:** in service training program must be developed based on nurses' need assessment regarding care of patients with fever.

Keywords: Nurses performance, fever, intensive Care Unit, Recommended guidelines.

Introduction

Studies revealed that fever is a relatively common occurs among critically ill patients and about 70% of all admissions were had fever during their hospital course, patients in intensive care units (ICU) always acquired fever with or without infection. And may have catastrophic effects cause low outcomes and low satisfaction that contribute to diminished quality of life (**Egi, Makino, and Mizobuchi, 2018**).

Fever can be caused by many medical conditions ranging from non-serious to life threatening. This includes viral, bacterial, parasitic infections such as (common cold, urinary tract infections, meningitis, malaria and others). Noninfectious causes include (vasculitis, deep venous thrombosis, side effects of medication and cancer among others) (**Young, et al., 2019**).

Although, the disease process that leads to fever may be harmful, there is no evidence to demonstrate that fever itself is harmful. In fact, the presence of fever inhibits bacterial growth and the replication of viruses. Many patients tolerate mild to moderate fever with remarkable ease. Fever has many immunological benefits, however, it is often viewed negatively by caregivers and nurses and treated aggressively (**Elseady et al., 2021**).

Most episodes of fever in ICU are due to infections. It was found that 63% of the critically ill patients who had a fever had sepsis. The common infectious causes include ventilator-associated pneumonia, catheter-related bloodstream infections, surgical site infections, urinary tract infections related to catheters, and bacteremia of various origins inclusive of the above causes (**Sundén-Cullberg et al., 2017**).

Persistent high fevers are also known to cause rhabdomyolysis and acute kidney injury. Fever could have significant indirect impacts too. Apart from the cost implication of any fever evaluation and treatment, unexplained fevers often prompt misuse or overuse of antibiotics (empiric use even in non-infectious causes), which could result in economic burden and promote the development of multidrug resistance (**Achaiah, Nithya& Ajith kumar, 2021**).

The aim of fever management is to protect and comfort the patient until a diagnosis of the underlying condition is made. Antipyretics should not be used with the purpose of lowering temperature but merely to comfort a patient pain associated with fever. Fever management is nursing responsibility, nurses must have background about physiology of the fever to be able to use their cognitive and practical skills

for managing patient with fever safely (**Allo, Hussein and Ibrahim, 2020**).

Critical care nurses are the health care professionals who have the obligation to protect critically ill patients against infection especially those who are immune compromised, in order to enhance their recovery, prevent deterioration in their health, and achieve high quality nursing care (**Arrar & Mohammed, 2020**).

Guidelines are available outlining how to correctly manage patients with fever. Adherence of healthcare providers to new guidelines could make a huge impact in dissemination of up-to-date evidence-based information. However, identifying and overcoming local barriers is essential in changing healthcare provider's behaviors to adopt and implement such guidelines (**Arias et al., 2019**).

The development of practice guidelines for evaluating adult patients who develop fever in the intensive care units important for clinical guidelines to provide therapeutic recommendations, evidence suggests they are not always followed (**Heinz, et al, 2017**).

Significant of the study:

The care of patients with fever occupies a considerable amount of time for many nurses. But despite this extensive experience with fever, there are even healthcare professionals have misconceptions about the adverse effects of a fever and about when and how a fever should treat (**Gouda et al., 2019**). Fever can be a diagnostic challenge for health care professionals toward patient at intensive care unit because it is often difficult to identify the cause (**National Institute of Health, 2020**). Fever can last for several days, can have a significant impact on society, including a rise in heat-related deaths. From 1998-2017, more than 16000 people died due to fever (**WHO, 2017**).

From the clinical experience and observation for the actual situation, it is obvious that, patients in intensive care units always acquired fever with or without infection. Moreover, patients with fever may suffer from catastrophic effects cause low outcomes and low satisfaction that contribute to diminished quality of life. Therefore, assessing nurses' performance and developing nurses 'guidelines toward patients with fever are consider important for improving quality of care and decrease cost of treatment.