



Arab American University

Faculty of Graduate Studies

**Nurses' Knowledge, Attitude, Practice, and Perceived Barriers
of Infection Control Measures in The Intensive Care Units at
North West Bank Hospitals**

By

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This thesis was submitted in partial fulfillment of the requirements
for the Master`s degree in Adult Nursing

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Approval form

Nurses' Knowledge, Attitude, Practice, and Perceived Barriers of Infection Control
Measures in the Intensive Care Units at North West Bank Hospitals

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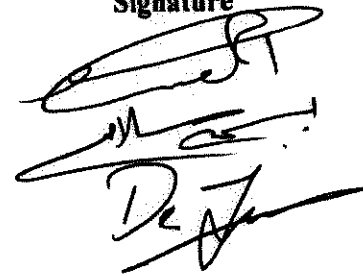
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Declaration

This is to certify that the dissertation entitled **(Nurses' Knowledge, Attitude, Practice, and Perceived Barriers of Infection Control Measures in The Intensive Care Units at North West Bank Hospitals)**, is the original work of **Khaled Ali Khaled Bawaqneh**, a nursing master's student at the Faculty of Graduate Studies at the Arab American. This study is according to the faculty's rules and regulations for the award of a Master of Science in Medical-Surgical Nursing under the guidance and supervision of Dr. Ahmad Ayed.

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Dedication

My study is dedicated to my loving parents, who have always been a source of motivation and inspiration for me, and who have given me the strength and commitment to work with enthusiasm and determination on every task. I dedicate my study to my family members as a mark of their support.

Acknowledgment

The first thing I want to say is that I'm thankful to God for giving me the health and wellbeing I needed to finish this research.

My parents deserve praise as well for their never-ending love, encouragement, and care.

I want to convey my gratitude to my supervisor, Dr. Ahmad Ayed, for being such a wonderful supporter of this accomplishment and for giving the research with all the facilities, direction, and encouragement it required.

In addition, I would want to express my gratitude to everyone who helped with this research in some way, whether directly or indirectly.

Abstract

Background:

The foremost challenge encountered by patients in intensive care units is nosocomial infections (NIS). The heightened prevalence of NIS among ICU is related to prolonged hospital stays, reduced immunity, and prolonged time in intensive care units. This has a substantial impact on their prognosis. Nurses need to be more knowledgeable and attentive to infection control measures and their practice.

Aim of the study:

This study aimed to assess nurses' knowledge, attitude, practice and perceived barriers of infection control measures in the Intensive care units at the North West Bank Hospitals.

Methodology:

Quantitative cross-sectional and observational design. The sample was conducted from October of 2023 to November of 2023, using a self-administration questionnaire and checklist for nurses who work in ICUs hospitals found in North West Bank-selected governmental hospitals (131 ICU nurse). After collecting the data was analyzed to SPSS version 23.

Results:

The recent research revealed 49 participant (42.6%) have moderate knowledge level and 30 participant (26.1%) have high knowledge level of the infection control and 36 (31.3%) have low knowledge. Depending on variables including age, gender, work shift, job position, educational level, marital status, and professional experience, there were certain differences and variations among the staff members. However, the attitude level of the infection control revealed that 39 (33.9%) have Neutral attitude level and

73(63.5%) have Positive attitude level. The practice level of the infection control revealed that 16 (27.1%) have fair practice level and 43 (72.9%) have good practice level. Nursing staff listed the barriers to achieving infection standards, followed by reasons: lack of equipment (26.1%), lack of training courses on infection control (17.4%), visitors (7.0%), lack of infection control policies and standards (6.1%), lack of isolation room (5.2%) and workload (5.2%).

Conclusion:

The majority of nurses in the current study had good practice level, a positive attitude toward infection prevention and moderate knowledge of infection control. The major barriers of Infection Control Measures were lack of equipment, lack of training courses and visitors.

Recommendations: Providing the necessary equipment to implement infection prevention standards, improving nurses' knowledge and skills through ongoing in-service training programs, working to adjust visiting times for patients and the number of visitors, providing the necessary protocols for all manifestations of infection in care and explaining them to the staff on a regular basis, working to provide isolation standards and appropriate design for intensive care units, reducing workload, Universities are required to add study materials that talk about infection and how to deal with it in their curriculum. Adding more females to the intensive care departments and involving them in the training programs due to the presence of a higher percentage of males in ICUs. It's appropriate to Conduct a study on the practice and application of infection protocols among females in ICUs and make a comparison to male practice to clear the gap. MOH should make more

supervision on training programs and their quality on the target group, as the results showed that there is no difference between trained and untrained nurses.

Key words: knowledge, attitude, practice, barriers, Infection control nurse, intensive care units

Table of Contents

Content	Page
Declaration	II
Dedication	III
Acknowledgment	IV
Abstract	V
Table of content	VIII
List of Figures	X
List of Tables	XI
List of Abbreviations	XII
Chapter one: introduction	1
1.1 Background	1
1.2 "Problem Statement"	3
1.3 Study main and secondary objective	4
1.4 Significant of the study	4
1.5 "Research questions"	5
1.6 Variable	5
1.7 Conceptual and Operational definitions	6
1.8. Conceptual framework	7
"Literature Review"	8
2.1 "Introduction"	8
2.2 Previous studies	8
2.3 Barriers	12
2.4 Summary	12
"Chapter three: Study Methodology"	14
3.1 "Study design"	14
3.2 "Study population"	14
3.3 "Inclusion criteria"	14

3.4. "Exclusion criteria"	14
3.5. Study setting	15
3.6. Study period	15
3.7. Sample size	15
3.8. Study tool	15
3.9. Validity of questionnaire	16
3.9.1. Face validity	16
3.9.2. Content validity	16
3.10. Pre-test of the questionnaire (pilot study)	17
3.11. Reliability of questionnaire	17
3.12. Data collection	18
3.13. "Data analysis"	18
3.14. "Ethical consideration"	19
"Chapter four: Results"	20
4.1. Response rate	20
4.2. Testing research questions (Reliability of the study scales)	20
4.3. Participants' characteristics	21
"Chapter five: discussion, recommendations, and conclusion"	31
5.1 "Introduction"	31
5.2 Discussion	31
5.3. "Recommendations of the study"	34
5.4. "Limitations of the study"	35
5.5. "Conclusion"	36
"References"	37
"Appendices"	
Appendix (A) Questionnaire	46
Appendix (B) AAUP - IRB Approval	52
Appendix (C) Palestinian MOH Approval	53
Arabic Abstract	54

LIST OF FIGURES

	Page
Figure 1-1 proposed conceptual framework of the study	7
Figure 4-1: "Distribution of the participants according to the hospital"	22

LIST OF TABLES

	page
Table 4-1. "Cronbach's Alpha of the scales"	20
Table 4-2. "Demographic Characteristics of the Participants(N=115)"	21
Table 4-3. "Distribution of the Participants regarding work characteristics (N=115)"	23
Table 4-4. "Distribution of the responses regarding infection control measures (N=115)"	24
Table 4-5. "Description of the nurses' Knowledge level of infection control (N=115)"	25
Table 4-6. "Description of the professional' Knowledge level of infection control who had training sessions (N=59)"	25
Table 4-7. "Description of the nurses' attitude level of infection control (N=115)"	26
Table 4-8. "Description of the professional' attitude level of infection control who had training sessions (N=59)"	26
Table 4-9. "Description of the nurses' practice level of infection control (N=115)"	27
Table 4-10. "Description of the professional' practice level of infection control who had training sessions (N=59)"	27

Table 4-11. "Differences between nurses' knowledge, attitude, practice of infection control and gender (N= 115)"	28
Table 4-12. "Differences between knowledge, attitude, practice of infection control and nurses' education level (N= 115)"	28
Table 4-13. "Differences between nurses' knowledge, attitude, practice of infection control and nurses' age (N= 115)"	29
Table 4-14. "Differences between nurses' knowledge, attitude, practice of infection control and training on infection control (N=115)"	29
Table 4-15. "Relationship between nurses' knowledge, attitude and practice of infection control and professional experience of nurses (N=115)"	30
Table 4-16. "The barriers of infection control & prevention in the ICU from nursing perspective (N=115)"	30

List of Abbreviations

"Abbreviation"	"Explanation"
ICUs	"Intensive care units"
HCAIs	Health care acquired infections
NI	"Nosocomial infection"
"WHO"	"World health organization"
HCWs	Health care workers
MOH	Ministry of health
"CLABSI"	"Central Line Associated Blood Stream Infection"
CAUTI	"Catheter-Associated urinary tract infections"
VAP	"Ventilator Associated Pneumonia"
NCIs	Needle Stick Infections
HIV	"Human Immunodeficiency Virus"
HH	Hand Hygiene
IPC	"Infection Prevention Control"
SPSS	Statistical Package of Social Science

Chapter One

Introduction

1.1. Background

Healthcare-acquired infections (HCAIs) or nosocomial infections (NIs) are infections that developed during different procedures or therapy carried out in hospitals and other medical facilities but were not apparent or incubating at admission (World Health Organization [WHO], 2019). They occur 48 hours or more after being admitted to the hospital or 30 days following discharge, critically ill patients are also affected by HCAIs, with 0.5 million bouts of HCAIs being detected yearly in ICUs alone (WHO, 2018). Infection prevention and control (IPC) standards are crucial to preventing and reducing pathogens that affect clients, healthcare providers and the community at large. HCAIs are a common worldwide challenge, they include significant health risks and raise yearly healthcare costs (WHO, 2020a).

Intensive care unit (ICU) patients' have high risk factors to developing Nosocomial infections such as low immunity regarding malignancy or long antibiotic therapy, chronic diseases, age more than 65 years, gender and long hospitalization days (Vincent et al., 2020). Disease burdens is high huge starting from unnecessary deaths and patients starting from elongated hospital days and additional financial workload on health systems, patients, and their families (Dimomicronpoulos et al., 2019).

The most common types of infections include central line-associated bloodstream infections (CLABSI), catheter-associated urinary tract infections(CAUTI), ventilator-associated pneumonia (VAP), surgical site infections, and eye infections (Khan, Baig & Mehboob, 2017). Intensive care units have greater than 20% of nosocomial infections

(NCIs), and there is 10-80% of infection cases related to the mortality rate in these hospitals (Edwardson & Cairns, 2019).

The top three major microorganisms that could be acquired after a needle stick injury (NCIs) are Hepatitis C, hepatitis B, and human immunodeficiency virus (HIV). HIV mostly impacts the immune system, while Hepatitis impacts the liver. When an NCIS occurs, the tetanus vaccine should always be taken into consideration, and the patient's immunization history must be obtained (Triassi & Pennino, 2018).

Good hand hygiene (HH) has long been promoted as an essential component of infection control and as one of the least simple and cheap ways to prevent hospital-acquired infections (Cawthorne & Cooke, 2021).

In a cross-sectional study, the main cause for NIS was inappropriate hand washing, which is the most vital point in preventing the spread of infection. Lack of time, a heavy workload, and forgetfulness were the biggest barriers to proper hand washing (Angelozzi et al., 2021).

The majority of hospital employees are nurses, who are in a unique position to enhance the standard of patient care by acting as the first line of defense against the spread of infections. It is a professional and ethical requirement that nurses have up-to-date knowledge and skills for preventing the transmission of infections and practice them safely and competently at all times (Panda & Nanda, 2009; Taneja et al., 2019).

1.2. Problem statement

Health care acquired infections occur 48 hours or more after being admitted to the hospital or 30 days following discharge, critically ill patients are also affected by HCAs, with 0.5 million bouts of HCAs being detected yearly in ICUs alone (WHO, 2018).

Prior cross-sectional study showed that the levels of nurses' knowledge and practices about infection control are inadequate and generally poor (Alemayehu, Ahmed & Sada, 2016). In addition to poor compliance to protocols of the prevention of nosocomial infections especially in ICU (Adegboye et al., 2018).

In Palestine the health care systems suffer from the lack of availability of essential drugs, equipment, and diagnostic tests, and the quality of health care is poor (Russo et al., 2019; WHO, 2022). The main occupational hazards that healthcare providers can face are infections (hepatitis, respiratory infections), ergonomic hazards (back injuries, musculoskeletal disorders), chemical hazards (allergies, toxic drugs), radiation hazards, and psychosocial hazards (WHO, 2022).

Patient safety is at risk due to nurses' weak infection control and prevention techniques and lack of knowledge (Boeira et al., 2019). Infections contracted while in the hospital can affect both patients and healthcare providers. In low- and middle-income hospital settings, they are a more serious issue. In order to effectively handle and control these diseases, it is essential to evaluate healthcare workers' knowledge, attitudes and practices toward, hospital-acquired infection prevention (WHO, 2022; Fashafsheh et al., 2015). Therefore, the current study aimed to assess nurses' knowledge, attitude, practice and perceived barriers of infection control measures in the Intensive care units at the North West Bank Hospitals.

1.3. Main objectives and Secondary objectives to:

Main objective: The purpose of this study was to assess nurses' knowledge, attitude, practice and perceived barriers of infection control measures in the Intensive care units in the North West Bank Hospitals.

Secondary objective: To assess the relationship between nurses' practice, knowledge, attitude and demographic data in relation to infection measures.

1.4 Significant of the study

This study assessed nurses' knowledge, practice, and attitudes in the ICU and identify any obstacles to infection control that may be present. The findings of this study will contribute significantly to the body of knowledge in nursing in Palestine and other Arab nations. They may help nurses adhere more closely to infection prevention measures in intensive care units or update protocols to reduce the frequency of HAIs. Furthermore, the findings may help decision-makers develop a systematic future plan for how the institution deals with infection, reduces it, and demonstrates the capabilities of the existing staff which lower mortality and morbidity rates.

I observed numerous incidences of HAIs for hospitalized patients in the ICU while working as a nurse at Thabet Governmental Hospital in Tulkarm City, where they were staying for a long time and needed more diagnostic tests and interventions additionally to their prior health issue.

1.5. Research questions

1. What are the levels of infection control knowledge among ICU nurses at the chosen hospitals?
2. What are the levels of infection control practice among ICU nurses at the chosen hospitals?
3. What are the levels of infection control attitude between ICU nurses at the chosen hospitals?
4. What are the relationship between sociodemographic data and knowledge, attitude, practice?
5. What are the barriers to infection control and prevention in the ICU from nursing perspective?

1.6. Variables

• Independent variables:

Age, gender, education level, marital status, training courses and professional experience.

• Dependent Variable: related to

- 1- Knowledge related to infection control measures.
- 2- Practice related to infection control measures.
- 3- Attitude related to infection control measures.

1.7. Conceptual and Operational definitions

1.7.1 Conceptual definitions

Nursing: "Nursing encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well, and in all settings. Nursing includes the promotion of health, prevention of illness, and the care of ill, disabled, and dying people. Advocacy, promotion of a safe environment, research, participation in shaping health policy and in patient and health systems management, and education are also key nursing roles" (International Council of Nurses [ICN], 2014).

Knowledge is the capability to obtain, keep, and use data that is mixed with skills and experience (Badran, 1995). Also, knowledge is the person's understanding of any specified topic (Kaliyaperumal, 2004).

Attitude is the person's feelings towards an issue (Kaliyaperumal, 2004). Attitude is a tendency to respond confidently to a specific condition (Badran, 1995).

Practice is how a person displays their knowledge and attitude (Kaliyaperumal, 2004). Also, according to Badran, 1995, it means the usage of rules and knowledge towards action.

1.7.2 Operational definition

- Knowledge was measured by 17 true and false questions developed by the researcher after reviewing literature.
- Practice was measured by 12 items checklist observed by the researcher.
- Attitude was measured by 12 items rated on likert scale from strongly agree to strongly disagree.

- Barriers of infection control measures was measured by open ended questions.

1.8. Conceptual frame work

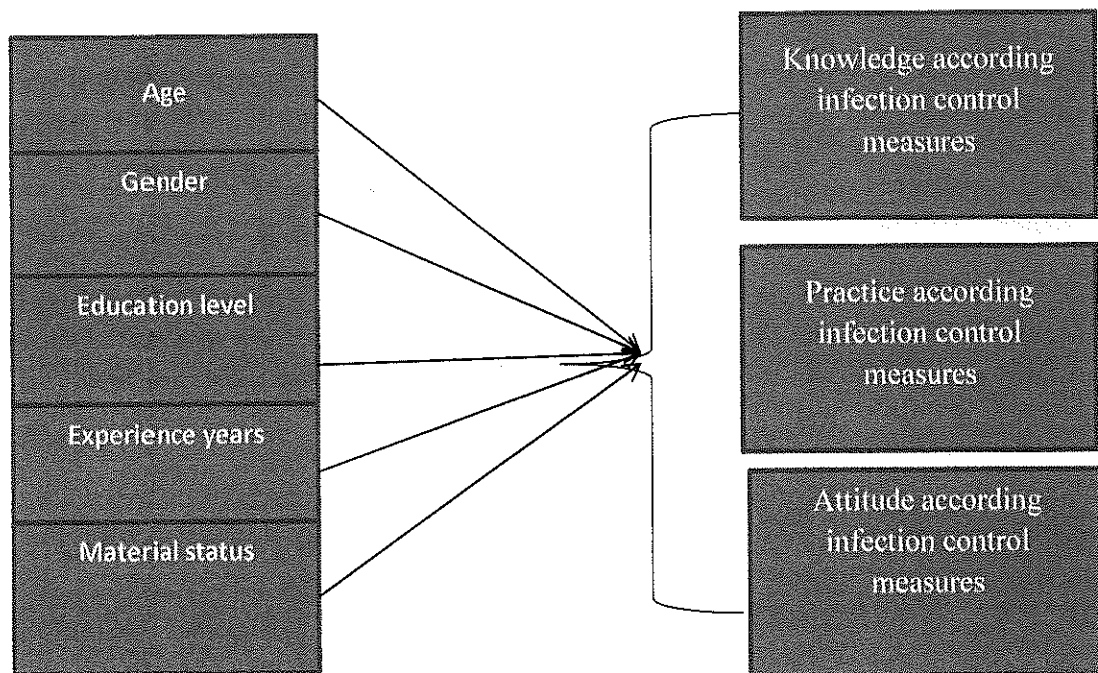


Figure 1-1 proposed conceptual framework of the study

Chapter Two

Literature review

2.1. Introduction

This study aimed to assess the knowledge, practice, attitude and perceived barriers of infection control measures among nurses who works in intensive care units in Palestinian hospital in North West Bank.

The literature relating to the study variables was reviewed in this chapter. The research approach evaluated a work that had been published in English. The review of literature for present study included cross sectional, observational, qualitative and systematic searches from different databases such as; Google scholar, Medline, PubMed, library literature and information science and computer and applied science complete. The key words infection control, knowledge, practice, attitude, barriers, nurse, intensive care units, ICU.

2.2. Previous studies

Fashafsheh et al. (2015) conducted a cross sectional study to assess nurses' knowledge and practice about infection control measures in Palestine. The study conducted with self-administered questionnaire developed by the researchers. The outcomes revealed that 53.9% of the sample size had a fair knowledge and 91.1% had good practice.

Also, a cross-sectional study was conducted in Egypt and it utilized a self-administered questionnaire for knowledge and an observation checklist for practice to assess the infection control standards. The results showed that 71.1% of the nursing team

had poor practice and 85.1% had unsatisfactory knowledge related to infection control standards (Elsayed Fawzi et al., 2019).

Another study conducted in Egypt with descriptive explorative was recruited at Ain Shams University at an emergency hospital affiliated intensive care units. With design observation checklist, self-administer questionnaire. The results showed that 47% of participants had acceptable knowledge, however, 58.3% of them practiced at an unacceptable level (Abdelstar, Nasr & Mahmoud, 2022).

In Ethiopia, Geberemariam, Donka & Wordofa (2018) conducted a study of sample size 680 healthcare workers. The results revealed that it is crucial to provide constant practice and education in the work.

Another study was conducted by Alrubaiee et al. (2018) with sample about 540 nurses. The outcomes revealed that the majority 94.6 % of the sample had insufficient knowledge and 53.9% had weak practices.

Also, a study done by Shrestha & Thapa (2018) in Nepal on nurses. The study revealed that respondents had much more knowledge (57%) than practice (48.2%) regarding infection prevention and control. However the researchers indicated that more than 88.8% of the participants hadn't gotten any training on preventing infections.

A study done by Jemal et al. (2019) in Ethiopia. The outcomes showed that half of the HCWs (50.6 %) had adequate knowledge, (69.2%) had positive attitudes & (48.3%) had safely used infection prevention. Despite more than (51.6%) of HCWs including dangerous ways of preventing infection. So, organizations have to make training programs and educational courses for the staff and provide the necessary instruction for patients and their families to know how to prevent infection.

In addition, a study was conducted in Nigeria by Adegboye et al. (2018). The study claimed that nurses have sufficient knowledge and awareness but subpar practice.

Similar study was conducted by Chitimwango (2017) at Zambia tertiary governmental hospital as a quantitative study design. It showed that almost all nurses had good knowledge with a score of 83, they had weak practice side in infection control with a score of 48.9 and a positive attitude.

Also, a systemic review was conducted to describe nurses' knowledge, practice and attitude (KAP) of IPC guidelines. The majority of studies' findings revealed that nurses had sufficient knowledge, positive attitude but demonstrated inadequate nursing practices (Nasiri et al., 2019).

A study was conducted on ICU nurses at Alzahra Hospital in Isfahan. It revealed that the staff members' knowledge of nosocomial infection was average, their attitudes were mild, and their degree of practice was also mild (Behroozynia, 2022).

A study conducted by Hamid et al. (2019) at Kingdom of Saudi Arabia. The outcomes indicated that while staff knowledge was generally considered to be of good quality (60.4%), there were some variances and differences based on gender, occupation, nationality, unit and years of experience. The total practice for all personnel was determined to be the least effective in terms of infection control (24.6%). The total compliance with recommended safety measures was determined to be the lowest (26.9%).

A cross sectional study was conducted in Ethiopia by Yazie, Sharew and Abebe, 2019. The outcomes showed that health care workers' KAP levels tended to be low. The

rate of needle stick injuries was considerable (26.6%), although post-exposure prophylactic utilization following prospective exposures was relatively low.

Another study was conducted at North Ethiopia .The sample size was 150 healthcare workers (HCWs), nurses were 83 participants. The results showed that 57.3%, 84.7% respectively showed good practice and knowledge for infection prevention Overall knowledge and practice of infection prevention were highly connected with old age, longer work experience, and better educational level (Desta et al., 2018).

Sharif et al. (2019) analytical study at Pakistan. Showed greater knowledge among male participants, and for practices females showed higher practices than males participants, even the research population have poor practices.

Bayleyegn, Mehari, Damtie& Negash (2021) conducted a study on HCWs toward Hospital-acquired infections. It showed that 90% of HCWs had excellent knowledge, 57.2% of them had positive attitudes and Just 36% of HCWs had appropriate practice.

A cross sectional and observational study was carried out in ICU in Iraqi hospital about infection control. The results showed that nurses had high levels of KAP toward infection control (Omer & Saleh, 2023)

In addition, Asfaw (2021) conducted a cross-sectional study in North Ethiopia to examine nurses' practices, knowledge, and associated variables on HAI prevention among nurses. The findings revealed that 52.5% of participants had high knowledge and 48.6% had good practice.

2.3. Barriers of infection control

The previous studies revealed that workload, low nurse- patient ratio, lack of time, occupational categorization, high rate of nursing team rotation, the length of time required to educate new employees, language problems and poor compliance to hand hygiene were the major barriers to infection control measures (Alhumaid et al., 2021; Angelozzi et al., 2021; Barker et al., 2017). Also, as an outcome of the conflict, there were high patient amounts, supply chain disruptions, high infection rates, and attacks on healthcare facilities, all of which made already difficult challenges worse and put more strains on hospitals and their IPC programs (Lowe et al., 2021). In addition, several obstacles were noted, including the availability of facilities, a lack of supplies for building materials, poor maintenance of the facilities and equipment, a high patient flow, serious emergencies, the experience and behavior of healthcare providers and their knowledge of infection prevention, a lack of awareness among patients and visitors, and an excess of families and visitors to the hospital (Yallew et al., 2019). According to a cross-sectional study, the most common barriers preventing nurses from sticking to routine practices were an excessive workload, unfavorable role models, and an awkward position for alcohol-based hand massager (Hamed et al., 2021).

2.4. Summary

There were several studies were conducted on nurses' knowledge, attitude, practice, and perceived barriers of infection control measures in the intensive care units. There were differences in the results. Some studies showed that the KAP level among nurses who works in ICUs was good. Some studies showed that knowledge and practice among nurses are inadequate (weak), and some studies demonstrated that there was good knowledge, positive attitude, and weak practice. Few of these studies illustrated the barriers against infection control measures application.

Even more, there is a clear gap between the results. In Palestine, there is no current study talked about nurses' knowledge, attitude, practice, and perceived barriers of infection control measures in the intensive care units. So the results of our research take the role of comparison and reveal the gap between studies and its causes.

Chapter Three

Methodology

3.1. Study Design

A cross-sectional, observational study design was used. Data was collected by a self-administration questionnaire for knowledge, attitude parts, and open question for barriers of infection control part. Also, observational check list was prepared for practice part.

3.2. Population and Sample

Each and every nurse who works in the ICU of the governmental hospitals in the North West Bank. Nurses who consented to take part in the study were included in a convenience sample.

3.3. Inclusion criteria:

ICU nurses with at least a year's worth of experience working.

3.4. Exclusion criteria:

ICU nurses with less than a year's worth of experience working.

3.5. Setting

ICUs nurses in governmental hospitals at North West Bank: Rafedia and Al Wattani hospitals in Nablus city, Khalil Suleiman hospital in Jenin, and Thabet Thabet hospital in Tulkarem city; Tubas Al Turki in Tubas City; Darwish Nazzal Hospital in Qalqilya City, and Yser Arafat hospital in salfit city.

3.6. Study period

From October of 2023 to November of 2023

3.7. Study sample

131 ICU nurse from the chosen Hospitals in North West Bank

3.8. Study tool

For the purpose of the study, after critical reviewing literature, a self-administered instrument and practice check list was developed by the researcher and composed of five parts; socio-demographic characteristics; knowledge; attitude; and practice, and barriers of infection control from nursing perspective. (Appendix A)

- Part one: Socio-demographic and work information and it composed of gender, age, marital status, educational level, experience, training
- Nurses' knowledge was assessed by seventeen questions, one point plotted for each right answer and 0 for the incorrect or I don't know answer. Correct responses summed up to get a total knowledge scores for everyone and converted to percentage. The

knowledge scores using the Bloom's cut off point were classified into poor knowledge (< 60%), moderate knowledge (60%-79), and (80-100%) high knowledge (Bloom, 1956).

- Nurses' practice (Observational checklist) regarding infection control and composed of the 12 items. The participants rated on five likert scale; where (1) never; (2) sometimes; (3) often; (4) usually; and (5) always. The level of practice was categorized using the Bloom's cut off point; good (80-100%), fair (60%-79), and poor (<60%) (Bloom, 1956).
- Nurses' Attitude regarding infection control and composed of the 12 items. The participants rated on five likert scale; where (5) strongly agree; (4) Agree; (3) Neutral; (2) Disagree; (1) strongly disagree. The level of attitude was categorized using the Bloom's cut off point; positive (80-100%), neutral (60%-79), and negative (<60%) (Bloom, 1956).
- Barriers of infection control from nursing perspective. It composed of one open ended question "in your opinion, what are the barriers of infection control in your department?"

3.9. Validity

The investigator double-checked the face validity. The first time involved three experts who evaluated the questionnaire's suitability and accuracy and offered suggestions for improvement. The second time was during the Pre-test of the questionnaire (pilot study) when the participants were asked about the questionnaire's question design, shape, typing accessibility, and the average time to fill the questionnaire.

Prior to data collection, content validity was completed by sending the questionnaire with a covering letter about the study, a paper containing instructions about the study, main

goals, objectives, the study's field, and other pertinent information to experts in the field. These experts were asked to evaluate and revise the questionnaire's items in terms of the questionnaire's sufficiency for the study, accuracy, and relevance. The researcher and supervisor modified the study in response to expert feedback and took their advice into consideration.

3.10. Pilot study

A pilot study was conducted on 10% of the sample. Approximately 15 respondents were involved to obtain concise questions and to prevent lengthy discussions & the vagueness of questions; all of them vary in terms of age, gender, educational level, and place of residence. Before applying, a detailed explanation of the study's aims was given to each of them, and asked about any challenges they had, the average time to fill out the questionnaire, and their opinion of the questionnaire. The participants consider it clear, without comments, and the time range between 10-20 minutes to complete the questionnaire. The respondents were taken out of the research itself.

3.11. Reliability of questionnaire

Through a pilot study involving 15 volunteers, alpha Cronbach was used to further test the reliability of the last copy obtained after the translation procedure. Cronbach's Alpha coefficient is the most commonly used measure of reliability (Polit and Beck, 2014). Cronbach's alpha coefficient of knowledge, practice, and attitude questionnaire was yielded at 0.81, 0.86, and 0.82 respectively, which is reliable, and the scale was accepted to be used in the research.

3.12. Data collection procedures

After receiving approval from Arab American University to carry out the study, the Ministry of Health, the researcher visited the hospitals and met the chiefs of nurses and head nurses of ICUs. Knowledge and attitude collecting by self-administered questionnaire, but practice part done through observation by checklist after taking the permission from the chief nurses. The researcher gave participants an explanation of the study's goals and requested them to compile a list of the names of the nurses who work in intensive care units as well as a calendar of their scheduled meetings with the nurses. The researcher goes over the study's goals with the nurses. The nurse who consented to participate completed the questionnaire after giving informed consent. The researcher spent one day for each nurse to observe him to fill the checklist practice part of the questionnaire.

3.13. Data analysis

The Statistical Package for Social Sciences (SPSS) program version 23 was used to clean and analyze the data. Descriptive analysis with percentage, frequency, mean, and standard deviation. For the testing research questions, an independent t-test, ANOVA test, and Pearson correlation test were utilized. An alpha level of 0.05 was used for all significance tests. Open-ended answers and put into themes.

3.14 Ethical consideration

Before starting data collection, the Arab American University of Palestine and MoH gave their ethical approval. (Appendix B). The nurses' participation was voluntary and will remain private. All nurses who reported interest in participating in the research were given the consent form and the questionnaire. Consent provided information about the objective of the study, reassurance that there are no dangers or hazards associated with participation, and a brief explanation of what the nurse will be asking for, describing how the information to the participant should be held secret, and how much time they will spend participating in the study. Nurses were told that they might exit the study at any time without penalty or loss of benefits if they chose to stop.

Chapter Four

Results

4.1 Response rate

The nurses in the current study composed of all nurses working in the intensive care units of the governmental hospitals in North West Bank/ Palestine. The nurses completed 115 out of 131 surveys (a response rate of 97.8%) and returned them.

The research's response rate was excellent from an organizational standpoint, thus the findings should reflect this by containing more reflecting information on the nursing population.

4.2 Reliability of the study scales

As can be shown in 4-1, the questionnaire had satisfactory internal consistency or homogeneity because Cronbach's Alpha values for all scales were over 0.70.

Table 4 -1. Cronbach's Alpha of the scales

Scale	Item	"Cronbach's Alpha"
"Knowledge"	17 "questions"	0.77
"Attitude"	12 "questions"	0.78
"Practice"	12 "questions"	0.82

4.3 "Participants' characteristics

One hundred and fifteen nurses participated in the study. The analysis results showed that approximately half of the participants 56 (48.7%) was between 20-30 years old and 71 (61.7%) were males. Also, 55 (47.8%) have diploma degree in nursing and 69 (60.0%) were married. The average of professional experience was 8 ± 5.3 years, as seen in Table 4-2.

Table 4-2. "Demographic Characteristics of the Participants (N=115)"

"Variable"		N (%)
"Age"	"20-30 years"	56(48.7)
	"31--40 years"	47(40.9)
	"40-50 years"	12(10.4)
"Gender"	"Male"	71(61.7)
	"Female"	44(38.3)
Educational level	Diploma	55(47.8)
	Bachelor	50(43.5)
	Master	10(8.7)
Marital status	Single	46(40.0)
	Married	69(60.0)
		M(SD)
Professional experience		8.0 (5.3)

According to hospitals, the analysis revealed that approximately one fourth of participants from Khaleel Sulaiman hospital in Jenin 28 (24.4%) followed by Rafedia hospital 25 (21.7%) participated in the study, as revealed in figure 4-1.

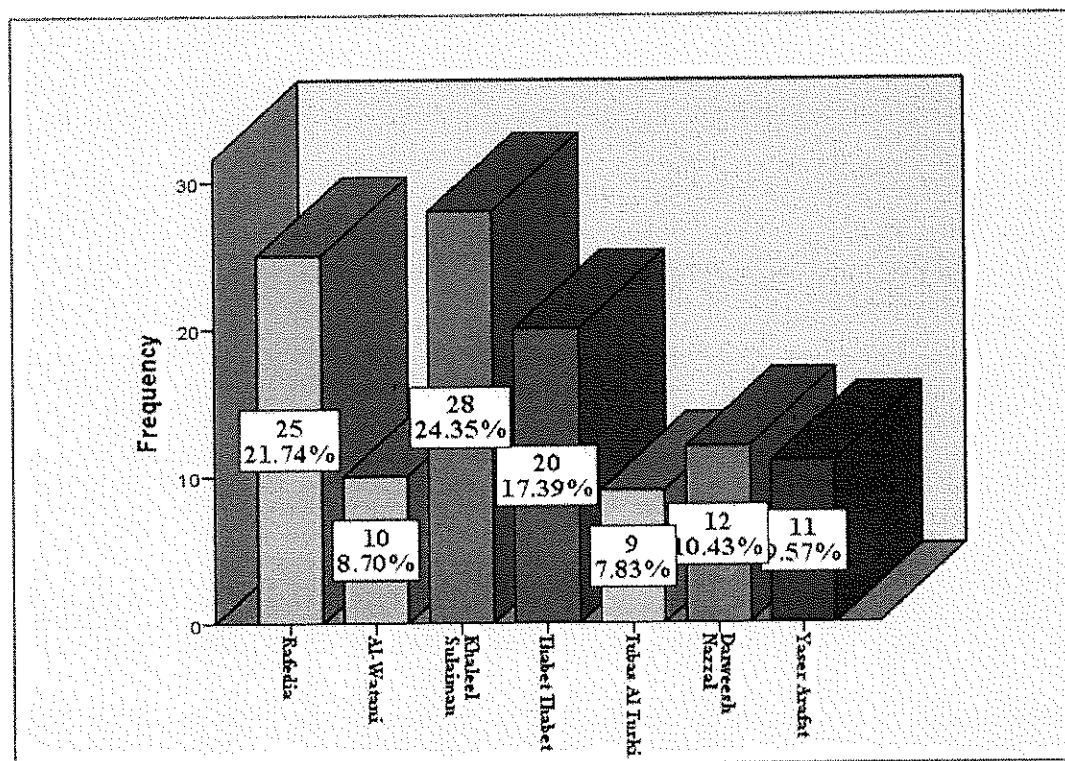


Figure 4-1. "Distribution of the participants according to the hospital (N=115)"

Additionally, the analysis revealed that most of the participants 71 (61.7%) worked rotation shift. The majority of them 85 (73.9%) were staff nurses, as revealed in table 4-3.

Table 4-3. “Distribution of the Participants regarding work characteristics (N=115)”

Variable		n	(%)
Work shift	Daily	26	22.6
	Evening	12	10.4
	Night	6	5.2
	Rotation	71	61.7
Job position	Practical Nurse	26	22.6
	Staff Nurse	85	73.9
	other	4	3.5

According to participants responses regarding infection control measures, the analysis revealed that 112 (97.4%) reported that special sharps disposal box is available in their department, 79(68.7) reported that guidelines or policy for infection control in the department is available, 97 (84.3%) reported that they are vaccination against HBV, 62 (53.9%) reported that isolation criteria for those who are admitted highly contagious diseases is available in their department. However, 61(53.0%) reported that written policy or guidelines in case of exposing to HIV, HBV, HCV, MDR and TB is not available.

Also, more than half of the participants 59 (51.3%) have attended infection training, and approximately half of the participants 29 (49.2%) reported that the training was training program, as revealed in Table 4-4.

Table 4-4. "Distribution of the responses regarding infection control measures (N=115)"

Variable		n	(%)
Availability of special sharps disposal box	yes	112	97.4
	No	3	2.6
Availability of guidelines or policy for infection control in the department	yes	79	68.7
	no	36	31.3
Vaccination against HBV	Yes	97	84.3
	no	18	15.7
Written policy or guidelines in case of exposing to HIV, HBV, HCV, MDR and TB	yes	54	47.0
	no	61	53.0
"Availability of isolation criteria for those who are admitted highly contagious diseases"	yes	62	53.9
	no	53	46.1
"Training on infection control"	yes	59	51.3
	no	56	48.7
Training type	Training program	29	49.2
	Workshop/ Seminar	18	30.5
	In-service education program	12	20.3

4.4. "Testing the research questions"

Research question one: What are the levels of infection control knowledge among ICU nurses at the chosen hospitals?

According to the analysis of infection control knowledge levels, the results revealed that 49 (42.6%) have a moderate level and 30 (26.1%) have a high knowledge level, as shown in Table 4-5.

Table 4-5: "Description of the nurses' Knowledge level of infection control (N=115)"

Variable		N	(%)
Knowledge	"Low knowledge level"	36	31.3
	Moderate knowledge level	49	42.6
	High knowledge level	30	26.1

"N= sample; %= percentage"

As shown in Table 4-6, the analysis of the knowledge level of infection control among nurses who have participated in training revealed that 23 (39.0%) have a moderate level and 18 (30.5%) have a high level.

Table 4-6. "Description of the professional' Knowledge level of infection control who had training sessions (N=59)"

Variable		N	(%)
Knowledge	"Low knowledge level"	18	30.5
	Moderate knowledge level	23	39.0
	High knowledge level	18	30.5

Research question two: What are the attitude levels of infection control among ICU nurses at the chosen hospitals?

According to the analysis of infection control attitude levels, the results revealed that 39 (33.9%) have a Neutral attitude level & 73(63.5%) have a Positive attitude level, as shown in Table 4-7.

Table 4-7. "Description of the nurses' attitude level of infection control (N=115)"

Variable		N	(%)
Attitude	Negative attitude	3	2.6
	Neutral attitude	39	33.9
	Positive attitude	73	63.5

Note: N= sample; %= percentage

According to the nurses who have attended infection control training, the analysis of the attitude level of the infection control revealed that 21 (35.6%) have a Neutral attitude level and 37(62.7%) have a Positive attitude level, as seen in Table 4-8.

Table 4-8. "Description of the professional' attitude level of infection control who had training sessions (N=59)"

Variable		N	(%)
Attitude	Negative attitude	1	1.7
	Neutral attitude	21	35.6
	Positive attitude	37	62.7

Research question three: What are the levels of infection control practice among ICU nurses at the chosen hospitals?

As can be seen in Table 4-9, the analysis of the infection control practice level showed that 34 (29.6%) had a Fair level and 81 (70.4%) had a Good level.

Table 4-9. "Description of the nurses' practice level of infection control (N=115)"

Variable		N	(%)
Practice	Poor level	0	0.0
	Fair level	34	29.6
	Good level	81	70.4

N= sample; %= percentage

Regarding the nurses who have attended infection control training, the analysis of the practice level of the infection control revealed that 16 (27.1%) have a fair practice level and 43 (72.9%) have a good practice level, as shown in Table 4-10.

Table 4-10. "Description of the professional' practice level of infection control who had training sessions (N=59)"

Variable		N	(%)
Practice	Poor level	0	0.0
	Fair level	16	27.1
	Good level	43	72.9

Research question four: Are there differences between sociodemographic data and knowledge, attitude, practice mean scores of ICU nurses at the chosen hospitals?

An independent t test, ANOVA test, and Pearson correlation test were used to assess differences between variables.

Nursing knowledge, attitude, and practice scores mean toward infection control were compared across gender using an independent test. The analysis showed that only practice was significant ($P < 0.05$). The practice mean scores of the male (M, 88.3 ± 9.2) was high than female

(M, 84.3 ± 10.0), as seen in Table 4-11.

Table 4-11. "Differences between nurses' knowledge, attitude, practice of infection control and gender (N= 115)"

"Variable"	Gender		"Statistical test"	
	"Male"	"Female"	t test	P value
	"M(SD)"	"M(SD)"		
"Knowledge"	68.8(19.4)	61.8(21.8)	1.796	0.075
Attitude	81.4(9.6)	80.5(10.1)	.502	0.617
Practice	88.3(9.2)	84.3(10.0)	2.176	0.032

"Significant at the 0.05 level".

To evaluate differences between nurses' knowledge, attitude, and practice scores mean toward infection control and educational level, an ANOVA test was utilized. The results of the analysis showed that there are no differences between nurses' mean knowledge, attitude, and practice mean scores and their level of education, as revealed in Table 4-12.

Table 4-12. "Differences between knowledge, attitude, practice of infection control and nurses' education level (N= 115)"

Variable	Educational level			"Statistical test"	
	Diploma	Bachelor	Master	F test	P value
	M(SD)	M(SD)	M(SD)		
Knowledge	64.8(19.5)	67.9(20.9)	64.1(25.2)	.340	.713
Attitude	80.8(10.7)	80.7(9.3)	81.1(9.7)	.613	.544
Practice	86.1(9.5)	87.6(9.5)	86.5(11.6)	.306	.737

"Significant at the 0.05 level".

ANOVA test was used to assess differences between nurses' knowledge, attitude, and practice scores mean towards infection control and age. The analysis revealed that there

are no differences between the age categories of nurses and knowledge, attitude, and practice mean scores, as seen in Table 4-13.

Table 4-13. "Differences between nurses' knowledge, attitude, practice of infection control and nurses' age (N= 115)"

Variable	Age			"Statistical test"	
	20-30 years	"31--40 years"	above 40 years	ANOVA test	P value
	M(SD)	M(SD)	M(SD)		
Knowledge	63.7(22.6)	69.0(17.7)	66.2(20.6)	.852	.429
Attitude	79.8(8.6)	82.9(10.7)	80.0(10.1)	1.371	.258
Practice	86.5(9.8)	87.5(9.0)	85.1(11.6)	.332	.718

"Significant at the 0.05 level".

An independent test was used to assess differences between nurses' knowledge, attitude, and practice scores mean towards infection control and training sessions. No differences between the variables were found to be statistically significant ($p>0.05$), as shown in Table 4-14.

Table 4-14. "Differences between nurses' knowledge, attitude, practice of infection control and training on infection control (N=115)"

Variable	Training		"Statistical test"	
	yes	no	t test	P value
	M(SD)	M(SD)		
Knowledge	66.5(22.0)	65.7(19.0)	.221	0.826
Attitude	81.1(9.3)	81.1(10.2)	.001	0.999
Practice	86.8(9.9)	86.7(9.5)	.077	0.939

"Significant at the 0.05 level".

The Pearson correlation test was used to assess the relationship between nurses' knowledge, attitude, and practice scores mean towards infection control and professional

experience. The analysis revealed no significant relationship between the variables ($p > 0.05$), as shown in Table 4-15.

Table 4-15. Relationship between nurses' knowledge, attitude and practice of infection control and professional experience of nurses (N=115)

Variable	Professional experience r(P. value)
Knowledge	0.045 (0.630)
Attitude	0.104 (0.270)
Practice	0.018 (0.848)

"Significant at the 0.05 level".

Research question five: What are the barriers of infection control & prevention in the ICU from nursing perspective?

The analysis revealed that 30 (26.1%) of nurses reported that most barrier of infection control is lack of equipments, followed by 20 (17.4%) related to lack of training courses in infection control. Also, the analysis revealed that considerable percentage of nurses 8 (7.0%) indicated that barriers of infection control due to visitors, as seen in Table 4-16.

Table 4-16. "The barriers of infection control & prevention in the ICU from nursing perspective (N=115)"

Barriers	N (%)
Lack of equipment	30 (26.1)
Lack of training courses on infection control	20(17.4)
Visitors	8 (7.0)
Lack of infection control policies and standards	7 (6.1)
Lack of isolation room	6 (5.2)
Workload	6 (5.2)

CHAPTER FIVE

Discussion, Recommendations, and Conclusion

5.1. Introduction

Discussion, conclusions, and recommendations will all be offered in this chapter. The conclusion will be written in accordance with the purposes of the research. The purpose of this research was to assess nurses' knowledge, attitude, practice and perceived barriers of infection control measures in the Intensive care units in the North West Bank Hospitals.

5.2. Discussion

The analysis of the knowledge level regarding infection control showed that 49 (42.6%) have a moderate level & 30 (26.1%) have a high knowledge level. Similar studies in Nigeria and Egypt revealed high levels of knowledge of infection control prevention among healthcare professionals (Aniwada & Onwasigwe, 2016; Hassan et al., 2017; Iliyasu et al., 2016). Also, previous literature indicated that healthcare professionals have average knowledge of infection control prevention (Aniwada & Onwasigwe, 2016; Hasanah, Setiawati, & Apriani, 2016). In Ethiopia, a study showed that all participants had acceptable knowledge about contaminated needles and sharp materials that transmit disease-causative agents, while 70.4% knew that gloves and gowns were required for any contact with patients (Yakob, Lamaro, & Henok, 2015). However, health professionals have suboptimal knowledge and practice levels regarding standard precautions for infection control (Al-Ahmari, AlKhaldi & Al-Asmari, 2021).

Compared to a study conducted in Palestine 2015, knowledge was 53.9% and 91.1% were good practice, there is deterioration in knowledge and practice between nursing (Fashafsheh et al., 2015). Also, compared to a study conducted in India was reported that health care providers who had good knowledge about infection control standard precautions and transmission of blood-borne pathogens constituted 79.9% and 64.5%, respectively (Acharya et al., 2013).

Since the current study's cutoff point for a high knowledge level was 80%, the discrepancy may be explained by the use of various tools and categorization methods. For instance, in the previous study, a score $\geq 60\%$ was considered to indicate a high knowledge level.

Regarding attitude, the current study revealed that the majority of nurses have a positive attitude level. This finding is consistent with previous studies from Saudi Arabia that acknowledged the positive outlook of healthcare personnel (Al-Ahmari, AlKhalidi, & Al-Asmari, 2021). Additionally, this outcome was better than that reported by 69.32% in a study conducted in Ethiopia (Jemal et al., 2018). Even so, these results were lower than that of a prior study published in 2019 which indicated 100% (Mandona et al., 2019), probably because healthcare workers aim to be model subjects when filling out questionnaire items. However, Folgari, Bielicki, Heath, and Sharland (2017) emphasize that if practitioners are well-trained and have a positive attitude toward managing infectious symptoms, the associated burden of disease linked to hospital-acquired infections can be effectively addressed. Another common method to lower the risk connected to receiving medical care is to promote a positive attitude (Oyemolade et al., 2020).

The current study indicated that the majority of nurses have good practice levels of infection control. This result was similar compared to a previous study in Ethiopia which showed 70.8% displayed good practices (Assefa, Diress, & Adane, 2020).

However, this study's outcome was higher than that of numerous comparable and related studies conducted in Iran at 34%, Bangladesh at 36%, Ethiopia 36%, Ghana 45.1%, Nigeria at 50.8% and Elele River State at 59% (Kabir, Akhter, Sharmin, et al. 2018; Sarani et al., 2016; Omisakin, 2018; Ziblim, Suara, & Tahiru, 2020; Bayleyegn, Mehari, Damtie et al., 2021).

There are many potential explanations for the discrepancy, including variations in sample size, study time, and study subject. On the other hand, the finding of this study was lower than studies conducted in Kosovo 76.2% (Gruda & Sopjani, 2017) and Yemen 74.1% (Alrubaiee, Baharom, Shahr et al., 2018). This may be due to a lack of training on infection prevention, a lack of sufficient materials and hand washing facilities & other infrastructure issues that might also be causes.

Also, the current study found no statistically significant changes in participant knowledge, attitude, or practice based on sociodemographic factors or infection control training. The only practice was significant with gender, the data showed. Male practice mean scores were higher than female practice mean scores. These results were reinforced by the Al-Ahmari et al. (2021) study, which found no appreciable variations in the knowledge or attitude of participants based on their socio-demographic traits. Additionally, this is consistent with the research done by (Sarani et al., 2016). However,

there are significant variations between the average nurse's knowledge of infection control and years of experience ($p=0.013$) and between the practice of nurses and exposure to infection while working ($p=0.027$) (Omer & Saleh, 2023).

According to this study, there are various obstacles to nurses practicing infection control in intensive care units. They include a lack of personal protection equipment (PPE), a lack of training, and a lack of policies for visiting visitors. These obstacles are similar to previous literature (Al-Ahmari et al., 2021; Alhumaid et al., 2021; Amin & Al-Wehedy, 2009). To overcome such barriers, all nurses must receive infection control training in order to provide ICUs with sufficient PPE, policy, and guidelines for visiting hours.

5.3. Recommendations of the study

The current study recommend the following:

- Providing the necessary equipment to implement infection prevention standards.
- Improving nurses' knowledge and practice through continues in-service training, education programs.
- Working to adjust visiting times for patients and the number of visitors.
- Providing the necessary protocols for all manifestations of infection in care and explaining them to the staff on a regular basis.
- Working to provide isolation standards and appropriate design for intensive care units
- Reducing workload on nurses.

- Universities are required to add study materials that talk about infection and how to deal with it in their curriculum.
- Adding more females to the intensive care departments and involving them in the training programs due to the presence of a higher percentage of males in ICUs.
- It's appropriate to Conduct a study on the practice and application of infection protocols among females in ICUs and make a comparison to male practice to clear the gap.
- MOH should make more supervision on training programs and their quality on the target group, as the results showed that there is no difference between trained and untrained nurses.

5.4. Limitations of the study

The study's main limitation was that it included nurses working in hospitals on the North West Bank. To obtain better results, a study based on a large sample size and several centers should be carried out. It is impossible to establish a connection between the explanatory and outcome variables using a cross-sectional study design. Because participants self-reported their practices and were not cross-checked by observing the actual activities other than the practice section, participants may have over- or under-reported their behaviors, which is one of the study's limitations. This study cannot be generalized on southern part of the West Bank because it has better and different resources, more tools and training capabilities and different resources than the northern

part of the West Bank. In the study sample the number of females was less than the number of males.

5.5. Conclusion

The majority of nurses in the current study had good practice level, a positive attitude toward infection prevention and moderate knowledge of infection control. The major barriers of Infection Control Measures were lack of equipment, lack of training courses and visitors.

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Appendix A

QUESTIONNAIRE

- PART 1 SOCIO-DEMOGRAPHIC DATA:

A- Personal information:

1. Gender: Male Female
2. Age group: 20-30 years 31-40 years
41-50 years 51-60 years
3. Marital status: Single Married Others
4. Educational level:
Diploma Bachelor Level Master & Above
5. Experience years : _____

B- Work characteristics:

1. Hospital :
- Rafedia Al-Watani Khaleel Solaiman
Thabet Thabet Tubas AL Turki Darwish Nazzal
Saleft Yaser Arafat
2. Work shift : Daily Evening Night Rotation
3. Job position: Practice Nurse Staff Nurse Others
4. Have special sharps disposal box in your department? Yes No
5. Is there an available guidelines for infection control in your department ?
Yes No
6. Have you been vaccinated for hepatitis B? YES NO

7. Do you have written policy or guide lines when your team are exposed with the following disease: human immunodeficiency virus, hepatitis B virus, hepatitis C virus, multi drug-resistant and tuberculosis? YES NO

8. Is there available isolation criteria for those who are admitted highly contagious diseases?
Yes No

9. Have you received any training on infection prevention ? Yes No

-----If yes: Select the type of training did you get?

Training program Workshop / seminar
In service education program

QUESTIONNAIRE - PART 2

KNOWLEDGE REGARDING infection control practices

Please tick (✓) in the correct answer

Statement	correct	incorrect	Uncertain
1.. The environment (air, water, inert surfaces) is the major source of bacteria responsible for nosocomial infection.	*		
2. Advanced age or very young age increases the risk of nosocomial infection.	*		
3. Invasive procedures increase the risk of nosocomial infection.	*		
4. <i>Precaution standards</i> apply for only healthcare workers who have contact with body fluid.		*	
5. <i>Precaution standards</i> is only applicable for the patients with the confirmed diagnosis of infection or in latent period of infection.		*	
6. <i>The standard precautions recommend use of gloves</i> for each procedure.	*		
7. <i>Hand hygiene is recommended</i> before or after a contact with (or care of) a patient.		*	
8. <i>Hand hygiene is recommended</i> between patients contacts.	*		
9. <i>Hand hygiene is recommended</i> after the removal of gloves.	*		
10. Since the gloves can prevent from the pollution for the hands contamination, there is no need to wash hands after taking off the gloves		*	
11. The gloves should be changed if contacting different patients	*		
12. The gloves should be worn in the operation might contact with secretion and excretion of patient	*		
13. The gloves should be changed if contacting different patients	*		
14. <i>When there is a risk of splashes or spray of blood and body fluids, the healthcare workers must wear only gloves.</i>		*	
15. The face mask should be worn in the operation might induce the spraying of blood, body fluid, secretion and excretion			
16. The sharps disposal box should be put in the area close to the sharp applicable area	*		
17. The needle should be recapped after injection		*	

QUESTIONNAIRE – PART 3**Infection control practices**

As a checklist read the sentences and mark (x) on the best answer according to your practice by using the below scales

Always: means you have performed on routine basis or every time 100%

Usually: means you have performed for most of times, but not every time 80%

Often : means you have performed for most of time, but not every time 70%

Some times: means you have performed for sometimes or irregularly behave 50%

Never : means you have never performed (0 days/a week) 0%

	Activities	Always	Usually	Often	Sometimes	Never
1	Washes hands when comes in contact with different patients.					
2	Washes hands after contact with different patients					
3	Washes hands immediately after contacting any blood, body fluid, secretion, excretion and dirty substances.					
4	Wears gloves when drawing blood samples.					
5	Wears gloves when disposing stool and urine.					
6	Wears gloves when handling impaired patient skin.					
7	Wears gloves when handling patients' mucosa.					
8	Wears gloves when handling saliva or sputum culture.					
9	Wears gloves when performing parenteral injection of medications.					
10	Wears gloves when comes in contact with blood.					
11	recap syringe after using.					
12	Disposes needles and blades in a sharp disposal box or receptacle after using.					

QUESTIONNAIRE - PART 4**ATTITUDE REGARDING infection control practices**

Please read the sentences and mark (x) on the best answer according to your attitude by using the below scales :

1-Strongly agree 2-Agree 3-Neutral 4-Disagree 5-Strongly disagree

	Statment	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	I feel comfortable asking every patient I see if they have any signs or symptoms of infection.					
2	I feel comfortable advising every patient to accept VCT					
3	I feel comfortable telling coughing patients to follow cough hygiene procedures (like giving them masks, telling them to cover mouth when coughing and sneezing.					
4	I feel comfortable when I open the doors and windows of the ward to make the ward ventilated.					
5	I feel comfortable when I use personal protective equipment's.					
6	I feel comfortable when I wash my hand before and after contact with patients.					
7	Do you believe that PPE protect the HCWs from infection?					
8	Do you agree that, in the absence of universal precaution hospital facilities can be the source of infection and epidemic diseases?					
9	Do you believe that needles should be recapped after use					
10	Do believe that, nosocomial infections pose a serious outcome (e.g. extended hospital stay days, mortality and increased cost of healthcare)?					
11	Do you agree that, recapping is the cause for needle prick injury?					
12	Do you believe that separating active TB patients from other patients is an effective strategy for preventing transmission of TB?					

QUESTIONNAIRE – PART 5

Q: What is the barriers of infection control & prevention in your department (your opinion) ??

Appendix B

Arab American University- Palestine
Deanship of Scientific Research
IRB committee
Tel: 04-2410000 ext 110
Email: IRB@aaup.edu.ps



الجامعة العربية الأمريكية
مجلس البحث العلمي
لجنة أخلاقيات البحث العلمي
تلفون: 04-2410000 110
البريد الإلكتروني: IRB@aaup.edu.ps

IRB Approval Letter

Study Title: "Nurses' Knowledge, Attitude, Practice, And Perceived Barriers of Infection Control Measures In The Intensive Care Units At North West Bank Hospitals"

Submitted by: Khaled Al-Khalaf Rawajfeh

Date received: 19th July 2023

Date reviewed: 5th September 2023

Date approved: 07 September 2023

Your study titled "Nurses' Knowledge, Attitude, Practice, And Perceived Barriers of Infection Control Measures In The Intensive Care Units At North West Bank Hospitals" with approval number 2023/A/146/N was reviewed by the Arab American University IRB committee and was approved on the 07 September 2023.

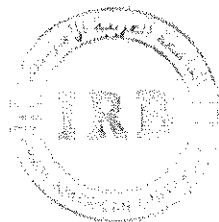
Ahmad Ayed, PhD
IRB Committee Member
Arab American University of Palestine

Sajed Ghawadra, PhD
IRB Committee Vice-Chairman
Arab American University of Palestine

Beham Khalaf-Nazzari, MD, PhD
IRB Committee Chairman
Arab American University of Palestine

General Conditions:

- 1- Valid for 12 months from the date of approval.
- 2- The sponsor must inform the committee of any modifications to the approved study protocol.
- 3- The sponsor must inform the committee of any changes in the research plan or completion.



مجلس أخلاقيات البحث العلمي في الجامعة العربية الأمريكية

IRB-Arab American University

Appendix C

State of Palestine
Ministry of Health
Education in Health and Scientific
Research Unit



دولة فلسطين
وزارة الصحة
وحدة التعليم الصحي
والبحث العلمي

Ref.:
Date:.....

الرقم: ٥٥٧٨/٢٠٢٠
التاريخ: ١٠/١٠/٢٠٢٠

عطفة الوكيل المساعد لشؤون المستشفيات والطوارئ المحترم،،،
تحية واحترام،،،

الموضوع: تسهيل مهمة بحث

يرجى تسهيل مهمة الطالب: خالد بواقله - ماجستير تمريض - الجامعة العربية الامريكية،
بخطوات:

" معرفة الممرضين، موافقتهم، ممارساتهم، والعقبات المتصورة لتدابير مكافحة العدوى في وحدات
العناية المكثفة في مستشفيات شمال الضفة الغربية "
حيث سيقوم الطالب بجمع معلومات عن طريق تعبئة استبانة الدراسة من قبل الممرضين والممرضات
(بعد اخذ موافقتهم)، وذلك في:

- مستشفى رفيديا - مستشفى الوطني - مستشفى طولكرم
- مستشفى جنين - مستشفى سنقيت - مستشفى طوباس - مستشفى قلقيلية

مع العلم ان مشرف الدراسة: د. احمد العايدي،
على ان يتم الالتزام بالمحافظة على اخلاقيات البحث العلمي وسرية المعلومات، وعدم التعرض للمعلومات
التعريفية للمشاركين.
على ان يتم تزويد الوزارة بنسخة PDF من نتائج البحث، التعميد بعدم النشر لحين الحصول على موافقة وزارة

ملخص الدراسة

معرفة الممرضين، مواقفهم، ممارساتهم و العقبات المتصورة لتدابير مكافحة العدوى في وحدات العناية المركزة في مستشفيات شمال الضفة الغربية

المقدمة:

أكبر مشكلة يواجهها المرضى في وحدات العناية المركزة هي عدوى المستشفيات . أثرت هذه العدوى على المرضى مع ارتفاع معدل الانتشار بسبب الإقامة الطويلة في المستشفى، وانخفاض المناعة، والوقت الطويل في وحدات العناية المركزة. وهذا له تأثير كبير على تشخيصهم و تطورهم المرضي. يجب أن يكون الممرضين أكثر علماً ودراية واهتماماً بتدابير مكافحة العدوى وممارساتها.

هدف الدراسة :

هدفت هذه الدراسة إلى تقييم معرفة الممرضين ومواقفهم وممارساتهم والعوائق الملموسة لتدابير مكافحة العدوى في وحدات العناية المركزة في مستشفيات شمال الضفة الغربية.

المنهجية:

التصميم الكمي المقطعي والرصدي. تم إجراء العينة في الفترة من أكتوبر 2023 إلى نوفمبر 2023، من خلال استبيان الإدارة الذاتية وقائمة التدقيق للممرضين الذين يعملون في مستشفيات وحدات العناية المركزة الموجودة في المستشفيات الحكومية المختارة في شمال الضفة الغربية (131 ممرضة في وحدة العناية المركزة). وبعد جمع البيانات تم تحليلها إلى برنامج SPSS الإصدار 23.

النتائج :

كشفت البحث الحديث أن 49 مشاركًا (42.6%) لديهم مستوى معرفة متوسط و30 مشاركًا (26.1%) لديهم مستوى معرفة عالٍ في مكافحة العدوى و36 (31.3%) لديهم معرفة منخفضة. اعتمادًا على المتغيرات بما في ذلك العمر والجنس ونوبة العمل والمنصب الوظيفي والمستوى التعليمي والحالة الاجتماعية والخبرة المهنية، كانت هناك بعض الاختلافات والاختلافات بين الموظفين. ومع ذلك، أظهر مستوى المواقف لمكافحة العدوى أن 39 (33.9%) لديهم مستوى اتجاه محايد و73 (63.5%) لديهم مستوى اتجاه إيجابي. وكشفت مستوى ممارسة مكافحة العدوى أن 16 (27.1%) لديها مستوى ممارسة عادلة و43 (72.9%) لديها مستوى ممارسة جيدة.

قام طاقم التمريض بإدراج العوائق التي تحول دون تحقيق معايير العدوى، تليها الأسباب: نقص المعدات (26.1%)، نقص الدورات التدريبية حول مكافحة العدوى (17.4%)، الزوار (7.0%)، نقص سياسات ومعايير مكافحة العدوى (6.1%)، نقص غرف العزل (5.2%) وعبء العمل (5.2%)

الاستنتاج :

غالبية الممرضين ات في الدراسة الحالية كان لديهم مستوى ممارسة جيد، وموقف إيجابي تجاه الوقاية من العدوى ومعرفة معتدلة (متوسطه) لمكافحة العدوى. وكانت العوائق الرئيسية أمام تدابير مكافحة العدوى هي نقص المعدات، ونقص الدورات التدريبية والزوار.

التوصيات :

توفير المعدات اللازمة لتطبيق معايير الوقاية من العدوى، وتحسين معارف ومهارات الممرضين من خلال برامج التدريب المستمر أثناء الخدمة، والعمل على ضبط أوقات الزيارة للمرضى وعدد الزوار، وتوفير البروتوكولات اللازمة لجميع مظاهر العدوى في الرعاية وشرحها للموظفين بانتظام، والعمل على توفير معايير العزل والتصميم المناسب لوحدات العناية المركزة، وتقليل عبء العمل، وإلزام الجامعات بإضافة مواد دراسية تتحدث عن العدوى وكيفية التعامل معها في مناهجها الدراسية. إضافة المزيد من الإناث إلى أقسام العناية المركزة وإشراكهن في البرامج التدريبية نظراً لوجود نسبة أعلى من الذكور في وحدات العناية المركزة. من المناسب إجراء دراسة حول ممارسة وتطبيق بروتوكولات العدوى بين الإناث في وحدات العناية المركزة وإجراء مقارنة مع ممارسات الذكور لسد الفجوة. ويجب على وزارة الصحة زيادة الإشراف على برامج التدريب وجودتها على الفئة المستهدفة، حيث أظهرت النتائج عدم وجود فرق بين الممرضين المتدربين والغير متدربين.

الكلمات المفتاحية:

المعرفة، المواقف، الممارسة، العوائق، ممرض مكافحة العدوى، وحدات العناية المركزة