Al–Quds University
Deanship Of Graduated Stuies

Assessing Nurses Exposure to Occupational Hazards and Compliance with Practice Safety Measures at Governmental Hospitals in the West Bank

Submitted by

Wael Zead Ahmed

Master Thesis

Jerusalem – Palestine

1435 / 2014

Assessing Nurses Exposure to Occupational Hazards and Compliance with Practice Safety Measures at Governmental Hospitals in the West Bank

Submitted by
Wael Zead Ahmed

Supervised by: Dr. Mohammed Shaheen, Ph.D

A thesis Submitted in Partial Fulfillment of the Requirement for the Degree of Master in Public Health in Al Quds University

1435 / 2014

Al-Quds University
Deanship of Graduated Studies
School of Public Health

Thesis Approval

Assessing Nurses Exposure to Occupational Hazards and Compliance with Practice Safety Measures at Governmental Hospitals in the West Bank

Prepared by: Wael Zead Ahmed
Registration No: 21010043

Mater thesis submitted and accepted, date: 12/1/2014, the names and signatures of examining committee members are as follows:

1. **Head of Committee: Dr. Mohammed Shaheen** Signature .....
2. **Internal Examiner: Dr. Sumaya Sayej** Signature .....
3. **External Examiner: Dr. Aida Alkaissi** Signature .....

Jerusalem – Palestine

1434 / 2013

Dedication

Commitment, effort, and dedication were fundamental elements for the completion of my thesis, but even more was the support of my family. To my wife Sana and the greatest projects of my life: my daughter Hamsa, and my parents, and all my family; today I dedicate them this important professional achievement because without their presence, support, and comprehension I would have not achieved my goal. I love you all, I remain.

Wael Zead

Declaration

The work provided in this thesis, unless otherwise referenced, is the researcher's own work and has not been submitted elsewhere for any other degree or qualification.

Student's name:

Signature:

Date:

Acknowledgment

Thank you GOD for the opportunity to learn…

First and foremost, I would like to offer all the praises and glory to our GOD Almighty. His inspiring words and steadfast love and mercy are lamps and lights to my path that guide me from the conception until the giving of birth to this study. To complete a research like this, several minds are essential. But God sent people who have been very helpful and instrumental in the accomplishment of this study. I am forever grateful to those people who have supported and encouraged me along the way.

I would like to thank all participants in this study, for their precious time they gave, also I would like to express my sincere gratitude to my supervisor Dr. Mohamed Shaheen for his faith in me, his unwavering support, wisdom, and great guidance throughout this study.

I would like to express my heartfelt appreciation to my teachers in the Public Health program at the University of Al- Quds for teaching me health management and Public Health. Thank them for making me better in different ways.

Several colleagues made special contributions to this work and the researcher gratefully acknowledges their assistance. To all my colleagues in the health profession my sincere gratitude goes to people who lent a helping hand to me in data collection. My thanks also would go to the members of Qulqilia Governmental Hospital, for their participation and cooperation. Thanks to the hospitals directorate and Nurses Unit in Ministry Of Health.

I must gratefully acknowledge the help and support of my gorgeous wife, Sana, whom I owe my deepest gratitude for caring, patience and inspiring; you were a pillar of strength and comfort, also my daughter, Hamsa, who have encouraged me to write, study, even though it has resulted in them undertaking additional family responsibilities.

My appreciation is also expressed to my father, mother and my full love goes to all my sisters and brothers and their wives, husband, children and daughters for their support, love and permanent caring, their encouragement was my motivation and also thanks my uncles and aunts special Hasan and Huseen whose allows support me and not forget thanks my uncle Mohamed abo Marim and my grandmother.

Wael Zead

Abstract

Nurses who work in hospitals are exposed to occupational hazards more than other nurses; these occupational hazards are chemical, physical, biological, psychosocial, and ergonomics hazards. This study aims at Assessing Nurses Exposure to Occupational Hazards and Compliance with Practice Safety Measures at Governmental Hospitals in the West Bank. Cross sectional study was conducted using self-administered 6-point Likert Scale questionnaire. 239 nurses out of the total sample of the study which consisted of 255 Nurses distributed to Medical, Surgical, Pediatric, Gynecology and Obstetrics departments in ten Governmental Hospitals in West Bank responded to the study questions. The response rate is 93.7%. Results: The present status at the domain perception and knowledge among nurses in occupational hazards are very high in some items and medium in others. In regard to safety climate and psychological risk, the total degree of this domain is (71.08%) which is high estimation. Sleeping disturbance has the highest percentage in psychological occupational hazards (51.0%) then anxiety (44.8%). Similarly, redness of eye (25.1%), burning of eye (14.2%), visual disturbance (13.8%), redness in skin (20.0%), cough in respiratory are the highest percentage in chemical symptoms among nurses. Visual problems (21.33%) appeared as physical symptoms among nurses. Hepatitis B appeared as the most contiguous diseases threaten the workers. In Ergonomic Symptoms, pain in all body parts is the highest symptom with percentages of (51.0%) in head and neck, (41.0%) in shoulders, (56.1%) in back (24.3%) in the upper limps, (41.9) in lower limps and (26.4%) in Pelvis. The results also showed that the biological hazards were the most severe with (66.44%), ergonomic hazards (64.10%), psychological hazards (60.17%), chemical hazards (58.08%), and physical hazards (55.73%). The total degree of the most important things needed at work for the safety of the nurses was (81.17%) which indicated very high degree. The results showed that the level of satisfaction among nurses was (76.19%) which showed high estimation; the burnout level among nurses in three domains (exhaustion, depersonalization and personal achievement). The results showed that depersonalization scored high degree. Exhaustion and personal achievement scored moderate degree according to Mslach Burnout Inventory scale. Moreover, there were significant differences between gender and nurses exposure to occupational hazards in domains (perception and knowledge, safety climate and psychological risk and in the total degree). Also; significance differences between governorate and nurses exposure to occupational hazards in domains safety climate and psychological risk and Level of satisfaction**.** There are no statistically significant differences between occupational hazards in domains perception and knowledge, safety climate and psychological risk, needed equipment and satisfaction, according to age, monthly income, and years of experience, number of family dependants, educational level variables, and significant differences between level of burnout and gender, governorates, and working department variables in domain of personal achievement, also significant in age variable in domain depersonalization. No differences significant between burnout level and marital status, family dependents, and years of experience. The researcher concluded that the perception and knowledge of occupational hazards among nurses in hospitals scored very high, and high in safety climate and psychological risk, the ranks of occupational hazards biological, ergonomic psychological, chemical and physical, the domain of satisfaction among nurses showed high score, very high degree was registered at the domain of needed safety things, high degree in depersonalization and moderate in Exhaustion and Personal achievement were recorded. According to the study results it was recommended that working hard and addressing educational programs to decrease all the occupational hazards which may face nurses.

List of Contents

List of Annexes

Conceptual and Operational Definitions

Assessment
Assessment is the systematic collection, review and use of information about nurses' compliance to the safety measures and occupational hazards to improve the situations of nurses working in the hospitals. Assessment focuses on what nurses know, what they are able to do, and what values they have when they subject to their work (WHO report, 2002).

Nurse
A nurse is a person who has completed a program of basic education and is qualified and authorized in her/his country to practice nursing. (International Council of Nurses, ICN).

Compliance
Compliance is undertaking activities or establishing practices or policies in accordance with the requirements or expectations of an external authority. The term compliance describes the ability to act according to an order, set of rules or request (CDC, 2003).

Safety measures
Action taken to protect patients and office personnel from such known hazards as particles and aerosols from high-speed rotary instruments, mercury vapor, radiation exposure, anesthetic and sedative gases, falls, inadequate sterilization, cuts, puncture wounds, and laboratory accidents (CDC, 2003).

Occupational hazards
A working condition that can lead to illness or death. Often, people in jobs which pose a high level of risk are paid more than similar but less risky jobs to compensate for the danger involved (CDC, 2003).

Exposure
Is the probability and/or amount of contact between the hazard and the entity it is potentially harming. (CDC, 2003).

Evaluation of the health hazard
Evaluations of the health hazard include the measurement of exposure and potential exposure comparison of those exposures to existing standard and recommendation of controls if needed (WHO 2001).

Exposure measurement techniques
These techniques are based on the nature of hazards and the routes of environment contact with the workers. Example skin wipes can use to measurement of skin contact with toxic materials (WHO 2001).

Prevalence
The proportion of individuals in a population having a disease or characteristic. Prevalence is a statistical concept referring to the number of cases of a disease that are present in a particular population at a given time,(Med. Dictionary).

Ergonomics
The science of designing the work environment to accompany the Individual, rather than the opposite. Ergonomics dissolves barriers to quality, productivity, and safe human performance by fitting products, tasks and environments to people" (Ergoweb, 2011).

Safety climate
As with organizational and safety culture no standard definition of safety climate exists. There is also confusion concerning the relationship and the differences between safety culture and safety climate. Consequently, the term safety climate is sometimes used interchangeably with the term safety culture. (Guldenmund, 2010) Perhaps one of the simplest explanations of safety climate is that it is not safety culture. (Denison, 1996) One of the more common descriptions of safety climate is that it is a ―snapshot of safety culture. (Wiegmann et al., 2002a; Wiegmann, Zhang, von Thaden, Sharma & Mitchell, 2002b; Canso, 2008) This means that safety climate reflects the safety culture at a given time and place. In contrast to safety culture, safety climate often refers to the features and not to the deeper context. (Denison, 1996) Nordén-Hägg (2010) concluded in her doctoral thesis that it can be considered that the organizational culture is expressing itself through the organizational climate.

Safety measures
Actions (e.g., use of glasses, face masks) taken to protect patients and office personnel from such known hazards as particles and aerosols from high-speed rotary instruments, mercury vapor, radiation exposure, anesthetic and sedative gases, falls, inadequate sterilization, cuts, puncture wounds, and laboratory accidents. (CDC, 2003).

Job satisfaction
The extent to which a person's hopes, desires, and expectations about the employment he is engaged in are fulfilled (Collins English Dictionary, 2009).

Emotional Exhaustion
Feelings of being emotionally overextended and exhausted by one's daily conflict in work. In this study the term is defined as the lack of passion and the sense of emotional draining by other people among the teachers. As the first dimension of burnout, emotional exhaustion in this study is measured by items like I feel emotionally drained from my work (Gavrilovici, 2007).

Depersonalization
An insensitive and impersonal response toward receivers of one's concern, care, service or instruction (Maslach, Jackson, & Leiter, 1996). Thus, it can result in the form of impassiveness and cynicism toward co-workers, clients and the organization (Ali & Hamdy, 2005). In this study, it is measured by items like I feel I treat some students as if they were impersonal objects.

Personal Accomplishment
It is defined as feelings of competency and successful achievement in one's work and one's self capability in classroom and professional efficacy (Gavrilovici, 2007). In this study, items like I feel I am positively influencing other people's lives through my work helped the researcher measure teachers' personal accomplishment.

Psychosocial hazards
Those aspects of the design and management of work, and its social and organizational contexts that have the potential for causing psychological or physical harm (http://www.who.int)

Ergonomic hazards
Are defined as a condition that is related to the position or proper function of one's body or to motion. Ergonomics hazard in assembly line include poorly design tools, work speed, improper lifting or reaching and awkward working posture. (http://psasir.upm.edu).

Physical hazards
Are generally perceptible and discernible. Physical hazards do not require laboratory analysis for their recognition or description. It can lead to drowning and injury may be natural or artificial. (http://www.who.int)

Biological hazard
Processes of organic origin or those conveyed by biological vectors, including exposure to pathogenic micro-organisms, toxins and bioactive substances, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. (http://www.who.int).

Chemical hazards

Is a hazards that results from contamination caused by harmful or potentially harmful chemicals. This nonliving hazards results from substances including solid, liquid or gas that can potentially interact. Some chemicals can damage the human body if people inhale, ingest or absorb them. A chemical hazard can increase the chances of a loss that may not necessarily result in illness or injury. (http://definitions.uslegal.com).

List of abbreviations

CDC	The Center for Disease Control and Prevention
HBV	Hepatitis B Virus.
HCV	Hepatitis C Virus.
HCWs	Health Care Worker.
HIV	Human Immunodeficiency Virus.
IARC	International Agency for Research in Cancer.
ICN	International Council of Nurses.
IV	Intravenous injection.
LPN	License Practical Nurse
LSD	Least Significant Difference.
MBI	Maslach Burnout Inventory.
MCH	Mother and Child Health
MDR-TB	Multi-drug resistant tuberculosis.
MOH	Ministry of Health.
MRSA	Methicillin - resistance Staphylococcus aureus.
MSDs	Musculoskeletal disorder.
NA	Nurses Assistance
NCD	Non-communicable Disease
NGOs	Nongovernmental Organizations.
NIOSH	National Institute of Occupational Safety and Health.
OBPN	Occupational back pain in Nurses.
OH	Occupational Health
OHS	Occupational Health and Safety
OSHA	Occupational Safety and Health Administration
PCBS	The Palestinian Central Bureau of Statistics.
PHC	Primary Health Care.
PPE	Personal Protective Equipment.
RN	Register Nurse
RSI	Repetitive Strain Injuries.
SPSS	Statistical Package for Social Sciences Program.
STFs	Slips, Trips, and Falls.
TB	Tuberculosis.
UNRWA	United Nations Relief and Works Agency.
WB	West Bank
WHO	World Health Organization.

Chapter One

Introduction

Chapter One

Introduction

Occupational health and safety risks that must be considered by the employer arise from normal functions and operations and during unusual circumstances such as accidents and incidents. The employer is responsible for implementing appropriate national and international recognized Occupational health and safety risk (OHS) standards, codes and guidelines. Maximum effectiveness of OHS systems requires the inclusion and meaningful participation of employees in implementation and maintenance of procedures and processes. To achieve meaningful and effective participation, the employer may have to implement a program to change employee culture and attitudes regarding health and safety (Hipwell, and Wilson, 2009).

Health care system in Palestine is a combined entity of all resources, actors and institutions related to the financing regulation and provision of all activities whose primary intent is to improve or maintain health, it is an arrangement in which health care system is delivered, there are many variations of health care system around the world, the goal for health system is to improving performance and responsiveness to the expectation of the population and fair financial contribution. Health care providers are institutions or individuals providing health care services. Individuals including health professionals and allied health professions can be self-employed or working as an employee in a hospital, clinic, or other health care institution, whether at governmental and NGO levels, private for-profit, or private not-for-profit. The researcher determined the target group from the nurses who working in Medical, Surgical, Pediatric, and Gynecology and Obstetric department in governmental hospitals in West Bank.

The hospital nurse workforce is experiencing greater workloads resulting from shorter hospital stays, rising average patient acuity, fewer support resources, and a national nurse shortage. Higher nurse workloads are associated with burnout and job dissatisfaction, precursors to voluntary turnover that contribute to the understaffing of nurses in hospitals and poorer patient outcomes. Indeed, more than 40% of hospital staff nurses score in the high range for job-related burnout, and more than 1 in 5 hospital staff nurses say they intend to leave their hospital jobs within 1 year. The understaffing of nurses and the overwork of health professionals in hospitals are ranked by consumers as major threats to patient safety, and more patients are bringing their own caregivers to the hospital with them. Research on job-related burnout among human service workers, nurses in particular, suggests that organizational stressors in the work environment are important determinants of burnout and subsequent voluntary turnover. A largely separate research literature on

patient satisfaction documents the importance of patients' satisfaction with nursing care in their overall ratings of satisfaction with their hospital care. This article examines the association between nurse burnout and patient satisfaction, and explores whether the factors that account for nurse burnout also account for patient dissatisfaction. The findings are important to understanding how to simultaneously stem the flight of nurses from hospital bedside care and improve patient satisfaction with care.(Doris et al., 2010).
The study aims to asses Nurses Exposure to occupational hazards and compliance toward practicing of safety measure in the west bank governmental hospitals so as to improve the loyalty of nurses toward the organization and the patient outcome.

1.1.Research background

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 (WHO report 2010).
Nurses are an integral component of the health care delivery system. In discharging their duties, nurses encounter a variety of occupational health problems which may be categorized to:

1. Biological
Nurses can be exposed to contagious and infectious diseases including those that can be transmitted through the air (e.g., TB - tuberculosis) and blood-borne diseases such as AIDS, hepatitis B and C. There is also the risk of exposure to multi-drug resistant organisms such as multi-drug resistant tuberculosis (MDR-TB), Methicillin-resistant staphylococcus aureus (MRSA) and others. As a consequence of the need for frequent hand washing, skin conditions such as dermatitis may occur. Illness as the result of a needle stick injury can also be a concern.

2. Chemical
In a hospital environment, nurses may encounter, various chemicals used for general janitorial cleaning as well as for disinfecting and sterilizing, anesthetic gases (including nitrous oxide, halothane, diethyl ether, methyoxyflurane, etc.), drugs or medications, and latex (in gloves and equipment).

3. Ergonomic
There are many situations where physical demands involve force, repetition, awkward postures and prolonged activities. These include, walking or standing for long periods of time, lifting, and overexertion (reaching, carrying, etc).

4. Physical
Nurses can be exposed to, radiation, both x-rays and radiation from radioisotopes, and lasers.

5. Psychological

When working alone, nurses may face a risk of violence. Responsibility of care, emergencies, and the need to make certain decisions when others cannot be found can increase the stress experienced by some people. Exposure to serious traumatic events (or consequence of the event) is another cause of stress. As with most emergency services, there will be long periods of quiet or routine interrupted abruptly by periods of intense stress or activity. In addition, most nurses work shifts or extended work days which can have health effects.

Several target organs may be adversely affected by prolonged exposure to chemicals including the respirator, neurologic, reproductive, dermal, and hematopoietic systems. For example, etheylene oxide has been classified by the International Agency for Research on Cancer (IARC) as a known human carcinogen (CDC, 2003).

6. Burnout

A popular term for mental or physical energy depletion after a period of chronic, unrelieved job-related stress characterized sometimes by physical illness. The person suffering from burnout may lose concern or respect for other people and often has cynical, dehumanized perceptions of people, labeling them in a derogatory manner. Causes of burnout peculiar to the nursing profession often include stressful, even dangerous, work environments; lack of support; lack of respectful relationships within the health care team; low pay scales compared with physicians' salaries; shift changes and long work hours; understaffing of hospitals; pressure from the responsibility of providing continuous high levels of care over long periods; and frustration and disillusionment resulting from the difference between job realities and job expectations. (Mosby's Medical Dictionary, 8th edition.2009, Elsevier).

Nurses preventive measures that can be applied in the hospital (WHO, 2003)

- Hand washing is extremely important for the reduction of infections. Be sure to use moisturizers to prevent your skin from drying.
- Learn proper techniques to avoid needle stick injuries.
- Always use the correct personal protective equipment (PPE) or other barriers for the task. In some cases, latex gloves will not be appropriate (e.g., cleaning with certain chemicals).
- Wear appropriate footwear (for walking/standing, as well as protection from dropped objects).
- Learn safe patient lifting techniques.
- If a job requires work in an awkward position (e.g., with hands above shoulder level) be sure to take frequent breaks.
- Follow a recommended shift work pattern, and be aware of the hazards associated with shift work.
- Consider offering a debriefing or session after a critical event to help reduce the impact from stress.
- Ask your workplace to establish safe procedures for working alone or develop procedures where this situation can be avoided altogether.
- Keep all hallways and passages clear of clutter and equipment.
- Install and maintain adequate ventilation for the area.

- Keep all radiation levels to a minimum and wear a radiation dosimeter, as recommended by the radiation safety officer or regulatory authorities.
- If work is in the nuclear medicine department or involves working with patients being treated or tested by such departments, staff should be given appropriate training to prevent or control exposure to radiation sources.

1.2. Problem statement

In spite of the increase number of nurses who join the governmental hospitals in the West Bank, they are not estimated for their compliance to the safety measure and occupational hazards they are exposed during their work. There for exposure to Occupational Hazards and their Compliance with Practice Safety Measuring at their hospitals in the West Bank that is to increase the loyalty of nurses toward the organization which finally lead to patient satisfaction (Hipwill, 2009).

While healthcare workers toil tirelessly to heal and comfort the nations ill, little attention must be focused on securing the health and safety of these critical workers. The number of nurses and midwives working in the Ministry of Health (3.856) as a nurse and midwife, (56.4%) of them in the West Bank and (43.6%) in the Gaza Strip, distributors according to specialist to (92.7%) nurses and (7.4%) scalable, and distributed these by place of work (26%) nurses in primary health care, and (71%) in the Ministry of Health hospitals, and (3%) in the departments, units and other departments. (MOH, 2010).

Nurse's workforce is rapidly becoming one of the most dangerous industries in the West Bank. It is now more dangerous to work in a hospital than in construction and more dangerous to work in a nursing home than in a mine (MOH, 2003).

The environment of the hospital itself is considered as a hazard for all hospital workers especially nurses, a variety of occupational hazards resulting from hospital environment classified in the following five categories (WHO, 2002):

- Biological/Infectious hazards
- Chemical hazards
- Physical hazards
- Ergonomic/Biomechanical hazards
- Psychosocial hazards

Because of the dynamic nature of occupational health nursing and the complexities of work-related health problems, it is important that the occupational health nurse utilize an interdisciplinary approach to address the health needs of the workforce. While individual care is provided to all ill and injured workers, occupational health nurses provide programs and services to maintain, monitor, and enhance the health of the aggregate workforce. Occupational health nurses practice within the context of a prevention framework in order to maintain, protect, and promote worker health and improve the health and safety of the work environment (WHO, 2003).
The employer is responsible for planning, implementing and monitoring programs and systems required to ensure OHS on its premises. Such provisions shall be pro-active and preventive by identification of hazards as well as by evaluation, monitoring, and control of work related risks. The employer shall provide and maintain workplaces, plant, equipment, tools, and machinery and organize work so as to eliminate or control hazardous ambient

factors at work. The employer shall provide appropriate occupational health and safety training for all employees. The organization shall, at no cost to the employee, provide adequate personal protective equipment. The employer shall record and report occupational injuries and illnesses. Contract specifications must include demands for service providers, contractors and sub-contractors to have or establish systems enabling them to meet the OHS requirements of the employer (WHO, 2003).

1.3. Justifications

Safety measures and occupational hazard are considered the most important factor in achieving the psychological and professional security at work, which in turn are positively reflected in job performance both quantitatively and qualitatively.

The researcher has limited his study to governmental hospitals in the west bank because it is observed that there are a defect in the nurses compliance toward safety measures and occupational hazards resulting from their work place environment due to overload of work stress under bad economic and political situations as a majority of Palestinian population seeks health services from governmental hospitals which provide a public health insurance.

The researcher anecdotal observation and his own personal experience as an employee at a governmental hospital in Qalqelia city gave his notice of frequent nurses complains criticism, and absenteeism amongst many other sign of poor job satisfaction amongst them.

Researcher decided to study the assessment of nurses exposure to occupational hazards and compliance toward safety measures and occupational hazards because there are a plenty of factors that have been resulted due to the defect in the nurses compliance like low customer satisfaction employee absenteeism due to the illness and physiological defect, nurses family members may be a target for that hazard, source of infection transmission between patient. There are clearly many challenges face the Palestinian Ministry of Health while working to minimize the occupational hazards and increase the safety measures, these challenges is the lack of financial and human resources and political situations.

The researcher decided to study the types of occupational hazards that effected in the health of nurses their working in governmental hospitals in West Bank, and study the relationship between the exposure to occupational hazards and compliance with safety measures and study the their satisfaction and assess the level of burnout and relations with exposure to occupational hazards.

1.4. Aim of the study

The main aim of the study is to assess the exposure of nurses to the occupational hazards and their compliance of practice safety measures in the West Bank governmental hospitals.

1.5. Specific Objectives

1. To assess the prevalence of health hazards among nurses working in Governmental Hospitals in the West Bank.
2. To identify the nurses exposure to the occupational health hazard.

3. To assess the extent of compliance of nurses 'practices with standardized safety measures.
4. To compare the relationship between the degrees of the nurses compliance with safety measures with nurses' exposure to occupational hazard.
5. To assess the level of burnout in hospitals among nurses.
6. To assess the level of satisfaction.

1.6. Research Questions

1. What is the prevalence of different types of occupational health hazards among nurses in their work settings by different demographic and professional related factors?
2. What is the degree of compliance of nurses work practices to standard safety measures by different demographic and professional related factors?,
3. Is there any significant relationship between Exposure to Occupational Hazards and Compliance with Safety Measures?
4. What is the level of nurses' satisfaction with their work environment?
5. Is there any relationship between their satisfaction and other demographic and professional related factors?
6. Is there a relationship between nurses' satisfaction and their compliance with standard safety measures in their work settings?
7. What is the perceived effect of hospital work on nurses' level of burnout?

Summary

The chapter explain the background of the study and discus the in briefly the role of nurses and set the types of hazards that expose the nurses in hospitals and discus the preventive measures in hospitals and aims, objectives and research question of the study.

Chapter Two

Literature Review

Chapter Two

2.1 Literature Review

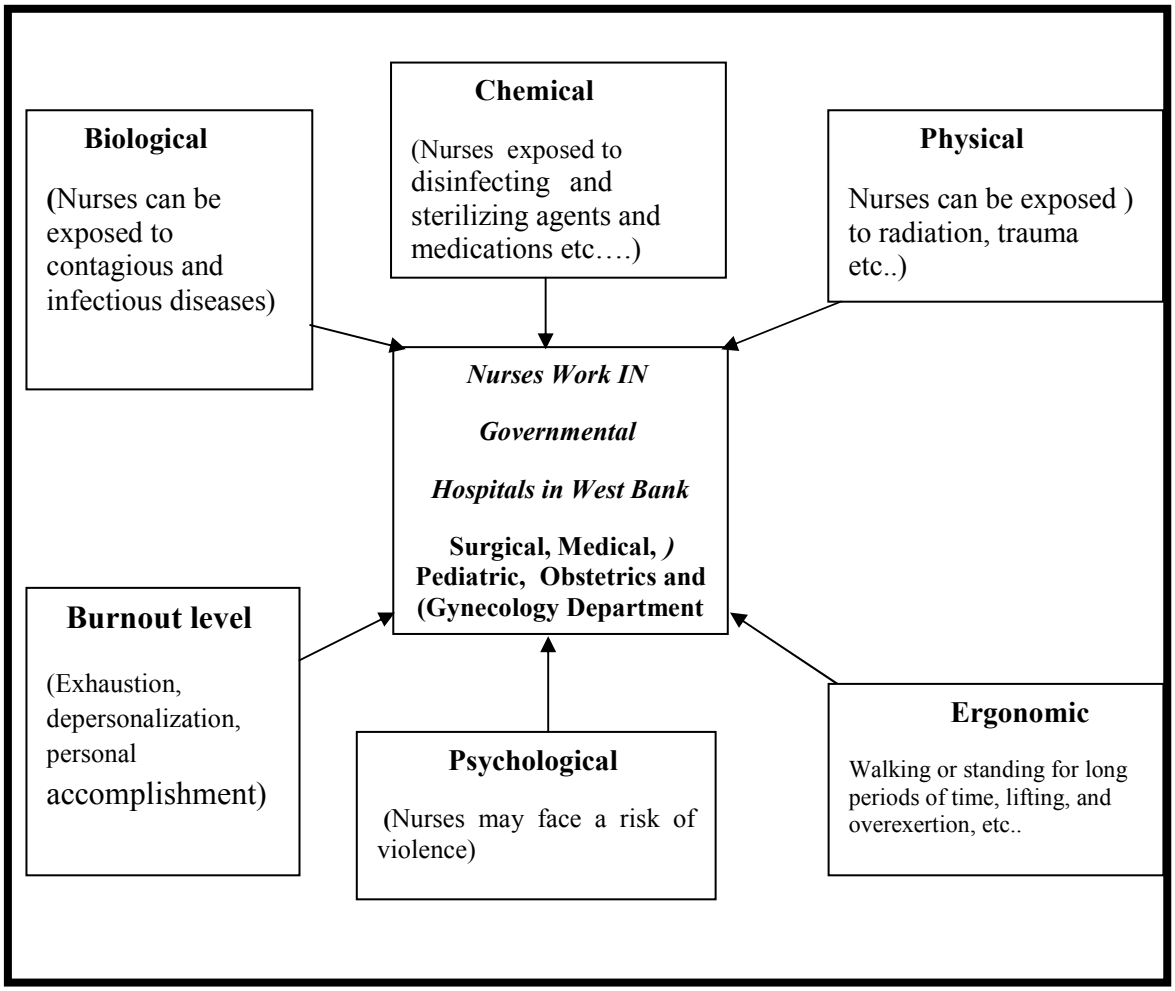
Introduction

For the purpose of making any meaningful and realistic conclusion on the data drawn from the study, it is important that a closer look is taken at similar works done on occupational hazards and compliance to safety measures and review some of the literatures pertinent to the study, in order for comparison, confirmation and differences to be laid bare. Due to this, this chapter is meant to contain the review of various literatures considered to be relevant to the study. It discusses the conceptual framework and the main concepts.
Nursing has hazards, especially in hospitals, and where nurses may care for individuals with infectious diseases. The environmental hazards of concern fall into five widely accepted classes: chemical, physical, biological, psychological, and ergonomic hazards and fall into burnout that effected of health.

2.2 Conceptual framework

Framework simply refers to a set of belief, ideas or rules that is used as the basis for making judgments or decisions. Nurses face a number of potential hazards in the workplace including biological, chemical, physical, psychosocial, and ergonomic and burnout hazards.
The researcher developed a model to explain the relationship between dependant variables and independent variables. Dependant variables including biological, chemical, physical, psychological, ergonomic and burnout and independent variable nurses who working in governmental hospitals in West Bank.
This study is an attempt to assess and explain the several of occupational hazards among nurses. The model suggests that the nurses functioning is mediated and influenced by interaction between nurses and exposure to hazards.

Figure Conceptual framework:



2.3 Chemical and physical hazards

Tuvadimbwa, (2005) Nurses are exposed to high levels of occupational hazards. The researcher had a question as to whether nurses have knowledge on the work-related risks to which they are exposed, for them to be able to prevent and manage these risks accordingly. The study focused on the following objectives:

- To determine the extent of the knowledge on occupational hazards amongst registered nurses in the Onandjokwe Health District.
- To determine the extent to which registered nurses practice occupational safety.
- To identify strategies that is in place dealing with occupational safety.

A quantitative research design utilizing a survey by means of questionnaires was used. The population of the study consisted of a randomly selected registered nurses who were in direct contact with patients.

The results indicated that a significant number of registered nurses have knowledge on occupational hazards, although there are a few numbers which have insufficient knowledge on occupational hazards. Registered nurses also try to practice occupational safety but the restrictions such as non-availability of facilities prevent them from the safety practices. The study also revealed that information on occupational hazards/safety and support is

provided to some nurses but not to all of them. There are only some guidelines/strategies in place for occupational hazards/safety although not all the nurses are aware about them.

Nattat, (2010) studied the occupational hazards among Nurses in Primary Health care Center in Gaza governorates, the study was cared out in order to rank the main occupational hazards that nurse encounter, to identify nurses perception about occupational health hazards and to describe the relationships between socio- demographic factors and the occurrence of occupational health hazards using close ended-self- administrated questionnaire. The study sample was 120 nurses who worked in 9 primary health care centers (level four), response rate 93% represent 112 nurses. The study results showed that nurses " ranking of occupational hazards as follows: 49% perceived that physical hazards ranked the first, followed by biological hazards (31.8%). Ergonomic and safety hazards (30.9%). Psychological hazards (29. 1%). And the last one is chemical hazards (26.4%). Regarding the actual exposure to hazards, it was noticed that the most frequently type hazards that the nurses had experienced were chemical and ergonomic related hazards such as eyes redness (67%), skin redness (88%) and respiratory distress (80 %). Also the results revealed that 51.8% of the study population reported complaining from head and neck pain, 63.4% complained of shoulder pain, 39.3% complained of back pain,(52.7%) had lower limbs pain and 76.8% of study population complained of pelvic pain, the result showed that 24.1% of study population had complained of anxiety, 20.5% reporting having sleep disturbances, and 23.9% had complained of other problems such as phobia and poor communication. Furthermore results revealed no registry of cases suffering from occupational related diseases such as Human Immune Deficiency Virus and Hepatitis (C & B).

Analysis revealed that there were no significant differences in knowledge and perceptions about hazards in relation to socio-demographic factors such as age, sex, and experience, while there were statistical significant differences in at the level of education. The study shows that there were statistical significant differences between environment and work department. Also it shows there were significant differences between the actual exposure to hazards and sex.

Eng, Amanda Jane (2011) This thesis is based on the first workforce survey in New Zealand to assess occupational exposures and health in a random sample of the working population. The aims of this thesis were to: i) describe the prevalence and distribution of occupational exposures and workplace practices in the New Zealand working population; ii) identify gender and ethnic differences in occupational exposure; and iii) examine which occupational risk factors contribute to the risk of respiratory disease. Over a two year period 10,000 individuals aged 20-64 were randomly selected from the Electoral Roll and invited to take part in a telephone interview. The interview obtained information on lifetime work history, occupational exposures including dust/chemical exposures and certain physical and organizational factors, and selected health effects including respiratory symptoms. A total of 3,003 interviews were completed (37% response rate). Occupational exposure to dust/chemical and certain physical factors were disproportionately experienced by workers in the agricultural, trades, and manufacturing sectors, where prevalence were as high as 75%. However, exposures also occurred in other occupational groups not traditionally associated with hazardous exposures (for example the legislators and managers group). Substantial differences in exposure prevalence were observed between males and females and Maori and non-Maori workers. The occupations positively associated with current and adult-onset asthma included printers, bakers, and sawmill

laborers, as well as several occupations that have not been previously associated with asthma (for example teachers and certain sales professionals). Finally, a positive association between work-related stress and asthma was identified. This thesis indicates that the traditional chemical and physical exposures are common in the New Zealand working population, and that emerging factors such as organizational and psychosocial exposures are also prevalent and relevant to occupational health. While the distribution of occupational exposures and risk factors for asthma were concentrated in certain occupational groups, they were also more widely spread across the workforce than previously assumed. Besides occupation, the demographic characteristics of a worker also appeared to determine their occupational exposure. The findings of this thesis illustrate that workforce surveys are a valuable tool for assessing a wide range of exposures in a wide range of workers, and therefore should be carried out on a regular basis.
Gilbert, et.al (2007) find that health care workers were exposed to an array of physical, chemical, biological, and psychosocial hazards. At a national conference in Seattle May 11–13, 1983, hospital occupational medicine programs were characterized as lagging far behind those in industries with comparable illness and injury rates. Participants and speakers recommended that health care workers be trained to recognize occupational hazards; that epidemiologic, laboratory, and clinical studies be undertaken to discern trends and establish the mechanisms of effects from hazardous exposures; and that adequate employee health and safety programs be established in health care settings.

2.4 Psychological Hazard

Jennifer, (2002) find that Recruitment and retention of nurses is a major concern in healthcare provision in several countries. This study explored the relationship between perceived social support, job stress, health, and job satisfaction among nurses from 4 organizations in northwest England. A total of 350 usable questionnaires measuring stressors, perceived support, health, and job satisfaction, were obtained from a sample of 1,162 nurses drawn from 4 healthcare organizations. A follow-up study was conducted after 6 months. Results indicate that perceived organizational support is related to nurses' health and job satisfaction. Current interventions to increase support, which typically operate at individual or group level, may be limited in their effectiveness unless nurses' perceptions of organizational support are taken into account.

Zvi, et al, (2004) find that Age differences and relationships between occupational stressors, work environment, depressed mood, and propensity to leave were examined among 263 case managers (CMs) in community-based mental health agencies. For younger CMs, satisfaction with the supervisor, perceived job pressure and lack of organizational support were significant predictors of propensity to leave the job. Older CMs who reported lower satisfaction with financial rewards, the type of work they did, and greater use of avoidance resignation and help seeking coping strategies, were more likely to rate themselves higher on the depressed mood scale.

Judith and others, (2007) determine that in a national study of the work environment, physical, and mental well-being of more than 2600 Swedish nurses, 30% reported having experienced violence at work. Possible association between violence and a range of occupational, demographic, and lifestyle characteristics were studied. Stepwise multiple linear and logistic regressions were used to further examine risk factors for violence. Occupational factors with significant correlations to workplace violence were nursing

discipline (type of ward or facility), years of work experience, supervisory responsibilities, night work, work dissatisfaction, work-related musculoskeletal injury, and frequency of patient handling. Demographic/lifestyle factors related to violence were age, gender, smoking, coffee consumption at work, and use of alcohol to relax after work. The best fit linear regression model explained 17% of the variance in violence, 13%, of the variance in threat of violence. The logistic regression model confirmed an increased risk of violence and threats in psychiatric and geriatric settings. However, much remains unexplained about the etiology of violence in health care settings. This report provides the basis for a pilot intervention study currently in progress.

Zontek, et al, (2009) studied the effects of psychosocial factors on direct-care workers' injuries. Psychosocial factors of stress, job satisfaction, organizational climate, safety climate, and training were studied for their relationship to occupational injuries among direct care workers. When staff tenure was greater than 3 years, both training and job satisfaction were predictors of injury. A lack of training and poor job satisfaction was risk factors that increased the injury rate of direct care workers. Training alone was not effective in reducing worker injury. The study also showed a lower injury rate for home health aides when compared to nurse aids working in facilities such as nursing homes.

2.5 Ergonomic Hazards

A study of six hospitals in Turkey investigated lower back pain and risk factors among hospital staff using a 44-item questionnaire Karahan, et al, (2009). Hospital workers included nurses, physicians, physical therapists, hospital aides, technicians, and secretaries. Findings showed 65% of respondents had experienced lower back pain, with the highest prevalence in nursing staff. Associated risk factors for injury found to be statistically significant included younger workers, female sex, smoking, perceived work stress, and heavy lifting.

Alison M. Trinkoff (2009), and others find the hazards of nursing work can impair health both acutely and in the long term. These health outcomes include musculoskeletal injuries/disorders, other injuries, infections, changes in mental health, and in the longer term, cardiovascular, metabolic, and neoplastic diseases. In this study we will present major research findings that link common work stressors and hazards to selected health outcomes. These stressors include aspects of the way work is organized in nursing (e.g., shift work, long hours, and overtime) and psychological job demands, such as work pace. In addition, aspects of direct care work that influence nurse safety will be discussed, including the impact of physical job demands such as patient lifting and awkward postures, protective devices to prevent needlesticks, chemical occupational exposures, and potential for violence. Where possible, interventions that have demonstrated effectiveness to reduce the risk of illness and injury will be presented, as well as gaps in knowledge that can spur new lines of research inquiry.

Trim, Adams and Elliott (2003) reported that 80% of sharp injuries in Birmingham Hospital were not reported due to minimal knowledge and workload pressure. A British study also revealed that health workers' knowledge on inoculation injuries and glove use in the clinical situation was inadequate (Trim et al 2003). As an indication nurses were not following policies and procedures or Universal precautions as set up.

2.6 Biological Hazards

A study conducted in the United Kingdom reported that nurses and physicians experienced the highest incidents of needle stick injuries. The study further related that approximately 1% of such events were experienced by porters and members of the housekeeping staff, i.e. those most likely to be involved in the processing of HCW. Since the risks of transmission of HBV, HCV, and HIV through a single needle stick are based upon deep injuries involving freshly drawn blood of patients, it is difficult to extrapolate from these figures to risks incurred by those whose needle stick incidents resulted from their work with HCW. However, as there are no other scientific data available, one could infer from the figures of needle sticks discussed above that 40,000 of the 2 million (considering half are unreported) needle stick incidents which occur each year in health care facilities involve those responsible for treatment and/or disposal of HCW. If 1 out of every 3 deep needlestick injuries can result in HBV infections, this could translate to approximately 13,000 occupationally related cases of this viral infection in HCW workers. Similarly, it could be estimated that events involving sharps could contribute to 1,300 cases of HCV infections and 130 of HIV. Therefore, even if the actual rate of occupational acquisition of viral infections from HCW may not be as high as that extrapolated from available data; it is highly probable that needlesticks associated with HCW are potentially a significant occupational health risk. WHO, (2004).

Health Services Division, Ministry of Health, Kuala Lumpur, Malaysia, (2001) find that nurses are an integral component of the health care delivery system. In discharging their duties, nurses encounter a variety of occupational health problems which may be categorized into biological hazards, chemical hazards, physical hazards, and psychosocial hazards. A review of some examples of each of these four types of hazards is presented in this article. Particular attention has been devoted to hepatitis B, acquired immunodeficiency syndrome, tuberculosis, cytotoxic drugs, anesthetic agents, needle stick injury, back pain, and stress.

It is estimated that 100,000 needlestick injuries occur annually in the UK alone and 500,000 annually in Germany Ramphal *et al* (2010). Each year, 3 million health workers worldwide are exposed through the percutaneous route to blood borne pathogens: 2 million are exposed to hepatitis B, 900, 000 to hepatitis C and 170 000 to HIV. These injuries resulting in 15,000, 70,000 and 1000 infections, respectively. More than 90% of these infections occur in developing countries (WHO, 2006). These blood borne infections have serious consequences, including long-term illness, disability and death. In addition to HBV, HCV and HIV, other pathogens can be transmitted to health-care workers by sharps injury, including those that cause tuberculosis, diphtheria, herpes, malaria, Ebola plague, and Epstein-Barr infection Pruss-Ustun. A, *et al*., (2005).

2.7 Burnout Level

Rebecca, et al, (2004) Objective The present study extends our knowledge of the main determinants of burnout among nurses working in public hospitals and investigates the impact of work support on the stress burnout relationship.
A cross sectional, survey design. Data were collected from three public hospitals in south east Queensland, Australia.

A convenience sample of 273 nursing staff (235 females, 38 males) participated in the study. The influence of work stressors (i.e. Job specific stressors and role stressors) and work support (i.e. supervisor and coworker support) on burnout amongst public hospital nurses.

The result of this study Overall, nurses reported moderate levels of burnout(emotional exhaustion, depersonalization and reduced personal accomplishment Hierarchical regression analyses revealed that social demographic factors play a small, but significant role in predicting burnout. Role Overload, Job Conflicts and Role Boundary contributed To higher levels of Emotional Exhaustion. Role Boundary and Professional Uncertainty contributed to higher levels Depersonalization and Role Boundary. And Role Ambiguity contributed to lower levels of Personal Accomplishment. Only Supervisor Support had a significant main effect on Depersonalization and Personal Accomplishment. No evidence was found to indicate that work support had a buffering effect on the stress burnout relationship.

The results highlight the need for organizational interventions to reduce the workload placed on nurses. Supervisors are in a better position than coworkers to reduce burnout among nurses by clearly outlining the boundaries and expectations of the nursing role.

Taylor, &Barling.(2004) the study aimed to identify work-related problems to assist mental health nurses to locate the sources and effects of career fatigue and burnout, set up a dialogue between the participants and the identified sources of stress in the workplace to address the identified problems, and make recommendations to a local Area Health Service to prevent and manage stressors in the practice of mental health nursing. In total, 20 experienced registered nurses working as mental health nurses were enlisted through a snowballing method of recruitment, and convenience sampling was used to intentionally target those research participants who were interested in identifying sources of career fatigue and burnout in their work. Data collection was via semi structured interviews which used questions reflecting the first stage method of narrative therapy, in which relative influence questioning is used to externalize the problem.

The research questions related to the effect of burnout in mental health nursing across various interfaces, through the dominant story of emotional stress and fatigue. The sources of work-related problems for mental health nurses that contribute towards their experiences of career fatigue and burnout were: employment insecurity and actualization of the work-force; issues with management and the system; difficulties with the nature of the work, inadequate resources and services, problems with doctors, aggressive and criminal consumers, undervaluing consumers and nurses, physical and emotional constraints of the work setting, and nurse relationships and horizontal violence. The effects of stress were shown in dealing with and reacting to work place stressors.

Hall. (2006) Burnout is conceptualized as a syndrome consisting of three components emotional exhaustion, reduced personal accomplishment and depersonalization of clients or patients that occurs in individuals who work in the human service professions, particularly nursing. It has been observed that nurses are at a high risk of burnout and burnout has been described as the 'professional cancer' of nursing. This is the first New Zealand study to use the Maslach Burnout Inventory (MBI) and the Phase Model of Burnout to determine the extent and severity of burnout in a population of 1134 nurses.

Results revealed an overall 'low to average' level of burnout, suggesting that New Zealand nurses, apart from those in the 41-45 age group, are doing better than expected insofar as they are managing to avoid or not progress to the advanced phases of burnout. Possible explanations and directions for future research are presented.

Maria M, et al, (2008) the researcher investigation of the frequency of the burnout syndrome among the nursing personnel of all rungs in a Regional University Hospital.
The research was conducted in a Regional University Hospital. The questionnaire was distributed to 150 Registered Nurses (RN) and Nurses Assistants (NA) and the response rate was 42,6% (N=64). MBI questionnaire was used in order to identify levels of burnout syndrome. The analysis was made with the use of SPSS (version 15). Student t-test, ANOVA one way, chi-square (χ^2) was performed.

In generally occupational burnout appears to be in moderate levels. 9,37% of the sample experienced a high degree of burnout while 6,24% experienced a low one. Emotional exhaustion correlates significantly with working a rotation shift (p=0,05). Emotional exhaustion correlates significantly with resignation from hospital (p=0,002). Depersonalization correlates significantly with the multidisciplinary cooperation (p=0, 05).

At the end environmental factors such as shift work, multidisciplinary cooperation is shown to be related with the appearance of the syndrome.

Chapter Three

Methodology

Chapter Three

Methodology

This chapter presents the study design, study setting, study period, study population, sample and sampling method, inclusion criteria, exclusion criteria, study tools and ethical considerations. In addition to that, procedures of data entry and management and analysis will be presented.

3.1. Study design

As part of the process of planning successful research, the researcher selected a research design that provides a framework within which to conduct research which will produce answers to his chosen research questions. The aim of this study aim of the study is to assess the exposure of nurses to the occupational hazards and their compliance of practice safety measures in the West Bank governmental hospitals.

This is analytical cross sectional study, as this study is considered suitable in describing the variables, their distribution patterns, and examining associations between the variables and enables the researcher to meet the study objectives over a short period of time. It is also, provides detailed information and stimulates further research or studies.

3.2. Study Population

The target population consists all nurses who are working in the Medical, Surgical, Pediatric and Gynecology & Obstetric Department on Ten Governmental Hospitals in West Bank. The total number of nurses working in these departments is 255 nurses distributed in ten hospitals.

3.3. Setting of the study

The study was carried out at the Medical, Surgical, Pediatric and Gynecology & Obstetric Department on Ten Governmental Hospitals in West Bank. Jenin (Khalil Sulaiman Hospital), Tulkarm (Thabit Thabit Hospital), Nablus (Rafidia Hospital), Beit Jala (Al Housein Hospital), Jericho (Jericho Hospital), Hebron (Alia Hospital), Qalqilia (Darweesh Nazal Hospital), Yatta (Abu Al Hassan Al Kassem Hospital), Salfit (Yasser Arafat Hospital), Ramallah (Palestine Medical Complex).

3.4. Inclusion Criteria

All nurses who are working in the Medical, Surgical, Pediatric and Gynecology & Obstetric Department on Ten Governmental Hospitals in West Bank were included in the study.

3. 5. Exclusion Criteria

The researcher excluded the new nurses who has employed after 31/12/2011, and excluded Nurses who work in primary health care, Nurses working in private hospitals and UNARWA and NGOs and Two governmental hospital (Al- Watany and Bethlehem (Psychiatric Hospital) because the hospitals doesn't have Surgical, Pediatric and Gynecology & Obstetric Department.

3. 6. Response Rate

The total number of population in the study 255 nurses, number of respondents 239 nurses, the response Rate represents (93.7%). Number of females' response 148 nurses represents (61.6 %) and number of males 91 nurses represent (38.1%).

3.7. Period of the study

The theses proper in two semester; in the first semester prepare proposal from January 2012 to May 2012, in the second semester September 2012 to September 2013 developing questionnaire, data collection, data analysis and writing theses.

3.8. Construction of Questionnaire

The survey tool was used for this study. The tool used is eleven pages long and contains data in six areas: general nurse data (demographic data), occupational hazard, safety climate and psychological risk, needed equipment at work, level of satisfaction and level of burnout in hospitals.

The first category includes nurses' age, gender, governorate, marital status, family dependent, monthly salary, years of experience, work department, qualification, performing another job and if yes the extra hours. The second category includes nurses' perception and knowledge about exposure to occupational hazard. The third includes safety climate and psychological risk, needed equipment and some procedures needed in the fourth category; Fifth category is about level of satisfaction.

Level of burnout in hospitals among nurses with (interpretation, depersonalization and personal achievement) which are Maslach Burnout Inventory (MBI) is the final category in the study tool. All participating nurses were tested by the study tool (the questionnaire). The frequencies, standard deviations, percentages were recorded using classification system. This system has been tested for validity and has been subjected for judgment. It has been given an excellent consent.

3.9. Content validity

Validity is the degree to which an instrument measures what it is supposed to be measuring (Polit et al 2001).

The study was conducted before data collocation by the help of experts to insure relevancy, clarity and compliance. Content validity is subjective estimate of measurement based on garment rather than statistical analysis. In order to validate the instrument used, the designed questionnaire with governing letter, title and objectives of the study were sent to six experts of deferent background including specialists in statistics, managers, and experts in public health since (Appendix E).

3.10. Reliability

The researcher ensured reliability by explaining in simple words the purpose of the study to the respondents. Questionnaires were written in simple language and explanations of questions were offered to the respondents. Because the researcher collected data herself, no inter – rater reliability is involved. A pilot study was also conducted**.**
The reliability of the study tool was tested by using Cronbach Alpha Test and it reached (0.79), which ensures higher validity.

3.11. Pilot study

A pilot study is a small scale preliminary study carried out prior the main study to check the feasibility or to improve the design of the study (Haralambos & Holborn, 2000: 998). The pilot study helps to test the feasibility of the proposed main study, to identify potential problems with the proposed design, to aid development or refinement of the data collection tools, and to give the investigator experience with the proposed participants, the proposed setting and the proposed procedure (Burns & Grove, 2007). Also, it gives a fair idea about the length of the questionnaire, and if all the participants understand the questions similarly.

3.12. Data collection

Questionnaires were used to collect the data, whereby the respondents completed the instruments themselves. A questionnaire refers to a self – report instrument where the respondent writes his or her answers in response to printed questions on a document. The researcher distributed the questionnaires per hand to the respondents and collected them back. The researcher reviewed over the completed questionnaires to ensure completion of all information needed.

3.13. Ethical Considerations

The searcher respected ethical principles by obtaining an official letter of request was sent to Ministry of Health to get approval from the Nursing Unit in Ministry the letter in Arabic language clarifying the Purpose of the study, in the other hand every Nurse participant was provided with an explanatory form that includes consent form.

3.14. Data analysis

Descriptive analysis was completed using statistical package for social science SPSS version 17.0.

3. 15. Statistical process

After gathering the responds, they have been codified, entered the computer and statically processed by using the statistical package for social science (SPSS)
The statistical procedures used in the study are:
- Frequencies, means, standard deviations and percentages.
- Cronbach Alpha test. Examine the reliability of the data.
- T- test for two independent samples. Examine the validity of the data.
- One Way ANOVA test. Examine the validity of the data
- LSD Test for distance comparisons.

3.16. Limitation of the study

- Most of the employees of the hospital have unstable or unfavorable work schedules. This made the conducting of interviews very difficult.
- Financial constraints-in the course of the research, the researcher had to spend a lot of money in printing of the research work, photocopying relevant research materials, allowances to research assistants, travelling and transport cost to the site to gather information.
- The Political situation and barriers when transfer between Governorate to fill the questioners.
- Limited information about occupational hazards in Palestine.
- Absent of facility or agency that take care of occupational health hazards.

Summary

This chapter discussed the study design, study setting, study period, study population, sample and sampling method, inclusion criteria, exclusion criteria, study tools and ethical considerations. In addition to that, procedures of data entry and management and analysis and explain how the data collected and analyzed then set the limitation of study.

Chapter Four

Results

Chapter Four

Results

4.1 Introduction

The chapter present the results of the study have been addressed including, the results of revenant statistical tests to explore and identify the relationship between different study variables with tables.

For achieving the study purpose, a questionnaire consisting of (100) paragraphs has been developed, distributed among of (239) individuals of study sample, gathered, codified, entered the computer and statistically processed by using the statistical package of social science (SPSS). The demographic details are shown in Table 4.2

4.2. The characteristics of all surveyed nurses Demographical characteristics

Variable		Frequency	Percentage
Age	Less than 25 years	62	25.9
	26-35	132	55.2
	36-45	43	18.0
	above 46	2	0.8
Gender	Male	91	38.1
	Female	148	61.9
Marital Status	Single	94	39.3
	Married	137	57.3
	Divorced	7	2.9
	Widowed	1	0.4
Family dependent	Less than 5	175	73.2
	6-10	60	25.1
	11-15	2	0.8
	Above 16	2	0.8
Monthly salary	Less than 2500	37	15.5
	2501-3500	155	64.9
	3501-4500	43	18.0
	More than 4500	4	1.7
Years of experience	1-9 years	148	61.9
	10-19 years	70	29.3
	20-29 years	16	6.7
	Above 30 years	5	2.1
Department	Medical department	76	31.8
	Surgical department	57	23.8
	Pediatric department	54	22.6
	Gynecology & Obstetric department	52	21.8
Qualification	Diploma 2 years	33	13.8
	3 years Diploma	6	2.5
	B.A	187	78.2
	M.A	13	5.4
Performing other jobs	Yes	20	8.4
	No	195	81.6
	Sometimes	24	10.0
If yes, How many hours?	.00	195	81.6
	Less than 3 hours/weekly	5	2.1
	Less than 6 hours/weekly	21	8.8
	Less than 10 hours/weekly	18	7.5

4.3 Study Questions results

Study questions results are divided into two sections; Occupational hazards and level of burnout among nurses.

4.3.1 Section One: Occupational hazards

For achieving the questions purpose, means, standard deviations, percentages and response degree for each item were used in questionnaire.

The items percentages were given the following scale:

- More than 80.0% very High
- From 70.0-79.9% High
- From 60.0-69.9% Medium.
- From 50.0-59.9% Low
- Less than 50.0% very Low.

Referring to table 1 in appendix A it is clearly shown that the response degree about the (Nurses perception and knowledge about exposure to occupational hazards) are from medium to very high degree according to the percentages which ranged between (67.45%) to(86.86%) for the items of (Hospital management keeps on reminding nurses about occupational safety measures) and (I'm aware of my legal rights if I'm exposed to health hazards). This can be summarized that some items got low or vary low degree; while others got medium such as number (23); and number (21) got high and numbers (12, 13, 14, 15, 16, 17, 18, 19, 20, 22)got very high degree.

4.3.1.1 What are the safety climate and psychological risks among nurses?

Referring to table 2 in appendix A it is clearly shown that that the response degree about the (Safety climate and psychological risk**)** are from low to very high degree according to the percentages which ranged between (53.47 %) to(87.36%) for the items.

(I feel loss of self confidence) and (There are too many responsibilities). This can be summarized that some items got low number (34, 35, 33) or very low degree; while others got medium such as number (27, 36%); and number (29, 26, 31, 30, 28, 32) got high and numbers (25, 24%)got very high degree. In the other hand Safety climate and psychological risk, that are very high degree of the work has much responsibilities with different kinds of work which causes too much time pressure with inadequate time support. The results of these work conditions indeed caused the nurse to be tired and fatigue and too much mental pressure. Working too much overtime is high among the nurse occupation. The nurses have medium feeling of boring, having tedious and defeating conditions.

On the contrary, feeling loss of control, emptiness and low self confidence are low feelings among nurses. This is positive. The total degree of the domain two was (71.08%) which refers to high degree.

4.3.1.2 What are the most important symptoms of (Psychological, Chemical, Physical, biological and ergonomic) occupational hazards that the nurses have due to their work?

Referring to table 3 in annex A it is clearly shown that the sleeping disturbance has the highest percentage in psychological occupational hazards (51.0%) then anxiety (44.8%). Similarly, redness of eye (25.1%), burning of eye (14.2%), Visual disturbance (13.8%), redness in skin (20.0%), Cough in respiratory are the high in chemical symptoms among nurses.

Visual problems (21.33%) appeared as physical symptoms among nurses. Hepatitis B appeared as the most contiguous diseases threaten the workers.

In Ergonomic Symptoms, pain in all body parts is the highest symptom with percentages of (51.0%) in head and neck, (41.0%) in shoulders, (56.1%) in back (24.3%) in the upper limps, (41.9) in lower limps and (26.4%) in Pelvis.

In general, table (4) shows that the ranks of hazards according to the severity that the study sample feel was (biological in the first place, then ergonomic. The psychological in the third place with medium degrees. Chemical and physical come later with low degrees.
Referring to table 4 in annex A it is clearly shown that the ranks of hazards according to the severity that the study sample feel was (biological in the first place represent (66.45%), then ergonomic (64.10%). The psychological in the third place (60.17%) with medium degrees. Chemical represent (58.08%) and physical (55.73%) come later with low degrees.

4.3.1.3 What are the most important things needed at work for the safety of the nurses?

Regarding the results that showed in table 5 at annex A that the safety measures represent the most important things needed at work with percentage (94.90%) then (94.56%) of participants needed to washing hands at work, the results revealed that (91.38%) of participants needed to wearing gloves and (90.46%) needed to wearing gown the results also showed that (86.78%) of participants needed to safety training, also the results showed that (81.34%) of participants need to wearing special clothes, and that (75.90%) carrying heavy weights, finally the results showed the lowest percentage for things needed at work reported to ear-protection headset that represent (56.15%) of participants in the study. The total degree of the domain was (81.17%) which refers to very high.

4.3.1.4 What is the level of satisfaction among nurses?

Referring to table 6 in appendix A it is clearly shown that the response degree about the (level of satisfaction) are from medium to very high degree according to the percentages which ranged between (60.10) to(83.93) for the items of (I feel isolated from my colleagues at work) and (My colleagues respect and like me). The study also revealed that high estimation in some items in domain of level of satisfaction among nurses such as (I would function better if it was less on the ward) that represent (79.92%) from participants and (In the last year, my work has grown more interesting) that represent (71.10%) of participants in study.
The results showed that the level of satisfaction among nurses was (76.19%) which indicates high estimation and this due to the fact of good relationship between colleagues and other facts of the meaningful of the job, respect gained from the others, the good team, confidence and other factors.

4.4 The results of the hypotheses

To investigate this study more robustly, study relation between nurses exposure to occupational hazards, ANOVA test and Two independent sample t- test were applied in an attempt to better find out factors influencing of the nurses exposure to occupational

hazards and compliance with practice safety measures at governmental hospitals in the West Bank according to age, gender, governorate, marital status, number of family dependent, monthly income, years of experience and department at work.

4.4.1 Relation between nurses' exposure to occupational hazards and the variable of age

Referring to table 7 in appendix A it is clearly shown that the Statistical description of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in West Bank due to the variable of age with domain of perception and knowledge that the highest mean represents (4.62%) for the age group above 46 and the lowest mean for age group 26-35 that represents (3.97%).

In the domain of safety climate and psychological risk that the highest mean represents (3.88%) for the age group above 46 and the lowest mean for age group 26-35 that represents (3.49%).

Also, the same table shows that the Statistical description of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in West Bank due to the variable of age with domain of Needed equipment that the highest mean represents (4.11%) for the age group less than 25 years and the lowest mean for age group above 46 that represents (3.91%).

In the domain of level of satisfaction that the highest mean represents (4.12%) for the age group above 46 and the lowest mean for age group 36-45 that represents (3.66%).

Finally the table shows that the total degree for all domains that the highest mean represents (4.14%) for the age group above 46 and the lowest mean for age group 36-45 that represents (3.79%).

4.4.2 The results of One Way ANOVA for the degree of the nurses' exposure to occupational hazards and the variable of age

Referring to table 8 in appendix A it is clearly shown that there are no significant differences at (α =0.05) level about the degree of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in the West Bank due to the variable of age The significant was (0.062) which is less than (0.05) and that means there are no differences of statistical significance relation between the variable domains.

4.4.3 Relation between the nurses' exposure to occupational hazards and the variable of gender

Referring to table 9 in annex A it is clearly shown that the Statistical description of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in West Bank due to the total degree for all domain in the variable

of gender that the highest mean represent (3.95%) for male and the lowest mean for female that represent (3.80%).

And it has been shown from the table that there are significant differences at (α =0.05) level about the degree of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in the West Bank due to the variable of gender. The significant was (0.001%).

These differences are for male nurses due to the means of them which is (3.95%) which is more than the females' whose was (3.80%). As for the variable domains, there are significant references at (α =0.05) level on first and second domains (Perception and knowledge and Safety climate and physiological risk) and these differences are for males in the first and second domains.

4.4.4 Relation between the nurses' exposure to occupational hazards and the variable of governorate

Referring to table 10 in appendix A it is clearly shown that the Statistical description of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in West Bank due to the total degree for all domain of variable of governorate that the highest mean represent (3.95%) for Qulqeliah Nurses and the lowest mean Tulkarem Nurses that represent (3.68%).

4.4.5 The results of One Way ANOVA for the degree of the nurses' exposure to occupational hazards and the variable of governorate

Referring to table 11 in appendix A it is clearly shown that there are no significant differences about the degree of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in the West Bank due to the variable of governorate.

The significant was (0.25%) which is more than (0.05) and that means there are no differences between the variable levels.

Jenin, Nablus, Qalqeliah and Ramallah nurses were more in (safety climate and psychological risk) than those in Tulkarem governorate nurses. Similarly, Bethlehem governorate nurses are more satisfied than those of the other governorates nurses. Moreover, Jenin, Selfeet, Bethlehem and Hebron nurses are more satisfied than Jericho nurses.

As for the variable domains, there are significant differences at (α =0.05) level on second and fourth domain. And in order to know for who the differences are, LSD Test for comparable distance comparable was used to clarifying the differences which is shown in the following tables

4.4.6 Shows LSD Test for comparable distance comparable for the degree of the second domain (safety climate and psychological risk)

Level	Jenin Nurses	Nablus Nurses	Qalqeliah Nurses	Ramallah Nurses
Tulkarem Nurses	-0.44393*	-0.57453*	-0.63786*	-0.62138*
Selfeet Nurses	***	-0.46964*	-0.53297*	-0.51648*

***. The mean difference is significant at the 0.05 level.**

It has been shown from the previous table that there are differences in domain of (safety climate and psychological risk) between Tulkarem nurses and (Jenin, Nablus, Qalqeliah and Ramallah Nurses) and these differences are for the other Nurses in Governorates. On the other hand, there are differences in the domain of (safety climate and psychological risk) between Salfeet nurses and (Nablus, Qalqeliah and Ramallah Nurses) and these differences are for the other Nurses Governorates

4.4.7 Shows LSD Test for distance comparable for the degree of the forth domain (level of satisfaction)

Level	Tulkarem Nurses	Nablus Nurses	Ramallah Nurses	Jericho Nurses
Bethlehem Nurses	.61275*0	.44861*0	.41422*0	.73829*0

***. The mean difference is significant at the 0.05 level.**

Level	Jenin Nurses	Selfeet Nurse s	Bethlehem Nurses	Hebron Nurses
Jericho Nurses	-0.61684*	-0.50397*	-0.73829*	-0.47302*

***. The mean difference is significant at the 0.05 level.**

It has been shown from the previous table that there are differences in domain (level of satisfaction) between Bethlehem nurses and (Tulkarem, Nablus, Ramallah and Jericho nurses)and these differences are for Bethlehem nurses . On the other hand, there are differences between Jericho nurses and (Jenin, Selfeet, Bethlehem and Hebron nurses) and these differences are for the other nurses in governorates.

4.4.8 Relation between the nurses exposure to occupational hazards and the variable of marital status

Referring to table 12 in appendix A it is clearly shown that the Statistical description of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in West Bank due to the variable of marital status and total degree for all domain that the highest mean represent (4.41%) for the widowed group and the lowest mean for divorced group that represent (3.76%).

4.4.9 The results of One Way ANOVA for the degree of the nurses' exposure to occupational hazards and the variable of marital status

Referring to table 13 in appendix A it is clearly shown that there are no significant differences at (α =0.05) level about the degree of the nurses exposure to occupational

hazards and compliance with practice safety measures at governmental hospitals in the West Bank due to the variable of marital status. In total domain the significant was (0.29%).

4.4.10 relation between the nurses' exposure to occupational hazards and the variable of number of family dependent

Referring to table 14 in appendix A it is clearly shown that the Statistical description of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in West Bank due to the variable of number of family dependent, the total degree for all domain that the highest mean represent (4.43%) for the group of 11-15 member and the lowest mean for group of less than 5 member that represent (3.83%).

4.4.11 the results of One Way ANOVA for the degree of the nurses exposure to occupational hazards the variable of Number of family dependent

Referring to table 15 in appendix A it is shown that there are no significant about the degree of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in the West Bank due to the variable of number of family dependent. There are no significant differences at (α =0.05) level on all the domains.

4.4.12 relation between the nurses' exposure to occupational hazards and the variable of monthly salary

Referring to table 16 in appendix A it is clearly shown that the Statistical description of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in West Bank due to the variable of monthly salary, the total degree for all domain that the highest mean represent (3.94%) for the less than 2500 NIS group and the lowest mean for more than 4500 NIS group that represent (3.71%).

4.4.13 the results of One Way ANOVA for the degree of the nurses exposure to occupational hazards and the variable of monthly salary

Referring to table 17 in appendix A it is that there are no significant differences at (α =0.05) level about the degree of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in the West Bank due to the variable of monthly salary. The total degree in all domains significant was (0.379%).

4.4.14 Relation between the nurses' exposure to occupational hazards and the variable of Years of experience

Referring to table 18 in appendix A it is clearly shown that the Statistical description of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in West Bank due to the variable of years of experience the total degree for all domains that the highest mean represent (4.00%) for the 20-29 years group and the lowest mean for above 30 years group that represent (3.77%).

4.4.15 the results of One Way ANOVA for the degree of the nurses exposure to occupational hazards and the variable of years of experience

Referring to table 19 in appendix A it is clearly that there are no significant differences at (α =0.05) level about the degree of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in the West Bank due to the variable of years of experience. The significant was (0.33%).

4.4.16 Relation between the nurses' exposure to occupational hazards and the variable of department at work

Referring to table 20 in appendix A it is clearly shown that the Statistical description of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in West Bank due to the variable of department at work with all domain that the highest mean represent (3.92%) for the surgical department and the lowest mean for pediatric department that represent (3.79%).

4.4.17 shows the results of One Way ANOVA for the degree of the nurses exposure to occupational hazards and the variable of work department

Referring to table 21 in appendix A it is that there are no significant differences at (α =0.05) level about the degree of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in the West Bank due to the variable of work department. The significant was (0.21%) the researcher opinion this is due to the similarly of hazards in different departments and nurses exposure to this hazards.

4.5 Section Two: level of burnout among nurses

To determine the risk of burnout among nurses, The MBI explores three components: exhaustion, depersonalization and personal achievement.

4.5.1 Analysis of the level of burnout categories.

The aim of this section was to examine the level of burnout among nurses (exhaustion, depersonalization and personal achievement).The following criteria were given in order to show the burden degrees of the results

In this section, the burnout level among nurses in three domains (exhaustion, depersonalization and personal achievement) was tested. Table (22) show that the results show that depersonalization scored high degree with total mean of (18.66%). Exhaustion and personal achievement scored moderate degree with total means of (11.40% and 14.00%) according to (MBI Scale).

The researcher concluded that high level at depersonalization refer to pressure in the work, low salary and other social problems while moderate level Exhaustion and personal achievement refer to acceptable level of income and respectful system at living.

In order to clarify the relationship between the nurses' demographic data(age, gender, governorate, marital status, family dependent, salary, years of experience and the department in the hospital) and the level of burnout (Exhaustion, depersonalization and personal achievement), One Way ANOVA AND t- Test were used.

4.5.2 Relation between of the of burnout among nurses and the variable of age

Referring to table 23 in appendix A it is clearly shown that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of age with domain Exhaustion that the highest mean represent (22.93%) for the 36-45 years of age group and the lowest mean for above 46 years of age group that represent (11.00%).

Also, the same table shows that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of age with domain depersonalization that the highest mean represent (21.30%) for the 36-45 years of age group and the lowest mean for above 46 years of age group that represent (14.00%).
Finally the table shows that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of age with domain personal achievement that the highest mean represent (33.50%) for the above 46 years of age group and the lowest mean for less than 25 years of age group that represent (29.40%).

4.5.3 The results of One Way ANOVA for the degree of the nurses burn out and the variable of age

Referring to table 24 in appendix A it is clearly shown that there are no significant differences at (α =0.05) level about the degree of the nurses burnout at the governmental hospitals in the West Bank due to the variable of age in section one and three. That there are no significant differences at (α =0.05) level about the degree of the nurses burnout at the governmental hospitals in the West Bank due to the variable of age in section one and three (Exhaustion and personal achievement). On the other hand, that are significant differences at (α =0.05) level about the degree of the nurses burnout at the governmental hospitals in the West Bank due to the variable of age in section two (depersonalization) and these differences are for high groups of age.

More the high age of the nurses, the more depersonalization and this due to the fact of Because of more family responsibility and old age this may cause the unhealthy status. In the other hand depersonalization in section 2 has significant differences for high group of age because aging and more family responsibility.

On the other hand , there are significant differences at (α =0.05) level on section two (Depersonalization) and in order to know for who the differences are, LSD Test for comparable distance comparable was used to clarifying the differences which is shown in the following table

4.5.4 Shows LSD Test for comparable distance comparable for the degree of the second section of burnout (Depersonalization)

Level	26-35	36-45
Less than 25 years	-3.69770*	-5.68942*

***. The mean difference is significant at the 0.05 level.**

It has been shown from the previous table that there are differences between the domain of less than 25 years old and (26-35 & 36-4) and these differences are for the other high groups of age.

4.5.5 Shows t- test for the for the degree of the nurses and the variable of gender

Referring to table 25 in appendix A it is that there are significant differences at (α =0.05) level about the burnout among nurses at the governmental hospitals in the West Bank due to the variable of gender in section three (Personal achievement).

These differences are for female nurses due to the means of them which is (33.67%) which is more than the males' whose was (28.86%).

As for the section one and two, there are no significant references at (α =0.05) level on first and second sections (Exhaustion and depersonalization).

Female nurses are more in personal achievement than male and the reason is Because of her feeling which shows high self-confidence which refers to her role in the society.

4.5.6 Relation between the burnout among nurses and the variable of governorate

Referring to table 26 in appendix A it is clearly shown that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of governorate with domain Exhaustion that the highest mean represent (24.57%) for the Jericho Nurses and the lowest mean for Tulkarem Nurses that represent (11.18%).

Also, the same table shows that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of governorate with domain depersonalization that the highest mean represent(21.52%) for the Nablus Nurses and the lowest mean for Tulkarem Nurses that represent (15.18%).

Finally the table shows that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of governorate with domain personal achievement that the highest mean represent (40.36%) for the Nablus Nurses and the lowest mean for Jaricho Nurses that represent (24.42%).

4.5.7 The results of One Way ANOVA for the degree of the nurses burnout and the variable of governorate

Referring to table 27 in appendix A it is that there are no significant differences at (α =0.05) level about the degree of the nurses burnout at the governmental hospitals in the West Bank due to the variable of governorate in section two (depersonalization).

Tulkarem nurses are less in (exhaustion) than other governorates nurses. On the other hand, Tulkarem and Jericho nurses are less in (personal achievement) than the other governorates nurses. The researcher found that Tulkarem nurses have less Exhaustion because of less pressure at work and available of human resources than other Governmental Hospitals which causes personality achievement.

On the contrary, there are significant differences at (α =0.05) level on section one and three (exhaustion and personal achievement) and in order to know for who the differences are, LSD Test for comparable distance comparable was used to clarifying the differences which is shown in the following table

4.5.8. LSD Test for comparable distance comparable for the degree of the second section of burnout (exhaustion)

Level	Jenin Nurses	Nablus Nurses	Qalqeliah Nurses	Selfeet Nurses	Ramallah Nurses	Hebron Nurses	Jericho Nurses
Tulkarem Nurses	-6.63300*	-12.87081*	-10.24675*	-9.43723*	-10.96104*	-8.74318*	-13.38961*

***. The mean difference is significant at the 0.05 level.**

It has been shown from the previous table that there are differences in domain exhaustion between (Tulkarem Nurses and (Jenin, Nablus, Qulqeliah,Selfeet,Ramallah, Hebron, and Jaricho nurses)and these differences are for the other nurses.

4.5.9 Shows LSD Test for comparable distance comparable for the degree of the second section of burnout (personal achievement)

Level	Jenin Nurses	Nablus Nurses	Qalqeliah Nurses	Selfeet Nurses	Hebron Nurses
Tulkarem Nurses	-11.35185*	-14.86842*	-9.21429*	-8.16667*	-10.10000*

***. The mean difference is significant at the 0.05 level.**

Level	Jenin	Nablus	Qalqeliah	Selfeet	Hebron
Jericho	-12.42328*	-15.93985*	-10.28571*	-9.23810*	-11.17143*

***. The mean difference is significant at the 0.05 level.**

It has been shown from the previous table that there are differences in domain personal achievement between Tulkarem Nurse and (Jenin, Nablus, Qulqeliah,Selfeet,Ramallah, and Hebron nurses).and these differences are for the other. Similarly, there are differences between Jericho Nurses and (Jenin, Nablus, Qulqeliah,Selfeet,Ramallah, and Hebron nurses). And these differences are for the others nurses.

4.5.10 Relation between the burnout among nurses and the variable of Marital stratus

Referring to table 28 in appendix A it is clearly shown that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of marital status with domain Exhaustion that the highest mean represent 25.0000 for the divorced and the lowest mean for married that represent (18.31%).

Also, the same table shows that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of marital status with domain depersonalization that the highest mean represent (29.00%) for the widowed and the lowest mean for married that represent (17.62%).

finally the table shows that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of marital status with domain

personal achievement that the highest mean represent (40.00%) for the widowed and the lowest mean for married that represent (31.43%).

4.5.11 the results of One Way ANOVA for the degree of the nurses burnout and the variable of marital status

Referring to table 29 in appendix A it is that there are no significant differences about the degree of the nurses burnout at the governmental hospitals in the West Bank due to the variable of marital status in all sections (exhaustion, depersonalization, and personal achievement).

Table (29) shows that there are no significant differences at (α =0.05) level about the degree of the nurses burnout at the governmental hospitals in the West Bank due to the variable of marital status in section one two and three (Exhaustion, depersonalization and personal achievement.

4.5.12 relation between burnout among nurses and the variable of number of family dependent

Referring to table 30 in appendix A it is clearly shown that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of number of family dependent with domain Exhaustion that the highest mean represent (33.00%) for the 11-15 number of family dependent and the lowest mean for above 16 number of family dependent that represent (16.00%).

Also, the same table shows the table that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of number of family dependent with domain depersonalization that the highest mean represent (24.00%) for the 11-15 number of family dependent and the lowest mean for above 16 number of family dependent that represent (9.50%).

finally the table shows that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of number of family dependent with domain personal achievement that the highest mean represent (44.0%) and the lowest mean for less than 5 of family dependent that represent (30.71%).

4.5.13 shows the results of One Way ANOVA for the degree of the nurses burnout and the variable of number of family dependent

Referring to table 31 in appendix A it is that there are no significant differences at (α =0.05) level about the degree of the nurses burnout at the governmental hospitals in the West Bank due to the variable of number of family (dependent in all sections exhaustion, depersonalization, and personal achievement)..

4.5.14 relation between burnout among nurses and the variable of monthly salary

Referring to table 32 in appendix A it is clearly shown that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of monthly salary with domain Exhaustion that the highest mean represent (20.79%) for the 3501-4500 NIS and the lowest mean for less than 2500 NIS that represent (16.45%).

Also, the same table shows the table that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of monthly salary with domain depersonalization that the highest mean represent(21.16%) for the 3501- 4500 NIS and the lowest mean for less than 2500 NIS that represent (15.70%).

finally the table shows that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of monthly salary with domain personal achievement that the highest mean represent(33.18%) for the 2501-3500 NIS and the lowest mean for more than 4500 NIS that represent(26.75%).

4.5.15 the results of One Way ANOVA for the degree of the nurses burnout and the variable of monthly salary

Referring to table 33 in appendix A it is that there are no significant differences at (α =0.05) level about the degree of the nurses burnout at the governmental hospitals in the West Bank due to the variable of monthly salary in all sections exhaustion, depersonalization, and personal achievement). The significant points were (0.36%, 0.13% and 0.23%).

4.5.16 relation between burnout among nurses and the variable of years of experience

Referring to table 34 in appendix A it is clearly shown that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of years of experience with domain Exhaustion that the highest mean represent 20.8000 for the above 30 years of experience and the lowest mean for 1-9 years of experience that represent (18.93%).

Also, the same table shows that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of years of experience with domain depersonalization that the highest mean represent 23.2000 for the above 30 years of experience and the lowest mean for 1-9 years of experience that represent (18.25%).

finally the table shows that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of years of experience with domain personal achievement that the highest mean represent 35.4000 for the above 30 years and the lowest mean for 10-19 years of experience that represent (31.45%).

4.5.17 shows the results of One Way ANOVA for the degree of the nurses burnout and the variable of years of experience

Referring to table 35 in appendix A it is clearly that there are no significant differences at (α =0.05) level about the degree of the nurses burnout at the governmental hospitals in the West Bank due to the variable of years of experience in all sections exhaustion, depersonalization, and personal achievement)..The significant points were (0.52%, 0.56% and 0.7%).

4.5.18 relation between burnout among nurses and the variable of department at the work

Referring to table 36 in appendix A it is clearly shown that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of

department at the work with domain Exhaustion that the highest mean represent (21.53%) for the Medical department and the lowest mean for Gynecology& Obstetric that represent (17.63%).

Also, the same table shows that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of department at the work with domain depersonalization that the highest mean represent (20.18%) for the pediatric department and the lowest mean for Surgical department that represent (16.84%).
Finally the table shows that the Statistical description of the of burnout among nurses at governmental hospitals in West Bank due to the variable of department at the work with domain personal achievement that the highest mean represent (35.69%) for the Gynecology & Obstetric department and the lowest mean for Surgical department that represent (28.91%).

4.5.19. The results of One Way ANOVA for the degree of the nurses burnout and the variable of department at the work

Referring to table 37 in appendix A it is that there are no significant differences at (α =0.05) level about the degree of the nurses burnout at the governmental hospitals in the West Bank due to the variable of department at the work in all sections exhaustion, depersonalization, and personal achievement).The significant points were (0.184% and 0.383%).

On the contrary, there are significant differences at (α =0.05) level on section three (personal achievement) and in order to know for who the differences are, LSD Test for comparable distance comparable was used to clarifying the differences which is shown in the following table:

4.5.20 LSD Test for comparable distance comparable for the degree of the second section of burnout (personal achievement)

Level	Surgical department	Pediatric department	Gynecology & Obstetric department
Medical department	.574560	-5.06871*	-6.20547*
Surgical department	***	-5.64327*	-6.78003*
Pediatric department		***	1.13675
Gynecology & Obstetric department	***	***	***

***. The mean difference is significant at the 0.05 level.**

It has been shown from the previous table that there are differences between) medical department) and (Pediatric department and Gynecology & Obstetric department) and these differences are for the Pediatric department and Gynecology & Obstetric department.

Similarly, there are differences between Surgical department) and (Pediatric department and Gynecology & Obstetric department) and these differences are for the Pediatric department and Gynecology & Obstetric department.

Chapter Five

Discussion

Chapter Five

Discussion

5.1. Socio- Demographic data

The study results revealed that (25.9%) of participants belong to age group less than 25 years opposed to (55.2%) who were in age group between (26-35) years old and only (0.8%) were more than 46 years old that revealed the most of participants from young of age group. This maybe due to the age group above 46 years old retirement.

Pertaining to population of the study, (61.9%) were females and (38.1%) males. This finding is in line with the Palestinian Center Bureau of Statistics (2007) which estimated that more than half of nurses in nursing sector were females. This result is compatible with statistics of the Palestinian Ministry of Health (2008) which estimated that (60%) of nurses in West Bank were females.

The result also showed that (57.3%) of participants were married and (39.3%) of participants were single and only (0.4%) were widowed.

Regarding department of hospitals (31.8%) of participants were working in the Medical department. This high percentage may be due to the fact that department needs more nurses than other departments because the medical patients need more care.

The result also showed that (64.9%) of participants had monthly salary between (2501 – 3500NIS). Only (1.7%) were more than (4500NIS). This due to the low average of salary in Palestinian Authority and lack of human resources.

The results revealed that (61.9%) of participants belong to group of years of experience between (1 – 9 years). Regarding to qualification (78.2%) of participants in the study have B.A degree and only (2.5%) have 3 years diploma as the Ministry of Health has programs to develop the nurses.

The results also showed that (81.6%) of participants answer (No) about performing other jobs. These due to the law of Ministry of Health which doesn't allow another job.

5.2. Nurses perception and knowledge about exposure to occupational hazards

The results in table (1) annex A showed the present status of perception and knowledge among nurses in occupational hazards perception and knowledge domain, which are very high on items of (awareness of legal rights, having sufficient knowledge about occupational hazards, knowing the preventative measures during work , knowing the procedures of safety measures, awareness of occupational hazards, mastering using tools and equipments of occupational safety , knowing the hazards and avoiding these hazards, knowing the effects of these hazards and knowing the procedures when something goes wrong) . These high results are positive and refer to high and adequate knowledge that the nurses have about occupational hazards they exposed to.

On the same token, item of high level is the knowledge of whom to report for in case of exposing to hazards. The medium estimation level appeared in the item of Hospital management keeps on reminding nurses about occupational safety measures.

The total degree in the same table that has a percentage of (80.38%) refers to very high degree about the sufficient knowledge among nurses

The results of these study are inconsistent with (Tuvadimbwa J, 2005) who found that the results indicated a significant number of registered nurses have knowledge on occupational hazards, although there are a few numbers who have insufficient knowledge on occupational hazards .

The researcher supports the idea which showed that the study sample responses ranged between (medium) to (very high) degree for several reasons including the awareness that the workers have in the medical field which had been gained from their daily practices of this occupation, the theoretical knowledge obtained from their studies and may be from the preventative protocols that they have in their wards.

5.3. Safety climate and psychological risk

The study revealed that the response degree about the (Safety climate and psychological risk**)** were from low to very high degree according to the percentages which ranged between (53.47 %) to (87.36%) for the items; the total degree of the domain was (71.08%) which refers to high degree.

Feeling loss of control, emptiness and low self-confidence are low feelings among nurses. This is an important result in this domain and it offers positive feeling among nurses.

The researcher supports to improving the good feeling of nurses, reducing the work pressure, determining the responsibility of nurses in hospitals, and protecting him from hazards that may expose in order to improve the job environment by applying safety measures.

5.4. What are the most important symptoms of (Psychological, Chemical, Physical, biological and ergonomic) occupational hazards that the nurses have due to their work?

The study results revealed that (51.00%) of participants complaining from sleep disturbance symptoms in psychological hazards. In addition, the results showed that (25.10%) of participants complain of redness in eye and (20.00%) redness in skin in the chemical hazards, and (21.00%) of participants complain from cough symptoms.

Regarding to physical hazards, the results showed that (21.33%) of participants complain of visual problems. The results also showed that (2.51%) of participants were Hepatitis B in biological hazards. In Ergonomic symptoms pain in all body parts is the highest symptom.

These results are inconsistent with (Nattat I, 2010) who found that it was noticed the most frequent type hazards that the nurses had experienced were chemical and ergonomic related to hazards such as eyes redness (67%). Skin redness (88%) and respiratory distress (80 %). The results also revealed that 51.8% of the study population reported complaining from head and neck pain, 63.4% complained of shoulder pain, 39.3% complained of back pain,(52.7%) had lower limbs pain and 76.8% of study population complained of pelvic pain, the results showed that 24.1 % of study population had complained of anxiety, 20.5 % reported having sleep disturbances, and 23.9% had complained of other problems such as phobia and poor communication. Furthermore, the results revealed that there were no registry of cases suffering from occupational hazards related to diseases such as Human Immune Deficiency Virus and Hepatitis (C & B).

The researcher explains that the sleeping disturbance has the highest level because the nurses change their duty from morning to evening and night and the same about anxiety, cough related to using some medications or substance that cause the sensitivity in respiratory system, Hepatitis B which threaten the worker due to needlstich when giving medications or during dealing with patients, the pain in all body parts is the highest percentage because the nurses standing long time during the shift and lifting heavy patients or equipment from side to side.

5.5. Severity of hazards according to the study sample

The study results revealed that the rank of hazards according to participants feeling; as the following biological hazards in the first place were (66.44%), then ergonomics hazards (64.10%), psychological hazards (60.17%), chemical hazards (58.08%) at last the physical hazards represent (55.73%).

On the other hand, the results contrast with some other studies such as (Nattat I, 2010) which revealed the nurses " ranking of occupational hazards as follows: (49.0%) perceived that physical hazards ranked the first, followed by biological hazards (31.8%). Ergonomic and safety hazards (30.9%).Psychological hazards (29. 1%); while the last one is the chemical hazards (26.4%).

5.6. What are the most important things needed at work for the safety of the nurses?

Referring to table 5 in appendix A is clearly shown in response degree about the (needed equipment at work) from low to very high degree according to the percentages which ranged between (56.15%) to(94.90%) for the items of (Ear -protection headset) and (Safety measures).

The total degree of the domain important things needed at work was (81.17%) which indicates to very high.

Safety measures, wearing special clothes (gloves, gowns and special shoes), washing hands are the most important equipments needed by nurses for their personal safety when direct contact with patients, safety training, standing for long hours, documented reports, medical examinations for testing the nurses' safety scored very high degrees.

On the contrary, wearing eyeglasses and ear – protection headset scored low degrees in the nurses' estimation for their needed equipment. This due to the availability of these equipments in hospitals.

According to the researcher point of view, these results refer to continuous training, studying such subjects at the university, sharing in the workshops of specialty which agree with availability of hospitals equipment, these claims agree with (Nattat, 2010) study that said, "(84.8%) of the study population are in need to use equipment as their work required and (91.1%) have safety measures at work".

5.7. What is the level of satisfaction among nurses?

The results showed that the level of satisfaction among nurses was (76.19%) which indicates high estimation and this due to the fact of good relationship between colleagues and other facts of the meaningful job, respect gained from the others, the good team, confidence and other factors.
The results of this study in this domain disagreed with a survey which was conducted by (Curtis, 2007) in Ireland with a sample of 2000 nurses. The results reported moderate levels of job satisfaction.

5.8. Discussion of the results of the hypotheses

5.8.1. Relation between nurses' exposure to occupational hazards and the variable of age

The results of the study showed that the Statistical description of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in West Bank due to the variable of age and total degree for all domains stated that the highest mean represents (4.14%) for the age group above 46 and the lowest mean for age group 36-45 represents (3.79%).

5.8.2. The results of One Way ANOVA for the degree of the nurses' exposure to occupational hazards and the variable of age

The study indicated that there are no significant differences which showed (0.062) about the degree of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in the West Bank due to the variable of age. This result is at the total degree of all domains of the study in table 8at annex A. The result of the study in these domains are also consistent with (Nattat I, 2010) who declared " no statistical differences between actual exposure information and age p- value = 0.862". The researcher explains that the effect of hazards are for all workers despite their age groups because of the same field of work, and have the same protocol to deal with some cases of patients, and have the same responsibility and job discretion.

5.8.3. Relation between the nurses' exposure to occupational hazards and the variable of gender

The results revealed that there were significant differences of gender and nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in the West Bank, the result of study in these domains are consistent with (Nattat I, 2010) who declared "that there were statistical differences between exposure to hazards and sex when using T-test that f=1.736, p- value = 0.085".

According to the results of this study males were found higher main in (perception and knowledge, Safety climate and psychological risk and in the total degree) than females.

5.8.4. The results of One Way ANOVA for the degree of the nurses' exposure to occupational hazards and the variable of governorate

The results revealed significant differences showed (0.25%) which is more than (0.05) this means that there are no differences between the domains (perception and knowledge, safety climate and psychological, needed equipment, level satisfaction). In addition, LSD Test for comparable distance comparable for the degree of the second domain (safety climate and psychological risk) showed that there are differences in domain of (safety climate and psychological risk) between Tulkarem nurses and (Jenin, Nablus, Qalqeliah and Ramallah Nurses), furthermore, there are differences in the domain of (safety climate and psychological risk) between Salfeet nurses and (Nablus, Qalqeliah and Ramallah Nurses). Moreover, the study revealed that there are differences in domain (level of satisfaction) between Bethlehem nurses and (Tulkarem, Nablus, Ramallah and Jericho nurses), and also differences between Jericho nurses and (Jenin, Selfeet, Bethlehem and Hebron nurses).

5.8.5. Shows the results of One Way ANOVA for the degree of the nurses exposure to occupational hazards and the variable of marital status

The results revealed that there were no significant differences at (α =0.05) level about the degree of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in the West Bank due to the variable of marital status the significance was (0.296).

5.8.6. Shows the results of One Way ANOVA for the degree of the nurses' exposure to occupational hazards the variable of Number of family dependents and Monthly salary.

The results revealed that there were no significant differences at (α =0.05) level about the degree of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in the West Bank due to the variable of number of family dependents. The significance was (0.086).
Besides the result revealed that there are no significant differences at (α =0.05) level about the degree of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in the West Bank due to the variable of monthly salary. The significance was (0.379).

5.8.7. Shows the results of One Way ANOVA for the degree of the nurses exposure to occupational hazards and the variable of years of experience and work department

The results revealed that there were no significant differences at (α =0.05) level about the degree of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in the West Bank due to the variable of years of experience. The significance was (0.338) that agrees with the study of (Nattat I, 2010) that revealed no differences between actual exposure to hazards and variable years of experience as (F= 0.187, p- value = 0.830).

Furthermore there were no significant differences at (α =0.05) level about the degree of the nurses exposure to occupational hazards and compliance with practice safety measures at governmental hospitals in the West Bank due to the variable of work department. The significance was (0.219) that agrees with the study of (Nattat I, 2010) which revealed no statistical differences between actual exposure to hazards and work department as (F= 0.155, p- value = 0.336).

5.9. Discussion of the results of the burnout levels

5.9.1. Criteria, degrees, frequencies, percentages, means and standard deviation of the burnout categories

The results showed that depersonalization scored high degree with total mean of (18.66) Exhaustion and personal achievement scored moderate degree with total means of (11.40 and 14.00) according to Mslach Burnout Inventory scales.

The study disagreed with (Lin F, et al, 1997) study that revealed low score in depersonalization; on the other hand agreed with (Lin F, et al, 1997) study that also revealed difference in exhaustion and personal achievement which showed moderate score. The researcher concluded that high level at depersonalization refers to pressure in the work, low salary and other social problems while moderate level of exhaustion and personal achievement refers to acceptable level of income and respectful system of living.

5.9.2. Shows the results of One Way ANOVA for the degree of the nurses burnout and the variable of age

The results of the study indicates that there are no significant differences at (α =0.05) level about the degree of the nurses burnout at the governmental hospitals in the West Bank due to the variable of age in domains (Exhaustion and personal achievement). On the other hand, there are significant differences at (α =0.05) level about the degree of the nurses burnout at the governmental hospitals in the West Bank due to the variable of age in domain (depersonalization) and these differences are for high groups of age. That disagrees with (Kedem, et al, 2005) study that revealed age (in years) significantly correlated with burnout score with a Pearson correlation of 0.235 (p>0.001).

5.9.3. Shows LSD Test for comparable distance comparable for the degree of the second section of burnout (Depersonalization)

The results show that there are differences between (less than 25 years old and (26-35 & 36-45) and these differences are for other high groups of age**.** the results of the current study agrees with (Kedem, et al, 2005) results that revealed the highest levels of burnout are found among the group of nurses over 45 years of age.

5.9.4. Shows t- test for the degree of the nurses and the variable of gender

There are significant differences at (α =0.05) level about the burnout among nurses at the governmental hospitals in the West Bank due to the variable of gender in domain (Personal achievement). In addition, the study agrees with (Kedem, et al, 2005) study that revealed men and women significantly correlated with burnout score with a Pearson correlation of (0.233).

5.9.5. Shows the results of One Way ANOVA for the degree of the nurses burnout and the variable of governorates

There are no significant differences at (α =0.05) level about the degree of the nurses burnout at the governmental hospitals in the West Bank due to the variable of governorates in the second (depersonalization).
There are significant differences at (α =0.05) level on section one and three (exhaustion and personal achievement).

5.9.6. Shows LSD Test for comparable distance comparable for the degree of the domain of burnout (exhaustion)

It has been shown from the results that there are differences between Tulkarem Nurses and (Jenin nurses, Nablus nurses, Qalqeliah nurses, Salfeet nurses, Ramallah nurses, Hebron nurses and Jaricho nurses) at the governmental hospitals in the West Bank..

5.9.7. Shows LSD Test for comparable distance comparable for the degree of the second section of burnout (personal achievement)

It has been shown from the results that there are differences between Tulkarem Nurses and (Jenin nurses, Nablus nurses, Qalqeliah nurses, Slfeet nurses, and Hebron nurses).

Moreover, these differences are for other domains. Similarly, there are differences between Jericho Nurses and (Jenin nurses, Nablus nurses, Qalqeliah nurses, Slfeet nurses, and Hebron nurses) and these differences are for others nurses pertaining personal achievement.

5.9.8. Shows the results of One Way ANOVA for the degree of the nurses burnout and the variable of marital status, family dependants, monthly salary and years of experience

There are no significant differences at (α =0.05) level about the degree of the nurses burnout at the governmental hospitals in the West Bank due to the variable of marital status in burnout levels. The results disagree with (Kedem, et al, 2005) study which revealed that divorced nurses had higher burnout scores compared to other participants and Married nurses also have significantly lower scores compared to all other nurses.

There are no significant differences at (α =0.05) level about the degree of the nurses burnout at the governmental hospitals in the West Bank due to the variable of number of family dependents in burnout levels. The results agree with (Kedem, et al, 2005) study that revealed number of children showed no clear linear correlation with burnout score.

There are no significant differences at (α =0.05) level about the degree of the nurses burnout at the governmental hospitals in the West Bank due to the variable of monthly salary in burnout levels. The results disagree with (Lasebikan V, et al, 2012) study that revealed poor wages were significantly associated with burnout in the area of emotional exhaustion ($P < 0.02$), in the area of depersonalization ($P = 0.04$), and in the area of reduced personal accomplishment ($P = 0.01$).

There are no significant differences at (α =0.05) level about the degree of the nurses burnout at the governmental hospitals in the West Bank due to the variable of years of experience. The results disagree with (Dimunov L, et al, 2011) study that revealed statistically significant relationship between burnout and the length of work experience. Nurses and midwives with 1 to 3 years of experience and five or more years of experience have significantly higher rates of burnout.

5.9.9. Shows the results of One Way ANOVA for the degree of the nurses burnout and the variable of department at the work

There are no significant differences at (α =0.05) level about the degree of the nurses burnout at the governmental hospitals in the West Bank due to the variable of department at the work in (exhaustion and depersonalization); while there are significant differences at (α =0.05) level on section three (personal achievement). The results of the current study disagree with (Fazelzadeh A, et al, 2008) study that revealed no significant differences between staff nurses burnout in emergency or intensive care units and general medical surgical departments.

5.9.10. Shows LSD Test for comparable distance comparable for the degree of the second section of burnout personal achievement

There are differences between (medical departments) and (Pediatric department and Gynecology & Obstetric department), these differences are for the Pediatric department

and Gynecology & Obstetric department. There are differences between surgical departments), (Pediatric department and Gynecology & Obstetric department) these differences are for the Pediatric department and Gynecology & Obstetric department.
The researcher refers such differences to the circumstances of the nurses which may improve or hinder their personal achievement.

Chapter Six

Conclusion and Recommendation

Chapter Six

Conclusion and Recommendations

6.1 Conclusion

This chapter presents the conclusion and recommendation of the study in order to identify the relationship among deferent study variables. It is widely acknowledged that nurses are essential components in health care system. The severity of nurses and their patients depends mainly upon the degree to which nurses have knowledge of occupational hazards specific to their jobs and managerial mechanisms for mitigating those hazards.

Concerning the conclusion of this study, the researcher concluded that a high level of knowledge about occupational hazards among nurses working in Governmental Hospitals in West Bank was noticed; while nurses have medium feeling of boring, they have tedious and defeating conditions. More over the ranks of hazards according to the severity that the study sample feel was (Biological, Ergonomic, Psychological in third place with medium degree; Chemical and Physical come late with low degrees.

Safety measures, wearing special cloths e.g. gloves, gowns, and special shoos, beside washing hands are the most important equipment needed by nurses for their personal safety; in addition to wearing eye glasses and eye- protection headset scored low degrees in the nurses estimation for their needed equipment's.

Due to analyses the questionnaire the researcher shows that the level of satisfaction among nurses was (76.19%) which indicated high estimation. The researcher also concluded that nurses at Governmental Hospitals in the West Bank varied in case of satisfaction from directorate to another .

Depersonalization scored high degree while Exhaustion and Personal achievement scored moderate degree with total mains. Female nurses are more in personal achievement than males.

There were significant differences between gender and nurses exposure to occupational hazards in domains perception and knowledge, Safety climate and psychological risk and

in the total degree than females. Also, significant differences between governorates and nurses exposure to occupational hazards in domains safety climate and psychological risk and Level of satisfaction**.** There are no statistically significant differences between occupational hazards perception and knowledge, safety climate and psychological risk, needed equipment and level of satisfaction domains, according to age, monthly income, and years of experience, number of family dependant, educational level variables and significant differences between of burnout and gender, governorates, and working department variables in domain of personal achievement, also significant in age variable in domain depersonalization.

Finally, the researcher concluded that the level about the degree of the nurses burnout at Governmental Hospitals in the West Bank due to the variables of marital status, number of family dependence, monthly salary, and years of experience had no significant differences at (a= 0.05); and nurses in pediatric, Gynecology and obstetrics department are more in personal achievements than those of medical one.

6.2 Recommendations

- According to the study results, several suggestions have been recommended including.
- Working hard to decrease all the occupational hazards which may face nurses.
- Nurses' implication there is a need to address educational program to reduce the occupation hazards.
- Well trained nurses should be appointed to educate health workers on the prevention and management of occupational hazards.
- The Hospitals should advocate policy frame work to outline the protocol for occupational hazards detection and prevention.
- Developed manual on safety at work place will reduce accident at work place.
- Orientation to new staff members should be done in each unit/department on occupational hazards and safety.
- Nursing newsletters, journals and periodicals on occupational hazards and safety should be made available to personnel.
- Awareness meetings on the effective use of the available resources should be done regularly in each ward/department.
- More nurses should be trained and recruited in order to provide adequate staff-to-patient ratio.

References

Alison M. Trinkoff ScD, RN, FAAN JONA: Journal of Nursing Administration August . . 2009 Volume 40 Number 7/8 Pages 309 -315.

Bradley, Jennifer R.; Cartwright, Sue, (2002) Social support, job stress, health, and job satisfaction among nurses in the United Kingdom. International Journal of Stress Management, Vol 9(3), Jul 2002, 163-182.

Burnout of nursing personnel in a regional university hospital", HSJ- Health Science Journal volume 2, issue 3.

Centers for Disease Control and Prevention, Division of Healthcare Quality Promotion. Surveillance of Healthcare Personnel with HIV/AIDS, as of December 2001. 2003. from http:// cdc.gov/ncidod/hip/BLOOD/hivpersonnel.htm. (Accessed in Oct 6th2011, 8:00pm).

Corlien M Varkevisses Gabriel, MB Mwoluko and Amanda LE grand (2001), research in action the training approach of joint health system research project form the southern African region, health policy and planning 16(3): p281 – 291.

Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), National Institute for Occupational Safety and Health (NIOSH) (2004c, February 17), From http:// cdc.gov/niosh/docs/2004- 144/pdfs/2004-144.pdf.(Access in August 4th2012, 16;30pm).

Doris C. , Linda H. , Douglas M., Sean P.,, and Delfino V. (2010)." Nurse Burnout and Patient Satisfaction"; Med Care. Author manuscript; available in PMC 2010 July 15.

Doris C., Linda H. , Douglas M., Sean P.,, and Delfino V. (2010)." Nurse Burnout and Patient Satisfaction"; Med Care. Author manuscript; available in PMC 2010 July 15.

Dr Rebecca Spooner-Lane, Professor Wendy Patton (2004), Determinants of burnout among public hospital nurses, Australian Journal of Advanced Nursing Volume 26 Number.

E. Azoulay, (2007). “Burnout syndrome in critical care nursing staff.” Am. J. Resp. Crit. Care Med., 175:698-704

Fazelzadeh A., Mehdizadeh A. & Sahraeeian A. (2008) Burnout in hospital nurses: a comparison of internal,surgery, psychiatry and burns wards. International Nursing Review 55, 62–67.

Frances Line, Winsome Stjohin and Carol Mcveigh 1997, Burnout among hospital nurses in China, Massey University Wellington, New Zealand.

Friend, M. and Kohn, J. (2003). Fundamentals of Occupational Safety and Health, Third Edition. Rockville, MD: Government Institutes.

Gilbert S. Omenn MD, PhD*, Sharon L. Morris BA, (2007) Occupational hazards to health care workers: Report of a conference, American Journal of Industrial Medicine Volume 6, Issue 2, pages 129–137.

Hipwell, A.E. Tyler P.A. and Wilson C.M.(1989)“Occupational health hazards of hospital staff nurses. Part I: Overview and psychosocial stressors”, in AAOHN Journal, Vol. 37, pp. 232-237.

http://definitions.uslegal.com/c/chemical-hazard/ (Accessed in Jan 12th 2011, 10:00pm)

http://library.iugaza.edu.ps/thesis/78760.pdf. (Accessed in April 12th 2011, 11:30pm)

http://mro.massey.ac.nz/handle/10179/296/browse?value=Eng%2C+Amanda+Jane&type=author(Accessed in March 21th 2011, 10:30pm).

http://ms.about.com/od/newsresearch/g/pilot_study.htm(Accessed in April12th 2011, 10:00pm).

http://psasir.upm.edu.my/7185/1/FPSK(M)_2009_10a.pdf (Accessed in May 22th 2011, 13:00pm).

http://www.collinsdictionary.com/dictionary/english/ergonomic. (Accessed in Jun10th 2011, 9:00am).

http://www.hindawi.com/isrn/nursing/2012/402157/(Accessed in July 16th 2011,11:00pm).

http://www.icn.ch/images/stories/documents/pillars/sew/coaching/Coaching_in_Nursing.pdf. (Accessed in Fab25th 2012, 15:00pm).

http://www.moh.ps/attach/532.pdf. (Accessed in Aug 5th 2011, 17:00pm).

http://www.nursingcenter.com/lnc/pdfjournal?AID=1043474&an=00005110-201007000-00005&Journal_ID=&Issue_ID=. (Accessed in Oct 10th 2012, 20:30pm).

http://www.who.int/kobe_centre/publications/annual_report2010.pdf?ua=1(Accessed in May 18th 2012, 10:30pm).

http://www.who.int/occupational_health/regions/en/oehemhealthcareworkers.pdf (Accessed in March 13th 2013, 10:00pm).

http://www.who.int/quantifying_ehimpacts/publications/en/ebd11.pdf (Accessed in Fib12th 2013, 11:00pm).

http://www.who.int/whr/2002/en/Chapter2.pdf (Accessed in May 4th 2013, 4:00pm)

http://wwwisis.unam.na/theses/tuvadimbwa2005.pdf (Accessed in March 19th 2013, 6:00pm).

https://www.escholar.manchester.ac.uk/api/datastream?publicationPid=uk-ac-man-scw:189872&datastreamId=FULL-TEXT.PDFeparticipants understand the questions similarly. (Accessed in March 9th 2013, 20:00pm).

Judith E. Arnetz, Bengt B. Arnetz & Inga-Lill Petterson. (2007) Violence in the nursing profession: Occupational and lifestyle risk factors in Swedish nurses, Work & Stress Volume 10, Issue 2, pages 119-127.

Karahan A., Kav S., Abbasoglu A. & Dogan N. (2009) Low back pain: prevalence and associated risk factors among hospital staff. Journal of Advanced Nursing 65(3), 516–524.

Maria M. Malliarou, Eleni C. Moustaka, Theodoros C Konstantinidis. (2008), Burnout of Nursing Personnel in a Regional University Hospital, pp: 140-152, Health Science Journal.

Ministry of Health, Department of Therapy, Vietnam. Report on the implementation of the APW of a pilot survey on unsafe injection practice in Vietnam, Hanoi 2003,p. 30.

Ministry of Health. National Strategic Health Plan (1999–2003). Ministry of Health/Palestinian National Authority; 2003.

Nattat I, (2010) Evaluation Of Occupational Health Hazards Among Nurses in Governmental Primary Health Care Centers in Gaza Governorates. Master thesis. Al- Quds University, Palestine. Retrieved March 2012 from Al-Quds University.

Rabbits JA. (2003) Occupational exposure to blood in medical students. S Afr Med J.; 93:8.

Sagoe CM, Pearson JD, Perry J, Jagger J.(2001) Risks to health care workers in developing countries. N Engl J Med.; 345:538-9.

Trim JC, Adams D, Elliott TSJ. Healthcare workers‘ knowledge of inoculation injuries and . . glove use. Br J Nurs 2003;12(4):215-221.

Tuvadimbwa J. (2005) Knowledge and Practices among Registered Nurses on Occupational Hazards in OnandJokwe Health District: Oshikoto Region, Namibia

U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) (2004, August 13), from http://www. osha.gov/SLTC/etools/hospital/er/er.html. (Accessed in Jon11th 2012, 17:00pm).

World Bank group EHS, (2003) Environmental and Social Guidelines for Occupational Health & Safety. Foley M, Leyden AM. American Nurses Association Independent Study Module, Needle sticks Safety and Prevention, 2003, from www.nursingworld.org/rnce. (Accessed in April 2th 2011, 104:00pm).

WHO (World Health Organization). (November 2003), Aide-Memoire for a Strategy to Protect Health Workers from Infection with Blood borne Viruses.Geneva, Switzerland.

WHO (World Health Organization).(2002), The World Health Report, Box 4.4. Geneva, Switzerland, from http://www.who.int/whr/2002/ chapter4/en/index8.html. (Accessed in May24th 2011, 18:00pm).

WHO (World Health Organization).(2002), The World Health Report. Geneva، Switzerland.

Zvi D. Gellis and Jong Chun Kim, (2004) Predictors of Depressive Mood, Occupational Stress, and Propensity to Leave in Older and Younger Mental Health Case Managers, Community Mental Health Journal. Volume 40, Number 5,p 407-421.

Annexes

Annex (A): Statistical Description

Annex (B): Questionnaire in English

Annex (C): Questionnaire in Arabic

Annex (D): Ethical consideration

Annex (E): Name of experts

Annex (A)

Table (1): Nurses perception and knowledge about exposure to occupational hazards

Item No.	Item	Mean	standard deviations	Percentage %	Response Degree
15	I'm aware of my legal rights if I'm exposed to health hazards	4.3431	2.07412	86.86	V. High
12	I have sufficient knowledge about occupational hazards	4.2092	0.74343	84.18	V. High
20	I know the preventative measures to be taken at work	4.1506	0.68162	83.00	V. High
18	I know what I have to do to keep myself and others safe	4.1339	0.69728	82.68	V. High
13	I'm aware of the occupational hazards	4.0837	0.83597	81.67	V. High
22	I master using tools and equipment of occupational safety	4.0586	0.75920	81.17	V. High
16	I know what hazards I'm being exposed to	4.0502	0.74303	81.00	V. High
14	I know how to avoid occupation hazards	4.0377	0.79033	80.75	V. High
17	I know how I may be affected by occupational hazards	4.0042	0.80177	80.09	V. High
19	I know how to check and spot when something is going wrong	4.0000	0.72181	80.00	V. High
21	I know to whom I should report for any of the occupational hazards	3.7824	0.90907	75.65	High
23	Hospital management keeps on reminding nurses about occupational safety measures	3.3724	1.19498	67.45	Medium
Total degree		4.0188	0.53216	80.38	V. High

Table (2): Safety climate and psychological risk

Item No.	Item	Mean	standard deviations	Percentage %	Response Degree
25	There are too much responsibilities	4.3682	0.84912	87.36	V. High
24	My work includes different kinds of work	4.1548	0.98576	83.10	V. High
29	I have too much time pressure	3.9958	0.94156	79.92	High
26	I don't get enough work support	3.9038	1.03060	78.08	High
31	I feel consistency tired and fatigue	3.8452	1.02341	76.90	High
30	I have too much mental pressure	3.7531	1.08162	75.06	High
28	I have too much unplanned work	3.7406	1.06888	74.81	High
32	I work too much overtime or extended hours	3.5607	1.17192	71.21	High
27	My work is too boring and too tedious	3.2092	1.16594	64.18	Medium
36	I feel of defeat	3.1967	1.33120	63.93	Medium
34	I feel loss of self- control.	2.9205	1.86463	58.41	Low
35	I feel of emptiness	2.8828	1.35150	57.66	Low
33	I feel loss of self confidence	2.6736	1.33559	53.47	Low
Total degree		3.5542	0.76717	71.08	High

Table (3) Psychological, Chemical, Physical, biological and ergonomic occupational hazards

Symptoms			Frequency	Percentage
Psychological Symptoms		Burnout	59	24.69
		Sleep disturbance	122	51.00
		Anxiety	107	44.80
		Depression	47	20.00
		Poor communication	54	22.6
		Hostile	47	20.00
		Phobia	55	23.00
		Worry	88	36.80
Chemical Symptoms	Eye	Redness	60	25.10
		Visual disturbance	33	13.80
		Swelling	14	5.85
		Burning	34	14.22
	Skin	Redness	47	20.00
		Edema	20	8.36
		Eczema	18	7.53
		Burn	6	2.51
	Respiratory	Distress	46	19.25
		Suffocation	26	11.00
		Cough	50	21.00
		Wheezing	12	5.00
Physical Symptoms	Hearing problems		17	7.11
	Visual problems		51	21.33
	Skin problems		28	11.70
	Breathing		34	14.22
Biological Symptoms	Hepatitis B		6	2.51
	Hepatitis C		4	1.67
	HIV		0	0.00
	Tuberculosis		5	2.10
Ergonomic Symptoms	Head and neck	Pain	122	51.00
		Stiffness	53	22.17
		Swelling	8	3.34
		Numbness	11	4.60
	Shoulder	Pain	98	41.00
		Stiffness	58	24.26
		Swelling	4	1.67
		Numbness	14	5.85
	Back	Pain	134	56.10
		Stiffness	41	17.15
		Swelling	4	1.67
		Numbness	10	4.18
	Upper limps	Pain	58	24.26
		Stiffness	36	15.06
		Swelling	8	3.34
		Numbness	16	6.69
	Lower limps	Pain	100	41.84
		Stiffness	36	15.06
		Swelling	30	12.55
		Numbness	23	9.62
	Pelvis	Pain	63	26.35
		Stiffness	37	15.48
		Swelling	1	0.04
		Numbness	10	4.18

Table (4): severity of hazard according to the study sample arranged according to the descending means:

No.	Hazard	Mean	standard deviations	Percentage%	Response Degree
1.	**Biological**	3.3222	1.33504	66.44	Medium
2.	**Ergonomic**	3.2050	1.56236	64.10	Medium
3.	**Psychological**	3.0084	1.47241	60.17	Medium
4.	**Chemical**	2.9038	1.35781	58.08	Low
5.	**Physical**	2.7866	1.49806	55.73	Low

Table (5): Needed things at work

Item No.	Item	Mean	standard deviations	Percentage %	Response Degree
43	Safety measures	4.7448	0.61981	94.90	V. High
46	Washing my hands	4.7280	0.55505	94.56	V. High
48	Wearing gloves	4.5690	0.73511	91.38	V. High
45	Direct contact with patient	4.5649	0.70037	91.30	V. High
55	Wearing a gown	4.5230	0.87837	90.46	V. High
57	Concentration and intensity of attention	4.4854	0.76064	89.71	V. High
58	Safety training	4.3389	0.99060	86.78	V. High
44	Standing for long hours	4.2720	0.87765	85.44	V. High
59	Documented report	4.2050	1.10186	84.10	V. High
56	Using sharp or dangerous equipment	4.1799	0.95104	83.60	V. High
49	Wearing special shoes	4.1172	1.08605	82.34	V. High
54	Wearing special clothes	4.0669	1.25847	81.34	V. High
60	Medical examination	3.9582	1.25955	79.16	High
47	Carrying heavy weights	3.7950	1.03906	75.90	High
51	Wearing head cover	3.4310	1.36986	68.62	Medium
50	Wearing a mask	3.3849	1.30382	67.70	Medium
52	Wearing eye glasses	2.8828	1.46201	57.66	Low
53	Ear -protection headset	2.8075	1.51345	56.15	Low
Total degree		4.0586	0.51541	81.17	V. High

Table (6): distribution of level of satisfaction

Item No.	Item	Mean	standard deviations	Percentage %	Response Degree
78	My colleagues respect and like me	4.1967	0.73266	83.93	V. High
76	I like my colleagues	4.1590	0.80950	83.18	V. High
77	I feel that I belong to a team	4.1339	0.82939	82.68	V. High
73	I feel confident as a clinician	4.0251	0.96982	80.50	V. High
62	My job is very meaning full for me	4.0126	0.90508	80.25	V. High
75	I developed many friendship at work	4.0084	0.89345	80.17	V. High
70	I would function better if it was less busy on the ward	3.9958	0.91898	79.92	High
74	I like the way my ward operates	3.8870	1.02069	77.74	High
66	It's worthwhile to pay an effort in my job	3.8410	1.04511	76.82	High
71	I always learn more throughout work	3.8326	1.00274	76.65	High
63	I'm enthusiastic about my present work	3.7908	1.06024	75.82	High
61	My jop gives me a lot of satisfaction	3.7490	1.07480	74.98	High
69	I get enough support from colleagues	3.6025	0.99840	72.10	High
64	My work gives me an opportunity to show what I'm worth	3.5816	1.17065	71.63	High
65	In the last year, my work has grown more interesting	3.5523	1.13592	71.10	High
67	I have enough time to deliver good care to patients	3.4603	1.12901	69.21	Medium
68	I have enough opportunity to discuss patient problems with colleagues	3.4059	1.08394	68.12	Medium
72	I feel isolated from my colleagues at work	3.0042	1.29478	60.10	Medium
Total degree		3.8096	0.70220	76.19	High

Table (7): relation between nurses' exposure to occupational hazards and the variable of age

Domain	Age group	N	Mean	Std. Deviation
Perception and knowledge	Less than 25 years	62	4.0484	0.54521
	26-35	132	3.9773	0.44730
	36-45	43	4.0756	0.71751
	above 46	2	4.6250	0.53033
Safety climate and Psychological risk	Less than 25 years	62	3.7022	0.71001
	26-35	132	3.4942	0.79266
	36-45	43	3.5098	0.76409
	above 46	2	3.8846	0.59832
Needed equipment	Less than 25 years	62	4.1138	0.53688
	26-35	132	4.0703	0.49770
	36-45	43	3.9496	0.54241
	above 46	2	3.9167	0.27499
Level of satisfaction	Less than 25 years	62	3.9534	0.60568
	26-35	132	3.7854	0.77898
	36-45	43	3.6615	0.55527
	above 46	2	4.1389	0.11785
Total degree	Less than 25 years	62	3.9545	0.37153
	26-35	132	3.8318	0.35370
	36-45	43	3.7991	0.37894
	above 46	2	4.1413	0.11521

Table (8): shows the results of One Way ANOVA for the degree of the nurses exposure to occupational hazards and the variable of age

		Sum of Squares	df	Mean Square	F	Sig.*
Perception and knowledge	Between Groups	1.156	3	0.385	1.366	0.254
	Within Groups	66.246	235	0.282		
	Total	67.401	238			
Safety climate and Psychological risk	Between Groups	2.137	3	0.712	1.214	0.305
	Within Groups	137.939	235	0.587		
	Total	140.077	238			
Needed equipment	Between Groups	0.758	3	0.253	0.951	0.417
	Within Groups	62.465	235	0.266		
	Total	63.223	238			
Level of satisfaction	Between Groups	2.520	3	0.840	1.719	0.164
	Within Groups	114.834	235	0.489		
	Total	117.353	238			
Total degree	Between Groups	0.976	3	0.325	2.478	0.062
	Within Groups	30.853	235	0.131		
	Total	31.829	238			

***. The mean difference is significant at the 0.05 level.**

Table (9): Shows t- test for the for the degree of the nurses exposure to occupational hazards and the variable of gender

Domain	Gender	N	Mean	Std. Deviation	T	Sig*
Perception and knowledge	Male	91	4.1438	0.52588	2.890	0.004*
	Female	148	3.9420	0.52306		
Safety climate and Psychological risk	Male	91	3.7194	0.76196	2.642	0.009*
	Female	148	3.4527	0.75510		
Needed equipment	Male	91	4.0690	0.50906	.244	0.807
	Female	148	4.0522	0.52088		
Level of satisfaction	Male	91	3.8932	0.65944	1.445	0.150
	Female	148	3.7583	0.72464		
Total degree	Male	91	3.9563	0.36235	3.246	0.001*
	Female	148	3.8013	0.35626		

***. The mean difference is significant at the 0.05 level.**

Table (10) relation between the nurses exposure to occupational hazards and the variable of governorate

Section	Governorate	N	Mean	Std. Deviation
Perception and knowledge	Jenin	27	4.1481	0.45722
	Tulkarem	22	3.9356	0.61610
	Nablus	19	3.9298	0.39700
	Qalqeliah	14	4.1488	0.76738
	Selfeet	21	4.1310	0.55875
	Ramallah	42	3.9802	0.58891
	Bethlehem	40	3.9417	0.50890
	Hebron	40	4.0521	0.45082
	Jericho	14	3.9643	0.50923
Safety climate and Psychological risk	Jenin	27	3.6467	0.71184
	Tulkarem	22	3.2028	1.18898
	Nablus	19	3.7773	0.60618
	Qalqeliah	14	3.8407	0.63609
	Selfeet	21	3.3077	0.71003
	Ramallah	42	3.8242	0.61569
	Bethlehem	40	3.4135	0.63281
	Hebron	40	3.4423	0.81347
	Jericho	14	3.6209	0.76237
Needed equipment	Jenin	27	3.8786	0.48015
	Tulkarem	22	4.0833	0.45125
	Nablus	19	4.0117	0.52135
	Qalqeliah	14	4.0357	0.67853
	Selfeet	21	4.0079	0.45212
	Ramallah	42	4.1587	0.64469
	Bethlehem	40	4.1514	0.50260
	Hebron	40	4.0500	0.39501
	Jericho	14	3.9881	0.49459
Level of satisfaction	Jenin	27	3.9938	0.65975
	Tulkarem	22	3.5025	0.78089
	Nablus	19	3.6667	0.71386
	Qalqeliah	14	3.7937	0.37895
	Selfeet	21	3.8810	0.53092
	Ramallah	42	3.7011	0.69399
	Bethlehem	40	4.1153	0.86070
	Hebron	40	3.8500	0.51523
	Jericho	14	3.3770	0.74190
Total degree	Jenin	27	3.9168	0.38346
	Tulkarem	22	3.6811	0.37372
	Nablus	19	3.8464	0.35711
	Qalqeliah	14	3.9547	0.28855
	Selfeet	21	3.8319	0.32998
	Ramallah	42	3.9160	0.40903
	Bethlehem	40	3.9054	0.42684
	Hebron	40	3.8486	0.29410
	Jericho	14	3.7376	0.24998

Table (11) shows the results of One Way ANOVA for the degree of the nurses exposure to occupational hazards and the variable of governorate

Domain		Sum of Squares	Df	Mean Square	F	Sig.
Perception and knowledge	Between Groups	1.642	8	0.205	0.718	0.676
	Within Groups	65.760	230	0.286		
	Total	67.401	238			
Safety climate and Psychological risk	Between Groups	10.735	8	1.342	2.386	0.017*
	Within Groups	129.341	230	0.562		
	Total	140.077	238			
Needed equipment	Between Groups	1.829	8	0.229	0.857	0.554
	Within Groups	61.394	230	0.267		
	Total	63.223	238			
Level of satisfaction	Between Groups	10.407	8	1.301	2.798	0.006*
	Within Groups	106.946	230	0.465		
	Total	117.353	238			
Total degree	Between Groups	1.367	8	0.171	1.290	0.250
	Within Groups	30.462	230	0.132		
	Total	31.829	238			

***. The mean difference is significant at the 0.05 level.**

Table (12) : relation between the nurses exposure to occupational hazards and the variable of marital status

Domain	Marital status	N	Mean	Std. Deviation
Perception and knowledge	Single	94	4.0062	.47208
	Married	137	4.0383	.54552
	Divorced	7	3.7262	.93258
	Widowed	1	4.5833	.
Safety climate and Psychological risk	Single	94	3.6530	.70778
	Married	137	3.4683	.79949
	Divorced	7	3.7582	.73168
	Widowed	1	4.6154	.
Needed equipment	Single	94	4.0963	.56139
	Married	137	4.0369	.49099
	Divorced	7	3.9524	.37050
	Widowed	1	4.2222	.
Level of satisfaction	Single	94	3.8002	.67169
	Married	137	3.8232	.72774
	Divorced	7	3.6111	.69389
	Widowed	1	4.2222	.
Total degree	Single	94	3.8890	.37037
	Married	137	3.8417	.35756
	Divorced	7	3.7620	.44501
	Widowed	1	4.4108	.

Table (13) : shows the results of One Way ANOVA for the degree of the nurses exposure to occupational hazards and the variable of marital status

Domain		Sum of Squares	Df	Mean Square	F	Sig.
Perception and knowledge	Between Groups	0.985	3	0.328	1.162	0.325
	Within Groups	66.416	235	0.283		
	Total	67.401	238			
Safety climate and Psychological risk	Between Groups	3.347	3	1.116	1.918	0.127
	Within Groups	136.730	235	0.582		
	Total	140.077	238			
Needed equipment	Between Groups	0.304	3	0.101	0.379	0.769
	Within Groups	62.919	235	0.268		
	Total	63.223	238			
Level of satisfaction	Between Groups	0.480	3	0.160	0.321	0.810
	Within Groups	116.874	235	0.497		
	Total	117.353	238			
Total degree	Between Groups	0.495	3	0.165	1.238	0.296
	Within Groups	31.333	235	0.133		
	Total	31.829	238			

***. The mean difference is significant at the 0.05 level.**

Table (14): relation between the nurses' exposure to occupational hazards and the variable of number of family dependant

Domain	N. of family dependant	N	Mean	Std. Deviation
Perception and knowledge	Less than 5	175	4.0157	0.50503
	6-10	60	4.0153	0.61763
	11-15	2	4.5000	0.11785
	Above 16	2	3.9167	0.11785
Safety climate and Psychological risk	Less than 5	175	3.4954	0.77076
	6-10	60	3.6769	0.73806
	11-15	2	4.4231	0.27196
	Above 16	2	4.1538	0.87029
Needed equipment	Less than 5	175	4.0359	0.53080
	6-10	60	4.1130	0.48041
	11-15	2	4.3056	0.11785
	Above 16	2	4.1667	0.39284
Level of satisfaction	Less than 5	175	3.8054	0.72227
	6-10	60	3.8083	0.64509
	11-15	2	4.5278	0.43212
	Above 16	2	3.5000	0.78567
Total degree	Less than 5	175	3.8381	0.35164
	6-10	60	3.9034	0.39358
	11-15	2	4.4391	0.04004
	Above 16	2	3.9343	0.54166

Table (15) : shows the results of One Way ANOVA for the degree of the nurses exposure to occupational hazards the variable of Number of family dependent

Domain		Sum of Squares	Df	Mean Square	F	Sig.
Perception and knowledge	Between Groups	0.486	3	0.162	0.569	0.636
	Within Groups	66.915	235	0.285		
	Total	67.401	238			
Safety climate and Psychological risk	Between Groups	3.738	3	1.246	2.148	0.095
	Within Groups	136.339	235	0.580		
	Total	140.077	238			
Needed equipment	Between Groups	0.413	3	0.138	0.515	0.672
	Within Groups	62.810	235	0.267		
	Total	63.223	238			
Level of satisfaction	Between Groups	1.226	3	0.409	0.827	0.480
	Within Groups	116.127	235	0.494		
	Total	117.353	238			
Total degree	Between Groups	0.879	3	0.293	2.224	0.086
	Within Groups	30.950	235	0.132		
	Total	31.829	238			

***. The mean difference is significant at the 0.05 level.**

Table (16) relation between the nurses exposure to occupational hazards and the variable of monthly salary

Domain	Monthly salary	N	Mean	Std. Deviation
Perception and knowledge	Less than 2500	37	4.0428	0.37711
	2501-3500	155	3.9844	0.51788
	3501-4500	43	4.1357	0.67799
	More than 4500	4	3.8750	0.51595
Safety climate and Psychological risk	Less than 2500	37	3.6216	0.67143
	2501-3500	155	3.5514	0.74718
	3501-4500	43	3.5009	0.92268
	More than 4500	4	3.6154	0.77688
Needed equipment	Less than 2500	37	4.1982	0.48707
	2501-3500	155	4.0129	0.51504
	3501-4500	43	4.1318	0.50030
	More than 4500	4	3.7500	0.74467
Level of satisfaction	Less than 2500	37	3.9294	0.67124
	2501-3500	155	3.8208	0.73503
	3501-4500	43	3.6822	0.58259
	More than 4500	4	3.6389	0.87782
Total degree	Less than 2500	37	3.9480	0.34979
	2501-3500	155	3.8424	0.35738
	3501-4500	43	3.8626	0.38417
	More than 4500	4	3.7198	0.61722

Table (17) : shows the results of One Way ANOVA for the degree of the nurses exposure to occupational hazards and the variable of monthly salary

Domain		Sum of Squares	Df	Mean Square	F	Sig.*
Perception and knowledge	Between Groups	0.875	3	.292	1.030	0.380
	Within Groups	66.527	235	0.283		
	Total	67.401	238			
Safety climate and Psychological risk	Between Groups	0.307	3	0.102	0.172	0.915
	Within Groups	139.770	235	0.595		
	Total	140.077	238			
Needed equipment	Between Groups	1.656	3	0.552	2.107	0.100
	Within Groups	61.567	235	0.262		
	Total	63.223	238			
Level of satisfaction	Between Groups	1.366	3	0.455	0.922	0.431
	Within Groups	115.988	235	0.494		
	Total	117.353	238			
Total degree	Between Groups	0.414	3	0.138	1.031	0.379
	Within Groups	31.415	235	0.134		
	Total	31.829	238			

***. The mean difference is significant at the 0.05 level.**

Table (18) : relation between the nurses exposure to occupational hazards and the variable of Years of experience

Domain	Years of experience	N	Mean	Std. Deviation
Perception and knowledge	1-9 years	148	3.9690	0.47810
	10-19 years	70	4.0429	0.62454
	20-29 years	16	4.2969	0.43776
	Above 30 years	5	4.2667	0.71783
Safety climate and Psychological risk	1-9 years	148	3.5707	0.69454
	10-19 years	70	3.4681	0.89129
	20-29 years	16	3.7500	0.90124
	Above 30 years	5	3.6462	0.48833
Needed equipment	1-9 years	148	4.0762	0.52574
	10-19 years	70	4.0278	0.51985
	20-29 years	16	4.0903	0.42835
	Above 30 years	5	3.8667	0.46911
Level of satisfaction	1-9 years	148	3.8345	0.63649
	10-19 years	70	3.7746	0.86970
	20-29 years	16	3.8889	0.40875
	Above 30 years	5	3.3111	0.62928
Total degree	1-9 years	148	3.8626	0.33569
	10-19 years	70	3.8283	0.43717
	20-29 years	16	4.0065	0.31720
	Above 30 years	5	3.7726	0.16967

Table (19) : shows the results of One Way ANOVA for the degree of the nurses exposure to occupational hazards and the variable of years of experience

Domain		Sum of Squares	Df	Mean Square	F	Sig.*
Perception and knowledge	Between Groups	1.951	3	0.650	2.336	0.075
	Within Groups	65.450	235	0.279		
	Total	67.401	238			
Safety climate and Psychological risk	Between Groups	1.214	3	0.405	0.685	0.562
	Within Groups	138.862	235	0.591		
	Total	140.077	238			
Needed equipment	Between Groups	0.313	3	0.104	0.389	0.761
	Within Groups	62.911	235	0.268		
	Total	63.223	238			
Level of satisfaction	Between Groups	1.520	3	0.507	1.028	0.381
	Within Groups	115.833	235	0.493		
	Total	117.353	238			
Total degree	Between Groups	0.453	3	0.151	1.130	0.338
	Within Groups	31.376	235	0.134		
	Total	31.829	238			

***. The mean difference is significant at the 0.05 level.**

Table (20) : relation between the nurses exposure to occupational hazards and the variable of department at work

Domain	Department at work	N	Mean	Std. Deviation
Perception and knowledge	Medical department	76	4.0395	0.54271
	Surgical department	57	4.0760	0.51401
	Pediatric department	54	3.8781	0.52148
	Gynecology & OBS department	52	4.0721	0.53627
Safety climate and Psychological risk	Medical department	76	3.6022	0.73872
	Surgical department	57	3.5951	0.74729
	Pediatric department	54	3.4786	0.74154
	Gynecology & OBS department	52	3.5178	0.86415
Needed equipment	Medical department	76	3.9795	0.53747
	Surgical department	57	4.1140	0.44967
	Pediatric department	54	4.0381	0.49723
	Gynecology& OBS department	52	4.1346	0.56284
Level of satisfaction	Medical department	76	3.6974	0.81974
	Surgical department	57	3.9201	0.63820
	Pediatric department	54	3.8004	0.63696
	Gynecology & Obstetric department	52	3.8622	0.63928
Total degree	Medical department	76	3.8297	0.41135
	Surgical department	57	3.9263	0.35723
	Pediatric department	54	3.7988	0.30204
	Gynecology & OBS department	52	3.8967	0.35876

Table (21): shows the results of One Way ANOVA for the degree of the nurses exposure to occupational hazards and the variable of work department

Domain		Sum of Squares	Df	Mean Square	F	Sig.*
Perception and knowledge	Between Groups	1.436	3	0.479	1.705	0.167
	Within Groups	65.965	235	0.281		
	Total	67.401	238			
Safety climate and Psychological risk	Between Groups	0.648	3	0.216	0.364	0.779
	Within Groups	139.428	235	0.593		
	Total	140.077	238			
Needed equipment	Between Groups	0.974	3	0.325	1.225	0.301
	Within Groups	62.250	235	0.265		
	Total	63.223	238			
Level of satisfaction	Between Groups	1.801	3	0.600	1.221	0.303
	Within Groups	115.552	235	0.492		
	Total	117.353	238			
Total degree	Between Groups	0.593	3	0.198	1.487	0.219
	Within Groups	31.236	235	0.133		
	Total	31.829	238			

***. The mean difference is significant at the 0.05 level.**

Table (22): Criteria, degrees, frequencies, percentages, means and standard deviation of the burnout categories

Section	Criteria*	Degree	Mean	Standard deviation	Response degree
Exhaustion	17 or less From 18-29 30 and over	Low Moderate High	19.3222	11.40437	Moderate
Depersonalization	5 or less 6-11 12 and over	Low Moderate High	18.6653	10.37029	High
Personal achievement	33 or less 34-39 40 and over	Low Moderate High	31.8452	14.00079	Moderate

***The criteria is according to MBI Scale.**

Table (23): relation between of the of burnout among nurses and the variable of age

Section	Age group	N	Mean	Std. Deviation
Exhaustion	Less than 25 years	62	17.4839	12.22299
	26-35	132	19.1364	10.89420
	36-45	43	22.9302	11.28504
	above 46	2	11.0000	5.65685
Depersonalization	Less than 25 years	62	15.6129	9.55116
	26-35	132	19.3106	10.25561
	36-45	43	21.3023	10.99466
	above 46	2	14.0000	14.14214
personal achievement	Less than 25 years	62	29.4032	15.25892
	26-35	132	32.5076	13.83794
	36-45	43	33.2558	12.75612
	above 46	2	33.5000	3.53553

Table (24): shows the results of One Way ANOVA for the degree of the nurses burn out and the variable of age

Section		Sum of Squares	df	Mean Square	F	Sig.*
Exhaustion	Between Groups	912.372	3	304.124	2.379	0.070
	Within Groups	30041.820	235	127.838		
	Total	30954.192	238			
Depersonalization	Between Groups	975.177	3	325.059	3.103	0.027*
	Within Groups	24620.045	235	104.766		
	Total	25595.222	238			
personal achievement	Between Groups	518.674	3	172.891	.881	0.452
	Within Groups	46134.598	235	196.317		
	Total	46653.272	238			

***. The mean difference is significant at the 0.05 level.**

Table (25): Shows t- test for the for the degree of the nurses and the variable of gender

Domain	Gender	N	Mean	Std. Deviation	T	Sig*
Exhaustion	Male	91	18.5165	12.14026	-.856-	0.393
	Female	148	19.8176	10.94018		
Depersonalization	Male	91	17.8571	10.92965	-.944-	0.346
	Female	148	19.1622	10.01635		
personal achievement	Male	91	28.8681	16.20097	-2.609-	0.010*
	Female	148	33.6757	12.15781		

***. The mean difference is significant at the 0.05 level.**

Table (26): relation between the burnout among nurses and the variable of governorate

Section	Governorate	N	Mean	Std. Deviation
Exhaustion	Jenin	27	17.8148	9.75483
	Tulkarem	22	11.1818	8.91567
	Nablus	19	24.0526	13.36859
	Qalqeliah	14	21.4286	10.17322
	Selfeet	21	20.6190	7.72966
	Ramallah	42	22.1429	12.49892
	Bethlehem	40	15.7500	10.52652
	Hebron	40	19.9250	11.01604
	Jericho	14	24.5714	13.32271
Depersonalization	Jenin	27	18.1111	9.28329
	Tulkarem	22	15.1818	8.58369
	Nablus	19	21.5263	8.61116
	Qalqeliah	14	16.7143	10.95044
	Selfeet	21	20.2857	9.95059
	Ramallah	42	20.8095	13.75790
	Bethlehem	40	17.8750	9.77487
	Hebron	40	17.8500	8.55915
	Jericho	14	19.0000	11.78004
personal achievement	Jenin	27	36.8519	13.04048
	Tulkarem	22	25.5000	13.99575
	Nablus	19	40.3684	9.70229
	Qalqeliah	14	34.7143	14.05171
	Selfeet	21	33.6667	12.72137
	Ramallah	42	26.1429	13.77090
	Bethlehem	40	30.7750	15.60816
	Hebron	40	35.6000	10.81736
	Jericho	14	24.4286	14.95488

Table (27): shows the results of One Way ANOVA for the degree of the nurses burnout and the variable of governorate

Section		Sum of Squares	Df	Mean Square	F	Sig.*
Exhaustion	Between Groups	3286.671	8	410.834	3.415	0.001*
	Within Groups	27667.522	230	120.294		
	Total	30954.192	238			
Depersonalization	Between Groups	785.451	8	98.181	.910	0.509
	Within Groups	24809.770	230	107.869		
	Total	25595.222	238			
personal achievement	Between Groups	5873.273	8	734.159	4.141	0.000*
	Within Groups	40779.999	230	177.304		
	Total	46653.272	238			

***. The mean difference is significant at the 0.05 level.**

Table (28): relation between the burnout among nurses and the variable of marital stratus

Section	Marital status	N	Mean	Std. Deviation
Exhaustion	Single	94	20.3191	11.85051
	Married	137	18.3139	10.85923
	Divoreced	7	25.0000	15.14376
	Widowed	1	24.0000	.
Depersonalization	Single	94	19.6170	10.82421
	Married	137	17.6277	9.92472
	Divorced	7	24.7143	10.85840
	Widowed	1	29.0000	.
personal achievement	Single	94	32.1702	14.16238
	Married	137	31.4380	13.97838
	Divorced	7	34.2857	14.63687
	Widowed	1	40.0000	.

Table (29): shows the results of One Way ANOVA for the degree of the nurses burnout and the variable of marital status

Section		Sum of Squares	df	Mean Square	F	Sig.*
Exhaustion	Between Groups	480.263	3	160.088	1.235	0.298
	Within Groups	30473.929	235	129.676		
	Total	30954.192	238			
Depersonalization	Between Groups	595.566	3	198.522	1.866	0.136
	Within Groups	24999.656	235	106.382		
	Total	25595.222	238			
personal achievement	Between Groups	140.844	3	46.948	0.237	0.870
	Within Groups	46512.428	235	197.925		
	Total	46653.272	238			

***. The mean difference is significant at the 0.05 level.**

Table (30): relation between burnout among nurses and the variable of number of family dependent

Section	number of family dependent	N	Mean	Std. Deviation
Exhaustion	Less than 5	175	19.1886	11.33978
	6-10	60	19.3667	11.27915
	11-15	2	33.0000	12.72792
	Above 16	2	16.0000	22.62742
Depersonalization	Less than 5	175	18.7314	10.84223
	6-10	60	18.6000	9.05763
	11-15	2	24.0000	7.07107
	Above 16	2	9.5000	4.94975
personal achievement	Less than 5	175	30.7143	14.41218
	6-10	60	34.7167	12.33995
	11-15	2	44.0000	5.65685
	Above 16	2	32.5000	21.92031

Table (31): shows the results of One Way ANOVA for the degree of the nurses burnout and the variable of number of family dependent

Section		Sum of Squares	Df	Mean Square	F	Sig.*
Exhaustion	Between Groups	399.482	3	133.161	1.024	0.383
	Within Groups	30554.710	235	130.020		
	Total	30954.192	238			
Depersonalization	Between Groups	225.945	3	75.315	.698	0.554
	Within Groups	25369.277	235	107.954		
	Total	25595.222	238			
personal achievement	Between Groups	1014.874	3	338.291	1.742	0.159
	Within Groups	45638.398	235	194.206		
	Total	46653.272	238			

***. The mean difference is significant at the 0.05 level.**

Table (32) relation between burnout among nurses and the variable of monthly salary

Section	monthly salary	N	Mean	Std. Deviation
Exhaustion	Less than 2500	37	16.4595	11.74402
	2501-3500	155	19.6194	10.92077
	3501-4500	43	20.7907	12.60113
	More than 4500	4	18.5000	13.42882
Depersonalization	Less than 2500	37	15.7027	10.65589
	2501-3500	155	18.6645	9.91344
	3501-4500	43	21.1628	11.50141
	More than 4500	4	19.2500	8.61684
personal achievement	Less than 2500	37	29.1892	16.02401
	2501-3500	155	33.1871	13.50314
	3501-4500	43	29.7674	13.34137
	More than 4500	4	26.7500	18.48197

Table (33): shows the results of One Way ANOVA for the degree of the nurses burnout and the variable of monthly salary

Section		Sum of Squares	df	Mean Square	F	Sig.*
Exhaustion	Between Groups	412.345	3	137.448	1.058	0.368
	Within Groups	30541.847	235	129.965		
	Total	30954.192	238			
Depersonalization	Between Groups	594.327	3	198.109	1.862	0.137
	Within Groups	25000.895	235	106.387		
	Total	25595.222	238			
personal achievement	Between Groups	829.598	3	276.533	1.418	0.238
	Within Groups	45823.674	235	194.994		
	Total	46653.272	238			

***. The mean difference is significant at the 0.05 level.**

Table (34): relation between burnout among nurses and the variable of years of experience

Section	years of experience	N	Mean	Std. Deviation
Exhaustion	1-9 years	148	18.9324	11.47826
	10-19 years	70	19.1286	10.43950
	20-29 years	16	23.3125	12.38127
	Above 30 years	5	20.8000	19.21458
Depersonalization	1-9 years	148	18.2568	10.46414
	10-19 years	70	18.6571	9.95480
	20-29 years	16	21.0625	10.92684
	Above 30 years	5	23.2000	12.75539
personal achievement	1-9 years	148	31.6081	14.06769
	10-19 years	70	31.4571	14.63635
	20-29 years	16	34.6250	10.91100
	Above 30 years	5	35.4000	14.04635

Table (35): shows the results of One Way ANOVA for the degree of the nurses burnout and the variable of years of experience

Section		Sum of Squares	df	Mean Square	F	Sig.*
Exhaustion	Between Groups	290.788	3	96.929	0.743	0.527
	Within Groups	30663.405	235	130.483		
	Total	30954.192	238			
Depersonalization	Between Groups	219.470	3	73.157	0.677	0.567
	Within Groups	25375.752	235	107.982		
	Total	25595.222	238			
personal achievement	Between Groups	205.680	3	68.560	0.347	0.791
	Within Groups	46447.592	235	197.649		
	Total	46653.272	238			

***. The mean difference is significant at the 0.05 level.**

Table (36): relation between burnout among nurses and the variable of department at the work

Section	department at the work	N	Mean	Std. Deviation
Exhaustion	Medical department	76	21.5395	11.91687
	Surgical department	57	19.2456	11.22224
	Pediatric department	54	17.9074	10.93595
	Gynecology & Obstetric department	52	17.6346	11.09854
Depersonalization	Medical department	76	19.0921	10.36813
	Surgical department	57	16.8421	10.46216
	Pediatric department	54	20.1852	10.27008
	Gynecology & Obstetric department	52	18.4615	10.36862
personal achievement	Medical department	76	29.4868	14.23188
	Surgical department	57	28.9123	15.04550
	Pediatric department	54	34.5556	12.96973
	Gynecology & Obstetric department	52	35.6923	12.35986

Table (37): shows the results of One Way ANOVA for the degree of the nurses burnout and the variable of department at the work

Section		Sum of Squares	Df	Mean Square	F	Sig.*
Exhaustion	Between Groups	630.155	3	210.052	1.628	0.184
	Within Groups	30324.038	235	129.038		
	Total	30954.192	238			
Depersonalization	Between Groups	330.216	3	110.072	1.024	0.383
	Within Groups	25265.005	235	107.511		
	Total	25595.222	238			
personal achievement	Between Groups	2079.313	3	693.104	3.654	0.013 *
	Within Groups	44573.959	235	189.676		
	Total	46653.272	238			

***. The mean difference is significant at the 0.05 level.**

Annex (B) Questionnaire in English

Dear Colleague:

The main aim of the study is to assess your exposure to the occupational hazard and your compliance toward practice safety measures in the west bank governmental hospitals, by evaluating, monitoring, and controlling` of work related risks.

Please fill this questionnaire according to previous agreement, you have the right to refuse to participate and fill the questionnaire but I will appreciate your cooperation and be sure that the information that you give will be used only for the scientific research.

Thanks for your participation.

Student: Wael Zead

Part One :

1- Age: years

( ) Less than 25 ( ) 26 – 35
( ) 36 – 45 ( ) Above 46

2- Gender:

( ) Male ( ) Female

3- Governorate_____.

4- Marital status:

( ) Single ( ) Married
( ) Divorced ( ) Widow

5- Number of family dependent: ----------

( ) Less than 5 ( ) 6 – 10
( ) 11- 15 ( ) Above 16

6- Monthly salary : (N I S) :

( ) Less than 2500 ( ) 2501 – 3500
( ) 3501-4500 ( ) more than 4500

7- Years of experience ----------

( ) 1-9 years ( ) 10 – 19 years
( ) 20 – 29 years ( ) above 30

8- the Department in which you work is:

( ) Gyna &obs Dep ( ) Medical Dep
( ) Surgical Dep ( ) Pediatric Dep

9– Last Qualification :

( ) Diploma 2years ( ) 3 years Diploma
( ) Bachelors ( ) Master and Above

10- Do you perform other jobs:

( ) ome time ( ) No
( ) Yas

11- If yes or sometimes, how many extra hours do you work weekly? ----

( ) Less than 3 Hours ( ) Less than 6 Hours
( ) Less than 10 Hours

Part Two: Nurses perception and knowledge about Exposure to Occupational Hazard.

		Strongly agree	Agree	neutral	Disagree	Strongly disagree
12	I have sufficient knowledge about occupational hazard					
13	I am aware of the occupational hazards					
14	I know how to avoid occupation hazards.					
15	I am aware of my legal rights if I am exposed to health hazard.					
16	I know what hazards I am being exposed to.					
17	I know how I may be affected by occupational hazard.					
18	I know what I have to do to keep myself and others safe					
19	I know how to check and spot when something is going wrong.					
20	I know the preventive measures to be taken at work					
21	I know to whom I should report for any of the occupational hazard.					
22	I master using tools and equipment of occupational safety.					
23	Hospital management keeps on reminding nurses about occupational safety measures					

Part Three: Safety Climate and Psychological Risk

		Strongly agree	agree	neutral	Disagree	Strongly disagree
24	My work too many deferent kind of work					
25	There is too much responsibility					
26	I don't get enough work support					
27	My work is too boring and too tedious					
28	I have too much unplanned work					
29	I have too much time pressure					
30	I have too much mental pressure					
31	I feel consistency tired and fatigue					
32	I work too much over time or extended hours					
33	I feel Loss of self-confidence					
34	I feel Loss of self-control					
35	I Feeling of emptiness					
	I Feeling of defeat					

37- Do you have history of these symptoms that could be referred to occupational hazard, if yes please specify by yes or no. (Psychological)

Depression	Anxiety	Sleep disturbance	Burnout
Worried	Phobia	Hostile	Poor communication

38- Do you have history of these symptoms that may be refer to occupational hazard, if yes please specify by yes or no. (Chemical)

Symptoms				Body part
Burning	swelling	Visual disturbances	Redness	Eyes
Burn	eczema	Edema	Redness	Skin
Wheezing	cough	Suffocation	Distress	Respiratory

39- Do you have history of these symptoms may be refer to occupational hazard, if yes please specify by yes or no. (Physical)

	Yes	No
Hearing problem		
Visual problem		
Skin problem		
Breathing		

40 - Do you have history of these diseases may be refer to occupational hazard, if yes please specify by yes or no.(Biological)

	Yes	No
Hepatitis B		
Hepatitis C		
HIV		
Tuberculosis		

41 - Do you have history of these symptoms that may be refer to occupational hazard, if yes please specify by yes or no (Ergonomic)

Body part	Pain	Stiffness	Swelling	Numbness
Head and neck				
Shoulder				
Back				
Upper limbs				
Lower limbs				
Pelvis				

42. Rank the following hazard according to the severity:
(Less severe) (More severe)
(1 2 3 4 5)

( ) Physical ( ) Chemical
( ) Psychosocial ( ) Ergonomic ( ) Biological

Part Four : How far the following are needed at work:

		Always	Mostly	Midd	Rarely	Not needed
43	Safety measure					
44	Standing for long hours.					
45	Direct contact with patients.					
46	Washing my hands					
47	Carrying heavy weights.					
48	Wearing gloves					
49	Wearing special shoes					
50	Wearing a mask					
51	Wearing a head cover					
52	Wearing eye glasses					
53	ear-protection headset					
54	Wearing special clothes					
55	Wearing a gown					
56	Using sharp or dangerous equipment.					
57	Concentration and intensity of attention					
58	safety training.					
59	documented report					
60	Medical examination					

Part Five: Indicate the level of your satisfaction in regard to the following:

		Strongly agree	Agree	neutral	disagree	Strongly disagree
61	My job gives me a lot of satisfaction					
62	My job is very meaningful for me					
63	I am enthusiastic about my present work					
64	My work gives me an opportunity to show what I'm worth					
65	In the last year, my work has grown more interesting					
66	Its worthwhile to pay an effort in my job					
67	I have enough time to deliver good care to patients					
68	I have enough opportunity to discuss patient problems with colleagues					
69	I get enough support from colleagues.					
70	I would function better if it was less busy on the ward:					
71	I always learn more throughout working.					
72	I feel isolated from my colleagues at work					
73	I feel confident as a clinician					
74	I like the way my ward operates.					
75	I developed many friendships at work.					
76	I like my colleagues					
77	I feel that I belong to a team					
78	my colleagues respect and like me.					

Part Six: the level of burnout in hospitals among nurses :

		Never	A few times per year	Once a Month	A few times per month	Once a week	A few times per week	Every day
	SECTION A	0	1	2	3	4	5	6
79	I feel emotionally drained by my work.							
80	Working with people all day long requires a great deal of effort.							
81	I feel like my work is breaking me down.							
82	I feel frustrated by my work.							
83	I feel I work too hard at my job.							
84	It stresses me too much to work in direct contact with people.							
85	I feel like I'm at the end of my rope.							
	Total score – SECTION A							

		Never	A few times per year	Once a month	A few times per month	Once a week	A few times per week	Every Day
	SECTION B	0	1	2	3	4	5	6
86	I feel I look after certain patients/clients impersonally, as if they are objects							
87	I feel tired when I get up in the morning and have to face another day at work.							
88	I have the impression that my patients/clients make me responsible for some of their problems.							
89	I am at the end of my patience at the end of my work day.							
90	I really don't care about what happens to some of my patients/clients.							
91	I have become more insensitive to people since I've been working.							
92	I'm afraid that this job is making me uncaring.							
	Total score – SECTION B							

		Never	A few times per year	Once a month	A few times per month	Once a week	A few times per week	Every Day
	SECTION C	0	1	2	3	4	5	6
93	I accomplish many worthwhile things in this job.							
94	I feel full of energy.							
95	I am easily able to understand what my patients/clients feel.							
96	I look after my patients'/clients' problems very effectively.							
97	In my work, I handle emotional problems very calmly.							
98	Through my work, I feel that I have a positive influence on people.							
99	I am easily able to create a relaxed atmosphere with my patients/clients.							
100	I feel refreshed when I have been close to my patients/clients at work.							
	Total score – SECTION C							

Annex (C): Questionnaire in Arabic

جامعة القدس
كلية الدراسات العليا
كلية الصحه العامه

الزملاء / الزميلات الممرضين والممرضات والقابلات المحترمين / المحترمات
تحية طيبة وبعد :

بين أيديكم استبانه كأداة جمع معلومات لبحث علمي للحصول على درجة الماجستير من جامعة القدس بعنوان " **تقيم مدى تعرض الممرضين للمخاطر الوظيفية وامتثالهم لتطبيق معايير السلامة اثناء العمل في المستشفيات الحكومية في الضفة الغربية**". ويهدف هذا البحث الى معرفة مدى تعرض الممرضين للمخاطر الوظيفية ومدى امتثالهم لتطبيق معايير السلامة اثناء العمل، ارجو التعاون بتعبئة هذه الاستبانه كجزء من مساهمتكم للارتقاء بالواقع التمريضي في فلسطين.

هذا علما بأن البيانات التي ستدلون بها ستعامل لأغراض البحث العلمي فقط دون اطلاع أي طرف غير الباحث عليها، مع العلم انه لا داعي لذكر اسمكم او ما يدل على شخصكم الكريم.

وشكرا لتعاونكم

الباحث
وائل زياد محمد

2013

الجزء الاول:

الرجاء وضع إشارة (x) في المكان المناسب:

1- العمر بالسنوات

( ) أقل من 25 سنه ( ) 26 – 35 سنه

( ) 36 – 45 سنه ( ) أكثر من 46 سنه.

2- الجنس

( ) ذكر ( ) أنثى

3- المحافظة:

( ) جنين ( ) طولكرم ( ) نابلس

( ) قلقيلية ( ) سلفيت ( ) رام الله

( ) بيت لحم ( ) الخليل

4- الحالة الاجتماعية.....

( ) أعزب ( ) متزوج

( ) مطلق ( ) أرمل

5- عدد الأفراد المعالين

( ) أقل من 5 أفراد ( ) 6 – 10 أفراد

( ) 11 – 15 ( ) أكثر من 16 فرد

6 – الدخل الشهري بالشيقل.....

( ) اقل من 2500 ( ) 2501 – 3500

( ) 3501 – 4500 ( ) اكثر من 4500

7- عدد سنوات الخبرة

( ) 1 – 9 ( ) 10 – 19

( ) 20 – 29 ( ) اكثر من 30

8 – القسم الذي تعمل به في المستشفى

( ) قسم الجراحة ( ) قسم الباطني

( ) قسم الاطفال ( ) قسم الولادة والأمراض النسائية

9- المؤهلات العلمية

( ) دبلوم تمريض سنتين ( ) دبلوم تمريض 3 سنوات

( ) بكالوريوس تمريض ( ) ماجستير تمريض فأكثر

10- هل تقوم بأي أعمال أخرى؟

( ) نعم ( ) لا ( ) في بعض الاحيان

11 – إذا كان الجواب نعم او في بعض الاحيان كم عدد ساعات العمل الاضافية اسبوعيا.....

( ) اقل من 3 ساعات ( ) اقل من 6 ساعات

( ) اقل من 10 ساعات

الجزء الثاني:

ادراك ومعرفة الممرضين حول مدى تعرضهم للمخاطر الوظيفية :

		موافق بشدة	موافق	محايد	غير موافق	غير موفق بشدة
12	لدي معرفة كافية بالمخاطر الوظيفية					
13	انا قلق من المخاطر الوظيفية					
14	اعرف كيف اتجنب المخاطر الوظيفية					
15	انا قلق من حقوقي الشرعية فيما لو تعرضت لمخاطر صحية.					
16	اعرف أي المخاطر التي اتعرض لها اثناء العمل					
17	اعرف كيف يمكن ان اتأثر بالمخاطر الوظيفية					
18	اعرف كيف اعمل لأحافظ على سلامة نفسي والآخرين					
19	اعرف كيف افحص واشخص عندما يكون هناك شيئا خطأ					
20	اعرف المعايير الوقائية التي يجب اتخاذها اثناء العمل					
21	اعرف لمن اقدم تقريرا حول اية مخاطر وظيفية.					
22	اتحكم باستخدام معدات وأدوات السلامة المهنية					
23	ادارة المستشفيات تحافظ على تذكير الممرضين بمعايير السلامة المهنية .					

الجزء الثالث : مناخ الأمان والمخاطر النفسية:

		موافق بشدة	موافق	محايد	غير موافق	غير موفق بشدة
24	عملي مختلف تماما عن أي عمل آخر					
25	عملي فيه الكثير من المسؤولية					
26	لا أحصل على الدعم الكافي في عملي					
27	أشعر بأن عملي ممل جدا ورتيب					
28	أقوم بالكثير من العمل غير المخطط له					
29	أشعر كثيرا بضغط الوقت					
30	أعاني كثيرا من الضغط الذهني					
31	أشعر بالإرهاق والإجهاد المتواصل					
32	أعمل لأوقات وساعات إضافية					
33	أشعر بقلة الثقة بالنفس					
34	أشعر بقلة ضبط النفس					
35	أشعر كثيرا بقلة جدواي					
36	أشعر كثيرا بالإحباط					

37- هل لديك أي من الاعراض التالية التي يمكن ان تعزى الى المخاطر الوظيفية، حدد الاجابة *بنعم او لا*) مخاطر نفسية).

احتراق وظيفي	مشاكل في النوم	توتر	اكتئاب
مشاكل في التواصل	عدوانية	خوف	قلق

38- هل لديك أي من الاعراض التالية التي يمكن ان تعزى الى المخاطر الوظيفية، حـــدد الاجابـــة *(بـــنعم* او *لا*) مخاطر كيميائية

عضو الجسم	الاعراض			
العيون	**احمرار**	**زغللة**	**ورم**	**حرقان**
الجلد	**احمرار**	**ورم**	**اكزيما**	**حرق**
التنفس	**ضيق**	**اختناق**	**كحة**	**صفير**

39 - هل لديك أي من الاعراض التالية التي يمكن ان تعزى الى المخاطر الوظيفية، حدد الاجابـــة *بـــنعم* او *لا* (مخاطر فيزيائية).

	نعم	لا
مشاكل في السمع		
مشاكل في الرؤية		
مشاكل جلدية		
مشاكل في التنفس		

40 - هل لديك أي من الاعراض التالية التي يمكن ان تعزى الى المخاطر الوظيفية، حدد الاجابة *بنعم* او *لا*) مخاطر بيولوجية).

	نعم	لا
التهاب الكبد Hepatitis B		
التهاب كبد نوع Hepatitis C		
(مرض الايدز) HIV		
مرض السل Tuberculosis		

41 – هل لديك اي من الاعراض التالية التي يمكن ان تعزى الى المخاطر الوظيفية، حـــدد الاجابـــة *بـــنعم او لا* (مخاطر الملائمة).

عضو الجسم	ألم	تيبس	ورم	تنميل
الرأس والرقبة				
الاكتاف				
الظهر				
الاطراف العلوية				
الاطراف السفلية				
الحوض				

42 – صنف المخاطر التالية حسب شدتها :

(اقل شدة) (أكثر شدة)

(1 2 3 4 5)

( ) مخاطر فيزيائية ( ) مخاطر كيميائية

( ) مخاطر نفسية ( ) مخاطر بيولوجية ( ) مخاطر الملائمة

الجزء الرابع: ما مدى الحاجة للأشياء التالية اثناء العمل.

		دائما	غالبا	متوسط	نادرا	نهائيا
43	معايير السلامة العامة					
44	الوقوف لساعات طويلة					
45	اتصال مباشر مع المرضى					
46	غسل اليدين					
47	حمل اوزان ثقيلة					
48	لبس قفازات					
49	لبس حذاء خاص					
50	لبس غطاء للوجه					
51	لبس غطاء للرأس					
52	لبس نظارات لحماية العيون					
53	لبس جهاز راس حماية للإذن					
54	لبس ثياب خاصة					
55	لبس مريول					
56	استخدام ادوات حادة وخطيرة					
57	التركيز وتكثيف الانتباه					
58	التدريب على السلامة المهنية					
59	التقارير الموثقة					
60	الفحص الطبي					

الجزء الخامس : أشير الى مستوى رضاك فيما يتعلق بالتالي :

		غير موافق بشدة	غير موافق	محايد	موافق	موافق بشدة
61	عملي يعطيني الكثير من الرضى					
62	عملي يعني لي الكثير					
63	انا متحمس لعملي الحالي					
64	عملي يعطيني فرصة لأبين ما استحق					
65	في السنة الاخيرة عملي تتطور بطريقة ممتعة اكثر					
66	من المجدي ان اعطي جهدا لعملي					
67	لدي الوقت الكافي لتقديم عناية جيدة للمرضى					
68	لدي الفرصة الكافية لمناقشة مشـــاكل المرضـــى مـــع الزملاء					
69	احصل على الدعم الكافي من الزملاء					
70	سأقوم بعمل افضل ان كان هناك عمل اقل في الجناح					
71	دائما اتعلم المزيد خلال العمل					
72	اشعر بالعزلة من زملائي اثناء العمل					
73	اشعر بالثقة بنفسي كممرض					
74	احب طريقة العمل في الجناح الذي اعمل به					
75	قمت بتطوير صداقات عديدة اثناء العمل					
76	احب زملائي					
77	اشعر بالانتماء الى الفريق					
78	زملائي يحترمونني ويحبونني					

الجزء السادس: مستوى الإجهاد لدى الممرضين في المستشفيات:

		مطلقا	مرات قليلة كل عام	مرة في الشهر	مرات قليلة كل شهر	مرة في الاسبوع	مرات قليلة في الاسبوع	كل يوم
		0	1	2	3	4	5	6
79	أشعر بالجفاف العاطفي في عملي							
80	التعامل مع الناس لفترة طويلة يتطلب مزيدا من الجهد							
81	أشعر بأن عملي يحبطني							
82	أشعر بأن عملي يثبطني							
83	أشعر بأن عملي شاق							
84	إن عملي ونتيجة للتواصل المستمر مع الناس يسبب لي الإجهاد							
85	أشعر بأنني في نهاية المشوار							
	النتيجة الإجمالية – القسم الأول							

		مطلقا	مرات قليلة كل عام	مرة في الشهر	مرات قليلة كل شهر	مرة في الاسبوع	مرات قليلة في الاسبوع	كل يوم
		0	1	2	3	4	5	6
86	أتعامل مع بعض المرضى بشكل موضوعي وبأنهم هم الفئة المستهدفة							
87	أشعر بالإرهاق عندما استيقظ باكرا وأرى بأن لدي يوم عمل آخر							
88	لدي انطباع بأن المرضى قد يحملوني مسؤولية بعض مشكلاتهم							
89	في نهاية اليوم ينفد الصبر لدي							
90	لا أهتم أبدا لما يحدث لبعض المرضى لدي							
91	منذ أن بدأت العمل وأنا أشعر بالجمود تجاه الناس							
92	أخشى بأن يجعلني عملي هذا شخص غير مبالي							
	النتيجة الإجمالية – للقسم الثاني							

		مطلقا	مرات قليلة كل عام	مرة في الشهر	مرات قليلة كل شهر	مرة في الاسبوع	مرات قليلة في الاسبوع	كل يوم
		0	1	2	3	4	5	6
93	أحقق الكثير من الأشياء الهامة في عملي هذا							
94	أشعر أنني مليء بالطاقة							
95	أشعر وأفهم مرضاي بسهولة ويسر							
96	أهتم بمشكلات المرضى لدي بكل شغف							
97	في أثناء عملي فإنني أتناول المشكلات العاطفية للمرضى بكل هدوء							
98	أشعر بأن لدي تأثير إيجابي على الناس من خلال عملي							
99	أستطيع توفير جو من الارتياح للمرضى بكل سهولة							
100	أشعر بالانتعاش كلما كنت قريبا من المرضى لدي							
	النتيجة الإجمالية – للقسم الثالث							

شكرا لتعاونكم

Annex (D): Ethical consideration

State Of Palestine
Ministry of Health
Nursing Unit
Tel 092384775-092384776
Fax 092384777
Nablus P.O.Box 14

دولة فلسطين
وزارة الصحة
وحدة التمريض
هاتف 092384775-092384776
فاكس 092384777
نابلس ص ب (14)

الرقم: ٢/٤٢/٣٤١
التاريخ: ١٨/٦/٢٠١٢

حضرة الأخ/ مدير التمريض في مستشفى قلقيلية المحترم
بواسطة الأخ/ مدير مستشفى قلقيلية المحترم
بواسطة الأخ/ مدير التمريض في الإدارة العامة للمستشفيات المحترم
بواسطة الأخ/ مدير عام الإدارة العامة للمستشفيات المحترم
تحية طيبة وبعد،،

الموضوع: دراسة بحثية /جامعة القدس

يرجى السماح لطالب برنامج ماجستير السياسات والادارة الصحية في الجامعة المذكورة اعلاه" وائل زياد احمد محمد" بتوزيع استبانة الدراسة على الممرضين والممرضات حملة شهادة البكالوريوس بهدف عمل بحث بعنوان

" تقييم مدى تعرض الممرضين للمخاطر الوظيفية وامتثالهم لتطبيق معايير السلامة اثناء العمل في المستشفيات الحكومية في الضفة الغربية"

من تاريخ ١٩/٦/٢٠١٢ — ١٩/٩/٢٠١٢

علما ان المعلومات التي سيحصل عليها ستكون سرية للغاية وستستخدم لاغراض البحث العلمي فقط .

شاكرين تعاونكم

دولة فلسطين
وزارة الصحة
الإدارة العامة للمستشفيات
مستشفى درويش نزال الحكومي

مدير وحدة التمريض
نجاة دويكات

دولة فلسطين
وزارة الصحة
الإدارة العامة للمستشفيات

Annex (E): Name of experts

تحكيم الاستبيان

عرض الباحث الاستبيان على مجموعة من المحكمين تألفت من (6) اعضاء وهم :

1- د. عبد الفتاح الشملة	جامعة النجاح
2- د. علي بركات	جامعة النجاح
3- د. عماد الخطيب	جامعة القدس
4- د. اسمى الامام	جامعة القدس
5- د. عايدة القيسي	جامعة النجاح
6- د. عطية مصلح	جامعة القدس المفتوحة

بعد ذلك تم توزيع الاستبيان على عينة من مجتمع الدراسة وتم اجراء اختبارها ومن ثم توزيعها على الفئة المستهدفة في الراسة.

تقيم مدى تعرض الممرضين للمخاطر الوظيفية وامتثالهم لتطبيق معايير السلامة اثناء العمل في المستشفيات الحكومية في الضفة الغربية

إعداد وائل زياد أحمد محمد

إشراف: د. محمد شاهين

الملخص

من المعروف ان التمريض الذين يعملون في المستشفيات هم اكثر عرضة للمخاطر الوظيفية من زملائهم الذين يعملون في اماكن اخرى.فيما تهدف هذه الدراسة الى تقييم مدى تعرض الممرضين للمخاطر الوظيفية وامتثالهم لتطبيق معايير السلامة اثناء العمل في المستشفيات الحكومية في الضفة الغربية.

تتكون عينة الدراسة من 255 ممرض وممرضة والذين يعملون في اقسام الجراحة ، الباطني ، الاطفال ، وأقسام الولادة والنسائية في عشرة من مستشفيات وزارة الصحة الفلسطينية في الضفة الغربية حيث استجاب منهم 239 ممرض وممرضة ، وتم تصميم استبيان يتناسب مع اهداف الدراسة ويلبي احتياجات البحث حيث تم توزيعه على الفئة المستهدفة ، وبعد ذلك تمت عملية التحليل الاحصائي والخروج بالنتائج.

وقد كانت النتائج تشير الى ان مدى الادراك والمعرفة للمخاطر الوظيفية بين التمريض مرتفعة جدا في بعض البنود ومتوسطة في بنود اخرى ، اما في ما يتعلق بمناخ السلامة والمخاطر النفسية فقد كانت الدرجة الكلية لهذا المجال هو (71.08٪) وهي نسبة عالية.

اما في ما يخص الاخطار المهنية النفسية والمتمثلة في اضطرابات النوم فقد كانت نسبتها تمثل (51.0٪) ثم تلاها القلق بنسبة (44.8٪) اما بالنسبة للمخاطر الكيميائية فقد كانت الاعراض التالية هي الاعلى والمتمثلة باحمرار العيون بنسبة (25.1٪) وحرق في العيون بنسبة (14.2٪) احمرار الجلد (20.0٪) وأخيرا السعال فيما يخص الجهاز التنفسي والناتجة عن المخاطر الكيميائية.

بالنسبة للمخاطر المهنية الفيزيائية كان من ابرزها المشاكل في البصر بنسبة (21.33٪) ، اما التهاب الكبد الوبائي نوع B فقد كان من ابرز المخاطر المهنية البيولوجية.

ومن جهة اخرى فقد كان لمخاطر الملائمة في العمل دور كبير تمثل في الالم في جميع انحاء الجسم حيث كانت نسبة الالم في الراس والرقبة اعلى نسبة (51.0٪) ، والألم في الكتفين بنسبة (41.0٪) ونسبة (56.1٪) للألم في الظهر و (24.3٪) للالم في الاطراف العليا ، (41.9) للألم في الاطراف السفلى و اخيرا نسبة (26.4٪) للألم في الحوض.

وبالنظر الى ترتيب المخاطر المهنية بالنسبة لشدتها فقد كان في المقام الاول المخاطر البيولوجية وتليها مخاطر الملائمة وحل في المركز الثالث وبدرجة متوسطة المخاطر النفسية اما المخاطر الكيميائية والفسيولوجية فقد كانت في اخر الترتيب وحصلت على درجة منخفضة وكان ذلك بناء على رأي مجتمع الدراسة.

بالنسبة لمجال الاشياء المهمة المطلوبة في العمل من اجل سلامة التمريض العاملين في المستشفيات الحكومية في وزارة الصحة الفلسطينية فقد كانت الدرجة الكلية لهذا المجال (81.17) والتي تشير الى درجة عالية جدا.
وأظهرت النتائج أن مستوى الرضا بين التمريض العاملين في المستشفيات الحكومية في وزارة الصحة الفلسطينية كانت (76.19٪) مما يدل على تقدير عالي.

لقد تم اختبار مستوى الاحتراق النفسي بين التمريض العاملين في ا لمستشفيات المستهدفة في البحث في وزارة الصحة الفلسطينية في ثلاثة مجالات (ألإرهاق و تبدد الشخصية وتحقيق الشخصية). وتبين النتائج أن تبدد الشخصية سجل درجة عالية بمتوسط مجموعه (18.6653) سجل الإرهاق وتحقيق الشخصية درجة معتدلة بمتوسط مجموعه(11.4043 – 14.00079).

وخلص الباحث إلى أن ادراك ومعرفة المخاطر المهنية بين التمريض العاملين في المستشفيات الحكومية قد سجل نسبة عالية جدا ، كما سجل نسبة عالية في مناخ السلامة والمخاطر النفسية بين التمريض العاملين في المستشفيات الحكومية ، كذلك تم ترتيب المخاطر وفقا لشدتها الى المخاطر البيولوجية في المقام الاول ومخاطر الملائمة في المقام الثاني اما المخاطر النفسية في المقام الثالث وبدرجة متوسطة تليها المخاطر الكيميائية والفسيولوجية وبدرجه منخفضة. وأظهرت الدراسة مستوى الرضا بين التمريض العاملين في المستشفيات الحكومية حيث حصلت على درجة عالية ، وبالنسبة للأشياء المطلوبة لسلامة التمريض فقد سجلت الدراسة درجة عالية ، وحول مستوى الاحتراق النفسي فقد سجلت الدراسة درجة عالية في تبدد الشخصية ودرجة معتدلة في الإرهاق وتحقيق الشخصية.
وأخيرا أوصى الباحث بضرورة العمل بجدية وعمل برامج تثقيفية للتمريض العاملين في المستشفيات من اجل تقليص نسبة المخاطر التي قد يتعرضوا لها. وذلك لتحسين الوضع الصحي في المستشفيات الحكومية في الضفة الغربية.