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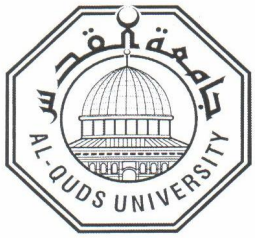


# Stress and Psychological Problems among Health Workers in Intensive Care Units at MOH Hospitals in Gaza Strip- Palestine

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**M.P.H Thesis**

**Jerusalem – Palestine**

**1434 / م 2012هـ**

**Deanship of Graduate Studies**

**AL-Quds University**

# Stress and Psychological Problems among Health Workers in Intensive Care Units at MOH Hospitals in Gaza Strip- Palestine

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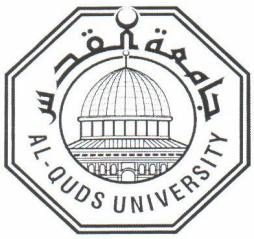


# Thesis Approval

## Stress and Psychological Problems among Health Workers in Intensive Care Units at MOH Hospitals in Gaza Strip- Palestine

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**Jerusalem – Palestine**

**1434 / م 2012هـ**

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

رَبِّ أَوْزِعْنِي أَنْ أَشْكُرَ نِعْمَتَكَ الَّتِي أَنْعَمْتَ عَلَيَّ وَعَلَى وَالِدَيَّ وَأَنْ أَعْمَلَ صَالِحًا تَرْضَاهُ وَأَصْلِحْ لِي فِي ذُرِّيَّتِي إِنِّي تُبْتُ إِلَيْكَ وَإِنِّي مِنَ الْمُسْلِمِينَ ( الأحقاف،آية :15 )

صَدَقَ اللَّهُ الْعَظِيمِ

## Dedication

I dedicate this research to the Palestinian people, who are still making life possible, to face Israeli aggression and violation against their civil and political rights, to soul of my brother "Ramzee" who is the victim of the war, to my loving parents, to my loving wife, To my brothers and sisters, to all of my friends, and to everyone who helped me and gave me support and energy to finish this work.

Researcher

Mohammed Merfeg Al Shrafi

## Declaration

I certify that this thesis submitted for the degree of Master is the result of my own research, except where otherwise acknowledged, and that this thesis (or any part of the same) has not been submitted for a higher degree to any other university or institution.

Signed:.....

Mohammed Merfeg Al Shrafi

Date: ..../..../

## Acknowledgements

I would like to express my gratitude to my respected teacher and my academic supervisor, **Pro. Dr. Mohammed Wfaie A. El helou,** professor of psychology at Islamic University- Gaza for his guidance, supervision, and encouragement in carrying out this research. He has been constant source of inspiration in all stages of this work. I am highly indebted to him for his advice and continuous guidance.

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I would like to thank my dear father and mother for supporting and encouraging me to do my best.

I would like to thank my wife for standing by me to finish this work. I also wish to thank my brothers and sisters who encouraged and supported me to achieve this work.

I also wish to thank my friends and colleagues who shared me my worries and offer help during study period.

I would like to thank doctors, nurses and physiotherapists in ICUs who helped me during data collection and were ready to participate in this study.

Finally, I would like to express my great thank and appreciation to the hidden hands who assisted me throughout the study period because this study would not have been done without their support.

**Researcher**

Mohammed Merfeg AlShrafi

## Abstract

The study aimed to identify the stress and psychological problems among health workers in intensive care units at MOH hospitals in Gaza Strip, Palestine. The study sample consisted of (366) health workers, (87) were female and (279) were male, (119) doctors, (233) nurses and (14) physiotherapists. The researcher used a descriptive analytic study and used two main tools, stress scale and BSI scale. The study showed that stress among health workers in ICUs is in a moderate level (67.60 %). The material dimension came in the first dimension with the highest average (86.63%), followed by work environment dimensions (73.70 %), followed by political dimension (67.41 %), followed by physical dimension (51.68 %), and psychological dimension came in the last dimension(50.17%). The total dimensions of BSI scale have low level with percentage of (43.14%). The highest item in the psychological problems items were: having to check and double check what you do (65.30 %), nervousness (63.39%), feeling that every thing in the life is difficult (58.20 %), feeling that others are not giving you the proper credit for your achievements (57.49%). There is a significant difference in stress due to profession (in favor of nurses), place of work (in favor of Al-Shifa Hospital). There is a significant difference in BSI scale according to gender (in favor of females), age (in favor of less than 30 years), place of residence/ governorate (in favor of Khan-Younis), years of service in the profession (in favor of 3-6 years), department (in favor of neonate ICUs), number of years of work in the department (in favor of 3-4 years). Finally, the researcher concludes that females who work in neonatal ICUs, health workers in Khan-Younis governorate and health workers under the age of 30 years require more attention because they are more liable to develop psychological problems.

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## Abbreviations

ANOVA……..**.....**One-Way Analysis of Variance

APA …….……American Psychiatric Association

BSI…….Brief Symptom Inventory

DSM-IV…….Diagnostic and Statistical Manual of Mental Disorders

EMT…….....Emergency Medical Team

GS…….**.....**Gaza Strip

ICUs……..….. ….….Intensive Care Units

LBP……..…….....Low Back Pain

MOH…….....Ministry of Health

MPH…….....Master of Public Health

NGOs…….....Non Governmental Organizations

SPSS……...……...Statistical Package for Social Science

UNRWA……United National Relief and word Agency

WB…….West Bank

WHO…….….World Health Organization

# Chapter (1)

## 1.1 Introduction

The working environment of the Intensive Care Units (ICUs) is a constant source of stress for the health workers particularly in Gaza Strip, they frequently deal with the injured and martyrs resulting from Israeli occupation. However, those injured or martyrs may be their relatives, neighbors, friends or one of their family. Health workers in ICUs are part from Palestinian society who experienced the effect of war on Gaza Strip, they are in risk of developing stress and psychological problems due to high level of exposure and dealing with victims of the war. These factors have a painful influence on the health workers when dealing with such cases, and they may increase the probability of suffering from physical and psychological problems.

ICU is the work environment of extremely stressful situations that result from the regular expectation of emergencies, high technological complexity, and concentration of severely critically ill patients, who are frequently subject to sudden changes in their general health status. Thus, this work environment is characterized as the basis of stress an emotionally risky scenario, both for health workers and for patients and their family members. Doctors and nurses of high complex specialties, who often work in the limit of life and death in ICUs, are more exposed to psychological stress (Sluiter, et al, 2003, Lutzen, et al. 2006 & Hays, et al. 2006). Health workers especially those working in variant ICUs including adults, pediatrics, neonates and also cardiac intensive units constantly experience overload work because of the complex nature of patients and their needs like continuous monitoring, and follow up hourly. However, working in ICUs is a stressful occupation and this fact is related directly to the work with people who suffer and require abundant attention, compassion, and sympathy. Whenever health workers face situations like these, they may eventually become irritable, depressed and disappointed. Such feelings can be considered as paradoxically incompatible with their professional performance, generating guilt and increasing anxiety and depression.

Numerous studies have shown high levels of psychological stress among doctors, nurses and other healthcare professionals who are working in various situations (O'Connor, 2000). There is some evidence to suggest that work stress plays an important role in some types of chronic health problems such as cardiovascular diseases, musculoskeletal

disorders and psychological illness (Weinberg and Francis, 2000). The issue of work stress is of utmost importance to the health workers because it can cause physical depletion, burnout, feelings of helplessness and hopelessness, emotional drain, development of a negative self-concept, interpersonal problems, high workforce absenteeism, and reduced efficiency and performance (Cushway, Tyler, & Nolan, 1996). However, studies investigating the work stress- wellbeing relationship have found significant relations between work stress and depression ( Caplan, 1994; Revicki & May, 1985; Weinberg & Creed, 2000). Therefore, the impact of mental health problems at the workplace, has serious consequences not only for individual well-being but also for firm productivity. Workers with better psychological well-being are generally more productive, less likely to suffer from illnesses and are less subject to sickness leave. In this respect, the burden of mental health disorders on health and productivity has long been underestimated. The economic cost of mental health problems, including treatment and the indirect cost of lost productivity and days off work, is estimated at more than 2 percent of general practitioners in the United Kingdom (Layard, 2005). However, according to the fourth European working conditions survey (2005), work-related stress is one of the most common work-related health problems, affecting 22% of European workers. Therefore, the currently psychiatric illness particularly depression, anxiety disorders, and stress related conditions is the most common cause for long-term sick-leave in Sweden for women, and the second largest for men (national social insurance board, 2007). Therefore, the current research tries to detect the level of stress and psychological problems among health workers in ICUs at MOH hospitals in Gaza strip-Palestine.

## 1.2 Problem statement

It is important to understand how work in the ICUs affects the health workers, and what are the stress and psychological problems in their working environment. A lot of researches describe the ICUs as stressful departments, and they are some evidence from longitudinal studies suggest that stressful work situations are associated with an increased level of depressive symptoms (Schonfeld, 1992), psychosomatic complaints (Frese, 1985; Parkes, Menham, & Rabenau, 1994) and other distress symptoms (Leitner, 1993). However, the researcher wants to determine whether or not there are stress and psychological problems among health workers in ICUs at MOH hospitals in Gaza Strip.

## 1.3 Study justification

This study is very important to document the level of stress and psychological problems among health workers in ICUs. However, protecting mental well-being at work requires that general distress should be identified and the proportion of workers suffering from stress or psychological reactions also should be known in order to develop adequate corrective and preventive measures. Therefore, the aim of the present study is to detect the level of stress and psychological problems and to find out various ways to help those workers to reach to high level of mental health. On the other hand, this study will increase awareness of the health decision makers to help those health workers in ICUs to achieve their works with high productivity, and introduce new visions and suggestions to institutions to guide preventive measures to reduce stress and psychological problems among those workers and to develop further studies towards the intervention of stress in the ICUs. At last, the need of this study to be applied here in Gaza Strip is to clarify the needs of the health workers and to be used by the researchers in this field.

## 1.4 Objectives

### 1.4.1 General objective

The current study aims to identify the stress and psychological problems among health workers in intensive care units at MOH hospitals in Gaza Strip.

### 1.4.2 Specific objectives

- To detect the level of stress and psychological problems among health workers in ICUs at MOH hospitals in Gaza Strip.
- To identify what are the stress and psychological problems among health workers in ICUs at MOH hospitals in Gaza Strip.
- To investigate the relationship between stress, psychological problems and socio demographic status among health workers in ICUs at MOH hospitals in Gaza Strip.
- To reach a recommendations for health decision makers for better planning and services.

## 1.5 Research questions

To achieve the research objectives , the study attempted to answer the following research questions :

- What is the level of stress and psychological problems among healthcare workers in ICUs at MOH hospitals in Gaza Strip?
- What are the stress and psychological problems among health workers in ICUs at MOH hospitals in Gaza Strip?
- Who are the most health workers (doctors, nurses or physiotherapists) of high risk to stress and psychological problems in ICUs at MOH hospitals in Gaza Strip?
- What are the most hospitals of high risk to stress and psychological problems in ICUs at MOH hospitals in Gaza Strip?
- To what extent other socio-demographic data affect of stress and psychological problems among health workers in ICUs at MOH hospitals in Gaza Strip?

## 1.6 Definition of variables:

### 1.6.1 Definition of stress

Stress defined as a process which causes or precipitates individuals to believe that they are unable to cope with the situation facing them, and the feelings of anxiety, tension, frustration and anger which result from the recognition that they are failing in some way and the situation is getting out of their control (Payne, 1999). Therefore, stress is a psychobiological reaction of the body to physical or psychological demands that threaten or challenge the organism's well-being (Laposa et al, 2003).

### 1.6.2 Psychological problems

Psychological problems are broad concepts, and there are a lot of psychological problems/disorders in psychiatry sciences, but in this research the researcher will talk about depression and anxiety. Some of the psychological problems resulting from stress are includes such as: high levels of anxiety or nervousness, feelings of anger or hostility, depression, mood swings, disturbing dreams, difficulty with concentration, forgetfulness or disorganization /confusion, trouble in making decisions, feelings of being overloaded or overwhelmed, crying spells or suicidal thoughts, feelings of loneliness or

worthlessness, increased irritability and overreaction potential, and possible heightened defensiveness (American Institute of Stress, 2006).

### 1.6.3 Definition of depression

In the fields of psychology and psychiatry, the terms depression or depressed refer to both expected and pathologically chronic or severe levels of sadness, perceived helplessness, disinterest, and other related emotions and behaviours (American Psychiatric Association, 2000).

### 1.6.4 Definition of anxiety

Anxiety is a physiological and psychological state characterized by cognitive, somatic, emotional, and behavioral components. These component combine to create the painful feelings that typically recognized as uneasiness, apprehension, or worry (Seligman, Walker, & Rosenhan, 2001).

## 1.7 Operational definition :

### 1.7.1 Stress

The researcher operationally defines stress as  a condition of physical and mental strain due to inability to adjust to environmental demands stressor or life events, thus resulting in physical and psychological problems or maladaptive behavior.

### 1.7.2 Psychological problems

Psychological problems may result from an excessive daily stressors that the health workers cannot adapt with these demands or challenges. Therefore, they may appear in his/her behavior as depression, hopelessness, helplessness, self worthlessness, isolation or anxiety and nervousness.

### 1.7.3 Health workers in ICUs

The health workers team in ICUs  has special training in the knowledge and skills needed to care for critically ill people. The team is involved in the management of all patients within the unit. Internationally, the health workers in ICUs include multi-disciplinary team: doctors, nurses, physiotherapists, dietitians, social workers, pharmacists, and other technicians, but this study will focus only on doctors, nurses and physiotherapists who are more involved in dealing with patients.

### 1.7.4 Definition of ICU

ICU is defined as a service for patients with potentially recoverable conditions who can benefit from more detailed observation and invasive treatment than that service which can be provided in general wards or high dependency areas. Intensive care is typically provided for patients with threatened or established organ failure. This may have arisen from an acute illness, trauma, or during planned treatment. Patients with or at risk of developing single organ failure are candidates for high deterioration of their health status. If patients' case requires mechanical ventilation, they will need admission to an ICU.

### 1.7.5 ICU doctor

Doctor who have special training, skill, and experience in caring for the critically ill or the injured patients. The resident doctor provide care for ICU patients and is available 24 hours a day, seven days a week. He works in close collaboration with the attending doctors, registered nurses and physiotherapists. All ICU patients are followed by a resident doctor. The residents are the physicians who coordinate care on a daily basis with the other specialist doctors. They are up to date on all lab and test results, and they participate in daily multi-disciplinary rounds with the intensivists to review the plan of care with the ICU team.

### 1.7.6 ICU nurse

ICU nurse is a professional registered nurse who works in an intensive care unit. This nurse has to comply with all the educational, legal, and training requirements to practice as a professional nurse, and he may have a special training and experience in caring for critically ill and injured patients, also receives the patient into the ICU; gives him/her the necessary personal treatment; connects him according to need to the appropriate medical system (e.g. respiratory instruments, artificial-feeding set-up, blood and plasma transfusion system, measuring and monitoring systems, etc.), conducts a follow-up of his health condition and has to be aware of any change in the health situation of the patient, and assists the medical doctor in the treatment in extreme events of required resuscitation and in connecting into the necessary instrument systems.

### 1.7.7 ICU physiotherapist

The majority of patients who are admitted to the ICUs will be intubated and/or sedated. Such patients will be unable to cough and clear their secretions normally. If adequate physiotherapy is not provided to these patients, they will quickly develop lung collapse or pneumonia. Therefore, most ICUs have physiotherapists providing dedicated physiotherapy for their patients. Immobile patients rapidly develop muscle weakness and stiff limbs, which may be prevented by musculoskeletal physiotherapy e.g. active and passive movements. Early intervention to rehabilitate patients can improve functional outcomes, especially for patients with neurological conditions, after trauma or where the ICU stay has been prolonged.

## 1.8 Demographic context

Palestine (Annex 1) is bordered by the Mediterranean Sea, the Gulf of Aqaba, the Dead Sea, the Sea of Galilee, the Jordan River, and by four countries Jordan, Egypt, Lebanon and Syria. According to the 2010 census, there were 10.88 million Palestinians all over the world by the end of 2009. They are distributed as follows: 36.7% of them or 3.99 million live in the Palestinian Territory (62.1% in the West Bank and 37.9% in Gaza Strip); 1.25 million (11.5%) live in Israel; 3.24 million live in Jordan (29.8%); 1.78 million (16.3%) in the other Arab countries. Palestinians living in other foreign countries is estimated to be 618 thousand (5.7%). According to data available in 2009, the refugee population in the Palestinian Territory accounts for 45.0% of the total Palestinian population. 50.8% of the total population are males and 49.2% are females. The demographic pyramid in Palestine is flat, and the population doubles every 23 years; 50% of the population is under 18 and about 3% is over 65. (PCBS, 2010).

Gaza Strip (Annex 2) is a narrow piece of land located on the coast of the Mediterranean sea, its position on the crossroad from Africa to Asia made it a strategic place for foreign occupiers over centuries. The Gaza Strip is a crowded place. With an area of 365 Sq. km. And a population density of 4117 per sq km, it is considered as the second most populated place on the earth after Hong Kong (CIA World Factbook, 2010). The Gaza Strip comprises five main governorates which are: North of Gaza 17% of Gaza Strip total area, Gaza City 20.3% of Gaza Strip total area, Mid-Zone 16% of Gaza Strip total area, Khan-Younis 30.5% of Gaza Strip total area, and Rafah 16.2% of Gaza Strip total area (Palestinian Ministry of Health, 2005).

## 1.9 Health services :

The health services in Palestine, and in Gaza Strip provided by the Palestinian health care system which consist of: (1) governmental health care system, (2) NGOs health care system,(3) UNRWA health care system, (4) private health care system.

### 1.9.1 Hospital facilities

There are (76) hospitals in Palestine; (51) in West Bank and (25) in Gaza Strip, with total number of (5,108) beds in government and non-government hospitals; (60%) in West Bank and (40%) in Gaza Strip. (74.5%) of them are general beds, (16.1%) specialized beds, (3.3%) rehabilitation beds and (6.5%) maternity beds. In Palestine, there are (12.6) beds per 10,000 of populations; (12.2) bed in West Bank and (13.3) bed in Gaza Strip ( Palestinian Ministry of Health, 2010a).

The scarcity of health services in Gaza is a major public health problem, particularly in cardiology, neurology, ophthalmology, oncology, radiology and hematology. While some MOH hospitals (particularly Al Shifa) have the premises and equipment to provide at least parts of such services, they lack the necessary human resources. They also experience great difficulties in getting spare parts and consumables for the high-tech equipment (Palestinian Ministry of Health, 2009a; WHO, 2009). In 2007, the bed density was 133 beds per 100,000 people in the population (WHO, 2009). This is fairly low when compared to e.g. the average number of beds per 100,000 people in the population in the WHO European Region (some 675) and in Israel (583.). The low bed density leads to overcrowding when there is any unusual increase in demand. While MOH hospitals are often overcrowded, the non-governmental hospitals tend to be under-used (WHO, 2009).

### 1.9.2 MOH mental health services

The directorate general mental of health was established recently at the end of 2009. The mental health services in MOH provides preventive, curative and community-based rehabilitation programs according 5 clinics, only one is specialized in child mental health. However, mental retardation occupied the highest proportion among children with 26.5%. While Neurosis and Epilepsy reported the most common with 17.8% and 16.6% respectively. In 2009 Gaza City occupied the highest incidence rate with 161/100,000 Gaza population followed by Rafah with 132.1/100,000 Rafah population ( Palestinian Ministry of Health, 2009b).

### 1.9.3 Health care manpower

Particularly in primary health care there is a shortage of nurses. Nurses tend to be underrepresented, compared to the medical doctors. Gaza has 2 medical faculties (with an annual average of 65 students) and 3 nursing colleges (with an annual average of 200 students). Medical faculty enrolments are increasing, but the quality of the medical education is deteriorating somewhat because of lack of certain training materials. While many members of the older generation of medical doctors in Gaza are well-trained- many with specializations obtained abroad, - their skills are getting "rusty", because of the lack of continuing education. The younger generation lacks both specialization possibilities and continuing education, since due to the blockade - it has been very difficult to travel abroad for study, or to import guest lecturers from abroad (WHO, 2009).

In 2009, the rate of physicians registered in the Physicians' Union in the Gaza Strip was 3.2 per 1000 people in the population. The rate of nurses was 3.5 per 1,000 people population in the Gaza Strip. However, the distribution of the medical professions in the Ministry of Health, Gaza Strip was as follows in 2009: 1579 physicians, 665 specialists, 252 dentists, 1592 nurses, 783 paramedics and 3520 administration workers (PCBS, 2010). On the other hand, the European Region of the WHO has 3.35 doctors and 7.13 nurses per 1000 people in the population; in Israel the corresponding figures are 3.53 and 5.79 (WHO Regional Office for Europe, 2010).

### 1.9.4 ICUs in MOH hospitals

There are six types of ICUs in governmental hospitals as the following: adults ICUs, cardiac ICU, pediatric ICU, neonate ICU, burn ICU, and recently cardiac surgery intensive care unit in Al Shifa Hospital- Gaza Strip. The sum of special care beds in MOH hospitals is (101) beds, with the percentage (57%) of the total MOH beds in Gaza Strip. The sum of neonate ICUs beds is (95) and constitute more than half of the total number (53.7%), at the average of (4.1) neonate ICU beds per (10) maternal beds in MOH hospital. All neonates cases in non governmental hospitals are transferred to neonate ICU departments in MOH hospitals ( Palestinian Ministry of Health, 2010b).

# Chapter (2)

# Conceptual framework and literature review

## 2.1 Introduction

This chapter is divided into two main parts, the first one is entitled "conceptual framework" and the second one is entitled "literature review". The main title of conceptual framework discussed also two important subjects first part is about stress and the second part is about psychological problems. Stress has many subtitles including" concepts of stress, overview of conceptualizations of stress, models of stress, effects of stress" psychological problems will handle the depression and anxiety. The second main part of this chapter is about the literature review that displayed several studies connected with this current study. Also, the researcher tries to draw the conceptual framework of stressors in ICUs and psychological problems among the health workers as the researcher expected; as shown in the following figure:

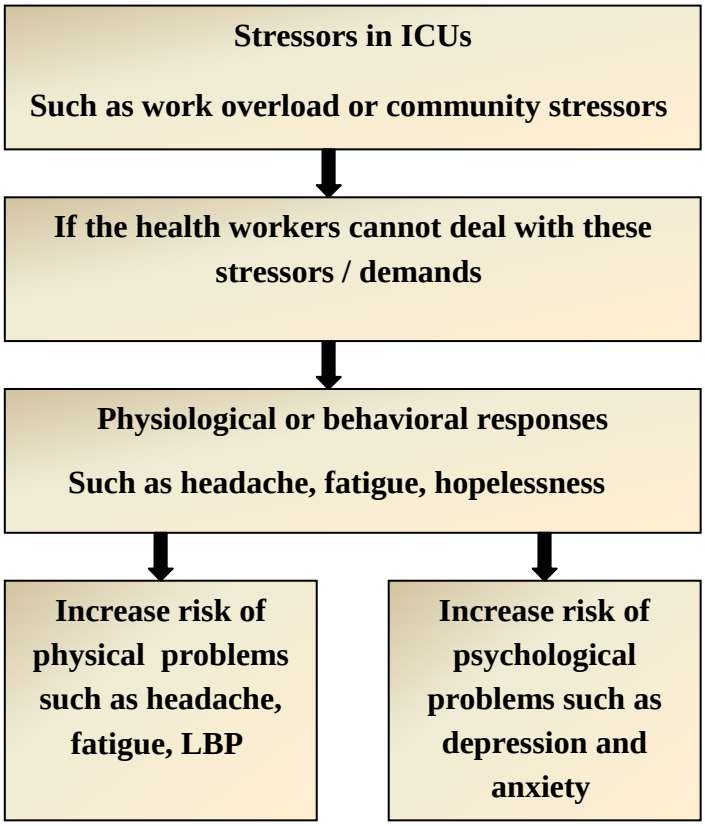


**Figure (2.1): Conceptual framework diagram.**

## 2.2 Part one : Conceptual framework

## 2.3 Concepts of stress

Stress is a broad area of study in many different branches of social and medical sciences. The meaning of stress depends mainly on which branch of science we talking. However, it is true that not all stress is negative; there is the positive side of stress (eustress) as well as the negative side of it (distress). Work-related stress is the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope. Stress occurs in a wide range of work circumstances but is often made worse when employees feel they have little support from supervisors and colleagues, as well as little control over work processes (WHO, 2012). Stress is not a disease, but can lead to mental and physical disorders, there is the reasonable degree of stress, which motivates some people to high performance, and there is the too much stress which causes low performance; the situation of no stress is impossible (Morgan, 1994). Callaghan et al. 2000 defined stress operationally as respondents' physical and psychological symptoms and health related and social behaviours attributed to their work experiences. On the other hand, work-stress can be defined as the harmful physical and emotional response that occurs when the requirements of the work do not match the capabilities, resources or needs of the worker. Gianakos (2000) define work-stress as one of the most serious occupational health hazards reducing workers satisfaction and productivity, and increasing absenteeism and turnover.

Work-stress is defined as the psychological state that represents an imbalance or mismatch between people's perceptions of the demands placed on them in their work environment and their ability to cope with those demands (Cox, 1985; Cox et al. 1993).

### 2.3.1 Overview of conceptualizations of stress

On the most general level, one can differentiate between four stress concepts: (a) the stimulus concept, (b) the response concept, (c) the transactional concept, and (d) the discrepancy concept. The stimulus concept focuses on situational conditions or events. Within this conceptualization, certain stimuli are stressful-for example, high time pressure, interpersonal conflict at work, or accidents. However, the stimulus concept is problematic because not all individuals react in a uniform manner to the same stressor. Nearly every situational condition or every event may evoke strain in some individuals. Although the stimulus conceptualization leads to conceptual problems, many researchers agree that there

are subsets of stimuli that evoke strain in most individuals (Brief & George, 1995; Kahn & Byosiere, 1992). The reaction concept focuses on physiological reactions as the crucial constituent of stress-that is, stress exists if an individual shows a specific reaction pattern regardless of situational characteristics (Selye, 1956). However, this conceptualization also has its shortcomings. It does not take into account that very different situations can result in the same physiological responses and that an individual's coping efforts may have an effect on that individual's reactions, thus altering the stress response.

Another class of concepts refers both to the situation and to the person when defining stress. The transactional concept brought forward by Lazarus (1966) assumes that stress results from a transaction between the individual and the environment, including the individual's perceptions, expectations, interpretations, and coping responses. The transactional relationship between the person and the environment appraised by the person as taxing or exceeding his or her resources and endangering his/her well-being" (Lazarus & Folkman, 1984). The discrepancy concept describes stress as an incongruity between an individual's desires and the environment (Edwards, 1992); in operationalizing such a discrepancy, however, researchers face great difficulties.

Thus, *stress* is a broad term that conveys a variety of meanings. To avoid ambiguity, the researcher will use the terms of stressors and stress reactions or strain throughout this chapter, and use the terms strains, and stress reactions synonymously.

*Stressors* are conditions and events that evoke strain (Kahn & Byosiere, 1992). Stressors can be single events such as critical life events or traumatic experiences, and they can also be chronic problems that continue over a longer period of time. The latter often are micro-stressors, so-called daily hassles (Kanner, Coyne, Schaefer, Lazarus, 1981)-for example, daily difficulties with finishing one's work in time or daily problems in dealing with difficult clients.

Stressors can be grouped into the categories-physical stressors, task-related job stressors, role stressors, social stressors, work-schedule-related stressors, career-related stressors, traumatic events.

*Physical stressors* refer to aversive physical working conditions, including noise, dirt, heat, vibrations, chemical, or toxic substances. They also include poor ergonomic conditions at the workplace and accidents. Physical stressors have psychological effects

(Seeber & Iregren, 1992). *Task-related job stressors* appear while the employee is doing a task; these stressors include high time pressure and work overload, high complexity at work, monotonous work, and disruptions (e.g., sudden deterioration in the patient's health status). *Role stressors* fall into role ambiguity and role conflict. *Social stressors* express themselves in poor social interactions with direct supervisors, coworkers, and others. These stressors include interpersonal conflicts at the workplace, and mobbing or bullying (Zapf, Knorz, & Kulla, 1996).

Role stressors comprise role overload, role conflict, and role ambiguity. Role overload occurs when individuals have to do too much or too complicated work, role conflict refers to situations with conflicting role expectations, and role ambiguity refers to situations with unclear role expectations. Many studies have been conducted on this successful model. Jackson and Schuler (1985) and Tubbs and Collins (2000) meta-analyzed findings from these studies and showed clear relationships between role stressors and impaired well-being. *Work-schedule-related stressors* stem from working time arrangements. The most prominent and well-researched stressors in this category are night and shift work. Additionally, long working hours and overtime belong to this category (Sparks, Cooper, Fried, & Shirom, 1997). *Career related stressors* include job insecurity and poor career opportunities. *Traumatic stressors* are single events such as the exposure to disasters, major accidents, or extremely dangerous activities.

## 2.4 Models of stress

Stress can be caused by a number of factors related to both content and context of the work. Models of stress provide a framework for assessing and intervening at an individual and organizational level to reduce work-related stress in health care settings.

### 2.4.1 The transactional models of stress

The transactional models of stress Lazarus & Folkman emphasizes the importance of peoples perceptions of not only the stress to which they are exposed but also of their own coping resources. The model proposes that the ability of people to prevent or reduce stress is determined by their appraisal of the threats within a situation **(primary appraisal)**, and their coping skills to deal with that threat **(secondary appraisal)** (Lazarus & Folkman,1984**).**

### 2.4.2 Theoretical concept of stress

There are numbers of definitions of stress as well as number of events that can lead to the experience of stress. People say they are stressed when they take an examination, when having to deal with a frustrating work situation, or when experiencing relationship difficulties. Stressful situations can be viewed as harmful, as threatening, or as challenging. However, Cox et al. (2000) mentioned that there are essentially three different, but they are overlapped approaches to define the study of stress. The first approach conceptualizes occupational stress as destructive or harmful characteristics of work environment. This approach has been termed as the "**engineering approach**". The second approach defines stress in terms the common psychological effect of a wide range of harmful stimuli. It treats stress as a particular physiological response to a threatening or damaging environment. This has been termed as the "**physiological approach**". The third approach conceptualizes work stress in terms of the dynamic interaction between the person and his work environment. This final approach has been termed as the "**Psychological approach**". Two specific criticisms had been offered to the first two approaches, the first empirical and conceptual. First, both engineering and physiological models are not adequately accounted for existing data. For instance, they ignore the mediation of strong cognitive as well as situational factors in the overall stress process. The second criticism is that, the engineering and physiological models of stress are conceptually dated, and largely ignore individual differences of physiological nature and perceptual and cognitive processes that might underpin (Cox et al, 2000). These two approaches, therefore, treat the person as a passive vehicle for translating the stimulus characteristics of the environment into physiological response parameters. They largely ignore the interactions between the persons and their various environments, which are essential part of systems-based on approaches to biology, behavior and psychology. However, the third approach to the definition and study of stress pays special attention to the environmental factors and, in particular, to the psychological and organization contexts of the work stress. Stress is either inferred from the existence of problematic person-environment interactions or measured in terms of the cognitive processes and emotional reactions, underpins those interactions. This has been termed as the "Psychological approach". Variants of psychological approach, contemporary, dominate stress theory and among them, the two distinct types are identified as the international and the transactional. The former focuses on the structural feature of the persons interaction with their work environment, while the later is more concerned with the psychological mechanisms underpin that interaction. Transactional models are primarily

concerned with the cognitive appraisal and coping. In a sense, they represent a development of interactional models, and largely consistent with them (Cox et al, 2000). There is a growing consensus on the definition of stress as a negative psychological state with cognitive and emotional components, and its effects on the health of both individual employees and their organizations. In addition, there nowadays theories of stress that can be used to relate the experience and effects on work stress with exposure of work hazards and harmful effects on health that such exposure might cause. Appling these theories on understanding of stress at work allows the approach of the management at work stress through the application of the control notion of the cycle, like this approach has proved effective somewhere in health and safety. It offers a systemic problem-solving system for continuous improvement related to work stress. There are several distinct areas, which research is required; some related to the individuals but others relate to the design and management of work and interventions to improve the work environment (Cox et al, 2000).

However, the earliest contributions to stress research was **Water Cannons** (1932) description of fight or flight response. Cannon proposed that, when an organism perceives a threat, the body is rapidly aroused and motivated via the sympathetic nervous system and the endocrine system. This intensive physiological response mobilizes the organism to attack the threat or to flee; hence, it is called the ***fight or flight*** response. Cannon reasoned on one hand, the fight or flight response is adaptive because it enables the organism to response quickly to threat. On the other hand, he concluded, stress can be harmful to the organism because it disrupts emotional and physiological functioning and can cause medical problems over time. In particular, when an organism is un able to either fight or flee and is exposed to prolonged stress, the state of psychological arousal may continue unabated, laying the groundwork for health problems (Taylor, 1999).

On the other hand, the early contribution to the field of stress is **Hans Selyes** (1956, 1976) work on the general adaption syndrome, although Selye initially explored the effect of sex hormones on physiological functioning. Thus, whereas Cannon work explored adrenomedullary responses to stress specifically, catecholamine secretion. Selyes work more closely explored adrenocortical responses of stress. From these observations, Selye developed his concept of general adaptation syndrome. He argued that, when an organism confronts a stressor, it mobilizes itself for action. The response itself is nonspecific with respect to the stressor; that is, regardless of the cause of threat, the individual will response

with the same physiological pattern of reactions. Overtime, with repeated or prolonged exposure to stress, there will be wear and tear on the system. The general adaptation syndrome consists of three phases. In the **first phase**, alarm, the organism becomes mobilized to meet the threat. In the **second phase**, resistance, the organism makes efforts to cope with the threat, as through confrontation. The **third phase**, exhaustion, occurs if the organism fails to overcome the threat and depletes its physiological recourses in the process of trying. The substantial of Selyes model on the field of stress continues to be felt today. One reason is that it offers a general theory of time. As such, it provides a way of thinking about the interplay of physiological and environmental factors. Second, it posits a physiological mechanism for the stress-illness relationship. Specifically, Selye believed that repeated or prolonged exhaustion of resources, the third phase of the syndrome, is responsible groundwork for disease. In fact, prolonged or repeated stress has been implicated in disorders such as cardio vascular disease, arthritis, hypertension, and immune-related deficiencies. Thus, stress researchers have also discovered evidence that suggest that psychological stress impairs healing of surgical wounds following surgery (Broadbent, Petrie, Alley, & Booth, 2003), exacerbates the symptoms of inflammatory bowel disease in afflicted individuals (Searle & Bennett, 2001), and may increase the risk of cardiovascular disease and serious cardiovascular-related events (Melamed, Shirom, Toker, Berliner, & Shapira, 2006).

### 2.4.3 Response and stimulus based models of stress

The original view of the physiological response to stress was developed by (Selye, 1956) and this marked the beginning of a response-based approach to the study of stress (Sutherland & Cooper, 1990). Laposa et al 2003 defines stress as an adaptive response that is a consequence of any external action, situation or event that places special physical and or psychological demands upon a person. Also, stress is a psychobiological reaction of the body to physical or psychological demands that threaten or challenge the organism's well being. (Michelson, 1994) argues that subsequent thinking around stress acknowledges that psychosocial stimuli are able to produce a stress response. The stimulus-based approach views stress as an external factor or force, which is disturbing or disruptive to the person (Dohrenwend & Dohrenwend 1978). The dominant criticism of this model pertains to its exclusive focus on the properties of the stimulus, hence its inability to account for cognitive and other variables (i.e. coping process) that might mediate the relationship

between psychosocial stressors and disorders. So it can define stress as challenging event that requires physiological, cognitive, or behavioral adaptation (Oltmanns & Emery, 1998).

### 2.4.4 Pearson and environment based model of stress

Stress defined as a process of transaction between the person and the environment (Streeten, 1995). However, according to Lazarus & Folkman (1984) stress is a dynamic and reciprocal relationship between the person and the environment. While this author is saying stressors or environmental demands can range from major catastrophes, life events such as death of loved ones or divorce, to daily hassles which encompass those often small but irritating problems that people deal on daily basis such as arguments and working responsibilities. According to this perspective stress is only experienced when situations are appraised as exceeding one's resources, thus being given extra responsibilities at work might be viewed as threatening to one person while another person may appraise the situation as a challenge (Cox, 1991). Viewed stress as a psychological state which is the internal representation of a particular and problematic transaction between the person and the environment. Antonovosky (1974) defined stress as a "demand made by the internal or the external environment on an organism (such as you or me), that upsets its homeostasis (or equilibrium), restoration of which depends on a non-automatic and not readily available energy-expending action". Whether or not a given stimulus or experience means to the individual, as well as on the repertoire of ways that he /she uses in order to cope with such demands. Hence, stress can be defined as a state of an organism subjected to a stressor it can take form of increased autonomic activity and in the long term, cause the breakdown of an organ or development of a mental disorder (Davison &Neale, 1994).

## 2.5 Effects of stress

Stress can result in biomedical, psychological, and psycho- physiological problems, any of which may be important targets of stress intervention. The researcher review here some of the major stress effects.

### 2.5.1 Physiological consequences due to stress

When demands exceed resources, a series of predictable physiological responses occurs. The body's first response to a stressful situation has been called the fight-or-flight response (Chrousos & Gold, 1992). This is because the body prepares for action by the increased release of norepinephrine and epinephrine, which raises heart rate and blood pressure and prepares the muscles for immediate use. Levels of cortisol, a metabolic hormone that plays

a central role in the stress response, also rise, which increases energy metabolism in the body. These physiological changes are adaptive in the short run, with mobilization of resources placing the body at an optimal level of alertness and readiness to act.

Stress can result in significant elevations in blood pressure, immune suppression, muscle tension and tension headaches, and fatigue (Herbert & Cohen, 1993b). For example, a longitudinal study of work stress found that changes in stress levels predict blood pressure changes over time (Schnall et al. 1998). When stress levels increased, blood pressure levels also increased, and when stress decreased, blood pressure levels also decreased. Similarly, in a study of susceptibility to infection. Cohen, Tyrrell, and Smith (1991) demonstrated that increased psychological stress increased the likelihood of being infected by a cold virus.

### 2.5.2 Medical consequences due to stress

Studies suggested that long-term stress plays a role in development of important medical conditions such as heart disease, chronic immune problems, and ulcers (Black & Garbutt, 2002; Krantz & McCeney, 2002) and thereby has an impact on general disease morbidity and mortality. Stress contributes to an increase in myocardial ischemia, and these stress-induced ischemic events are significantly related to higher rates of fatal and nonfatal cardiac events ( Jiang et al. 1996). Chronic stress has also been found to play a prominent role in blood vessel damage and the development of atherosclerosis (Black & Garbutt, 2002). Chronic stressors also negatively affect immune function, which is of serious concern for people coping with diseases such as cancer. In a study of women with breast cancer, women with abnormal cortisol rhythms had a shorter life expectancy than those with normal cortisol levels (Septhon, Sapolsky, Kraemer & Spiegel, 2000). It was hypothesized that the immuno-suppression caused by the elevated cortisol levels led to more rapid progression of the cancer. In studies of HIV-positive men, increased stress was related to decreased immune functioning (Antoni, LaPerriere, Schneiderman, & Fletcher, 1991; Leserman et al. 1997). A follow-up study found that cognitive behavioral stress management intervention reduced stress levels and bolstered immune functioning (Antoni et al. 2000).

### 2.5.3 Psychological consequences due to stress

The researcher believes that psychological problems that resulting from stress is very important like physical ones if not more. In addition, to the physiological impact of stress,

there are significant emotional and behavioral effects. Feelings of anxiety frequently accompany stressful situations, and the symptoms associated with both significantly overlap. For example, both anxiety and stress symptoms include difficulties with concentration, sleep disturbances, muscle tension, and irritability (DSM-IV [American Psychiatric Association, 1994] diagnostic criteria for the anxiety disorders). The same is true with depression and mood disorders, which share many of the above symptoms with anxiety and stress. Other emotional changes that frequently occur with stress include lability and hyper-reactivity of mood states, particularly when a stressor is uncontrollable or unpredictable. Prolonged stress can result in chronic depression and anxiety. This is particularly true when it appears that the stress is a constant part of life and is not likely to end in the near future. Long-term chronic stress can also lead to feelings of hopelessness and helplessness if there is a large disparity between the demands of the stress and the availability of coping resources. When repeated attempts to cope with the situation are unsuccessful, the individual can be left emotionally exhausted and fragile and will likely develop a negative sense of self. Continued failure to cope successfully can result in emotional withdrawal and apathy.

### 2.5.4 Interaction of psychological and medical consequences of stress

Both immediate and prolonged emotional changes play a key role in the relationship between stress and physical health. Measures of personality (Friedman & Booth-Kewley, 1990), depression (Herbert & Cohen, 1993a; Musselman & Nemeroff, 2000), and hostility (Miller, Smith, Turner, Guijarro, & Hallet, 1995) have all been found to mediate the relationship between stress and physical health outcomes. Common behavioral symptoms associated with stress include increased withdrawal, avoidance, and negative health behaviors. People usually avoid unpleasant situations and will attempt to distance themselves from stress. A specific example of avoidance in health settings is poor adherence to treatment. High levels of stress have been found to reduce adherence to treatment regimens. For example, in a study of diabetic patients, higher perceived stress was related to poorer glycemic control and more avoidant coping (Frenzel, McCaul, Glasgow, & Shafer, 1988). In a study of stress and exercise adherence, it was found that both increased frequency of stress and higher levels of perceived stress resulted in decreased levels of exercise and lower self-efficacy (Stetson, Rahn, Dubbert, Wilner, & Mercury, 1997). Increased stress is also related to increases in unhealthy behavior. Stressed individuals are more likely to use cigarettes and alcohol, consume more fat and unhealthy

foods, and engage in less physical activity (Conway, Vickers, Ward, & Rahe, 1981; Wiebe & McCallum, 1986). These behaviors are significant factors in the development and progression of heart disease and represent another pathway through which stress affects health. Highly stressed individuals are also more likely to suffer accidental injuries at home, during sports activities, on the job, and while driving than are less-stressed individuals (Johnson, 1986).

## 2.6 Psychological problems

This section is about the psychological problems, and the researcher will talk about depression and anxiety which includes definitions, signs and symptoms, causes and risk factors, classifications, major types, diagnosis, also theories of depression and anxiety. Finally, the researcher will mention briefly a list of psychological problems that are included in the scale of brief symptom inventory (BSI).

### 2.6.1 Depressive disorders

The diagnostic and statistical manual of mental disorders (DSM) states that a depressed mood is often reported as feeling depressed, sad, helpless and hopeless. In traditional colloquy, "depressed" is often synonymous with "sad", but both clinical and non-clinical depression can also refer to a conglomeration of more than one feeling. Such a mixture can include (but is not limited to) anger, fear, anxiety, despair, guilt, apathy, and/or grief, in addition to what many people would describe as typical "sadness". It is harmful for the human body and can affect proper functioning of the brain( Sadock, & Sadock, 2007).

#### 2.6.1.1 Signs and symptoms of depression

There is a vast difference between "feeling depressed" and suffering from clinical depression. The despondency of clinical depression is unrelenting and overwhelming. Some people describe it as "living in a black hole" or having a feeling impending doom. They cannot escape their unhappiness and despair. However, some people with depression don't feel sad at all. Instead, they feel lifeless and empty. In this apathetic state, they are unable to experience pleasure. Even when participating in activities they used to enjoy, they feel as if they're just going through the emotions. The signs and symptoms vary from person to person, and they may wax and wane in severity over time.

Feelings of helplessness and hopelessness: a bleak outlook-nothing will ever get better and there's nothing you can go to improve your situation. Loss of interest in daily activities: no

interest in or ability to enjoy former hobbies, pastimes, social activities, or sex. Appetite or weight changes: significant weight loss or weight gain –a change of more than 5% of body weight in a month. Sleep changes: either insomnia, especially waking in the early hours of the morning, or oversleeping ( also known as hypersomnia). Psychomotor agitation or retardation: either feeling "keyed up" and restless or sluggish and physically slowed down. Loss of energy: feeling fatigued and physically drained. Even small tasks are exhausting or take longer. Self-loathing: strong feelings of worthlessness or guilt. Harsh criticism of perceived faults and mistakes. Concentration problems: trouble focusing, making decisions, or remembering things (Barlow, 2007).

#### 2.6.1.2 Causes and risk factors

Some medical illnesses have a specific biological or chemical cause. Depression is more complicated it is not just a result of chemical imbalance and is not simply cured with medication . what makes depression so difficult to treat is what seems like depression may actually be something else. If you are stuck in a dead end job and feel hopeless and helpless , for example the best treatment might be finding another job which challenges you more. And if you area and feeling lonely and sad , the best treatment might be finding new friends at work through a hobby. In those cases, the depression is situational and is remedied by changing the situation. Clinical depression is thought to be caused by a combination of biological, psychological and social factors. There are certain risk factors that make you more vulnerable learning what the risk factors are and making lifestyle changes might help reduce the risk of developing depression.

**Genetics.** If you have family members who have suffered from depression , you may have a greater risk of developing depression yourself , although there is currently no direct gene that has been found to cause depression.

**Early childhood trauma or abuse:** Emotional trauma and abuse has a powerful effect on the psyche .if you had traumatic early life experiences ,you may be more at risk to develop depression during or after a stressful life event.

**Loneliness and lack of social support:** a key risk factor for depression is isolation and loneliness. Lack of support, whether it is family , friends or colleagues, makes coping with stress all the more difficult. Having and relationship problems can also make you feel alone and frustrated.

**Recent stressful or traumatic life experiences:** Some events, like losing a loved one, are clearly stressful and cause enormous disruption and strain in our lives. However, anything that causes change can be a stressful life experience, even if it is normally considered a happy event such as a big work promotion, a wedding or childbirth.

**Alcohol and drugs:** Alcohol and drugs can cause strong depression symptoms on their own . they can also make you more vulnerable to depression even if you decide to stop using them. Some people try to treat themselves with alcohol and drugs to self medicate, but this only worsens the problem.

**Finances and employment**: Financial strain can be an enormous stressor. Struggling to pay the bells or mortgage, or suddenly becoming unemployed, is a very stressful life event. Being unemployed can be a blow to self confidence and can be a very difficult adjustment, especially for men.

**Health problems or chronic pain**: Health problems and chronic pain may reduce your mobility, your ability to work or your spare time. They can chip away at supportive relationships and make you feel hopeless and frustrated. (Elkin, 1999).

### 2.6.1.3 Classification of depressive disorders

Depression comes in many shapes and forms. In some, depression can persist at a low level for months and even years . in others, the symptoms are so strong that life grinds to a halt and suicide can be a real concern. Depression can be triggered or aggravated by personal and interpersonal events, hormonal changes (like after childbirth), and can even be triggered by lack of sunlight. Episodes of depressed mood are a core feature of the following psychological disorders, as specified by the DSM-IV:

**Major depressive disorder** commonly called major depression or unipolar depression, where a person has two or more major depressive episodes. Depression without periods of mania is sometimes referred to as unipolar depression.

The mood remains at one emotional state or "pole". Diagnosticians recognize several subtypes or course specifiers:

**Atypical depression** is characterized by mood reactivity (paradoxical anhedonia) and positivity significant weight gain or increased appetite ("comfort eating"), excessive sleep or somnolence (hypersomnia), an sensation of heaviness in limbs known as leaden paralysis, and significant social impairment as a consequence of hypersensitivity to perceived interpersonal rejection. Difficulties in measuring this subtype have led to questions of validity and prevalence.

**Melancholic depression** is characterized by a loss of pleasure ( anhedonia) in most or all activities , a failure of reactivity to pleasurable stimuli , a quality of depressed mood more pronounced than that of grief or loss , a worsening of symptoms in the morning hours, early morning waking , psychomotor retardation , excessive weight loss ( not to be confused with anorexia nervosa), or excessive guilt.

**Psychotic depression** is the term for a major depressive episode , particularly of melancholic nature, where the patient experiences psychotic symptoms such as delusions or, less commonly, hallucinations, these are most commonly mood-congruent (content coincident with depressive themes).

**Catatonic depression** is a rare and severe form of major depression involving disturbances of motor behavior and other symptoms. Here the person is mute and almost stuporose, and either immobile or exhibits purposeless or even bizarre movements. Catatonic symptoms also occur in schizophrenia , a manic episode , or be due to neuroleptic malignant syndrome.

**Postpartum depression** is listed as a course specifier in DSM- IV- TR; it refers to the intense, sustained and sometimes disabling depression experienced by women after giving birth. Postpartum depression which has incidence rate of 10-15%, typically sets in within three months of labor, and lasts as long three months.

**Seasonal affective disorder** is a specifier. Some people have a seasonal pattern , with depressive episodes coming on in the autumn or winter, and resolving in spring. The diagnosis is made if at least two episodes have occurred in colder moths with none at other times over tow-year period or longer.

**Dysthymia** which is a chronic , milder mood disturbance where a person reports a low mood almost daily over span of at least two the symptoms are not as severe as those for major depression although people with Dysthymia are vulnerable to secondary episodes of major depression (sometimes referred to as double depression).

**Depressive disorder not otherwise specified (DD- NOS)** designated by the code 311 for depressive disorders that are impairing but do not fit any of the officially depressive disorder that does not meet the criteria for a specific disorder ." it includes the research diagnoses of recurrent brief depression, and minor depressive disorder listed below.

**Recurrent brief depression (RBD)** distinguished form major depressive disorder primarily by differences in duration . people with RBD have depressive episodes about once per month , with individual episodes lasting less than two weeks and typically less than 2-3 days . Diagnosis of RBD requires that the episodes occur over the span of at least

one year, and in female patients independently of the menstrual cycle. People with clinical depression can develop RBD , and vice versa , and both illnesses have risks.

**Minor depression** which refers to a depression that does not meet full criteria for major depression but in which at least two symptoms are present for two weeks (American Psychiatric Association, 2000).

## 2.6.2 Major depressive disorder

Major depressive disorder (also known as major depression, unipolar depression, or clinical depression) is a mental disorder typically characterizes by a pervasive low mood, low self-esteem loss of interest or pleasure in usual a activities. The diagnosis of major depressive disorder is based on the patients self–reported experiences, behavior reported by relatives or friends and mental state. Tests for physical conditions that may cause similar symptoms. The most common time of onset is between the ages of 30 and 40 years with a later peak between 50 and 60 years major depression occurs about twice as frequently in women than men, although men are at higher risk for suicide ( Barlow, 2007).

### 2.6.2.1 Sings and symptoms

Major depression is a serious illness that affects a person's family, work or school life sleeping and eating habits, and general health. The impact of depression on functioning and well-being has been equated to that of chronic medical conditions such as diabetes. A person suffering a depressive episode usually experiences a pervasive low mood , or loss of interest or pleasure in favored activities. Depressed people may be preoccupied with feeling of worthlessness ,inappropriate guilt or regret, helplessness, or other symptoms include poor concentration and memory, withdrawal from social situation and activities , reduced libido, and thoughts of death or suicide. Insomnia is common: in the typical pattern, a person wakes very early and is unable to get back to sleep. Hypersomnia , or oversleeping is lees common. Appetite often deceases , with resulting weight loss , although increased appetite and weight gain occasionally occur. The person weight loss , loss although increased appetite and weight gain occasionally occur. The person may report persistent physical symptoms such as fatigue , headaches digestive problems, according to the WHO criteria of depression , in developing countries , family and friends may perceive that the person is either agitated or slowed down , older people with depression are more likely to show cognitive symptoms of recent onset ( Sadock, & Sadock, 2007).

#### 2.6.2.2 Diagnosis of major depressive

A diagnostic assessment may be conducted by a general practitioner or by psychiatrist or psychologist who will record the persons current circumstance geographical history and current symptoms, and a family medical to see if other family members have from a mood disorder and discuss the persons alcohol and drug use. A mental state examination includes an assessment of the persons current mood and exploration of thought content, in particular the presence of themes of hopelessness or pessimism, self-harm or suicide, and an absence of positive thoughts or plans. The most widely used criteria for diagnosing depressive conditions are found in the American psychiatric association's revised fourth edition of the diagnostic and statistical manual of mental disorders (DSM-IV-TR) , and the health problems (ICD-10) which uses different terminology, calling a similar condition recurrent depressive disorder. Major depressive disorder is classified as a mood disorder in DSM-IV-TR. The diagnosis hinges on the presence of a single or recurrent major depressive episode. Further qualifiers are used to classify both the episode itself and the course of the disorder (Sadock, &Sadock ,2007) (Annex 14).

### 2.6.3 Dysthymia

Dysthymia is a mood disorder that falls within the depression spectrum. It is considered a chronic depression, but with less severity than a major depression. This disorder tends to be a chronic, long–lasting illness. Dysthymia can start early in life, even in childhood, and it is constant. Treatment can reduce how long it lasts and the intensity of the symptoms ( Barlow, 2007).

#### 2.6.3.1 Symptoms of dysthymia

The symptoms of dysthymia are similar to those of major depression, they tend to be less intense. In both conditions, a person can have a low or irritable mood, lack of interest in things most people fined enjoyable, and a loss of energy (not all patients feel this effect). Appetite and can be increased. The person may sleep too much or have trouble sleeping. He or she may have difficulty concentrating. The person may be indecisive and pessimistic and have a negative self-image. The symptoms can grow into a full blown episode of major depression. This situation is sometimes called double depression because the intense episode exists with the usual feelings of low mood. People with dysthymia have a greater than average chance of developing major depression. While major depression often occurs

in episodes, dysthymia is more constant, lasting for long periods, sometimes beginning in childhood, dysthymia, like major depression, tends to run in families it is two three times more common in women than in men (Sadock & Sadock, 2007).

#### 2.6.3.2 Diagnoses of dysthymia

The diagnostics and statistical manual of mental disorders (DSM), published by the APA, characterizes dysthmic disorder. The essential symptoms involves the individual feeling depressed daily for at least two years, but without the criteria necessary for a major depression. Low energy disturbances in sleep or in appetite, and low self-esteem typically contribute to the clinical as well duffers have often experienced dysthymia for many years before it is diagnosed. People around them come to believe that sufferer is just a moody person (APA, 2000).

### 2.6.4 Recurrent brief depression

Recurrent brief depression (RBD) defines a mental disorder characterized by intermittent depressive episodes, in women not related to menstrual cycles, occurring at least once a moth over at least one year or more fulfilling the diagnostic criteria for major depressive episodes (DSM-IV and ICD-10) except for duration which in RBD is less than 14 days, typically 2- 4 days. Despite the duration of the depressive episodes, such episodes are sever and suicidal ideation and impaired function is rather common. The majority of patients with RBD also repot symptoms of anxiety and increased irritability. Hypersomnia is also rather frequent. About 1/2 of patients fulfilling diagnostic criteria for RBD may have additional short episodes of brief hypomania which is a severity marker of RBD. RBD is also seen among some patient with personality disorders . the life time prevalence of RBD has been estimated at 2.6 to 10.0% and the one-year prevalence at (5.0- 8.2%). The WHO project on psychological problems in general health care, which was based on primary care samples, reported a one-year prevalence of 3.7- 99%. However, none of these studies differentiate between RBD with and without a history of other mood disorders (e.g. major depression). DSM-IV field trial estimated the life time of RBD only to be about 2 %. The cause of RBD is unknown, but recent findings may suggest a link between RBD and bipolar disorders, pointing to the importance of genetic factors .A small sub-group of patients with RBD has temporal lobe epilepsy (Sadock& Sadock, 2007).

## 2.7 Anxiety and anxiety disorders

Anxiety is normal reaction to stress. It may help a person to deal with a difficult situation. Anxiety disorder is a blanket term covering several different forms of abnormal pathological anxieties, fears, and phobias. In clinical usage, fear "anxiety" and "phobia" have distinct meanings though the words are often used interchangeable in casual discourse to describe ubiquitous emotions. Clinically, A phobia is defined in the (DSM-IV-TR) as a persistent or irrational fear. Fear is defined as an emotional and physiological response to a recognized external threat. Anxiety is an unpleasant emotional state, the sources of which are less readily identified. Distinguishing among different anxiety disorders is important since accurate diagnosis is more likely to result in effective treatment and important since accurate diagnosis is more likely to result in effective treatment and a better prognosis. surveys have shown as many as 18 % of Americans may be affected by anxiety disorders. Anxiety disorders are frequently accompanied by physiological symptoms that may lead to fatigue even exhaustion. Clinical depression is frequently co – morbid with anxiety disorders (APA, 2000).

Anxiety is a physiological and psychological state characterized by cognitive, somatic emotional, and behavioral components. These components combine to create the painful feelings that are typically recognized as uneasiness, apprehension, or worry. Anxiety generally occurs without an identifiable triggering stimulus. As such, it is distinguished form fear, which occurs in the presence of an external threat. Additionally, fear is related to the specific behaviors of escape and avoidance, whereas anxiety is the result of threats that are perceived to be uncontrollable or unavoidable. When anxiety becomes excessive, it may fall under the classification of an anxiety disorder (Ohman, 2000).

Anxiety disorders are often debilitating chronic conditions ,which can be present from an early age or begin suddenly after a triggering event. They are prone to flare up at time of high stress. A good essential for the initial diagnosis of an anxiety disorder preferably using a standardized interview or questionnaire procedure alongside expert evaluation and the views of the affected person. There should be a medical examination in order to identify possible medical conditions that can cause the symptoms of anxiety. A family history of anxiety disorders is often suggestive of the possibility of an anxiety disorder. It is important to note that patient with an disorder will often exhibit symptoms of Clinical depression and vice- versa. Rarely does a patient exhibit symptoms of only or the other (Sadock, & Sadock, 2007).

### 2.7.1 Sings and symptoms of anxiety

Anxiety can be accompanied by physical effects such as heart palpitations, nausea, chest pain, fidgeting shortness of breath, stomach, or headache. Physically, the body prepares the organism to deal with a threat. Blood pressure and heart rate increased, sweating is increased, blood flow to the major muscle groups is increased and immune and digestive system functions are inhibited (the ***fight or flight*** response). External signs of anxiety may include pale skin sweating, trembling , and papillary dilation. Someone suffering from anxiety might also experience it as a sense of dread or panic. Although panic attacks usually come without warning ,and although the fear is generally irrational, the perception of danger is very real. A person experiencing a panic attack will often feel as if he or she is about to die pass out. Panic attacks may be confused with heart attacks (Seligman, et al. 2001).

### 2.7.2 Classification of anxiety disorders

Anxiety disorders can view as a family of related but distinct mental disorders, which include the following as classified in the (DSM-IV-TR) (1) Panic disorder with or without agoraphobia; (2) Agoraphobia with or with panic disorder; (3) Specific phobia; (4) Social phobia; (5) Obsessive-compulsive disorder (OCD); (6) Post–traumatic stress disorder (PTSD); (7) Acute stress disorder; and (8) Generalized anxiety disorder (GAD) (Sadock,& Sadock, 2007).

## 2.7.3 Five major types of anxiety disorders are:

Panic disorder, obsessive- compulsive disorder (OCD), phobias, post-traumatic stress disorder (PTSD). And generalized anxiety disorder (GAD).

## 2.7.3.1 Panic disorder

Panic disorder is a psychological condition characterized by recurring panic attacks in combination with significant behavioral change lasting at least a month, and of ongoing worry about the implications or concern about having other attacks. Panic disorder sufferers usually have a series of intense episodes of extreme anxiety during panic attacks. These attacks typically last about ten minutes, but can be short- lived as 1-5 minutes and last as long as twenty minutes or until medical intervention. However, attacks can wax and wane for a period of hours- panic attack rolling into another. They may vary in intensity and specific symptoms of panic over the duration (e.g. rapid heartbeat, perspiration dizziness, dyspnea, trembling, psychological experience of uncontrollable, fear,

hyperventilation etc.). Some individuals deal with these events on a regular basis; sometimes daily or weekly. The outward symptoms of a panic attack often cause negative social experiences (e.g. embarrassment, social stigma, isolation etc.) However, experienced sufferers can often have intense panic attacks with very little outward manifestations of the attack occurring as many as 36 % of all individuals with panic disorders also have agoraphobia. Panic disorder is a serous health problem but can be successfully treated. It is estimated that up to 1.7 percent of the adult American population has panic disorders at some point in their lives. It typically strikes in early adulthood; roughly half of all people who have panic disorder develop the condition before age 24, especially if the person has been subjected to a traumatic experience. However, some sources say that the majority of young people affected for the first time are between the ages of 25 and 30. Women are twice as likely as men to develop panic disorder (Elkin, 1999). Panic disorder can continue for months or even years, depending on how and when treatment is sought. If left untreated, if may worsen to the point where the persons life is seriously affected by panic attacks and by attempts to avoid or conceal the condition. In fact, many people have had problems with friends and family or employment while struggling to cope with disorder. Some people with panic disorder may to occur frequently for a period of months or years, then many years may pass symptoms free. In others, the symptoms persist at the same level indefinitely (Sadock, & Sadock, 2007).

### 2.7.3.2 Obsessive compulsive disorder (OCD)

Obsessive compulsive disorder (OCD) is a chronic anxiety disorder most commonly characterized by obsessive, distressing, intrusive thoughts and related compulsion. The individual often realizes are senseless. Compulsions are repetitive behaviors that the person feels forced or compelled into doing, sometimes, in order to relieve anxiety. Compulsion are tasks or rituals which attempt to neutralize the obsessions. OCD is distinguished from other types of anxiety ,including the routine tension and stress that appear throughout life. Obsessive compulsive disorder is very frustrating to the affected person and any friends and family. OCD manifests in a variety of forms. Studies have placed the prevalence between one and three percent, although the prevalence of clinically recognized OCD is much lower, suggesting that many individuals with the disorder may not be diagnosed. The fact that may individuals do not seeking treatment may be due to part of stigma associated with OCD. Another reason for not seeking treatment is because many sufferers of OCD do

not realize that they have the condition. The typical OCD sufferer performs tasks (or compulsions) to seek relief form obsession related anxiety. To others, these tasks may appear odd and unnecessary. But for the sufferer, such tasks can feel critically important, and must be performed in particular ways to ward off dire consequences and to stop the stress from building up. Physical symptoms may include those brought on from anxieties and unwanted thought, as well as tics or parkinson's disease like symptoms: rigidity, tremor, jerking arm movements, involuntary movements of the limbs (Elkin, 1999).

#### 2.7.3.2.1 Diagnoses of obsessive compulsive

To be diagnosed with OCD, a person must have either obsessions or compulsions alone, or obsessions and compulsions, according to the diagnostic criteria from DSM–IV-TR (2000) states six characteristics of obsessions and compulsions:

**Obsessions**

1- Recurrent and persistent thoughts, impulses, or images that are experienced as intrusive and that cause marked anxiety or distress.

2- The thoughts, impulses, or images are not simply excessive worries about real- life problems.

3- The person attempts to ignore or suppress such thoughts, impulses, or images, or to neutralize them with some other thought or action.

4- The person recognizes that the obsessional thoughts, impulses, or images are a product of his or her own mind, and are not based in reality.

**Compulsions**

1. Repetitive behaviors or mental acts that the person feels driven to perform in response to an obsession, or according to rules that must be applied rigidly
2- The behaviors or mental acts are aimed at preventing or reducing distress or preventing some dreaded event or situation; however, these behaviors or mental acts are not actually connected to the issue ,or they are excessive.

In addition to these criteria, at some point during the course of disorder, the individual must realize that his/her obsessions or compulsions are unreasonable or excessive. Moreover, the obsessions or compulsions must be time-consuming (taking up more than one hour per day), cause distress, or cause impairment in social, occupational, or school functioning. OCD often causes feeling similar to those of depression (APA, 2000).

### 2.7.3.3 Phobia

Phobias (in the clinical meaning of the term) are the most common form of anxiety disorder. An American study by the national institute of mental health (NIMH) found that between 8.7% and 81.1% of Americans suffer from phobias broken down by age and gender , the study found that phobias were the common mental illness among women in all age groups and the second most common illness among men older than 25. It is generally accepted that phobias arise from a combination of external events and internal predispositions. Many specific phobias can be traced back to a specific triggering event, usually a traumatic experience at an early age. Social phobias and agoraphobia have more complex causes that are not entirely know at this time . It is believed that heredity , genetics , and brain chemistry combine with life-experiences to play a major role in the development of anxiety disorders , phobias and panic attacks (American Psychiatric Association, 2000).

#### 2.7.3.3.1 Clinical phobias

Most psychologists and psychiatrists classify most phobias into three categories :

**Social phobia**- also known as social anxiety disorder – fears involving other people or social situations such as performance anxiety or fears of embarrassment by scrutiny of others, such as eating in public . Social phobia may be future subdivided into : generalized social phobia , and specific social phobia ,which are cases of anxiety triggered only in specific situations. The symptoms may extend to psychosomatic manifestation of physical problems . For example, sufferers of paruresis find it difficult or impossible to urinate in reduced levels of privacy . that goes beyond mere preference . If the condition triggers , the person physically cannot empty their bladder.

**Specific phobias** – fear of a single specific panic trigger such as spiders , snakes, dogs, elevators, water , waves, flying, balloons, catching a specific illness. etc.

**Agoraphobias** – a generalized fear of leaving home or a small familiar 'safe' area, and of possible panic attacks that might follow (Kessler, et al., 2005).

According to the diagnostic and statistical manual of mental disorders , fourth edition (DSM-IV), social phobias , specific phobia, and agoraphobia are sub-groups of anxiety disorder. Many of the specific phobias such as fear of dogs , heights, spider and so forth,

are extensions of fears that a lot of people have . people with these phobias specifically avoid the entity they fear. phobias vary in severity among individuals. Some individuals can simply avoid the subject of their fear and suffer only relatively mild anxiety over that fear. Others suffer fully- fledged panic attacks with all the associated disabling symptoms. Most individuals understand that they are suffering from an irrational fear, but are powerless to override their initial panic reaction (APA, 2000).

### 2.7.3.4 Post-traumatic stress disorder (PTSD)

Posttraumatic stress disorder (PTSD) is an anxiety disorder that can develop after exposure to one or more terrifying events that threatened or caused grave physical harm . It is a severe and ongoing emotional reaction to an extreme psychological trauma . This stressor may involve someone's actual death , a threat to the patient's or someone else's life serious physical injury , or threat to physical or psychological integrity , overwhelming usual psychological defenses coping . In some cases it can also be from profound psychological and emotional trauma, apart from any actual physical harm. often, however, the two are combined. PTSD is a condition distinct from traumatic stress , which has less intensity and duration, and combat stress reaction, which is transitory. PTSD has also been recognized in the past as railway spine, shell shock, traumatic war neurosis, or post-traumatic stress syndrome (PTSS) (Brunet, 2007).

PTSD is believed to be caused by psychological trauma. Possible sources of trauma includes encountering or witnessing childhood or adult physical, emotional or sexual abuse. In addition, encountering or witnessing an event perceived as life-threatening such as physical assault, adult experiences of sexual assault, accidents , drug addiction, illnesses, medical complications, or the experience of , or employment in occupations exposed to war (such as soldiers) or disaster (such as emergency service workers). Traumatic events that may cause PTSD symptoms to develop include violent assault, kidnapping, torture, being a hostage, prisoner of war or concentration camp victim, experiencing a disaster, violent automobile accidents or getting a diagnosis of a life-threatening illness. Children may develop PTSD symptoms by experiencing sexually traumatic events like age-inappropriate sexual experiences. Witnessing traumatic experiences or learning about these experiences may also cause the development of PTSD symptoms (American Psychiatric Association, 1994).

Although most people (50-90%) encounter trauma over a lifetime, only about 8% develop full PTSD. Vulnerability to PTSD presumably stems from an interaction of biological

diathesis, early childhood developmental experiences, and trauma severity. Predictor models have consistently found that childhood trauma, chronic adversity, and familial stressors increase risk for PTSD as well as risk for biological markers of risk for PTSD after a traumatic event in adulthood. This effects of childhood trauma, which is not well understood, may be a marker for both traumatic experiences and attachment problems. Proximity to, duration of, and severity of the trauma also make an impact; and interpersonal traumas cause more problems than impersonal ones (Barlow, 2007).

### 2.7.3.5 Generalized anxiety disorder (GAD)

Anxiety disorders are among the most prevalent mental disorders in the general population. Nearly 30 million persons are affected in the United State, with women affected nearly twice as frequently as men (Sadock, & Sadock, 2007). Generalized anxiety disorder (GAD) is an anxiety disorder that is characterized by excessive, uncontrollable and often irrational worry about everyday things that is disproportionate to the actual source of worry. This excessive worry often interferes with daily functioning, as individuals suffering GAD typically catastrophes, anticipate disaster, and are overly concerned about everyday matters such as health issues, money, family problems, friend problems or work difficulties. They often exhibit a variety or physical symptoms, including fatigue, fidgeting, headaches, nausea, muscle tension, muscle aches, difficulty swallowing, trembling, twitching, irritability, sweating, insomnia, and hot flashes. These symptoms must be consistent and on-going, persisting at least 6 months, for a formal diagnosis of GAD to be introduced (See annex 15). Approximately 6.8 million American adults experience GAD. The usual age of onset is variable – from childhood to late adulthood. Women are two to three times more likely to suffer from generalized anxiety disorder than men. Some research suggests that GAD may run in families, and it may also grow worse during stress. GAD usually begins at an earlier age and symptoms may manifest themselves more slowly than in most other anxiety disorders. Some people with GAD report onset in early adulthood, usually in response to life stressor. Once GAD develops, it can be chronic, but can be managed, if not all-but-alleviated, with proper treatment (Barlow, 2007).

## 2.8 Theories of depression

The researcher will view in this section five etiological theories for depression ( psychoanalytic, cognitive, behavioral, interpersonal and genetic theory).

### 2.8.1 Psychoanalytic theory of depression

The concept of depression in Freud and Jung Sigmund Freud argues that although there exist many different clinical forms of depression, or melancholia as he calls it, each form is characterized by an internal guilt caused by the loss or devaluation of a sexual object. An understanding of several terms as Freud uses them is necessary for a complete understanding of his theory of depression. Basically, Freudian psychoanalytic theory argues that our psychological life is determined by our conscious and unconscious life. Our conscious life, however, is transitory, in the sense that concepts or memories that are conscious or manifest at any given time may become preconscious or unconscious at a later time. From the psychoanalytic perspective, depression may be intertwined with self-criticism. Sigmund Freud wrote that the" super-ego becomes over-severe, abuses the poor ego, humiliates it and ill-treats it, threatens it with the direst punishments". Freud argued that objective loss, as occurs through death or a romantic break-up, could result in subjective loss as well, when the depressed subject has identified with the object of its affection through an unconscious, narcissistic process called the libidinal cathexis of the ego. Such loss results in " a profoundly painful dejection, cessation of interest in the outside world, loss of the capacity to love, inhibition of all activity, and a lowering of self-regarding feelings", that is more severe than mourning" In mourning it is the world that has become poor and empty; (depression) it is the ego itself." (Barlow, 2007).

### 2.8.2 Cognitive theory of depression

Beck 1967 exemplifies cognitive theories of depression with the starting point that thoughts and beliefs cause emotional states. He argues that people become depressed through making a logical error; they distort events into self-blame. An event that is normally seen as just irritating (say, spil ling a drink) is seen as another example of the utter hopelessness of life. So depressed persons draw illogical conclusions about themselves (Strongman, 2003). According to Beck, there are three important aspects of these distortions or depressive cognitions. First, they are automatic- that is, they occur without reflection or forethought. Second, they appear to be involuntary. Some patients indicate that these thoughts occur even though they have resolved not to have them. Third, the depressed person accepts these thoughts as plausible, even though others would not view them in the same manner (Pitorowski, 2005). According to cognitive theories of depression, dysfunctional cognitions are stable (e.g. trait-like ) characteristics of depressed individuals that place them at elevated risk for further depressive episodes. That is, these

characteristics should be observed whether or not an individual is currently in a depressive state. Such a conceptualization, therefore, would suggest that the cognitions of remitted depressives will be similar to those of currently depressed individuals. Yet, several types of evidence appear to suggest that such cognition are state- dependent, rather than trait-dependent, appearing to wax an wane depressive symptoms (Davidson, 2000).

### 2.8.3 Behavioral theory of depression

The predominant behavioral theory of depression postulates that major life stressors can result in a depressive episode because they disrupt normal behavior reinforcement patterns. Originating from an operant conditioning paradigm, this theory views depression as the consequence of a lack of or decrease in the efficiency of positively reinforced behavior and perhaps overt punishment for behavioral initiation. This may be a result of a decrease in the availability of reinforcing events, one's personal skills to act on the environment, the impact of certain types of events, or a combination of these. In addition, the mobilization of support from family and other social networks may result in a negative feedback loop of social reinforcement for depressive behaviors ( e.g. social withdrawal, positive social reinforcements for withdrawal, further withdrawal ). In other words, in times of major stress from unexpected events, people may experience a low rate of positive reinforcement for mood-enhancing behavior and a higher rate of positive reinforcement for depressive behavior ( Jacobson, et al., 1996).

### 2.8.4 Interpersonal theory of depression

The interpersonal theory of depression is based on the theories emanating from the interpersonal school of psychiatry and empirical data related to attachment theory and social roles. Interpersonal psychotherapy, developed by Klerman et al. is a focused, short-term, time-limited therapy that emphasizes the current interpersonal relations of the depressed patient (Miller, et al., 2001). A large body of research has documented the importance of interpersonal factors, including strained or critical personal relationships, in the onset of depressive symptoms and major depression in young and middle-aged adults. Vulnerability factors-such as early maternal loss, lack of confiding relationship responsibility for the care of several young children at home, and unemployment-can interact with life stressors to increase the risk of depression. For older adults, the factors are often health problems, changes in relationships with a spouse or adult children due to the transition to a care-giving or care-needing role, the death of a significant other, or a

change in the availability or quality of social relationships with older friends because of their own health-related life changes (Miller, et al., 2001).

### 2.8.5 Genetic theory of depression

According to statistics from the national institute of mental health (NIMH, 2001), studies involving adoptees reveled higher correlations of mood disorders between depressed adoptees and biology parents than adoptive parents. Studies of twins have shown that if an identical twin develops a mood disorder, the other twin has a 70 % chance of developing the disorder, too. The risk decreases to about 15% with siblings, parents, or children of the person with the mood disorders. Grandparents, aunts, or uncles have about a 7% chance of developing a mood disorder.

Theorists believe that a dominant gene may influence or predispose a person to react more readily to experiences of loss or grief, thus manifesting symptoms of a mood disorder. Medina (1995) discusses the history of bipolar disorder(previously referred to as manic-depressive disorder) research since 1987. he cites the various pseudogenetic studies dealing with linkage between human genes and human behaviors." No gene for bipolar disorder has been isolated". There is strong disagreement as to the number of genes actually involved in the disease. The ups and downs of the published literature illustrate the enormous problems researchers encounter attempting to describe human behavior in terms of genetic sequence (Medina, 1995).

## 2.9 Theories of anxiety

The researcher will view in this section four etiological theory for anxiety ( psychoanalytic, cognitive, behavioral, existential and biological theory).

### 2.9.1 Psychoanalytic theory of anxiety

Sigmund Freud, who said that understanding anxiety "would be bound to throw a flood of light on our whole mental existence," had two theories of anxiety, an early one in 1917, and a later one in 1926. In the early theory, libido (mental energy, often equated with sexual drive) build up until it is discharged by some pleasurable activity. In Freud's first theory, repression causes anxiety. In psychoanalytic theory, repression is a defense mechanism that keeps unacceptable thoughts and impulses from becoming conscious. In the later theory, the relationship between them has change: anxiety causes repression. In this theory, anxiety acts as a signal to the ego ( in Freud's theory, the rational, conscious

part of the mind). This object can arouse all the emotions associated with the forbidden impulse, including the signal anxiety (Piotrowski, 2005).

Another form of anxiety originated within the psychical system and mediated by the ego. This "signal anxiety" presaged the emergence of a new "danger situation" that would be a repetition of one of several earlier, "traumatic states." These states, whose prototype lay in birth, corresponded to the central preoccupations of different developmental levels, as the infants needs become progressively abstracted from the original situation of immediate sensory overload to more sophisticated forms of need regulation capable of synthesizing the many elements facing it (from the reality and pleasure principles and the object word). These moments—loss of the object, loss of the objects love, the threat of castration, and the fear of punishment by the internalized objects of the superego-which were experienced serially during the developmental process, could reemerge at any time in a persons subsequent adult life, typically brought on by some conflation of reality and intra-psychic conflict, as a new edition of anxiety (Seligman, Walker,& Rosenhan, 2001).

Melanie Klein expanded on Freud's view by developing a theory of internal object relation linked to drives. She regarded fear of annihilation as the most fundamental anxiety and related it to Freud's death instinct. In her view, the ego engaged in a splitting process to deal with that fear of annihilation. All the derivatives of the death instinct, such as sadism, hatred, aggression, and any form of badness, were evacuated from the infant and projected into the mother. The infant then began to suffer persecutory anxiety from the death instinct derivatives projected into the mother. This form of anxiety, which Klein linked to the paranoid-schizoid position, involved a fear that the "bad" mother created by the infant's projection would invade the infant and destroy all the "good" aspects of the infant (Sadock, & Sadock, 2007).

### 2.9.2 Cognitive theory of anxiety

Cognitive theories of anxiety illustrate how theory is applied to develop a treatment. There are many different cognitive models of anxiety, but are similar in that they assume that there is a cognitive cause of the fear state. This cognitive step is some times called an irrational belief (Piotrowski, 2005). Cognitive therapy is designed to change unproductive thought pattern by learning to examine feelings and distinguish between rational and irrational thoughts. Cognitive therapy include a number of components, such as psychoeducation (e.g. information about the cognitive model of anxiety), cognitive

restructuring, interceptive exposure and situational exposure. Cognitive restructuring focuses on challenging patients beliefs about dangerousness of bodily sensations (e.g. challenging the belief that palpitations lead to heart attacks) (Kay & Tasman, 2006). Cognitive models of anxiety disorders emphasize the role of specific beliefs and appraisals of threat and of ones ability to cope. These models are becoming increasingly popular, perhaps because they attempt to give a fairly comprehensive account of anxiety disorders and seem credible in doing so. However, cognitive models have generally not been sufficiently tested, and the treatment based on them has yet to demonstrate whether it is as efficacious as behavior therapy. The attractiveness of cognitive models and cognitive therapy also lies in their radical dismantling of the psychological mechanisms in anxiety disorders and in their proposition that therapeutic change should occur as a result of changes in the more fundamental patterns of thinking. At the same time, this ambitious proposition may be the reason why cognitive therapy seems less pragmatic and perhaps less applicable to all patients with anxiety disorders (Starcevic, 2005).

### 2.9.3 Behavioral theory of anxiety

The behavioral or learning theories of anxiety postulate that anxiety is a conditioned response to a specific environmental stimulus. In a model of classic conditioning, a girl raised by an abusive father, for example, may become anxious as soon as she sees the abusive father. Through generalization, she may come to distrust all men. In the social learning model, a child may develop an anxiety response by imitating the anxiety in the environment, such as in anxious parents (Sadock & Sadock, 2007).

### 2.9.4 Existential theories of anxiety

Existential theories of anxiety provide models for generalized anxiety, in which no specifically identifiable stimulus exists for a chronically anxious feeling. The central concept of existential theory is that persons experience feelings of living in a purposeless universe. Anxiety is their response to the perceived void in existence and meaning. Such existential concerns may have increased since the development of nuclear weapons and bioterrorism (Sadock & Sadock, 2007).

### 2.9.5 Physiological theory of anxiety

The autonomic nervous system (ANS) of human beings is hard-wired to respond to dangers or threats. These responses are not subject to conscious control and are the same in humans as in lower animals. They represent an evolutionary adaption to animal predators

and other dangers that all animals including primitive humans had to cope with. The most familiar reaction of this type is the fight or flight reaction to a life-threatening situation. When people have fight or flight reactions, the level of stress hormones in their blood rises. They become more alert and attentive, their eyes dilate, their heartbeats increase, their breathing rates increase, and their digestion slows down, making more energy available to the muscles. This emergency reaction is regulated by a part of the nervous system called the autonomic nervous system. The ANS is controlled by the hypothalamus, a specialized part of the brainstem that is among a group of structures called the limbic system. The limbic system controls human emotions through its connections to glands and muscles; it also connect to the ANS and higher brain centers, such as parts of the cerebral cortex. On problem with this arrangement is that the limbic system cannot tell the difference between a real physical threat and an anxiety producing thought or idea. The hypothalamus may trigger the release of stress hormones from the pituitary gland even when there is no external danger . A second problem is caused by the biochemical side effects of too many false alarms in the ANS. When a person responds to a real danger, his or her body relieves itself of the stress hormones by facing up to the danger or feeling from it. In modern life, however, people often have fight-or-flight reactions in situations where they can neither run away nor lash out physically (Sadock & Sadock, 2007).

Finally, the researcher will mention a list of psychological problems that are included in the scale of brief symptom inventory (BSI) as following : **somatization** (distress arising from perceptions of bodily dysfunction), **obsessive-compulsive** (thoughts and impulses that are experienced as unremitting and irresistible but are of an unwanted nature), **interpersonal sensitivity** (feelings of personal inadequacy and inferiority in comparison with others), **depression** (symptoms of dysphoric mood and affect as well as lack of motivation and loss of interest in life), **anxiety** (nervousness and tension as well as panic attacks and feelings of terror), **hostility** (thoughts, feelings or actions that are characteristic of anger), **phobic anxiety** (persistent fear response to a specific place, object or situation that is irrational), **paranoid ideation** (disordered thinking characteristic of projective thoughts, hostility, suspiciousness, grandiosity, fear of loss of autonomy, and delusions) and **psychoticism** (withdrawn, isolated, schizoid lifestyle as well as first rank symptoms of schizophrenia such as thought control) (Derogotis, 1993).

## 2.10 Part two: literature review

In this part of literature review, the researcher will present the previous studies that are concerning about stress among health workers in Gaza Strip. The researcher also will present the studies concerning with physical stress, psychological problems in Palestine, then the studies that clarify the sources and consequences of stress in the ICUs. At last the researcher will conclude with an overview about all of the literature review and summarize the most harmful things surrounding the health workers in the ICUs in Gaza Strip.

### 2.10.1 Studies concerning with stress

In the recent study conducted in Gaza Strip by Mattar (2011), aimed to determine the effect of secondary traumatization for health professionals "doctors and nurses" working at emergency department on their mental health (PTSD, Anxiety, and Depression). His study shows that the professional workers had arousal symptoms (irritability reported by 75% of professional workers), followed by avoidance symptoms (avoidance of patients 71.5%), and intrusion symptoms (intrusive thoughts about patients 70%). the prevalence of secondary trauma among emergency professionals worker in this sample 85% reported at least one secondary trauma symptoms. 45% of the sample met the criterion for a diagnosis of secondary trauma. There were (n=99) 46.3% of study sample have mild anxiety symptom due to work on emergency department, while (n=100) 46.7% of study sample have moderate anxiety symptom, and (n=15) 7% of study sample have sever anxiety symptom, (mild=0-5, moderate=6-10, sever=11+). And there were positive significant correlation between secondary trauma and anxiety, traumatic event among the study sample (person's correlation "R" = -0.272, p = 0.000). That mean the high incidence of secondary trauma will combined with high incidence of anxiety symptom and traumatic.

Another recent study conducted in Gaza Strip among nurses working in the ICUs by Abu L-Hussein (2010), aimed to explore the psychological stress among nurses who works in different ICUs sittings (adult, pediatric, neonate, and cardiac) in governmental hospitals in Gaza Districts, and its relation with self-efficacy, the results shown that ICUs nurses have been found to have high levels of psychological stress (64.73%), were the financial dimension came to be the first major stressor (88.43%), while work environment came second as the percentage was (69.20%), political dimension came third (58.03%), fourth the physical dimension as the percentage was (51.37%), and finally the psychological dimension came to take the fifth and the last item stressors (49.68%).

Another study conducted in Gaza Strip by Yaghee (2006), aimed to exploring the relationship between stress and psychological hardiness for workers of Gaza Districts, the sample 683 of workers Gaza who have been registered by the Palestinian ministry of worker during the period of June 2005 as having a valid Israeli entrance magnetic card to work inside Israel. The actually filled questionnaires were 578. The results shown that the workers of Gaza have high level of stress 75.5 %, economical stress has come to take the first stressor, terminal stress- which is a new item came out of the study- took the second major stressor 77.8%, family stress was the third stressor 71,6%, emotional stress took the fourth rank as the percentage of 67.9%, and finally the social stress has come to take the fifth and the last item stressor 73.0%. The study also showed that although the level of stress for participants was high, they also got high level of psychological hardiness 74.9 %, commitment items took 78.5%, while control items got 71.2%, and finally challenging items took 74.1%. The study showed that there were statistical differences between stress and area of living for the north of Gaza and another statistical differences have been found between stress and number of family members for 5-9 and over.

In Gaza strip, study conducted by Al- khodaree (2003) on 123 person of emergency medical team (EMT) in Gaza governorate, aimed to determine the level of emotional security among EMT in Gaza strip and its relation with some personal trait and other alternatives. The results indicate that EMT had emotional security level was ( 67.7%), feeling of self trust (73.8%), feeling of self acceptance (70.5%), free from psychological pain (46.4%), social security (62%) and emotional security ( 67.7%). There are statistically correlation between emotional security and religious commitments, ego strength, martial status in favor of married persons and number of family members in favor of medium family (5-10) members. There are no statistically significant differences between emotional security and years of experience.

In Palestinian study by Joudeh (2003), aimed to identify the degree of job stress and its sources among Palestinian nurses working in northern West Bank district hospitals, also to explore the role of study variables (sex, academic qualification, years of experience, marital status, place of living, kind of hospital, place of hospital, kind of word). The Sample of (276) nurses were randomly selected for the study. It was found that the total degree of general average of job stress sources among Palestinian nurses working in Northern West Bank district hospital was moderate. The psychosocial stress domain were in the first place among job stress sources domains. Its percentage of response was

(73.89%). The domain of personality stress came last in order, It was found that there were statistically significant mean differences at = (0.05), in Job stress sources related to variables of years of experience, marital status, place of living, kind of hospital, place of hospital, and kind of word. No statistically significant differences at = (0.05) in degree of job stress sources related to sex, and academic qualifications.

Another study in Gaza Strip by Abu Laila (2003), aimed to investigate the effect of trauma on mental health of Palestinian ambulance drivers exposed to traumatic events during Al-Aqsa Intifada compared with other professionals working in similar situation. A total of 227 of subjects were selected, 115 were ambulance drivers, and 112 were from Pediatric, Psychiatric, and Ophthalmic hospitals in Gaza city as a control group. Both groups were assessed by Traumatic Events Checklist, Davidson Trauma Scale (DSM-IV), John Hopkins Symptoms Checklist (HCL), and Beck Depression Inventory (BDI). The result shown that ambulance drivers experienced a wide range of traumatic events (Mean = 16.2) more than the control group (Mean = 10.5). Ambulance drivers reported less PTSD symptoms (mean =15.3) than the control group (Mean =17.5). Also, according to HSCL-25 depression subscale, ambulance drivers were less depressed (Mean = 7.99) than the control group (Mean =11.4); they were less anxious (Mean = 4) than control group (Mean = 6.7). According to BDI-II ambulance drivers were less depressed (Mean =13.73) than the control group (M=19.7). The researcher conclude that ambulance drivers living in a very stressful situation related to the frequent incursions of the Gaza Strip by Israeli armed forces were more traumatized than the control group. However, they were less depressed, anxious, and having less PTSD symptoms than the control group. This could be due psychological preparedness of drivers by health education and training courses they had received during their work.

In the study of Zaghloul and Abou El Enein (2009), in Alexandria, Egypt, examined the sample of nurses in two hospitals in: Shark Al Madina (120) and Karmouz (170) hospitals. Aimed to explore the difference in stress levels among nurses working at two different health care organizations and the determinants of nurse stress within each organization. The study show that highest mean stress scores were the same for both hospitals. The dimension of coping with new situations was 2.7 _0.6 at Shark Al Madina hospital, and was 2.5_0.7 at Karmouz hospital. The Conclusion of this study is the Stressors among nurses appear to be the same despite the differences in organizational or hierarchical structure where they work or the type of consumer they serve.

Another study in Saudi Arabia conducted by AL-Omar (2003) aimed to determine the sources of work-stress among the MOH hospital staff working in Riyadh City, and to examine the relationship between the socio-demographic variables and the level of work stress, and to studies the relationship between work-stress and the anticipated outcomes. This study showed that both age and experience showed significant negative relationship with work-stress level. The level of work-stress among the MOH hospital staff seems to be high. This was due to insufficient technical facilities, absence of appreciation, long working hours, and short breaks. In addition, the older the employee and the more experience he/she has the less work-stress is experienced.

In the study of Monaliza et al. (2008) aimed to investigate the factors that cause stress for physicians and nurses working in a pediatric and neonatal ICU, the results shown that health professionals who work in pediatric and neonatal ICUs are strong candidates for developing stress, psychological alterations and burnout syndrome. Researches on this subject identified important alterations suffered by these physicians and nurses, such as: work overload, burnout, desires of giving up their jobs, high levels of cortisol, among other alterations. Professionals, who work in pediatric and neonatal ICUs, due to the specificity of their job, are liable of developing occupational stress, and consequently burnout. These results suggest the need to research the matter further, with the objective of developing preventive measures and intervention models.

In the study of Rusli, et al., (2006), aimed to determine the prevalence and associated factors of stress in dental healthcare workers. The Sample 54 dental healthcare workers of an institution of higher learning in Kelantan. The results showed that the prevalence of stress was 22.2%. One (1.9 %) staff member experienced severe stress whilst 20.4% experienced mild to moderate stress. After controlling for age, sex, marital status and duration of work, psychological job demand, toxic exposures, and overtime work were directly associated with reported stress in dental healthcare workers. High psychological job demand, increased toxic exposures at work and increased overtime work were significantly associated with stress in dental healthcare workers.

In the study of Govender (1995) investigated the role of perceived sources of stress, perception of work environment, type of hospital ward and nurse rank in occupational distress, coping and burnout among practicing nurses at local general hospital in Pietermaritzburg. Data were collected with the Nursing Stress Scale (NSS), Maslach

Burnout Inventory (MBI), Brief Symptom Inventory (BSI), Ways of Coping Checklist (WCCN) and the Work Environment Scale. Stress response in this study was measured specifically in terms of clinical distress and burnout. This author suggested that workload was identified as the greatest perceived source of stress. Comparison of perceived stressor types particular to the profession as a function of a unit indicated the coronary care unit perceived higher levels of workload as compared to intensive care unit nurses. It was suggested that this was possibly due to a qualitative workload overload as opposed to a quantitative one. The second major perceived source of stress was emotional issues related to death and dying. This was higher in casualty, a trauma unit. The theatre unit subjects, with frequently low death and short contact with patients and their families perceived emotional issues related to death and dying to be a minor stressor source. Surgical ward nurses experienced high levels of distress and burnout as compared to medical ward nurses.

In the study of Foxall and colleagues (1990), surveyed 138 nurses including 35 ICU nurses, 30 hospice nurses, and 73 medical-surgical nurses to determine differences in stress levels among the groups. While there were no overall significant differences among the groups with respect to stress levels, significant differences did occur for subscales: ICU and hospice nurses perceived significantly more stress related to death and dying than did medical-surgical nurses; ICU and medical-surgical nurses perceived significantly more stress related to floating than did hospice nurses; and medical-surgical nurses perceived significantly more stress related to work-overload and staffing than did ICU and hospice nurses. While the effects of job stress on the quality of patient and family care were not specifically addressed. Similar findings were reported by Boumans and Landeweerd (1994) who studied 561 ICUs and non- ICUs nurses from 36 units in 16 hospitals. Non-ICU nurses had more work pressure, absenteeism, and health complaints than did the ICU nurses.

### 2.10.2 Studies concerning with physical stress

The study of Michel et al. (2008) aimed to investigate the prevalence and factors associated with low back pain (LBP) among health professionals working in a Kuwait hospital. A self-administered survey was conducted with health professionals in an urban orthopedic hospital. The response rate was 60% (n = 344). And the results showed that Lifetime prevalence of LBP in that sample was 70.9%, and point prevalence of LBP was

21.5%. And the results suggested that direct patient contact that includes lifting and transferring patients may be an important risk factor for LBP.

In the study of Sun (2007) aimed to explore the prevalence of occupational low back pain and assess work-related risk factors in ICU nurses. The subject was (477- ICU) nurses working in other wards (control group) of the same comprehensive hospital were investigated using OLBP Investigation Questionnaire for nurses including working postures and related work activities. The results was, the prevalence of OLBP (87%), frequency of OLBP (48%=1 per month) and OLBP related work-absence (7%) of the ICU nurses were significantly higher than the control group (64%, 32% and 2%, respectively). The frequency of harmful postures occurred during working tasks of observing drainage, lifting and transferring patients in bed, injection, suctioning and adjusting drip were ( 99%, 90%, 75%, 75% and 6%, respectively. Suctioning, injection, observing drainage, lifting and transferring patients in bed were (100 : 155 : 199: 301: 418). That mean the prevalence of OLBP in ICU nurses is high. High frequency of bending and twisting, transferring patients in bed are the main causes of OLBP in ICU nurses. Therefore, another study conducted by Useh.U, et al. (2003) on physiotherapists in Zimbabwe confirmed that 78 % reported experiencing work-related musculoskeletal disorders (WMSDs), and that one in four physiotherapists took sick leave or required treatment because of work-related musculoskeletal disorders.

In the study of Abu Rayya (1999) conducted among physiotherapist professionals in Gaza Strip, the results showed that 71% of interviewers reported having had LBP at some time of life, 32.7% period prevalence, 37.1% point prevalence at the time of applying the questionnaire. The occurrence rate of LBP among health workers in UNRWA was high but in general population range prevalence of LBP affects 60-80% of adults at some time during their lives, the highest rate was 93% among physiotherapist & physiotherapist assistance, Dentists/Technician 80%, Laboratory Technician 75%, Nurses 71.2%, Midwives 71%, Pharmacists & pharmacists assistance 68.6%, Doctors 60.6 %, and health education was 60%.

Another study conducted by Perkins (2001), aimed to examined shift related differences in chronic fatigue and the contribution of sleep quality anxiety and depression to chronic fatigue among a random sample (142) of female critical care nurses. Twenty three percent of this sample met the criteria for clinical depression, day and night nurses did not differ in

their reports of chronic fatigue. Night nurses reported more depression and poorer sleep quality, depression and anxiety, depression and sleep quality were the most relevant to the explanation of chronic fatigue. This study suggests the need for studies of strategies to promote sleep and improve mood in critical care nurses

### 2.10.3 Studies concerning with psychological problems in Palestine

There are little available epidemiological data on the psychiatric morbidity, prevalence, incidences, and distribution of mental disorders in Gaza Strip. Despite the advances achieved in mental health research and mental health care in Gaza over the past years, the bulk of people who need some form of mental health care is difficult to estimate. It is believed 30- 40,000 are incapacitated by various mental and psychological problems, the majority of them don't seek help, fearing of stigmatization associated with specialized psychiatric care (Afana, 1995). However, In general there are gradually increase of incidence rate of mental disorder. In 2009 there were (1,697) patient visits to primary health care centers with increase percentage (38.4% ) if compared with 2008. The highest number of new cases of mental disorders was observed among adult ( 20-29 years) which reflect the importance of intervention programs to be targeted this age group ( Palestinian Ministry of Health, 2009b).

In the study of Thabet, et al. (2008) aimed to investigate the impact of siege of the Gaza Strip on Palestinians feelings of anger and anger state in relation psychological symptoms in relation to other socioeconomic variables. The sample include 386 adults who interviewed using BSI. The results showed that females reported more somatization, obsessive compulsive disorder, and phobic anxiety. Palestinians live in camps reported more general psychological problems, somatization, obsessive compulsive problems, interpersonal sensitivity, depression symptoms, anxiety, hostility, phobic anxiety, paranoid ideation than those in cities and village. However, psychosis symptoms were more common in people live in villages than in camps and cities. The results showed that there were statistically significant positive correlation between total siege scores and BSI in which people who scored more in siege items had more psychopathology, somatization, obsessive compulsive, interpersonal sensitivity, depression, anxiety, hostility, panic (phobic anxiety), paranoid ideation, and psychosis. The study showed that the most common anger state were: I feel upset (18.4%) and I barely burned from the inside (10.4%). While trait of anger items were: I feel upset when my work is not appreciated (21.1%), I became angry when I did a good job and get the estimate is weak (19.9%), and

I am angry when mistakes of others delayed my work (16.1%).The results showed no statistically significant sex , citizenship, relation to place of residence, and marital status differences in mean anger state and anger trait.

Another study conducted by Thabet et al. (2009), aimed to investigate the ways of coping in Palestinian families exposed to siege and stress and mediating effect of coping on mental health problems. The results showed that the most common impact of siege of Gaza items were: prices are sharply increased (90.8%), I feel I am in a big prison (88.5%), I can not find things I need in the market (91.70%), I was not able to get specific medicine for me or for one of the family member due to shortage of fuel and absence of transportation (73.4%), and I was not able to get specific medicine for me or for one of the family member due to shortage of physicians and nurses (62.58). The most common psychological problems were: Crying easily (21.7%), difficulty falling asleep (16.8%), worrying too much (16.3%), headaches (15.2%), and feeling tense (15.2%). The results showed than mean HSCL was 53.82, mean anxiety subscale scores was 21.70, and mean depression subscale scores was 32.11, 139 of participants (75.5%) rated as psychiatric cases. People live in cities reported mental health problems less than those live in villages and camps. Also, the results showed that people with monthly income less than 350 US $ showed more mental health problems than the other two groups were more affected by siege that the other groups. The present study shows that Palestinian families are victims of stress and trauma and showed high level of depression and anxiety. The reliance on spiritual coping and reframing could be useful for these families to face their difficulties even if we observe adjustment problems.

In the study of Elbedour et al. (2007), conducted among 229 Palestinian adolescents living in refugee camps of Rafah and Khan-Younis in the southern region of the Gaza Strip, who were administered measures of post-traumatic stress disorder (PTSD), depression, anxiety, and coping. With respect to scores on the PTSD-I, 68.9% of the sample was classified as having developed PTSD, 40.0% of the participants reported moderate or severe levels of depression, 94.9 % of the sample was classified as having severe anxiety levels. the results of the anxiety scale demonstrate that Palestinian adolescents are predominantly occupied with an intense experience of uncertainty and anxiety. Thus, adolescents in the refugee camps of Rafah and Khan-Younis in the Gaza Strip are experiencing extremely high rates of psychological maladjustment, with one mental disorder (e.g., anxiety, depression) being associated with an increased likelihood of the adolescent experiencing another mental

problem (e.g. PTSD). In addition, in community mental health department the prevalence of PTSD between the cases that can be treated in their clinics in Bethlehem 13.3%, in Gaza city 12.6%, and in Khan-Younis 29.7 % which indicate increase level of PTSD in contact area (Samor, 2001).

### 2.10.4 Studies concerning with sources and consequences of stress in the ICUs.

In small amounts, stress can be helpful, providing a source of motivation. But too much stress can be harmful and can threaten the professionals' physical and mental health, and place them at risk for injury, behavioral and/or serious health-related problems over time (Jaffe-Gill, Smith, Larson, and Segal, (2007). However, several researchers have described the ICU as a stressful environment because of the complex nature of patients' health problems requiring an extensive use of very sophisticated technology (Vreeland & Ellis 1969, Oskins 1979, Robinson & Lewis 1990). However, nurses constantly experience a stressful environment because of the complex nature of patient's health problems requiring an extensive use of very sophisticated technology (Robinson & Lewis 1990). Therefore, several research studies focusing on nursing staff in acute care settings have attempted to identify a wide range of factors associated with stress. They include overwhelming workload, limited facilities and space, inadequate help, too much responsibility, too little continuing education, poor organization, excessive paperwork, inadequate communication with physicians, intra staff tensions, and many other variables. Lack of recognition and lack of administrative support and leadership also can lead to stress.

Also the effects of noise on those working to care for patients in hospital environments are less well documented, health workers is clearly affected in many of the same ways. "Health workers who work in noisy environments for long shifts, day in and day out, also have similar stress-induced experiences," says Susan Mazer, president of healing healthcare systems. "They report everything from exhaustion to burnout, depression, and irritability expressed at home.( Susan Mazer, 2005).

Recent findings in the field of cognitive science show that mental activities requiring a lot of working memory, such as paying attention to a variety of different cues or performing a complex analysis, are especially noise-sensitive.( Jasper Cole, et al. 2005). The frequent interruptions and distractions noise causes often result in medication errors, one of today's most challenging issues in delivering care, according to clinical consultant Greenberg.

“Since noise breaks concentration, it can contribute to the number of medication errors that is becoming a costly and dangerous situation in many healthcare facilities. When a sudden loud noise causes an involuntary reflex reaction in a surgeon or when a nurse fails to hear a warning signal over the general sound level in a chronically noisy ICUs, performance suffers and accidents can result (Linda Greenberg, 2006).

### 2.10.5 Conclusion

The researcher have a good benefits from these literature review in development of the questionnaire and discussion of the results. However, the researcher believes that (Lazarus and Folkman, 1984) in transactional model of stress is appropriate conceptualization that suit with my research study, since it focus on the dynamic and reciprocal relationship between the person and the environment. including the individual’s perceptions, expectations, interpretations, and coping responses. In the light of the last literature review the researcher found that some of the literature review talk about socio-demographic variables like : gender, age, marital status, place of work, department, level of education, years of experience. These makes studies similar with my study in some of these variables. Some of study talk about the effects of stress among health workers, while others studies talk about the prevalence of psychological problems among Palestinian people in Gaza Strip. The researcher will summarize from this literature review and his experience at working in the ICU, the most harmful things surround the health workers in the ICUs in Gaza Strip. Health workers "doctors, nurses, physiotherapists" working in ICUs may be exposed to infectious diseases due to direct contact with patients. They may suffer from musculoskeletal problems and low back pain resulting from the handling of heavy patients. In addition, the Continuous work while standing or walking causes fatigue and leg problems. In the ICUs may be use cleaning, disinfecting, and sterilizing agents that may damage the skin, mucous membranes, and respiratory system. Moreover they may be exposed to anesthetic gases, drugs, radiation, latex allergy caused by exposure to natural latex gloves, injured by sharp objects (needles, blades, etc.). On the other hand, may suffer from stress and burnout caused by shift and night work, and by other psychological and organizational factors such as different political context, workload, strained family relations, patients ratio to health workers, absenteeism, and contact with sick patients, especially accident victims and their relatives. Also deal with to severely critically ill patients, multiple victims of explosive, shooting from Israel occupational or severely violent patients may lead to post-traumatic stress syndrome.

# Chapter (3)

# Methodology

## 3.1 Introduction

In this chapter the researcher will describes the methodology that used in this research. The adopted methodology to accomplish this study used the following techniques: the information about the study design, study population, study sample, eligibility criteria, period of the study, questionnaire design, pilot study, statistical data analysis, and content validity and reliability.

## 3.2 Study design

The current study is a descriptive analytic study, coming in purpose of assessing the stress and psychological problems among health workers in ICUs at MOH hospitals in Gaza Strip, Palestine. It has been selected because this method would be useful for descriptive and analysis of study variables. This type of study measures the level and prevalence of the phenomena, it is not expensive, economic, doesn't take long time.

## 3.3 The study population

The study population includes all of the health workers: doctors, nurses and physiotherapists who are working in ICUs at MOH hospitals in Gaza Strip, Palestine. These hospitals contain ICUs such as ( Kamal Adwan Hospital, Mohamed Al-Durra Hospital, El Nassir Pediatric Hospital, Abdel Aziz El Rantisee Hospital, Al-Shifa Hospital, Al-Aqsa Martyrs Hospital, Nasser Hospital and European Gaza Hospital). The researcher took the whole study population members (doctors, nurses and physiotherapists). The total number of health workers in these ICUs about (440) members, and the returned number of questionnaires is 366 ( 119 doctors, 233 nurses, physiotherapy 14).

## 3.4 Eligibility criteria

### 3.4.1 Inclusion criteria

The inclusion criteria of the study were all doctors, nurses and physiotherapists who are registered, eligible and work in ICUs of MOH hospitals.

### 3.4.2 Exclusion criteria

Doctors, nurses and physiotherapists who are unregistered, a administration members, or volunteers, members who were in vacation, members who refused to participate, another hospitals in MOH haven't ICU, and other health workers in the ICUs at NGOs in Gaza Strip.

## 3.5 Period of the study

The study period started from the second semester (2011) when the research's title is approved and it's followed by all necessary procedures to apply the research. The actual distribution of questionnaires on the population is between (17/1/2012 - 31/01/2012).

## 3.6 Questionnaire design

The questionnaire was provided with a covering letter explaining the purpose of the study, the way of responding, the aim of the research and the security of the information in order to encourage a high response. The questionnaire included multiple choice questions: which used widely in the questionnaire, The variety in these questions aims first to meet the research objectives, and to collect all the necessary data that can support the discussion, results and recommendations in the research. The researcher used three main tools in order to answer the study questions, the **first** one is socio-demographic data, the **second** is questionnaire of stress, the **third** is brief symptom inventory to measure the psychological problems among health workers in ICUs at MOH hospitals in Gaza Strip, Palestine.

### 3.6.1 Socio-demographic variables:

The socio-demographic data were collected by self administer questionnaire which include: gender, age, place of residence, marital status, profession , educational degree, years of service in the profession, place of work, department and number of years of work in the department.

### 3.6.2 Stress questionnaire

The researcher used the questionnaire of (Abo L-hussin, M., 2010). It was used in Gaza Strip among nurses in ICUs at MOH hospital, and his thesis submitted to faculty of education in the Islamic University for having the degree of master in psychology, March, 2010. The researcher added some items and delete some others in order to be suitable for this study, after that the questionnaire was administered to a judgment committee, and they modified some questions, some other questions were excluded and some others were

added. After that procedures, the final shape of stress questionnaire consists of 74 items, and its divided into four main dimensions. The **first** is psychological dimension contains 9 items, the **second** is physical dimension contains 10 items, the **third** is political dimension contains 5 items, the **fourth** is work environment dimension and it is divided into six dimensions, (A) place environment dimension and the provided services contains 11 items, (B) the relationship with colleagues dimension contains 10 items, (C) the dimension of relationship with patients contains 6 items, (D) the dimension of relationship with the visitors contains 6 items, (E) the dimension of the relationship with the officials contains 7 items, (F) the dimension of the medical supplies contains 5 items, and the **fifth** is the material dimension contains 5 items. Stress scale as the following:

| Level | Rarely | Sometimes | Always |
|---|---|---|---|
| Item | 1 | 2 | 3 |

### 3.6.3 Brief symptoms inventory (BSI-53 Derogatis, 1993)

The Brief Symptom Inventory (BSI: Derogatis, 1993), a 53-item self-report inventory of psychopathology and psychological distress, BSI is a brief form of the SCL–90–R, developed and used in a variety of settings and applications. These include: somatization items (2, 7, 23, 29, 30, 33, 37), obsessive compulsive items (5, 15, 26, 27, 32, 36), interpersonal sensitivity items (20, 21, 22, 42), depression items (9, 16, 17, 18, 38, 43, 50), anxiety items (1, 12,19, 35, 45, 49) hostility items (6, 13, 40, 41,46), phobic anxiety items ( 8, 28, 31, 47 ), paranoid ideation items (4, 10, 24, 48, 51), psychoticism items (3, 14, 34, 44, 53), additional items ( 11, 25, 39, 52 ) don't listed into any of the dimensions, but are included because they are clinically important. However, Arab researchers was used the 53-item checklist to the sample of 647 nonclinical participants and 315 clinical participants in Jordon. The study suggests that the BSI is a potentially useful measure of general psychological distress in clinical and nonclinical population. Ideas for further research are recommended (Daoud and Abojedi, 2010). (BSI) scale as the following:

| Level | Never | Rarely | Sometimes | Often | Always |
|---|---|---|---|---|---|
| Item | 1 | 2 | 3 | 4 | 5 |

## 3.7 Pilot study

A pilot study for the questionnaire was conducted before collecting the results of the sample. It provides a trial run for the questionnaire, which involves testing the wordings of question, identifying ambiguous questions, testing the techniques that used to collect data, and measuring the effectiveness of standard invitation to respondents. The researcher applied the instruments of this study on thirty health workers: 15 nurses, 12 doctors, 3 physiotherapists as a pilot sample from the original population of the study sample, where this technique used to estimate and discuss the validity and reliability of instruments used in this study.

## 3.8 Ethical consideration

An approval letter was obtained from Helsinki Committee in the Gaza Strip (Annex 3).

An official letter was obtained from the coordinated public health programs at Al Quds University-Gaza to facilitate the task of researcher, then it is sent to the director of ministry of health (Annex 4).

An official letter was obtained from the general director of ministry of health in order to conduct the study in ICUs at MOH hospitals (Annex 5).

Participants were given full explanation both verbal and written about the purpose and the nature of the study, the confidentiality of the information will be maintained at all time of the study and the participation is optional (Annex 7).

## 3.9 Statistical analysis

The collected data were processed and analyzed under supervision of the academic supervisor and statistician. Data were entered by the statistical package for social sciences (SPSS) software version 15 computer program for the data entry and analysis. This statistical program has a variety of option that is optimal for use in such studies, were data can be entered, labeled, coded and recoded as different variables, while the researcher used other statistical analysis that clarify the differences between the groups such as follow: frequencies and percentile, Alpha-Cronbach Test for measuring reliability of the items of the questionnaires, Person correlation coefficients for measuring validity of the items of the questionnaires, Spearman-Brown coefficient, one sample **t** test, independent sample **t** test, one way ANOVA, and Tukey for multiple comparisons.

## 3.10 Statistical validity

To insure the validity of the questionnaire, two statistical tests was applied. The first test is criterion-related validity test (Pearson test) which measure the correlation coefficient between each item in the field and the whole field. The second test is structure validity test (Pearson test) that used to test the validity of the questionnaire structure by testing the validity of each field and the validity of the whole questionnaire. It measures the correlation coefficient between one filed and all the fields of the questionnaire that have the same level of similar scale.

## 3.11 Criterion related validity

**Internal consistency** of the questionnaire is measured by a scouting sample, which consisted of thirty questionnaires, through measuring the correlation coefficients between each paragraph in one field and the whole filed. Tables no. (1- 3) in the (Annex 13) show the correlation coefficient and p-value for each field items. As it's shown in these tables the p- values are less than 0.05 or 0.01, so the correlation coefficients of this field are significant at $\alpha = 0.01$ or $\alpha = 0.05$, so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

## 3.12 Structure validity of the questionnaire

Structure validity is the second statistical test that used to test the validity of the questionnaire structure by testing the validity of each field and the validity of the whole questionnaire. It measures the correlation coefficient between one filed and all the fields of the questionnaire that have the same level of liker scale. As shown in table no. (4), the significance values are less 0.01, so the correlation coefficients of all the fields are significant at $\alpha = 0.01$, so it can be said that the fields are valid to be measured what it was set for to achieve the main aim of the study.

**Table No. (4)**

Structure validity of the questionnaire

| Section | Pearson coefficient | p-value |
|---|---|---|
| Stress scale | 0.781 | 0.000 |
| Brief Symptom Inventory | 0.678 | 0.000 |

### 3.12.1 Reliability of the research

Reliability of an instrument is the degree of consistency with which it measures the attribute it is supposed to be measuring . The test is repeated to the same sample of people on two occasions and then compares the scores obtained by computing a reliability coefficient. For the most purposes reliability coefficient above **0.7** are considered satisfactory.

### 3.12.2 Split half method

This method depends on finding Pearson correlation coefficient between the means of odd rank questions and even rank questions of each field of the questionnaire. Then, correcting the Pearson correlation coefficients can be done by using Spearman Brown correlation coefficient of correction. The corrected correlation coefficient (consistency coefficient) is computed according to the following equation :

Consistency coefficient = 2r/(r+1), where r is the spearman correlation coefficient. The normal range of corrected correlation coefficient 2r/(r+1) is between 0.0 and + 1.0 As shown in table no.(5), and the general reliability for all items equal **0.8897**, and the significant (α ) is less than 0.05 so all the corrected correlation coefficients are significance at α = 0.05. It can be said that according to the half split method, the dispute causes group are reliable.

**Table (5)**

Split-Half Coefficient method

| Section | person- correlation | Spearman-Brown Coefficient | (Sig. (2-Tailed |
|---|---|---|---|
| Stress scale | 0.7264 | 0.8415 | 0.000 |
| Brief Symptom Inventory | 0.8143 | 0.8976 | 0.000 |
| **All scales** | 0.8013 | 0.8897 | 0.000 |

### 3.12.3 Cronbach's alpha coefficient

This method is used to measure the reliability of the questionnaire between each field and the mean of the whole fields of the questionnaire. The normal range of Cronbach's coefficient alpha value between 0.0 and + 1.0, and the higher values reflects a higher degree of internal consistency. As shown in table no. (6) the Cronbach's coefficient alpha was calculated for the first field of the causes of claims, the second field of common procedures and the third field of the particular claims. The general reliability for all items equal **0.8975**. This range is considered high; the result ensures the reliability of the questionnaire.

**Table (6)**

Cronbach's alpha for reliability

| Section | Cronbach's Alpha |
|---|---|
| Stress scale | 0.8760 |
| Brief Symptom Inventory | 0.9021 |
| All scales | 0.8975 |

### 3.12.4 One Sample K-S Test

**One Sample K-S** test will used to identify if the data follow normal distribution or not, this test is considered necessary in case testing hypotheses as most parametric Test stipulate data to be normality distributed and this test used when the size of the sample are greater than 50. Results test as shown in table no. (7) , clarifies that the calculated p-value is greater than the significant level which is equal 0.05 ( p-value. > 0.05), this in turn denotes that data follows normal distribution, and so parametric tests must be used.

**Table (7)**

One Sample K-S

| Section | Statistic | P-value |
|---|---|---|
| Stress scale | 0.767 | 0.598 |
| Brief Symptom Inventory | 1.083 | 0.191 |
| **All scales** | 1.052 | 0.218 |

# Chapter (4)

## 4.1 Results

## Introduction

In this chapter the researcher will present the main findings of the study, include the socio-demographic results of the study sample, stress and psychological problems results. Also the researcher will answer the questions of the research study according to the socio-demographic and each variables.

## 4.2 Socio-demographic results of the study sample

The following table no. (8) shows the descriptive results of the socio-demographic variables of the health workers in ICUs ( N= 366 ).

**Table NO. (8)**

**Socio-demographic results of the study sample**

| Variable | | Frequency | % |
|---|---|---|---|
| **Gender** | Male | 279 | 76.2 |
| | Female | 87 | 23.8 |
| **Age** | less than 30 years | 192 | 52.5 |
| | From 30-40 year | 124 | 33.9 |
| | From 41 to 50 years | 39 | 10.7 |
| | more than 50 years | 11 | 3.0 |
| **Place of Residence / governorate** | North | 56 | 15.3 |
| | Gaza City | 144 | 39.3 |
| | Mid-Zone | 82 | 22.4 |
| | Khan-Younis | 58 | 15.8 |
| | Rafah | 26 | 7.1 |
| **Marital Status** | Single | 69 | 18.9 |
| | Married | 297 | 81.1 |
| **Profession** | Doctor | 119 | 32.5 |
| | Nurse | 233 | 63.7 |
| | Physiotherapy | 14 | 3.8 |
| **Educational Degree** | Doctorate | 16 | 4.4 |
| | Master | 48 | 13.1 |
| | Bachelor | 240 | 65.6 |
| | Diploma of two years | 54 | 14.8 |
| | Diploma of three years | 8 | 2.2 |
| **Years of service in the profession** | Less than 3 years | 69 | 18.9 |
| | From 3 - 6 years | 152 | 41.5 |
| | From 7- 9 years | 49 | 13.4 |
| | more than 10 years | 96 | 26.2 |
| **Place of work** | Kamal Adwan Hospital | 18 | 4.9 |
| | Al-Shifa Hospital | 118 | 32.2 |

| | | | |
|---|---|---|---|
| | Al-Aqsa Martyrs Hospital | 30 | 8.2 |
| | Mohamed Al-Durra | 25 | 6.8 |
| | El Nasser pediatric Hospital | 47 | 12.8 |
| | European Gaza Hospital | 67 | 18.3 |
| | Abdel Aziz El Rantisee | 19 | 5.2 |
| | Nasser Hospital | 42 | 11.5 |
| **Department** | Adult Intensive care unit | 131 | 35.8 |
| | Neonate Intensive Care | 87 | 23.8 |
| | Cardiac Intensive care Unit | 36 | 9.8 |
| | Pediatric Intensive Care | 90 | 24.6 |
| | Burn Intensive care unit | 10 | 2.7 |
| | Cardiac Surgery Intensive | 12 | 3.3 |
| **Number of years of work in the department** | 2 years or less | 112 | 30.6 |
| | 3-4 years | 113 | 30.9 |
| | 5-6 years | 46 | 12.6 |
| | More than 6 years | 95 | 26.0 |

In the table no. (8) **Gender** shows that 76.9% from the samples are "male", and 23.8% from the samples are "female". **Age** shows that 52.5 % from the samples age "less than 30 years", and 33.9 % from the samples age "from 30-40 year". **Place of residence / governorate** shows that the highest percentage of 39.3 % from the sample represents Gaza City, whereas the lowest percentage of 7.1% from the sample represents Rafah. **Marital status** shows that 18.9 % from the samples are "Single", and 81.1 % from the samples are "Married". **Profession** shows that 32.5% from the samples are " Doctor", and 63.7% from the samples are "Nurse", and 3.8 % from the samples are "physiotherapy". **Educational degree** shows that 4.4 % from the samples the educational degree are "Doctorate", and 13.1% from the samples "Master", and 65.6 % from the samples "Bachelor", and 14.8 % from the samples "Diploma of two years", and 2.2 % from the samples" Diploma of three years". **Years of service in the profession** shows that 18.9 % from the samples the years of service in the profession "Less than 3 years", 41.5% from the samples "from 3 - 6 years", 13.4% from the samples " from 7- 9 years", and 26.2% from the samples" more than 10 years". **Place of work** was in favor of "Al-Shifa Hospital", where took the highest percentage of 32.2 % from the sample, meaning that it had the largest number of workers among other hospitals. **Department** shows the highest percentage of 35.8 % from the sample represents workers who work in Adult ICU, on the other hand the lowest percentage of 2.7% from the sample represents the workers who work in Burn ICU. **Number of years of work in the department** shows that the highest

percentage 30.9 % from the sample was people who are working in the department about less than 4 years.

## 4.3 Results of stress scale:

The researcher used one sample **t** test to test the opinion of the respondent in the content of the sentences are positive ( weight mean greater than "66.6%" and the p-value less than 0.05) or the opinion of the respondent in the content of the sentences are neutral ( p-value is greater than 0.05) or the opinion of the respondent in the content of the sentences are negative (weight mean less than "66.6%" and the p-value less than 0.05) .

### 4.3.1 Psychological dimension

In this dimension which is shown in table (9) that shows the average mean for all items equal 1.51 and the weight mean equal 50.17 % which is less than " 66.6%", that means the psychological dimension is low**,** and this reflect that health workers in ICUs don't suffer from psychological problems.

**Table No.(9)**
Psychological dimension

| No. | Item | Mean | Standard deviation | Weigh t mean | t-value | P-value |
|---|---|---|---|---|---|---|
| 1 | I feel sluggish most of the time at work | 1.46 | 0.541 | 48.72 | -19.022 | 0.000 |
| 2 | I have no desire to come to work | 1.69 | 0.655 | **56.28** | -9.100 | 0.000 |
| 3 | I feel uncomfortable when I am in the ward | 1.67 | 0.705 | 55.56 | -9.047 | 0.000 |
| 4 | I become tense quickly for the most trivial reasons due to stress of work | 1.12 | 0.384 | 37.25 | -43.916 | 0.000 |
| 5 | I blame my self firmly on the simplest things | 1.58 | 0.681 | 52.55 | -11.894 | 0.000 |
| 6 | I have bad dreams related to work | 1.29 | 0.557 | 42.99 | -24.393 | 0.000 |
| 7 | I suffer from sleeping problems | 1.53 | 0.720 | 51.09 | -12.418 | 0.000 |
| 8 | I feel depressed without justification | 1.55 | 0.672 | 51.64 | -12.843 | 0.000 |
| 9 | I suffer from frequent forgetfulness of things happened nearly | 1.66 | 0.698 | 55.46 | -9.215 | 0.000 |
| | All items | 1.51 | 0.347 | 50.17 | -27.256 | 0.000 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

### 4.3.2 Physical dimension

In this dimension which is shown in table (10) that shows that the average mean for all items equal 1.55 and the weight mean equal 51.68 % which is less than " 66.6%" , that means physical dimension is low, and this reflect that health workers in ICUs don't suffer from physical problems.

**Table No.(10)**

Physical dimension

| No. | Item | Mean | Standard deviation | Weight mean | t-value | P-value |
|---|---|---|---|---|---|---|
| 10 | My hands are extremely sweaty during work hours | 1.16 | 0.436 | 38.71 | -36.778 | 0.000 |
| 11 | I suffer from a headache always out of work | 1.65 | 0.684 | 55.10 | -9.701 | 0.000 |
| 12 | I've got a headache most of the time of work | 1.51 | 0.677 | 50.27 | -13.890 | 0.000 |
| 13 | I feel tired and exhausted after any activity even it was simple | 1.49 | 0.648 | 49.73 | -14.993 | 0.000 |
| 14 | I have pains in the joints | 1.66 | 0.684 | 55.19 | -9.633 | 0.000 |
| 15 | I have a lower back pain during the work | 1.92 | 0.711 | **64.03** | -2.131 | 0.034 |
| 16 | I suffer from cramps in my muscles | 1.66 | 0.687 | 55.28 | -9.510 | 0.000 |
| 17 | I suffer from acidity in the stomach | 1.60 | 0.721 | 53.28 | -10.651 | 0.000 |
| 18 | I suffer from stomach disorders that make me unable to enjoy food | 1.45 | 0.651 | 48.36 | -16.143 | 0.000 |
| 19 | I have an increase of heart beats during the work | 1.40 | 0.606 | 46.81 | -18.796 | 0.000 |
| | All items | 1.55 | 0.409 | 51.68 | -21.030 | 0.000 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

### 4.3.3 The political dimension

In this dimension which is shown in table (11) that shows that the average mean for all items equal 2.02 and the weight mean equal 67.41 % which is greater than " 66.6%", that means the political dimension is in moderate level, and this reflect that health workers in ICUs don't mainly suffer from political situations.

**Table No.(11)**

The political dimension

| No. | Item | Mean | Standard deviation | Weight mean | t-value | P-value |
|---|---|---|---|---|---|---|
| 20 | It bothers me the handling of the political situations at work | 2.19 | 1.779 | 72.86 | 1.998 | 0.046 |
| 21 | I suffer from different political views between me and my colleagues | 1.71 | 0.704 | 57.10 | -7.797 | 0.000 |
| 22 | The political circumstances prompt me to offer interest to work on my own | 2.16 | 0.811 | 72.13 | 3.866 | 0.000 |
| 23 | I avoid working in a team contradicts me in political views | 1.31 | 0.573 | 43.53 | -23.182 | 0.000 |
| 24 | I treat all patients equally, regardless of their political tendencies | 2.74 | 0.610 | 91.44 | 23.304 | 0.000 |
| | All items | 2.02 | 0.521 | 67.41 | 0.823 | 0.411 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

## 4.3.4 Work environment dimension. It is divided into six dimensions

### A- Place environment dimension and the provided services.

In this dimension which is shown in table (12) that shows that the average mean for all items equal 2.09 and the weight mean equal 69.81 % which is greater than " 66.6%" , that means place environment and the provided services is not good.

**Table No.(12)**

Place environment dimension and the provided services

| No. | Item | Mean | standard deviation | Weight mean | t-value | P-value |
|---|---|---|---|---|---|---|
| 25 | I feel that the stress and workload in the section is large | 2.12 | 0.681 | 70.77 | 3.452 | 0.001 |
| 26 | It bothers me the work with shift system "evening or night" | 2.24 | 0.745 | 74.68 | 6.170 | 0.000 |
| 27 | I'm worried about the possibility of catching an infectious diseases because of my work in the ward | 2.22 | 0.767 | 73.95 | 5.455 | 0.000 |
| 28 | It bothers me the many sounds of the devices within the ward | 2.28 | 0.744 | 76.05 | 7.237 | 0.000 |
| 29 | I feel nervous whenever the phone or the door bell rang in the ward | 1.94 | 0.758 | 64.75 | -1.448 | 0.149 |
| 30 | It bothers me the continuous bright lights in the ward around the clock | 1.78 | 0.755 | 59.47 | -5.471 | 0.000 |
| 31 | It bothers me that the ward's temperature is inappropriate for the external atmosphere temperature | 1.93 | 0.705 | 64.39 | -1.854 | 0.065 |
| 32 | It bothers me that the rest periods during work hours are few | 2.26 | 0.717 | 75.23 | 6.849 | 0.000 |
| 33 | Drinking tea, coffee and juice during working hours makes me relaxed | 2.40 | 0.695 | 80.15 | 11.136 | 0.000 |
| 34 | The way of providing meals for the working team is inappropriate | 2.54 | 0.692 | 84.79 | 15.031 | 0.000 |
| 35 | The amount of provided food is high of quality | 1.31 | 0.565 | 43.72 | -23.316 | 0.000 |
| | All items | 2.09 | 0.375 | 69.81 | 4.820 | 0.000 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

### B. The Relationship with colleagues dimension

In this dimension which is shown in table (13) that shows that the average mean for all items equal 1.98 and the weight mean equal 65.97 % which is less than "66.6%" that means the relationship with colleagues is moderate. In other words, health workers in ICUs annoyed from some items, but generally the relationship between colleagues is good. There are some problems that hinder work in ICUs as carelessness from some colleagues, but the social relationship between colleagues is excellent.

**Table No.(13)**

The relationship with colleagues dimension

| No. | Item | Mean | Standard deviation | Weight mean | t-value | P-value |
|---|---|---|---|---|---|---|
| 36 | I rebel quickly against colleagues for trivial reasons | 1.33 | 0.535 | 44.26 | -24.014 | 0.000 |
| 37 | My vocational relationship with colleagues is tense | 1.35 | 0.567 | 45.08 | -21.831 | 0.000 |
| 38 | I feel nervous whenever my colleague was late to receive work | 1.99 | 0.712 | 66.21 | -0.367 | 0.714 |
| 39 | The upgrading of some colleagues who are in the same level of me makes me stressful | 2.10 | 0.801 | 70.13 | 2.480 | 0.014 |
| 40 | My social relationship with colleagues is limited to work hours only | 1.75 | 0.702 | 58.47 | -6.701 | 0.000 |
| 41 | It bothers me the sudden entering of some of my colleagues on the patient while working with him and without asking permission | 1.94 | 0.761 | 64.57 | -1.579 | 0.115 |
| 42 | I feel annoyed from the non-existence of colleagues in the ward all the time | 2.01 | 0.731 | 67.12 | 0.358 | 0.721 |
| 43 | I feel upset from receiving the prescriptions of dangerous cases on the phone | 2.27 | 0.755 | 75.68 | 6.851 | 0.000 |
| 44 | It bothers me some carelessness from some colleagues in the ward | 2.31 | 0.696 | 77.14 | 8.635 | 0.000 |
| 45 | My relationship with colleagues is excellent | 2.73 | 0.545 | 90.98 | 25.631 | 0.000 |
| | All items | 1.98 | 0.345 | 65.97 | -1.167 | 0.244 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

### C- The dimension of relationship with patients

In this dimension which is shown in table (14) that shows the average mean for all items equal 2.47 and the weight mean equal 82.45% which is greater than "66.6%", that means the relationship with patients is good.

**Table No.(14)**

The dimension of relationship with patients

| No. | Item | Mean | Standard deviation | Weight mean | t-value | P-value |
|---|---|---|---|---|---|---|
| 46 | I work with the largest concentration with the cases of war injuries | 2.31 | 0.809 | 77.14 | 7.431 | 0.000 |
| 47 | The crises and disasters increase my motivation to work | 2.61 | 0.586 | 86.89 | 19.802 | 0.000 |
| 48 | I do my duty towards the patients at work, regardless of the material proceeds | 2.83 | 0.467 | 94.35 | 34.049 | 0.000 |
| 49 | I feel that my patients thank others instead of me | 2.05 | 0.712 | 68.49 | 1.469 | 0.143 |
| 50 | I enjoy my work with patients | 2.45 | 0.625 | 81.51 | 13.640 | 0.000 |
| 51 | I feel that the medical service provided to patients is in need of improvement | 2.59 | 0.579 | 86.34 | 19.487 | 0.000 |
| | All items | 2.47 | 0.349 | 82.45 | 25.990 | 0.000 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

**D- The dimension of relationship with the visitors**

In this dimension which is shown in table (15) that shows that the average mean for all items equal 2.29 and the weight mean equal 76.28 % which is greater than "66.6%", that means the relationship with the visitors is not good.

**Table No.(15)**

The dimension of relationship with the visitors

| No. | Item | Mean | standard deviation | Weight mean | t-value | P-value |
|---|---|---|---|---|---|---|
| 52 | I become tense when the time of the visit is getting closer | 2.56 | 0.579 | 85.33 | 18.415 | 0.000 |
| 53 | It bothers me the entrance of visitors to ask about their patients not in the time of the visit | 1.66 | 0.728 | 55.46 | -8.826 | 0.000 |
| 54 | It bothers me the lack of commitment of the visitors and workers in the time of the visit | 2.38 | 0.699 | 79.42 | 10.466 | 0.000 |
| 55 | It bothers me the lack of gown , mask, head and foot cover for visitors | 2.58 | 0.631 | 85.88 | 17.477 | 0.000 |
| 56 | My permission of entering some cases but not others not in the time of the visit is makes me in conflict with myself | 2.39 | 0.700 | 79.51 | 10.534 | 0.000 |
| 57 | The presence of security men to organize the visit comfort me from the burden of confrontation with the visitors | 2.13 | 0.702 | 71.04 | 3.576 | 0.000 |
| | All items | 2.29 | 0.427 | 76.28 | 12.930 | 0.000 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

**E. The dimension of the relationship with the officials**

In this dimension which is shown in table (12) that shows that the average mean for all items equal 2.20 and the weight mean equal 73.50 % which is greater than " 66.6%", that means the relationship with the officials is not good. On the other hand, the item no. (64) that states "I feel that the official is keen to develop my performance at work" is controversial because despite the relationship with the officials is not good, this item indicates that they are keen develop the performance of work.

**Table No.(16)**

The dimension of the relationship with the officials

| No. | Item | Mean | standard deviation | Weight mean | t-value | P-value |
|---|---|---|---|---|---|---|
| 58 | It bothers me the many instructions and guidance from my direct official | 2.51 | 0.713 | 83.79 | 13.787 | 0.000 |
| 59 | I feel tense whenever I want to change the shift schedule after its approval | 1.90 | 0.677 | 63.30 | -2.857 | 0.005 |
| 60 | I feel that my relationship with my direct official is excellent | 1.96 | 0.743 | 65.21 | -1.126 | 0.261 |
| 61 | It bothers me the clear distinction between my colleagues by the direct official | 2.58 | 1.729 | 86.07 | 6.440 | 0.000 |
| 62 | It bothers me the lack of clear criteria for promotion | 1.84 | 0.760 | 61.38 | -3.989 | 0.000 |
| 63 | I carry out the instructions of my direct official according to the policy of the hospital | 2.48 | 0.681 | 82.79 | 13.581 | 0.000 |
| 64 | I feel that the official is keen to develop my performance at work | 2.58 | 0.595 | 75.88 | 18.526 | 0.000 |
| | All items | 2.20 | 0.758 | 73.50 | 5.173 | 0.000 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

**F- The dimension of the medical supplies**

In this dimension which is shown in table (17) that shows that the average mean for all items equal 2.21 and the weight mean equal 73.7% which is greater than "66.6%", that means there is a lack of medical supplies and medicines that are necessary to work.

**Table No.(17)**

The dimension of the medical supplies

| No. | Item | Mean | standard deviation | Weight mean | t-value | P-value |
|---|---|---|---|---|---|---|
| 65 | It bothers me the waste of much time from work to search for sound devices | 2.31 | 0.700 | 77.14 | 8.587 | 0.000 |
| 66 | It bothers me the lack of medical supplies and medicines that are necessary to work | 2.58 | 0.604 | 85.97 | 18.344 | 0.000 |
| 67 | I feel careless in the case of the lack of equipments | 2.24 | 0.692 | 74.68 | 6.646 | 0.000 |
| 68 | The maintenance services of medical devices are excellent | 1.52 | 0.618 | 50.55 | -14.971 | 0.000 |
| 69 | It bothers me the accumulation of the broken medical devices in the ward | 2.40 | 0.714 | 80.15 | 10.833 | 0.000 |
| | All items | 2.21 | 0.379 | 73.70 | 10.638 | 0.000 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

### 4.3.5 The material dimension

In this dimension which is shown in table (18) that shows that the average mean for all items equal 2.60 and the weight mean equal 86.63 % which is greater than "66.6%", that means the salary is not sufficient. However, this dimension has the highest percentage among the fifth dimensions, that means the health workers in ICUs are dissatisfied about the financial incentives. The researcher suggests that it is necessary to provide the health workers in ICUs with appropriate financial incentives for exerting much effort with critically ill patients.

**Table No.(18)**
The material dimension

| No. | Item | Mean | Standard deviation | Weight mean | t-value | P-value |
|---|---|---|---|---|---|---|
| 70 | It bothers me the non- equivalent salary to the amount of exerted effort if it compared to other ward | 2.66 | 0.615 | 88.71 | 20.573 | 0.000 |
| 71 | It bothers me the failure to provide appropriate financial incentives | 2.70 | 0.567 | 89.89 | 23.509 | 0.000 |
| 72 | It bothers me the lack of moral incentives | 2.67 | 0.550 | 89.16 | 23.485 | 0.000 |
| 73 | It bothers me that the law of reward and punishment isn't applied fairly in the section | 2.46 | 0.727 | 81.88 | 12.011 | 0.000 |
| 74 | The monthly salary does not meet my basic needs | 2.51 | 0.657 | 83.52 | 14.722 | 0.000 |
| | All items | 2.60 | 0.486 | 86.63 | 23.583 | 0.000 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

## 4.4 Results of all dimensions in stress scale

In this dimension which is shown in table (19) that shows that the mean for all items equal 2.03 and the weight mean equal 67.60% which is greater than "66.6%", that means generally the health workers in ICUs has a moderate level of stress.

**Table (19)**
All dimensions of stress scale

| No. | Dimensions | Mean | standard deviation | Weight mean | t-value | P-value |
|---|---|---|---|---|---|---|
| **1** | **Psychological Dimension** | 1.51 | 0.347 | 50.17 | -27.256 | 0.000 |
| **2** | **Physical Dimension** | 1.55 | 0.409 | 51.68 | -21.030 | 0.000 |
| **3** | **The Political Dimension** | 2.02 | 0.521 | 67.41 | 0.823 | 0.411 |
| | Total | 1.63 | 0.307 | 54.39 | -22.956 | 0.000 |
| **4** | **Work Environment Dimension** | | | | | |
| A | Place Environment Dimension and the Provided Services | 2.09 | 0.375 | 69.81 | 4.820 | 0.000 |
| B | The Relationship with Colleagues Dimension | 1.98 | 0.345 | 65.97 | -1.167 | 0.244 |
| C | The Dimension of Relationship with Patients | 2.47 | 0.349 | 82.45 | 25.990 | 0.000 |
| D | The Dimension of Relationship with the Visitors | 2.23 | 0.470 | 74.26 | 9.275 | 0.000 |
| E | The Dimension of the Relationship with the Officials | 2.26 | 0.365 | 75.24 | 13.463 | 0.000 |
| F | The Dimension of the Medical Supplies | 2.21 | 0.379 | 73.70 | 10.638 | 0.000 |
| | Total | 2.22 | 0.251 | 73.94 | 16.618 | 0.000 |
| **5** | **The Material Dimension** | 2.40 | 0.366 | 80.16 | 21.183 | 0.000 |
| | Total All dimensions | 2.03 | 0.232 | 67.60 | 2.315 | 0.021 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

- This table shows that the material dimension had the highest percentage in the sample and this clearly indicate to the difficulty of economic situation in Gaza Strip, then it comes the work environment dimensions in the second rank, later it comes the political dimension, after that the physical and finally it comes the psychological dimension in the last rank.

## 4.4 Result of psychological problems:

The researcher used one sample **t** test to test the opinions of the respondents in the content of the sentences are positive ( weight mean greater than "60%" and the p-value less than 0.05) or the opinion of the respondent in the content of the sentences are neutral (p- value is greater than 0.05) or the opinion of the respondent in the content of the sentences are negative (weight mean less than "60%" and the p-value less than 0.05).

### 4.4.1 Somatization

In this dimension which is shown in table (20) that shows that the average mean for all items equal 2.11 and the weight mean equal 42.12% which is less than "60%" , that means health workers has a low level of somatization.

**Table No.(20)**
Somatization

| No. | Item | Mean | standard deviation | Weight mean | t value | P-value |
|---|---|---|---|---|---|---|
| 1 | Faintness or dizziness | 2.05 | 1.125 | 41.04 | -16.122 | 0.000 |
| 2 | Pains in the heart or chest | 2.43 | 1.095 | 48.58 | -9.977 | 0.000 |
| 3 | Nausea or upset stomach | 2.00 | 1.074 | 40.05 | -17.765 | 0.000 |
| 4 | Difficulty in breathing | 1.75 | 0.926 | 34.97 | -25.857 | 0.000 |
| 5 | Hot or cold spells in your body | 1.82 | 1.001 | 36.45 | -22.515 | 0.000 |
| 6 | Numbness or tingling in parts of your body | 1.99 | 1.051 | 39.73 | -18.457 | 0.000 |
| 7 | Feeling weak in parts of your body (you're exhausted) | 2.70 | 1.128 | **54.04** | -5.050 | 0.000 |
| | All items | 2.11 | 0.768 | 42.12 | -22.265 | 0.000 |

Critical value of t at **df** "365" and significance level 0.05 equal **1.96**

### 4.4.2 Obsessive-compulsive

In this dimension which is shown in table (21) that shows that the average mean for all items equal 2.45 and the weight mean equal 49.03 % which is less than " 60%" , that means health workers has a low level of obsessive compulsive.

**Table No.(21)**

Obsessive - compulsive

| No. | Item | Mean | standard deviation | Weight mean | t value | P-value |
|---|---|---|---|---|---|---|
| 1 | Difficulty in remembering things | 2.47 | 1.087 | 49.34 | -9.379 | 0.000 |
| 2 | Inability to finish you work | 1.99 | 0.917 | 39.73 | -21.147 | 0.000 |
| 3 | Having to check and double check what you do | 3.27 | 1.247 | **65.30** | 4.067 | 0.000 |
| 4 | Difficulty in making decisions | 2.46 | 0.914 | 49.29 | -11.207 | 0.000 |
| 5 | Feeling that your mind is blank | 1.99 | 0.951 | 39.78 | -20.341 | 0.000 |
| 6 | Difficulty in concentration | 2.54 | 0.949 | 50.71 | -9.359 | 0.000 |
| | All items | 2.45 | 0.669 | 49.03 | -15.699 | 0.000 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

### 4.4.3 Interpersonal sensitivity

In this dimension which is shown in table (22) that shows that the average mean for all items equal 2.11 and the weight mean equal 42.19 % which is less than " 60%" , that means health workers has a low level of interpersonal sensitivity.

**Table No.(22)**

Interpersonal Sensitivity

| No | Item | Mean | Standard deviation | Weight mean | t value | P-value |
|---|---|---|---|---|---|---|
| 1 | Your feelings are easily hurt | 2.68 | 1.048 | **53.66** | -5.783 | 0.000 |
| 2 | Feeling that people are unfriendly or dislike you | 2.02 | 0.958 | 40.49 | -19.485 | 0.000 |
| 3 | Feeling inferior to others | 1.75 | 0.905 | 34.97 | -26.456 | 0.000 |
| 4 | Feeling very self-conscious with others | 1.98 | 0.943 | 39.62 | -20.666 | 0.000 |
| | All items | 2.11 | 0.705 | 42.19 | -24.181 | 0.000 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

### 4.4.4 Depression

In this dimension which is shown in table (23) that shows that the average mean for all items equal 2.09 and the weight mean equal 41.71% which is less than " 60%" , that means health workers has a low level of depression.

**Table No.(23)**
Depression

| No. | Item | Mean | standard deviation | Weight mean | t value | P-value |
|---|---|---|---|---|---|---|
| 1 | Thoughts of ending your life | 1.37 | 0.843 | 27.43 | -36.950 | 0.000 |
| 2 | Feeling lonely | 1.96 | 1.044 | 39.23 | -19.034 | 0.000 |
| 3 | Feeling sad or depressed | 2.28 | 1.090 | 45.63 | -12.607 | 0.000 |
| 4 | Feeling no interest in things | 2.13 | 0.967 | 42.57 | -17.252 | 0.000 |
| 5 | Inability to do very well as others | 2.30 | 2.917 | 46.07 | -4.570 | 0.000 |
| 6 | Feeling that every thing in the life is difficult | 2.91 | 1.228 | **58.20** | -1.405 | 0.161 |
| 7 | Feelings of worthlessness | 1.64 | 0.898 | 32.84 | -28.940 | 0.000 |
| | All items | 2.09 | 0.856 | 41.71 | -20.441 | 0.000 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

### 4.4.5 Anxiety

In this dimension which is shown in table (24) that shows that the average mean for all items equal 2.25 and the weight mean equal 44.99 % which is less than " 60%" , that means health workers has a low level of anxiety.

**Table No.(24)**

Anxiety

| No. | Item | Mean | standard deviation | Weight mean | t value | P-value |
|---|---|---|---|---|---|---|
| 1 | Nervousness | 3.17 | 1.003 | **63.39** | 3.230 | 0.001 |
| 2 | Sudden fear or scare for no reason | 1.80 | 0.953 | 36.07 | -24.011 | 0.000 |
| 3 | Feeling afraid | 1.95 | 0.993 | 38.96 | -20.263 | 0.000 |
| 4 | Feeling tense or uncomfortable | 2.61 | 1.068 | 52.30 | -6.898 | 0.000 |
| 5 | Spells of terror or panic without reason | 1.74 | 0.922 | 34.81 | -26.133 | 0.000 |
| 6 | Feeling so restless that you couldn't sit still | 2.22 | 1.082 | 44.43 | -13.772 | 0.000 |
| | All items | 2.25 | 0.743 | 44.99 | -19.324 | 0.000 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

### 4.4.6 Hostility

In this dimension which is shown in table (25) that shows that the average mean for all items equal 2.14 and the weight mean equal 42.73% which is less than " 60%" , that means health workers has a low level of hostility.

**Table No.(25)**

Hostility

| No. | Item | Mean | standard deviation | Weight mean | t value | P-value |
|---|---|---|---|---|---|---|
| 1 | Feeling easily annoyed or irritated | 2.62 | 1.058 | **52.40** | -6.870 | 0.000 |
| 2 | Temper outbursts that you could not control | 2.28 | 1.925 | 45.52 | -7.194 | 0.000 |
| 3 | Having urges to beat, injure or harm someone | 1.81 | 1.022 | 36.28 | -22.193 | 0.000 |
| 4 | Having urges to break or smash things | 1.54 | 0.887 | 30.77 | -31.539 | 0.000 |
| 5 | Getting into frequent arguments and discussion | 2.43 | 0.971 | 48.69 | -11.147 | 0.000 |
| | All items | 2.14 | 0.800 | 42.73 | -20.648 | 0.000 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

### 4.4.7 Phobic anxiety

In this dimension which is shown in table (26) that shows that the average mean for all items equal 1.71 and the weight mean equal 34.13% which is less than " 60%" , that means health workers has a low level of phobic anxiety.

**Table No.(26)**
Phobic Anxiety

| No | Item | Mean | standard deviation | Weight mean | t value | P-value |
|---|---|---|---|---|---|---|
| 1 | Feeling afraid in open spaces or street | 1.51 | 0.856 | 30.22 | -33.279 | 0.000 |
| 2 | Feeling afraid to travel on buses, or public transport | 1.43 | 0.811 | 28.63 | -37.017 | 0.000 |
| 3 | Having to avoid certain things, activity, or places because they frighten you | 1.82 | 0.932 | 36.34 | -24.297 | 0.000 |
| 4 | Feeling angry when you are alone | 2.07 | 1.034 | **41.31** | -17.285 | 0.000 |
| | All items | 1.71 | 0.684 | 34.13 | -36.194 | 0.000 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

### 4.4.8 Paranoid ideation

In this dimension which is shown in table (27) that shows that the average mean for all items equal 2.32 and the weight mean equal 46.37% which is less than " 60%" , that means health workers has a low level of paranoid ideation.

**Table No.(27)**
Paranoid Ideation

| No. | Item | Mean | Standard deviation | Weight mean | t value | P-value |
|---|---|---|---|---|---|---|
| 1 | Feeling others are to blame for most of your troubles | 2.04 | 0.973 | 40.77 | -18.912 | 0.000 |
| 2 | Feeling that most people cannot be trusted | 2.41 | 1.096 | 48.20 | -10.301 | 0.000 |
| 3 | Feeling that you are watched or talked about by others | 1.87 | 0.954 | 37.49 | -22.573 | 0.000 |
| 4 | Feeling that others are not giving you the proper credit for your achievements | 2.87 | 1.205 | **57.49** | -1.995 | 0.047 |
| 5 | Feeling that people will take advantage of you | 2.40 | 1.184 | 47.92 | -9.758 | 0.000 |
| | All items | 2.32 | 0.736 | 46.37 | -17.717 | 0.000 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

### 4.4.9 Psychoticism

In this dimension which is shown in table (28) that shows that the average mean for all items equal 2.12 and the weight mean equal 42.43% which is less than "60%" , that means health workers has a low level of psychoticism.

**Table No.(28)**
Psychoticism

| No. | Item | Mean | Standard deviation | Weight mean | t value | P-value |
|---|---|---|---|---|---|---|
| 1 | The belief that someone else can control your thoughts | 1.76 | 0.912 | 35.14 | -26.088 | 0.000 |
| 2 | Feeling lonely even when you are with people | 1.95 | 0.994 | 38.91 | -20.291 | 0.000 |
| 3 | Feeling guilty and that you should be punished for your sins | 2.05 | 0.989 | 41.09 | -18.290 | 0.000 |
| 4 | feeling lonely even in the presence of people | 2.08 | 1.093 | 41.53 | -16.168 | 0.000 |
| 5 | The idea that something wrong could happen to you | 2.41 | 1.143 | **48.20** | -9.881 | 0.000 |
| | All items | 2.12 | 0.792 | 42.43 | -21.212 | 0.000 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

### 4.4.10 Additional items

In this dimension which is shown in table (29) that shows that the average mean for all items equal 2.25 and the weight mean equal 44.96% which is less than" 60%" , that means health workers has a low level in this items.

**Table No.(29)**
Additional items

| No. | Item | Mean | standard deviation | Weight mean | t value | P-value |
|---|---|---|---|---|---|---|
| 1 | Poor appetite | 2.24 | 0.982 | 44.75 | -14.844 | 0.000 |
| 2 | Difficulty in falling asleep | 2.49 | 1.134 | 49.84 | -8.573 | 0.000 |
| 3 | Thoughts of death or dying | 2.14 | 1.242 | 42.84 | -13.220 | 0.000 |
| 4 | Feeling of guilt for trivial things | 2.12 | 1.089 | 42.40 | -15.458 | 0.000 |
| | All items | 2.25 | 0.773 | 44.96 | -18.609 | 0.000 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

### 4.4.11 Results of all dimensions in BSI

In this dimension which is shown in table (30) that shows that the average mean for all dimensions equal 2.16 and the weight mean equal 43.14% which is less than " 60%", that means health workers has a low level in the all dimensions of BSI scale**.**

**Table (30)**
All dimensions of BSI

| No. | Dimensions of BSI | Mean | Standard deviation | Weight mean | t-value | P-value |
|---|---|---|---|---|---|---|
| 1 | Somatization | 2.11 | 0.768 | 42.12 | -22.265 | 0.000 |
| 2 | Obsessive-Compulsive | 2.45 | 0.669 | 49.03 | -15.699 | 0.000 |
| 3 | Interpersonal Sensitivity | 2.11 | 0.705 | 42.19 | -24.181 | 0.000 |
| 4 | Depression | 2.09 | 0.856 | 41.71 | -20.441 | 0.000 |
| 5 | Anxiety | 2.25 | 0.743 | 44.99 | -19.324 | 0.000 |
| 6 | Hostility | 2.14 | 0.800 | 42.73 | -20.648 | 0.000 |
| 7 | Phobic Anxiety | 1.71 | 0.684 | 34.13 | -36.194 | 0.000 |
| 8 | Paranoid Ideation | 2.32 | 0.736 | 46.37 | -17.717 | 0.000 |
| 9 | Psychoticism | 2.12 | 0.792 | 42.43 | -21.212 | 0.000 |
| 10 | Additional Items | 2.25 | 0.773 | 44.96 | -18.609 | 0.000 |
| | Total items | 2.16 | 0.635 | 43.14 | -25.395 | 0.000 |

Critical value of t at df "365" and significance level 0.05 equal 1.96

- In the above table that measures the psychological problems the researcher found that health workers in ICUs don't suffer from clear or high psychological problems, but the researcher notice that in some dimensions there is a high and clear item and this items will be discussed later.

**4.5 The researcher will answer the questions of the research study as following :**

Is there a significant difference at $\alpha \leq 0.05$ in stress and psychological problems among health workers in ICUs at MOH hospitals in Gaza Strip due to demographic data (gender, age, place of residence/governorate, marital status, profession, educational degree, years of service in the profession, place of work, type of department, number of years of work in the department). **And these questions divided into sub-questions as follows:**

**1.** Is there a significant difference in stress and psychological problems among health workers in ICUs at MOH Hospitals in Gaza Strip-Palestine due to gender?

To answer this inquiry table no.(31) shows the following results:

**A. Stress scale**

The researcher found from this results especially which is related to gender that there is no significant difference between males and females according to stress scale . In other words, both males and females suffer equally from stress in ICUs.

**B. Brief Symptom Inventory scale**

The researcher found from this results especially which is related to gender in BSI scale that there is significant difference between males and females and the difference in favor of females, this means that females suffer from psychological problems in ICUs more than males according to BSI scale.

**Table No.(31)**

Independent samples test for difference among stress and psychological problems among health workers in ICUs at MOH hospitals in Gaza Strip-Palestine **due to Gender**

| scale | Gender | N | Mean | Std. Deviation | T | P-value |
|---|---|---|---|---|---|---|
| Stress scale | male | 279 | 2.029 | 0.234 | 0.133 | 0.894 |
| | Female | 87 | 2.025 | 0.226 | | |
| Brief Symptom Inventory scale | male | 279 | 2.103 | 0.632 | -2.961 | 0.003 |
| | Female | 87 | 2.331 | 0.617 | | |

Critical value of t at df "364" and significance level 0.05 equal 1.96

**2-** Is there a significant difference in stress and psychological problems among health workers in ICUs at MOH hospitals in Gaza Strip-Palestine **due to Age?**

To answer this inquiry table no.(32) shows the following results:

**A. Stress scale**

The researcher found from this results especially which is related to age that there is no significant difference between the health workers according to stress, this means that young and old health workers equally suffer from stress in ICUs and all of them expose to the same level of stress.

**B. Brief Symptom Inventory scale**

The researcher found from this results especially which is related to age in BSI scale that there is a significant difference between health workers who are "less than 30 years" , and " from 30-40 year" and the difference is in favor of the group which is "less than 30 years". In other words, health workers who are less than 30 years suffer from psychological problems more than the other groups as it's shown in table no.(33).

**Table No.(32)**

One way ANOVA test for difference among in stress and psychological problems among health workers in ICUs at MOH hospitals in Gaza Strip-Palestine **due to Age**

| Field | Source | Sum of Squares | df | Mean Square | F value | Sig.(P-Value) |
|---|---|---|---|---|---|---|
| Stress scale | Between Groups | 0.367 | 3 | 0.122 | 2.301 | 0.077 |
| | Within Groups | 19.266 | 362 | 0.053 | | |
| | Total | 19.633 | 365 | | | |
| Brief Symptom Inventory scale | Between Groups | 5.526 | 3 | 1.842 | 4.706 | 0.003 |
| | Within Groups | 141.692 | 362 | 0.391 | | |
| | Total | 147.218 | 365 | | | |

Critical value of F at df "3,362" and significance level 0.05 equal 2.63

**Table No.(33)**
Tukey HSD

| Mean Difference | Age | | | |
|---|---|---|---|---|
| | less than 30 years | from 30-40 year | from 41 to 50 years | more than 50 years |
| less than 30 years | | 0.263* | 0.188 | 0.184 |
| from 30-40 year | -0.263* | | -0.076 | -0.079 |
| from 41 to 50 years | -0.188 | 0.076 | | -0.003 |
| more than 50 years | -0.184 | 0.079 | 0.003 | |

* The mean difference is significant at the .05 level

**3-** Is there a significant difference in stress and psychological problems among health workers in ICUs **due to place of residence or governorate?**

To answer this inquiry table no.(34) shows the following results:

**A. Stress scale**

The researcher found from this results especially which is related to place of residence or governorate that there is no significant difference between the health workers about their suffering from stress according to the place of residence or governorate, this means that health workers in all governorates in Gaza Strip equally suffer from stress in ICUs and all of them expose to the same level of stress.

**B. Brief Symptom Inventory scale**

The researcher found from this results especially which is related to place of residence or governorate that there is a significant difference in BSI scale and the difference appears clearly between the health workers who are living in the "Khan-Younis", and "Mid-Zone", and the difference is in favor of the group who are living in " Khan-Younis ", as it's shown in table no.(35). In other words, health workers who are living in Khan-Younis suffer from psychological problems more than the other groups as BSI scale.

**Table No.(34)**

One way ANOVA test for difference among in stress and psychological problems among health workers in ICUs at MOH hospitals in Gaza Strip-Palestine **due to Place of Residence / governorate**

| Field | Source | Sum of Squares | df | Mean Square | F value | Sig.(P-Value) |
|---|---|---|---|---|---|---|
| Stress scale | Between Groups | 0.192 | 4 | 0.048 | 0.892 | 0.469 |
| | Within Groups | 19.441 | 361 | 0.054 | | |
| | Total | 19.633 | 365 | | | |
| Brief Symptom Inventory scale | Between Groups | 4.284 | 4 | 1.071 | 2.705 | 0.030 |
| | Within Groups | 142.934 | 361 | 0.396 | | |
| | Total | 147.218 | 365 | | | |

Critical value of F at df "4,361" and significance level 0.05 equal 2.40

**Table No.(35)**

Tukey HSD

| Mean Difference | Place of Residence / governorate | | | | |
|---|---|---|---|---|---|
| | North | Gaza City | Mid-Zone | Khan-Younis | Rafah |
| North | | -0.028 | 0.038 | -0.278 | 0.081 |
| Gaza City | 0.028 | | 0.067 | -0.250 | 0.110 |
| Mid-Zone | -0.038 | -0.067 | | -0.317* | 0.043 |
| Khan-Younis | 0.278 | 0.250 | 0.317* | | 0.359 |
| Rafah | -0.081 | -0.110 | -0.043 | -0.359 | |

* The mean difference is significant at the .05 level

**4-** Is there a significant difference in stress and psychological problems among health workers in ICUs **due to marital status?**

To answer this inquiry table no.(36) shows the following results:

**A. Stress scale**

The researcher found from this results especially which is related to marital status that there is no significant difference in stress according to marital status. In other words, single and married health workers equally suffer from stress in ICUs and both of them expose to the same level of stress in ICUs.

**B. Brief Symptom Inventory scale**

The researcher found from this results especially which is related to marital status that there is no significant difference in BSI scale according to marital status, this means that single and married health workers equally suffer from psychological problems in ICUs.

**Table No.(36)**

Independent samples test for difference among stress and psychological problems among health workers in ICUs at MOH hospitals in Gaza Strip-Palestine **due to marital status**

| scale | Marital Status | N | Mean | Std. Deviation | T | P-value |
|---|---|---|---|---|---|---|
| Stress scale | Single | 69 | 2.038 | 0.240 | 0.395 | 0.693 |
| | Married | 297 | 2.026 | 0.230 | | |
| Brief Symptom Inventory scale | Single | 69 | 2.252 | 0.696 | 1.375 | 0.170 |
| | Married | 297 | 2.135 | 0.619 | | |

Critical value of t at df "364" and significance level 0.05 equal 1.96

**5-** Is there a significant difference in stress and psychological problems among health workers in ICUs **due to profession**?

To answer this inquiry table no.(37) shows the following results:

**A. Stress scale**

The researcher found from this results especially which is related to profession that there is a significant difference in stress according to profession, the difference appears clearly between the nurses and physiotherapy and the difference is in favor of nurses. However, both doctors and nurses equally suffer from stress in ICUs and both of them expose to the same level of stress in ICUs.

## B. Brief Symptom Inventory scale

The researcher found from this results especially which is related to profession that there is no significant difference at in BSI scale according to profession. In other words, health workers with different specialization gave the same results according to BSI scale, and the researcher noticed from the results that all of them don't highly complain of psychological problems.

**Table No.(37)**

One way ANOVA test for difference among in stress and psychological problems among health workers in ICUs at MOH hospitals in Gaza Strip-Palestine **due to profession**

| Field | Source | Sum of Squares | df | Mean Square | F value | Sig.(P-Value) |
|---|---|---|---|---|---|---|
| Stress scale | Between Groups | 0.432 | 2 | 0.216 | 4.079 | 0.018 |
| | Within Groups | 19.201 | 363 | 0.053 | | |
| | Total | 19.633 | 365 | | | |
| Brief Symptom Inventory scale | Between Groups | 1.961 | 2 | 0.981 | 2.451 | 0.088 |
| | Within Groups | 145.257 | 363 | 0.400 | | |
| | Total | 147.218 | 365 | | | |

Critical value of F at df "2,363" and significance level 0.05 equal 3.03

**Table No.(38)**

Tukey HSD

| Mean Difference | Profession | | |
|---|---|---|---|
| | Doctor | Nurse | physiotherapy |
| Doctor | | -0.060 | 0.066 |
| Nurse | 0.060 | | 0.126* |
| physiotherapy | -0.066 | -0.126* | |

* The mean difference is significant at the .05 level.

**6-** Is there a significant difference in stress and psychological problems among health workers in ICUs **due to educational degree**?

To answer this inquiry table no.(39) shows the following results:

**A. Stress scale**

The researcher found from this results especially which is related to educational degree that there is no significant difference between the health workers in stress according to their educational degrees.

**B. Brief Symptom Inventory scale**

The researcher found from this results especially which is related to profession that there is no significant difference between the health workers about their suffering from psychological problems according to BSI scale.

**Table No.(39)**

One way ANOVA test for difference among in stress and psychological problems among health workers in ICUs at MOH hospitals in Gaza Strip-Palestine **due to educational degree**

| Field | Source | Sum of Squares | df | Mean Square | F value | Sig.(P-Value) |
|---|---|---|---|---|---|---|
| Stress scale | Between Groups | 0.207 | 4 | 0.052 | 0.963 | 0.428 |
| | Within Groups | 19.426 | 361 | 0.054 | | |
| | Total | 19.633 | 365 | | | |
| Brief Symptom Inventory scale | Between Groups | 3.510 | 4 | 0.877 | 2.204 | 0.068 |
| | Within Groups | 143.708 | 361 | 0.398 | | |
| | Total | 147.218 | 365 | | | |

Critical value of F at df "4,361" and significance level 0.05 equal 2.40

**7-** Is there a significant difference in stress and psychological problems among health workers in ICUs **due to years of service in the profession**?

To answer this inquiry table no.(40) shows the following results:

**A. Stress scale**

The researcher found from this results especially which is related to years of service in the profession that there is no significant difference between the health workers about suffering from stress according to stress years of service in profession. In other words, health workers who are working a few or many years equally suffer from stress.

**B- Brief Symptom Inventory scale**

The researcher found from this results especially which is related to years of service in the profession that there is a significant difference between the health workers about suffering from psychological problems according to BSI scale, the difference is between (3-6 years) and (more than 10 years) in favor of (3-6 years) as it's shown in table no.(41) meaning that new health workers with few experience suffer more than others.

**Table No.(40)**

One way ANOVA test for difference among in stress and psychological problems among health workers in ICUs at MOH Hospitals in Gaza Strip-Palestine **due to years of service in the profession**

| Field | Source | Sum of Squares | df | Mean Square | F value | Sig.(P-Value) |
|---|---|---|---|---|---|---|
| Stress scale | Between Groups | 0.370 | 3 | 0.123 | 2.320 | 0.075 |
| | Within Groups | 19.263 | 362 | 0.053 | | |
| | Total | 19.633 | 365 | | | |
| Brief Symptom Inventory scale | Between Groups | 5.658 | 3 | 1.886 | 4.823 | 0.003 |
| | Within Groups | 141.561 | 362 | 0.391 | | |
| | Total | 147.218 | 365 | | | |

Critical value of F at df "3,362" and significance level 0.05 equal 2.63

**Table No.(41)**
Tukey HSD

| Mean Difference | Years of service in the profession | | | |
|---|---|---|---|---|
| | Less than 3 years | From 3 - 6 years | from 7- 9 years | more than 10 years |
| Less than 3 years | | -0.089 | 0.163 | 0.194 |
| from 3 - 6 years | 0.089 | | 0.252 | 0.283* |
| from 7- 9 years | -0.163 | -0.252 | | 0.031 |
| More than 10 years | -0.194 | -0.283* | -0.031 | |

* The mean difference is significant at the .05 level.

**8-** Is there a significant difference in stress and psychological problems among health workers in ICUs **due to Place of work?**

To answer this inquiry table no.(42) shows the following results:

**A. Stress scale**

The researcher found from this results especially which is related to place of work that there is a significant difference between the health workers about their suffering from stress according to place of work. It's shown from results that the difference is between Abdel Aziz El Rantisee hospital and Al-Shifa hospital in favor of Al Shifa hospital as it's shown in table no.(43). In other words, health workers in Al Shifa hospital suffer from stress more than others hospitals in Gaza Strip, the researcher interprets this result that Al Shifa hospital lies in the city of Gaza Strip as it's the center and a crowded zone, so an increasing number of patients and cases come to this hospital.

**B- Brief Symptom Inventory scale**

The researcher found from this results especially which is related to place of work that there is no significant difference between the health workers about their suffering from psychological problems according to BSI scale.

**Table No.(42)**

One way ANOVA test for difference among in stress and psychological problems among health workers in ICUs at MOH hospitals in Gaza Strip-Palestine **due to place of work**

| Field | Source | Sum of Squares | df | Mean Square | F value | Sig.(P-Value) |
|---|---|---|---|---|---|---|
| Stress scale | Between Groups | 0.760 | 7 | 0.109 | 2.059 | 0.047 |
| | Within Groups | 18.873 | 358 | 0.053 | | |
| | Total | 19.633 | 365 | | | |
| Brief Symptom Inventory scale | Between Groups | 4.073 | 7 | 0.582 | 1.455 | 0.182 |
| | Within Groups | 143.145 | 358 | 0.400 | | |
| | Total | 147.218 | 365 | | | |

Critical value of F at df "7,358" and significance level 0.05 equal 2.04

**Table No.(43)**

Tukey HSD

| Mean Difference | Place of work | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Kamal Adwan Hospital | Al-Shifa Hospital | Al-Aqsa Martyrs Hospital | Mohamed Al-Durra Hospital | El Nassir pediatric Hospital | European Gaza Hospital | Abdel Aziz El Rantisee Hospital | Nasser Hospital |
| Kamal Adwan Hospital | | -0.036 | -0.031 | 0.031 | -0.002 | 0.044 | 0.071 | -0.095 |
| Al-Shifa Hospital | 0.036 | | 0.005 | 0.066 | 0.033 | 0.080 | 0.106* | -0.059 |
| Al-Aqsa Martyrs Hospital | 0.031 | -0.005 | | 0.062 | 0.029 | 0.075 | 0.102 | -0.064 |
| Mohamed Al-Durra Hospital | -0.031 | -0.066 | -0.062 | | -0.033 | 0.013 | 0.040 | -0.126 |
| El Nassir pediatric Hospital | 0.002 | -0.033 | -0.029 | 0.033 | | 0.046 | 0.073 | -0.093 |
| European Gaza Hospital | -0.044 | -0.080 | -0.075 | -0.013 | -0.046 | | 0.027 | -0.139* |
| Abdel Aziz El Rantisee Hospital | -0.071 | -0.106* | -0.102 | -0.040 | -0.073 | -0.027 | | -0.166 |
| Nasser Hospital | 0.095 | 0.059 | 0.064 | 0.126 | 0.093 | 0.139* | 0.166 | |

* The mean difference is significant at the .05 level

**9-** Is there a significant difference in stress and psychological problems among health workers in ICUs **due to type of department**?

To answer this inquiry table no.(44) shows the following results:

**A. Stress scale**

The researcher found from this results especially which is related to type of department that there is no significant difference between health workers about their suffering from stress according to type of department. In other words, types of department with different specializations expose to the same level of stress.

**B- Brief Symptom Inventory scale**

The researcher found from this results especially which is related to type of department that there is a significant difference in BSI scale to the type of department. The difference is between the neonate intensive care units and burn intensive care units in favor of neonate intensive care units as its shown in table no.(45). The researcher interprets that result to the large number of beds in NICUs and overload of work, so the stress will increase on the health workers in NICUs in comparison with other ICUs.

**Table No.(44)**

One way ANOVA test for difference among in stress and psychological problems among health workers in ICUs at MOH hospitals in Gaza Strip-Palestine **due to type of department**

| Field | Source | Sum of Squares | df | Mean Square | F value | Sig.(P-Value) |
|---|---|---|---|---|---|---|
| Stress scale | Between Groups | 0.175 | 5 | 0.035 | 0.646 | 0.664 |
| | Within Groups | 19.458 | 360 | 0.054 | | |
| | Total | 19.633 | 365 | | | |
| Brief Symptom Inventory scale | Between Groups | 5.495 | 5 | 1.099 | 2.792 | 0.017 |
| | Within Groups | 141.723 | 360 | 0.394 | | |
| | Total | 147.218 | 365 | | | |

Critical value of F at df "5,360" and significance level 0.05 equal 2.24

**Table No.(45)**
Tukey HSD

| Mean Difference | Type of department | | | | | |
|---|---|---|---|---|---|---|
| | Adult Intensive Care Unit | Neonate Intensive Care Unit | Cardiac Intensive Care Unit | Pediatric Intensive Care Unit | Burn Intensive Care Unit | Cardiac Surgery Intensive Care Unit |
| Adult Intensive Care unit | | -0.115 | 0.046 | 0.101 | 0.547 | 0.219 |
| Neonate Intensive Care Unit | 0.115 | | 0.161 | 0.216 | 0.662* | 0.334 |
| Cardiac Intensive Care Unit | -0.046 | -0.161 | | 0.055 | 0.501 | 0.173 |
| Pediatric Intensive Care Unit | -0.101 | -0.216 | -0.055 | | 0.446 | 0.118 |
| Burn Intensive Care unit | -0.547 | -0.662* | -0.501 | -0.446 | | -0.328 |
| Cardiac Surgery Intensive Care Unit | -0.219 | -0.334 | -0.173 | -0.118 | 0.328 | |

* The mean difference is significant at the .05 level

**10-** Is there a significant difference in stress and psychological problems among health workers in ICUs **due to number of years of work in the department**?

To answer this inquiry table no.(46) shows the following results:

**A. Stress scale**

The researcher found from this results especially which is related to number of years of work in the department that there is no significant difference between health workers about their suffering from stress according to number of years of work in the department. In other words, all health workers indifferent departments expose to the same level of stress.

**B- Brief Symptom Inventory scale**

The researcher found from this results especially which is related to number of years of work in the department that there is a significant difference in BSI scale to number of years of work in the department. The difference is between the (3-4 years) and (more than 6 years) in favor of (3-4 years) as its shown in table no.(47). This result agrees with the previous one is related to number of years of work in profession, that new health workers suffer from psychological problems more than the others.

**Table No.(46)**

One way ANOVA test for difference among in stress and psychological problems among health workers in ICUs at MOH hospitals in Gaza Strip-Palestine due to number of years of work in the department

| Field | Source | Sum of Squares | df | Mean Square | F value | Sig.(P-Value) |
|---|---|---|---|---|---|---|
| Stress scale | Between Groups | 0.085 | 3 | 0.028 | 0.526 | 0.665 |
| | Within Groups | 19.548 | 362 | 0.054 | | |
| | Total | 19.633 | 365 | | | |
| Brief Symptom Inventory scale | Between Groups | 3.646 | 3 | 1.215 | 3.064 | 0.028 |
| | Within Groups | 143.572 | 362 | 0.397 | | |
| | Total | 147.218 | 365 | | | |

Critical value of F at df "3,362" and significance level 0.05 equal 2.63

**Table No.(47)**

Tukey HSD

| Mean Difference | Number of years of work in the department | | | |
|---|---|---|---|---|
| | 2 years or less | 3-4 years | 5-6 years | More than 6 years |
| 2 years or less | | -0.030 | 0.044 | 0.217 |
| 3-4 years | 0.030 | | 0.074 | 0.247* |
| 5-6 years | -0.044 | -0.074 | | 0.173 |
| More than 6 years | -0.217 | -0.247* | -0.173 | |

* The mean difference is significant at the .05 level.

# Chapter (5)

# Discussion and recommendations

## 5.1 Introduction

This chapter will introduce the main results, and it will clarify the results and their relation with other studies that may be helpful in supporting our findings and discuss the highest item within the dimensions. However, the researcher will highlight some of implications and recommendations regarding stress and psychological problems among health workers in ICUs that are likely to be in consideration in the application of the future planning to decision makers. At the end of this chapter the researcher will conclude with some suggested research studies.

## 5.2. Main results of stress

The researcher found that the prevalence of all dimensions of stress scale among health workers in ICUs at MOH hospitals in Gaza Strip is at the average of ( 67.60 %). The material dimension at the highest rank (86.63 %) with mean 2.60, followed by the dimension of relationship with patients (82.45 %), with mean 2.47, followed by the dimension of relationship with the visitors (76.28 %) with mean 2.29, followed by the dimension of the medical supplies (73.70 %) with mean 2.21, followed by the dimension of the relationship with the officials (73.50 %), with mean 2.20, followed by the place environment dimension and provided services (69.81 %) with mean 2.09, followed by the political dimension (67.41 %) with mean 2.02, followed by the relationship with colleagues dimension (65.97 %) with mean 1.98, followed by the physical dimension (51.68 %) with mean 1.55, and psychological dimension at the lowest rank (50.17%) with mean 1.51. However, the researcher will discus all dimensions (psychological, physical, political, work environmental and material ) and detect the highest items in every dimension as the follow: **Psychological dimension** has the percentage of (50.17 %). It is the lowest percentage among the fifth dimensions. The researcher also noticed that the item no. (2) that states " I have no desire to come to work " has the highest percentage among the other items in this dimension. This indicate that health workers are dissatisfied about their work. **Physical dimension** has the percentage of (51.68 %). This percentage is low. The researcher noticed that the item no. (15) that states " I have a lower back pain during the work " has the highest percentage among the other items in

this dimension. From experience of the researcher, he interprets that is as result of the work especially in adult intensive care unit (AICU) due to dealing with a heavy weight patients, especially when the patients is unconscious or into coma. Therefore, health workers in AICU needs frequently to change the position of those patients to prevent the possibility of bed sores, so all these factors causes the lower back pain among health workers in AICU. **Political dimension** has the percentage of (67.41 %). This percentage is moderate. The researcher also noticed that the item no. (24) that states " I treat all patients equally, regardless of their political tendencies " has the highest percentage among the other items in this dimension. In spite of the current political divisions in Gaza Strip, health workers deal equally with all patients regardless of their political parties.

**Work Environment Dimension, and it is divided into six dimensions**

**Place environment dimension and the provided services** has the percentage of (69.81 %). That means the place environment and the provided services is not good in ICUs. The researcher also noticed that the item no. (34) that states " The way of providing meals for the working team is inappropriate " has the highest percentage among the other items in this dimension The researcher also found that some ICUs don't have meals, and this is wrong because they deal with critically ill patients who needs close monitoring. So health workers cannot leave patients even a minute to buy or prepare some food. Therefore, meals should be provided for health workers in ICUs in appropriate way. **The relationship with colleagues dimension** has the percentage of (65.97 %). This percentage is moderate in ICUs. Regardless of this percentage, there is a clear distinction between colleagues about the upgrading system. The clear bias from the managers causes many psychological stress among health workers. So the governmental should select good and qualified mangers. The researcher also noticed a high percentage about the carelessness of some colleagues and this causes a conflict between colleagues. **The dimension of relationship with patients** has the percentage of (82.45 %). This percentage is high. The researcher also noticed that the item no. (48) that states " I do my duty towards the patients at work, regardless of the material proceeds " has the highest percentage among the other items in this dimension. This indicates the cooperation and sympathy of the health workers with patients to cure them regardless of the material proceeds. On the other hand, health workers indicated that the medical services provided to patients need improvement. **The dimension of relationship with the visitors** has the percentage of (76.28 %). This percentage is high. The researcher also noticed that the

item no. (55) that states " I bother me the lack of gown, mask, hood and food cover for visitors" has the highest percentage among the other items in this dimension. In general, results of this dimension indicates that the relationship with visitors seems good, and there are some of health workers express that they got annoyed from the lack of commitment of the visitors and workers in the time of the visit, and also the sudden entrance of some visitors for asking about patients cases not in the time of the visit. **The dimension of the relationship with the officials** has the percentage of (73.50 %). That means the relationship with the officials is not good. The researcher also noticed that the item no. (61) that states " It bothers me the clear distinction between my colleagues by the direct official " has the highest percentage among the other items in this dimension. health workers complained from the obvious bias from the direct official to some colleagues. This produces conflict between colleagues. **The dimension of the medical supplies** has the percentage of (73.70 %). That means there is a lack of medical supplies and medicines that are necessary to work. The researcher also noticed that the item no. (66) that states " It bothers me the lack of medical supplies and medicines that are necessary to work " has the highest percentage among the other items in this dimension. this shortage of medical supplies and medicines resulted from the siege on Gaza Strip. This shortage may cause psychological stress for the health workers especially when it leads to death of some cases. Also the item no.(68) that states " The maintenance services of medical devices are excellent " has the lowest percentage in this dimension that means the health workers are dissatisfied about the maintenance services. **The material dimension** has the percentage of (86.63 %). This dimension has the highest percentage among the fifth dimensions. The researcher also noticed that the item no. (71) that states " It bothers me the failure to provide appropriate financial incentives " has the highest percentage among the other items in this dimension. That means the health workers in ICUs are dissatisfied about the financial incentives. The researcher suggests that it is necessary to provide the health workers in ICUs with appropriate financial incentives for exerting much effort with critically ill patients.

## 5.3 Main results of psychological problems

The researcher found that the total results of BSI dimensions of psychological problems are low level, that means the health workers in ICUs have good mental health. The results as follow: somatization (42.12 %) with mean 2.11, obsessive compulsive (49.03 %) with mean 2.45, interpersonal sensitivity (42.19 %) with mean 2.11, anxiety (44.9 %)

with mean 2.25, hostility (42.73%) with mean 2.14, phobic anxiety (34.13%) with mean 1.71, paranoid ideation (46.37%) with mean 2.32, psychoticism (42.43%) with mean 2.12, and additional items (44.96%) with mean 2.25. So the researcher will discus all dimensions and detect the highest items in every dimension as follow:

**Somatization** has the percentage of (42.12 %). This percentage is low, that means the health workers don't suffer from somatization. The researcher noticed that the item no. (37) that states " feeling weak in parts of your body (you're exhausted)" has the highest percentage among other items in this dimension that is (54.04 %). So most of health workers suffered from the general weakness. **Obsession-Compulsion** has the percentage of (49.03 %). This dimension has the highest percentage if its compared with the other dimension in BSI, but it is still low. The researcher noticed that the item no. (26) that states " having to check and double check what you do" has the highest percentage among other items in this dimension that is (65.30 %) it is relatively high. **Interpersonal Sensitivity** has the percentage of (42.19 %). This percentage is low. The researcher noticed that the item no. (20) that states " your feelings are easily hurt " has the highest percentage among other items in this dimension that is (53.66 %). **Depression** has the percentage of (41.71 %). This percentage is low. The researcher noticed that the item no. (43) that states " feeling that every thing in the life is difficult " has the highest percentage among other items in this dimension that is (58.20 %) it is low to moderate level. **Anxiety** has the percentage of (44.99 %). This percentage is low. The researcher noticed that the item no. (1) that states "nervousness" has the highest percentage among other items in this dimension that is (63.39%) it is relatively high. **Hostility** has the percentage of (42.73%). This percentage is low. The researcher noticed that the item no. (6) that states " feeling easily annoyed or irritated " has the highest percentage among other items in this dimension that is (52.40%). **Phobic Anxiety** has the percentage of (34.13%). This percentage is low. The researcher noticed that the item no. (47) that states " feeling angry when you are alone " has the highest percentage among other items in this dimension that is (41.31%). **Paranoid Ideation** has the percentage of (47.92%). This percentage is low. The researcher noticed that the item no. (48) that states " feeling that others are not giving you the proper credit for your achievements " has the highest percentage among other items in this dimension that is (57.49 %). **Psychoticism** has the percentage of (42.43%). This percentage is low. The researcher noticed that the item no. (53) that states " the idea that something wrong could happen to you" has the highest

percentage among other items in this dimension that is (48.20%). **Additional Items** has the percentage of (44.96%). This percentage is low. The researcher noticed that the item no. (25) that states " difficulty in falling asleep" has the highest percentage among other items in this dimension that is (49.84%). **All dimensions of the BSI** has the percentage of (43.14%). This percentage is low. The researcher noticed that the dimension of obsessive compulsive has the highest percentage among the all dimensions of BSI that is (49.03 %).

## 5.4 Main results of stress and psychological problems according to socio-demographic variables as follow :

There is no significant difference at $\alpha \leq 0.05$ in stress due to gender, place of residence /governorate, marital status, educational degree, department, number of years of work in the department. But there is a significant difference at $\alpha \leq 0.05$ in stress due to profession, the difference is between "nurse" and "physiotherapy", and the difference in favor of "nurse". There is a significant difference at $\alpha \leq 0.05$ in stress due to place of work, the difference is between Abdel Aziz El Rantisee Hospital and Al-Shifa Hospital, and the difference in favor of Al-Shifa Hospital.

There is no significant difference at $\alpha \leq 0.05$ in BSI due to marital status, profession, educational degree, place of work. But there is a significant difference at $\alpha \leq 0.05$ in BSI due to gender and the difference in favor of to female. There is a significant difference at $\alpha \leq 0.05$ in BSI due to Age and the difference is between " less than 30 years" and "from 30-40 year", and the difference in favor of "less than 30 years". There is a significant difference at $\alpha \leq 0.05$ in BSI due to place of residence/ governorate and the difference is between "Khan-Younis" and "Mid-Zone" and the difference in favor of " Khan-Younis ". There is a significant difference at $\alpha \leq 0.05$ in BSI due to years of service in the profession and the difference is between "from 3 - 6 years" and " more than 10 years" , and the difference in favor of "from 3 - 6 years ". There is a significant difference at $\alpha \leq 0.05$ in BSI due to section and the difference is between "Neonate Intensive Care Unit" and "Burn Intensive Care Unit", and the difference in favor of "Neonate Intensive Care Unit". There is a significant difference at $\alpha \leq 0.05$ in BSI due to number of years of work in the department and the difference is between " 3- 4 years" and " more than 6 years", and the difference in favor of " 3- 4 years ".

There is a positive significant correlation at significance level α = 0.05 between each of psychological, physical, political ,environmental and material dimensions. Also, there is a positive significant correlation at significance level α = 0.05 between each of work environment dimensions. In the last, there is a positive significant correlation at significance level α= 0.05 between each of BSI dimensions.

## 5.5 Discussion with the other studies

The following discussion intend to shed light on the most important results that are related directly to the objectives of the study, and the results of the study answered the questions of the research. The researcher will firstly discuss stress results, then psychological problems results.

### 5.5.1 Results of stress

The researcher emphasize that stress among health workers in ICUs is in a moderate level about (67.60 %). That appear to be consistent with the finding of (Joudeh, 2003) it was found that the total degree of general average of job stress sources among Palestinian nurses working in the north West Bank district hospital was moderate level about (67.2 %), and (Abu L-Hussein, 2010) found that the ICUs nurses in Gaza Strip at MOH hospitals has the highest level of psychological stress about (64.74%). Also in the study of (Yaghee, 2006) it's found that the workers in Gaza Strip have high level of stress about 75.5% . In the study of ( Al-Omar, 2003) it's found that the level of work-stress among the MOH hospital staff seems to be high. The study of (Al-Khodaree, 2003) indicated that EMT had emotional security level was (67.7%), feeling of self trust (73.8%), feeling of self acceptance (70.5%), free from psychological pain (46.4%), social security (62%) and emotional security ( 67.7%). In the study of (Rusli, et al., 2006) the results showed that the prevalence of stress was 22.2% One (1.9 %) staff member experienced severe stress whilst 20.4% experienced mild to moderate stress. However, the study of (Govender, 1995) found that the second major perceived source of stress was emotional issues related to death and dying.

The material dimension came in the first dimension with the highest average (86.63%). The researcher explains this result due to bad economical status in Gaza Strip. However, the Palestinian people, especially those living in Gaza Strip, suffer from high poverty about ( 85% of households are living under the poverty line) and unemployment (65 %) levels have sharply limited households ability to buy supplies (Palestinian Shippers

Council, 2007).Therefore, this agrees clearly in the finding of (Yaghee, 2006), which found that high levels of stress of workers in Gaza Strip (74.5%), and the economical stress has come to take the first stress about (81.2%). Also these results agree with the findings of (Abu L-Hussein, 2010), which found that the material stress is the highest rank about (88.43 %) among ICUs nurses in Gaza Strip.

Work environment dimensions came in the second rank with the average of (73.70 %). That means the health workers is complain of high stress in the ICUs environment. From many sides as: lack of providing meals for the working, lack of commitment of the visitors and workers in the time of the visit, clear distinguish between colleagues by official and lack of medical supplies and medicines. These stressor are the majority of health workers suffered from these problems in ICUs in Gaza Strip. Regardless of these problems, the health workers are cooperative and sympathetic with patients needs and treats them regardless of the bad work environment and shortage of the medical supplies. This appear to be consistent in the study of ( Al-Omar, 2003) that found the level of work-stress among the MOH hospital staff seems to be high, this was due to insufficient technical facilities, absence of appreciation, long working hours, and short breaks. However, the study of Foxall and colleagues (1990) found that the ICU and hospice nurses perceived significantly more stress related to death and dying than the medical-surgical nurses; ICU and medical-surgical nurses perceived significantly more stress related to floating than did hospice nurses; and medical-surgical nurses perceived significantly more stress related to work-overload and staffing than did ICU and hospice nurses.

Political dimension came in the third rank, and it has the percentage of (67.41 %), so this result indicates that most of the health workers treat all patients equally, regardless of their political tendencies, in spite of the current political divisions in Gaza Strip. Also most of the health workers avoid to handling of the political situations at work. Also this result agree with the finding of (Abu L-Hussein, 2010), which found that the political dimension came in the third rank (58.03 %) among ICUs nurses in Gaza Strip.

Physical dimension came in the fourth dimension and has the percentage of (51.68 %). Referring that the majority of the study sample doesn't highly suffer from physical illness or pains. But it was remarkable noticed that a large number of the sample suffer from (LBP), this problem is commonly pervasive between health workers due to dealing

with a heavy patients during work in ICUs, that requires changing their positions left and right every two hour, particularly when they are into coma or under sedations, thus to prevent the possibility of bed ulcers. The researcher found the concordance between his finding and (Sun, 2007) finding that high frequency of bending and twisting, transferring patients in bed are the main causes of occupational low back pain in ICUs nurses. Also that appear to be consistent with the finding of (Abu Rayya, 1999) that the (LBP) among health workers in UNRWA is the most common among physiotherapist professionals in Gaza Strip, and the highest rate was 93% among physiotherapist and physiotherapist assistance, nurses 71.2% and doctors 60.6 %. In addition, (Michel et al. 2008) reported that lifetime prevalence of LBP in that sample was 70.9%, and point prevalence of LBP was 21.5%. And the results suggested that direct patient contact that includes lifting and transferring patients may be an important risk factor for LBP.

Psychological dimension came in the last dimension and has the percentage of (50.17%). It is the lowest percentage among the fifth dimensions. That means the health workers in ICUs has low level of psychological stress. That appear to be consistent with finding study of (Abu L-Hussein, 2010) that the psychological dimension among nurses ICUs in Gaza Strip is (49.68 %). Also, In the study of (Abu Laila, 2003) the result appeared that ambulance drivers experienced a wide range of traumatic events more than the control group. Ambulance drivers reported less PTSD symptoms than the control group. Also, according to HSCL-25 depression subscale, ambulance drivers were less depressed than the control group; they were less anxious than control group. According to BDI-II ambulance drivers were less depressed than the control group. The researcher conclude that ambulance drivers living in a very stressful situation related to the frequent incursions of the Gaza Strip by Israeli armed forces were more traumatized than the control group. However, they were less depressed, anxious, and having less PTSD symptoms than the control group. On the other hand, the total dimensions ( psychological, physical, political, work environmental and material dimensions ) has a moderate level with the percentage of (67.60 %) also this result is consistent with the result of (Abu L-Hussein, 2010) which reported that the total psychological stressors among nurses in ICUs is ( 64.73 %). The researcher believes that the percentage of psychological stress among health workers in this study emphasizes that not only nurses complain of psychological stress, but also doctors and physiotherapists had the psychological stress in ICUs.

There is no significant difference at $\alpha \leq 0.05$ in stress due to gender, place of residence /governorate, marital status, educational degree, department, number of years of work in the department. That appear to be consistent with the findings of (Joudeh, 2003) and (Abu L-Hussein, 2010), they found that no statistically significant differences at = (0.05) in degree of job stress sources related to gender, and academic qualifications. However, in my study, there is a significant difference at $\alpha \leq 0.05$ in stress due to profession, the difference is between nurse and physiotherapy, and the difference in favor of nurse. The researcher interprets that nurses are working most of the time beside the patients and they around the clock monitoring developments on patient's conditions, in comparison with doctors or physiotherapists. On the other hand, physiotherapists only work in the morning period, while doctors waiting for the phone calls from nurses if some thing urgent happened to any patient. At last, nurses in ICUs suffer largely then comes doctors and finally physiotherapists. However, there is a significant difference at $\alpha \leq 0.05$ in stress due to place of work, the difference is between Abdel Aziz El Rantisee Hospital and Al-Shifa Hospital, and the difference in favor of Al-Shifa Hospital. The researcher found in his study that the level of stress in Al-Shifa medical complex is higher than Abdel Aziz El Rantisee Hospital. The researcher interprets that Al-Shifa Hospital has a number of health workers, beds and ICUs is greater than the number in Abdel Aziz El Rantisee Hospital. Table no.(8) show that 32.2% from the sample for Al-Shifa Hospital and 5.2 % from the sample is Aziz El Rantisee Hospital.

### 5.5.2 Results of psychological problems

The total dimensions of BSI scale has low level with percentage of (43.14%) with mean 2.16. The most common psychological problems items were: Having to check and double check what you do (65.30 %), nervousness (63.39%), feeling that every thing in the life is difficult (58.20 %), feeling that others are not giving you the proper credit for your achievements (57.49 %), feeling weak in parts of your body "you're exhausted" (54.04 %), your feelings are easily hurt (53.66 %), difficulty in falling asleep (49.84%), the idea that something wrong could happen to you (48.20%), and the last item is feeling angry when you are alone (41.31%). However, there is no significant difference at $\alpha \leq 0.05$ in BSI due to marital status, profession, educational degree, place of work. While there is a significant difference at $\alpha \leq 0.05$ in BSI due to gender and the difference in

favor of to female. The researcher found that females suffer from psychological problems more than males, indicating that females are more vulnerable for psychological problems than males in this sample, females don't have enough ability to deal efficiently with difficult cases in comparison with males. On the other hand, night shifts, work overload, long working hours, make females keep away their families or children that makes them suffer from psychological problems such as anxiety, depression or frustration. This appeared clearly in the study of (Thabet et al., 2008) the results showed that female reported more somatization, obsessive compulsive and phobic anxiety. However, there is a significant difference at $\alpha \leq 0.05$ in BSI due to age and the difference is between " less than 30 years" and "from 30-40 year", and the difference in favor of "less than 30 years". The researcher found that health workers who are under the age of 30 years suffer more than others from psychological problems. The researcher interprets that the adults ( more than 30 years) are more knowledgeable with life affairs and more aware of the nature of their work as well as having the adequate experience in life and work, whereas health workers under the age of 30 years, may be un adequately well-prepared for working in ICUs and don't have the adequate experience in life and work, perhaps for feeling disappointed or helpless at bearing the burdens upon them. That appear to be consistent with the finding of ( Al-Omar, 2003) that found the older employee and more experience he/she has the less work stress is experienced. Therefore, there is a significant difference at $\alpha \leq 0.05$ in BSI due to years of service in the profession and the difference is between "from 3 - 6 years" and " more than 10 years", and the difference in favor of "from 3 - 6 years". However, there is a significant difference at $\alpha \leq 0.05$ in BSI due to place of residence/ governorate and the difference is between "Khan-Younis" and "Mid-Zone" and the difference in favor of "Khan-Younis". Therefore, many studies have stated that people who are living in camps are more vulnerable for psychological problems than those who living in cities. This appeared clearly in the study of (Thabet et al., 2008) they found that Palestinian who live in camps reported more psychological problems, depression, anxiety and hostility. In addition, psychosis symptoms were more common in people who live in villages than in camps or cities. Also that appear to be consistent with the finding of (Samor, 2001) that the prevalence of PTSD between the cases that can be treated in their clinics in KhanYounis 29.7% which indicate increase level of PTSD in contact area.

There is a significant difference at $\alpha \leq 0.05$ in BSI due to section and the difference is between "Neonate Intensive Care Unit" and "Burn Intensive Care Unit", and the difference in favor of "Neonate Intensive Care Unit". The researcher found that there is difference between health workers in NICU and those in BICU, the researcher interpreting that due to the increasing number of cases in NICU. That appear to be consistent with the finding of (Monaliza, et al. 2008) that health workers who work in pediatric and neonatal ICUs are strong candidates for developing stress, psychological alterations and burnout syndrome. The researcher noticed during his work that the majority of health workers in NICU are from females, that assure what is previously mentioned about the differences in gender in favor of females. Females have many responsibility imposed on her by their families as well as the requirements of daily life and at last their work at night. However, female nurses may deal with more than three newborns in the same shift. That appear to be inconsistent with the findings of the study of Boumans and Landeweerd (1994) found that Non-ICU nurses had more work pressure, absenteeism, and health complaints than did the ICU nurses.

## 5.6 Recommendations

**Decision makers should take in consideration the following :**

- Appeal international community to break the siege that imposed on Gaza Strip to enter the medical supplies and medicine.
- Increasing the number of the health workers in ICUs, especially staff nurse, to relive the work overload and work stress.
- Material incentives to encourage the workers in ICUs because they exerted effort during working with difficult cases and continuous monitoring to the patients.
- Providing meals in an appropriate way to the health workers in all ICUs and giving them breaks during the working hours.
- Passing strict laws about the commitment in the time of the visit and not giving the permission to any visitor to break the timetable.

- Training the new health workers in ICUs on how to deal with war cases and other critically ill patients.
- The number of ICU beds in the governmental hospitals should be increased due to the difficult situations of siege, war, and the growing numbers of the injured that Palestinian people have experienced.
- New health workers in ICUs should work under the supervision of direct official at least one month to evaluate his performance in the work and should be given an orientation program about the working in ICUs.
- Mandatory training and updating must be readily accessible for all staff for example: fire training, and basic life support.
- Stress management programs should be encouraged, particularly in the area of death and dying, to alleviate psychological problems and facilitate more effective care.
- Psychological counseling and therapy should be easily accessible and available for troubled health workers.
- Health workers, especially females who work in neonate ICUs, require more attention because they are more liable to develop psychological problems.

## 5.7 Suggestions for future researches

- The researches should be more specialized in stress and psychological problems among health workers in ICUs and concentrate on socio-economic variables among health workers in ICUs.
- The researchers should highlight the effects of the work on females who are working in neonate intensive care units.
- The last suggestion for future research focuses on the importance of comparative research in stress and psychological problems between health workers in West Bank and Gaza Strip or other neighbor countries.

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**(Annex 1)**

## Location Map of Palestine

Source: MOH, 2000

**(Annex 2)**

## Location Map of Gaza

## (Annex 3)

## Helsinki committee approval letter

**Palestinian National Authority**
**Ministry of Health**
**Helsinki Committee**

**السلطة الوطنية الفلسطينية**
**وزارة الصحة**
**لجنة هلسنكي**

**التاريخ: 07/03/2011**

Name: **Mohammed Shrafi**

**الاسم: محمد الشرافي**

I would like to inform you that the committee has discussed your application about:
**"Stress and psychological problems among health workers in intensive care units at MOH hospitals in Gaza Strip- Palestine".**

نفيدكم علماً بأن اللجنة قد ناقشت مقترح دراستكم حول:-

In its meeting on March 2011
and decided the Following:-
To approve the above mention research study.

و ذلك في جلستها المنعقدة لشهر 3 2011
و قد قررت ما يلي:-
الموافقة على البحث المذكور عاليه.

Signature
توقيع

Member
عضو

Member
عضو

Chairperson

Conditions:-
- Valid for 2 years from the date of approval to start.
- It is necessary to notify the committee in any change in the admitted study protocol.
- The committee appreciate receiving one copy of your final research when it is completed.

**(Annex 4)**

## An official letter from Al-Quds University-Gaza


Al-Quds University
Jerusalem
School of Public Health

جامعة القدس
القدس
كلية الصحة العامة


2011/12/13

حضرة الدكتور/ ناصر أبو شعبان المحترم
مدير عام تنمية القوى البشرية
تحية طيبة وبعد ،،،

الموضوع :مساعدة الطالب محمد الشرافي

يقوم الطالب المذكور أعلاه بإجراء بحث بعنوان:

***Stress and psychological problems among health workers in intensive care units at MOH hospitals in Gaza strip.*** ".

كمتطلب للحصول على درجة الماجستير في الصحة النفسية المجتمعية وعليه نرجو التكرم والإيعاز لمن ترونه مناسب لتسهيل مهمة الطالب في جمع الاحصائيات و البيانات اللازمة من الطاقم العامل في أقسام العناية المركزةوهم من فئة (الأطباء – التمريض– العلاج الطبيعي )في وزارة الصحة الفلسطينية ..

علما بأن المعلومات ستكون متوفرة لدى الباحث والجامعة فقط وسنطلعكم على النتائج في حينه.

شاكرين لكم حسن تعاونكم ودعمكم للمسيرة التعليمية .

وتفضلوا بقبول وافر الاحترام والتقدير،،،

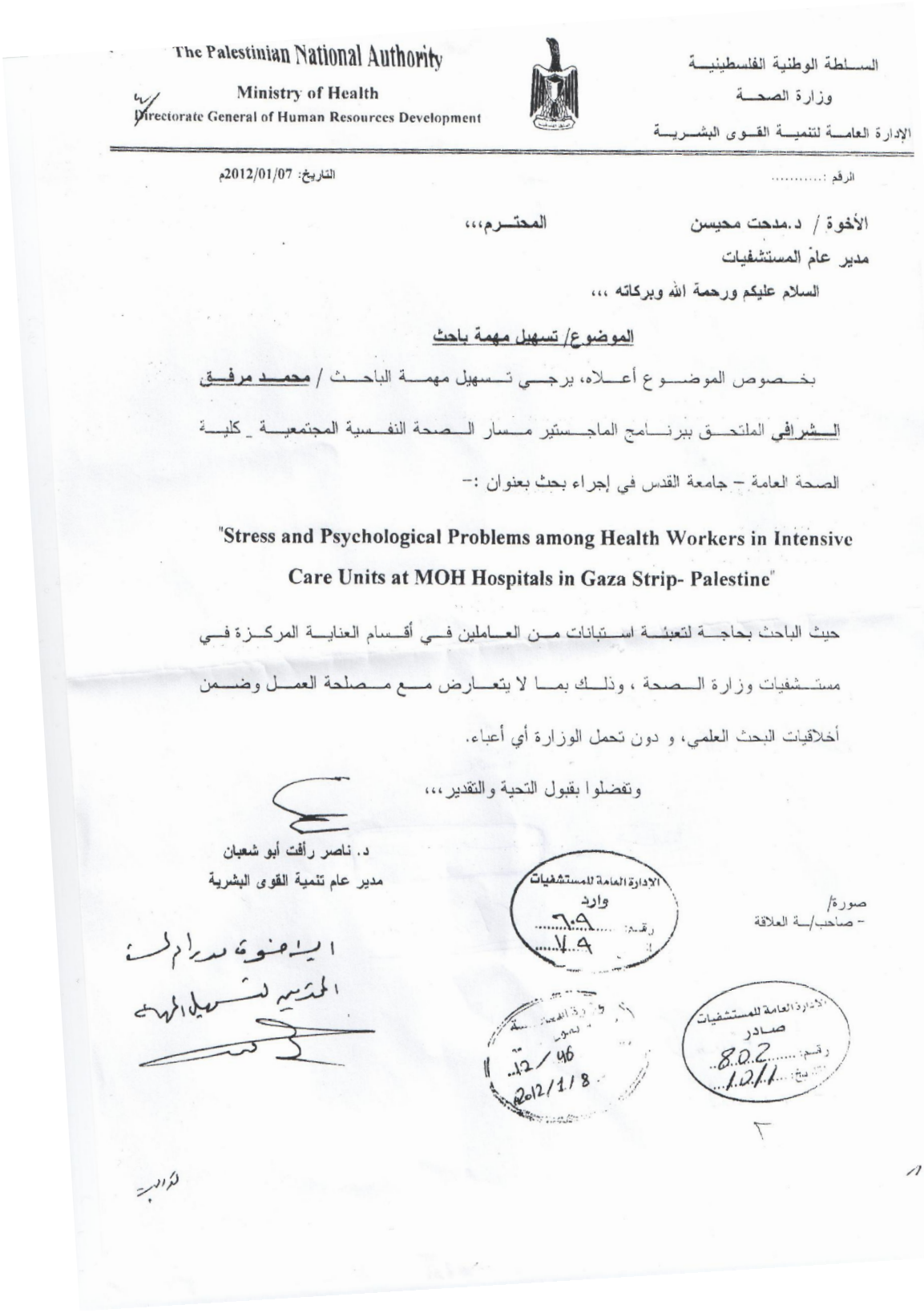
د.بسام أبو حمد
منسق برامج الصحة العامة
جامعة القدس – غزة

نسخة/ الملف


Jerusalem Branch/Telefax 02-24799234
Gaza Branch/telefax 08-2884422-2884411
Sphealth@admin.alquds.edu
فرع القدس/تلفاكس 02-2799234
فرع غزة/تلفاكس 08-2884422-2884411
ص.ب/51000-القدس

**(Annex 5)**

## Ministry of health approval letter



The Palestinian National Authority
Ministry of Health
Directorate General of Human Resources Development

السلطة الوطنية الفلسطينية
وزارة الصحة
الإدارة العامة لتنمية القوى البشرية

الرقم: .....
التاريخ: 2012/01/07م

الأخوة / د.مدحت محيسن المحترم،،،
مدير عام المستشفيات

السلام عليكم ورحمة الله وبركاته ،،،

الموضوع/ تسهيل مهمة باحث

بخصوص الموضوع أعلاه، يرجى تسهيل مهمة الباحث / محمد مرفق الشرافي الملتحق ببرنامج الماجستير مسار الصحة النفسية المجتمعية _ كلية الصحة العامة – جامعة القدس في إجراء بحث بعنوان :-

"Stress and Psychological Problems among Health Workers in Intensive Care Units at MOH Hospitals in Gaza Strip- Palestine"

حيث الباحث بحاجة لتعبئة استبانات من العاملين في أقسام العناية المركزة في مستشفيات وزارة الصحة ، وذلك بما لا يتعارض مع مصلحة العمل وضمن أخلاقيات البحث العلمي، و دون تحمل الوزارة أي أعباء.

وتفضلوا بقبول التحية والتقدير،،،

د. ناصر رأفت أبو شعبان
مدير عام تنمية القوى البشرية

الإدارة العامة للمستشفيات
وارد
رقم: ٦٩
٧٩

صورة/
- صاحب/ـة العلاقة

الإدارة العامة للمستشفيات
صادر
رقم: 802
1.2.11

**(Annex 6 )**

## The names of arbitrators of stress scale

| | | |
|---|---|---|
| 1- | Prof. Dr. Mohammed W. El heluo | Islamic University – Gaza |
| 2- | Dr. Yousef El-Geash | Islamic University – Gaza |
| 3- | Dr. Abdel El- Karim Radwan | Islamic University – Gaza |
| 4- | Dr. Faouze El Naboulsia | Directors of ICU at Al-Shifa Hospital |
| 5- | Mr. Taleb Saleh Abu Mo‘alla | Director of Nursing at Al-Shifa Hospital |
| 6- | Mr. Mohammed Abu L-Hussein | Palestinian Collage for Nursing |
| 7- | Ms. Nathmiea Abo Sneada | Master of Community Mental Health |

**(Annex 7)**

**جامعة القدس – فلسطين**

**كلية الدراسات العليا**

**كلية الصحة العامة**

الأخ الفاضل / الأخت الفاضلة :

تحية تقدير واحترام وبعد،،،

أنا الباحث / محمد مرفق الشرافي طالب ماجستير بجامعة القُدس كُلية الدراسات العُليا- برنامج الصحة العامة- تخصص الصحة النفسية المجتمعية، أقوم بإجراء هذا البحث كمتطلب رئيسي من متطلبات الحصول علي شهادة الماجستير، حيثُ أن هذه الدراسة تهدف إلي التعرف علي الضُغوط والمُشكلات النفسية لدى العاملين في أقسام العناية المُركزة، يحتوي الاستبيان علي عدد من المقاييس ، لذا أرجُوا من سيادتكم التكرم بالإجابة علي الاستبانة بشكل مناسب وصريح، مع ضمان سرية المعلومات المقدمة وأن هذا البحث لن يستخدم إلا لأغراض البحث العلمي فقط.

ولكم جزيل الشكر والتقدير

**الباحث**

**محمد مرفق الشرافي**

mohammed.alshrafi@hotmail.com

**Mobile**: 00972599406610

**تتضمن الأسئلة التالية معلومات شخصية خاصة بحضرتكم حتى يستفيد الباحث منها لأغراض المعالجة الإحصائية ، لذا يرجى وضع إشارة ( × ) في المكان الذي يلائم كل جملة تتوافق مع معلوماتكم الشخصية.**

1- **الجـــنس :** ( ) ذكر ( ) أنثي

2- **العمـــــر :** ( ) أقل من 30 عام ( ) من30– 40 عام

( ) من 41 إلي 50 عام ( ) أكثر من 50 عام

3- **مكان السكن/ محافظة** : ( ) الشمـــال ( ) غـــزة

( ) الوسطي ( ) خان يونس ( ) رفـــح

4- **الحالة الاجتماعية** : ( ) أعزب. ( ) متزوج. ( ) غير ذلك.

5- **المهنة :** ( ) طبيب ( ) تمريض ( ) علاج طبيعي.

6- **الدرجة العلمية** : ( ) دكـتوراه ( ) ماجسـتير ( ) بكالـوريوس

( ) دبلوم سنتـــان ( ) دبلوم 3 سنوات ( ) غير ذلك

7- **سنوات الخدمة في المهنة :**

- أقـل من 3 سنـوات ( ) من 3 سنوات إلي 6 سنوات ( )
- من 7 سنوات إلي 9 سنوات ( ) من 10 سنـــوات فـأكـثر ( )

8- **مكان العمل** :

م. الشهيد كمال عدوان ( ) مجمع الشفـــاء الطـبي ( ) م. شهداء الأقصى ( )

م. الشهيد محمد الـــدرة ( ) م. النصـــر للأطفال ( ) م. غـزة الأوربي ( )

م. الشهيد عبد العزيز الرنتيسي ( ) م. ناصـر الطبي ( )

**9- القـســـم** :

عناية مركزة للبالغين : ( ) عناية مركزة للموالـيد : ( )

عناية مركزة للقلـب : ( ) عناية مركزة للأطفـال : ( )

عناية مركزة للحروق : ( ) عناية جراحة القـلب : ( )

10- **عدد سنوات العمل بالقسم** : ..... سنة.

## (Annex 8)

## Stress questionnaire in Arabic

**مقياس الضغوط النفسية التي يتعرض لها طاقم العناية المركزة وتحتوي علي عدة أبعاد**

| الرقم | العبارة | نادرا | أحيانا | دائما |
|---|---|---|---|---|
| **1** | **البعد النفسي** | | | |
| 1 | أشعر بالخمول معظم الوقت أثناء العمل | | | |
| 2 | ينتابني شعور بعدم الرغبة في القدوم للعمل | | | |
| 3 | أشعر بعدم الارتياح أثناء تواجدي في القسم | | | |
| 4 | أتوتر بسرعة لأبسط الأسباب بسبب ضغط العمل | | | |
| 5 | ألوم نفسي بشدة على أبسط الأشياء | | | |
| 6 | تنتابني أحلام مزعجة تتعلق بالعمل | | | |
| 7 | أعاني من مشاكل في النوم | | | |
| 8 | ينتابني شعور بالكآبة بدون مبرر | | | |
| 9 | أعاني من النسيان المتكرر لأشياء قريبة الحدوث | | | |
| **2** | **البعد العضوي** | نادرا | أحيانا | دائما |
| 10 | يتصبب العرق من يدي أثناء الدوام | | | |
| 11 | أعاني من الصداع خارج الدوام | | | |
| 12 | أشعر بالصداع معظم فترة الدوام | | | |
| 13 | أشعر بالتعب والإرهاق عقب أي نشاط ولو بسيط | | | |
| 14 | أشعر بآلام في المفاصل | | | |
| 15 | أشعر بآلام أسفل الظهر أثناء العمل | | | |
| 16 | أعاني من تقلصات في عضلاتي | | | |
| 17 | أعاني من حموضة في المعدة | | | |
| 18 | أعاني من اضطرابات في المعدة تفقدني الاستمتاع بالطعام | | | |
| 19 | أشعر بزيادة خفقان القلب أثناء العمل | | | |

| 3 | البعد السياسي | نادرا | أحيانا | دائما |
|---|---|---|---|---|
| 20 | يزعجني تداول الأوضاع السياسية أثناء العمل | | | |
| 21 | أعاني من اختلاف وجهات النظر السياسية بيني وبين زملائي | | | |
| 22 | الظروف السياسية تدفعني لتقديم مصلحة العمل على مصلحتي الخاصة | | | |
| 23 | أتجنب العمل ضمن فريق يخالفني الوجهة السياسية | | | |
| 24 | أعامل جميع المرضى بالتساوي بغض النظر عن توجهاتهم السياسية | | | |
| 4 | **بعد بيئة العمل ويتفرع إلي ستة أبعاد** | | | |
| أ | بعد بيئة المكان والخدمات المقدمة | نادرا | أحيانا | دائما |
| 25 | أشعر أن ضغط و أعباء العمل علي في القسم كبير | | | |
| 26 | يزعجني العمل بنظام المناوبات " دوام مسائي أو ليلي" | | | |
| 27 | يقلقني احتمال إصابتي بأمراض معدية بسبب عملي في القسم | | | |
| 28 | يزعجني كثرة أصوات الأجهزة داخل القسم | | | |
| 29 | أشعر بالتوتر كلما رن جرس هاتف أو جرس باب القسم | | | |
| 30 | تزعجني الأضواء الساطعة في القسم و المستمرة على مدار الساعة | | | |
| 31 | يزعجني عدم ملائمة حرارة القسم للجو الخارجي حرارة عالية أو برودة شديدة | | | |
| 32 | يزعجني أن فترات الراحة أثناء الدوام قليلة | | | |
| 33 | تناول الشاي والقهوة و العصائر أثناء الدوام يريحني نفسيا | | | |
| 34 | طريقة تقديم الوجبات للفريق العامل غير ملائِمة | | | |
| 35 | كمية الطعام المقدمة ذات جودة عالية | | | |
| ب | بعد العلاقة مع الزملاء | نادرا | أحيانا | دائما |
| 36 | أثور بسرعة من الزملاء لأتفه الأسباب | | | |
| 37 | تتسم علاقتي المهنية بالتوتر مع بعض الزملاء | | | |
| 38 | أشعر بالتوتر كلما تأخر زميلي لاستلام العمل | | | |
| 39 | ترقية بعض الزملاء والذين هم في نفس مستواي يضغطني نفسيا | | | |
| 40 | علاقتي الاجتماعية مع الزملاء تقتصر على وقت الدوام فقط | | | |
| 41 | يزعجني الدخول المفاجئ لبعض الزملاء على المريض أثناء عملي معه وبدون استئذان | | | |

| | | | | |
|---|---|---|---|---|
| 42 | أنزعج من عدم تواجد الزملاء في القسم طوال الوقت | | | |
| 43 | أنزعج من تلقي الوصفات الطبية على الهاتف لمرضى الحالات الخطرة | | | |
| 44 | يزعجني بعض التقصير من بعض الزملاء في القسم | | | |
| 45 | علاقتي مع الزملاء ممتازة | | | |
| ج | بعد العلاقة مع المرضى | نادرا | أحيانا | دائما |
| 46 | أعمل بتركيز أكبر مع حالات إصابات الحرب | | | |
| 47 | الأزمات و الكوارث تزيد من دافعيتي للعمل | | | |
| 48 | أقوم بواجبي في العمل تجاه المرضى بغض النظر عن العائد المادي | | | |
| 49 | أشعر أن جهدي مع المرضى يشكر عليه غيري | | | |
| 50 | أشعر بالاستمتاع أثناء عملي مع المرضي | | | |
| 51 | أشعر أن الخدمة الطبية المقدمة للمريض تحتاج إلى تحسين | | | |
| د | بعد العلاقة مع الزوار | نادرا | أحيانا | دائما |
| 52 | أصبح متوترا كلما اقترب موعد الزيارة | | | |
| 53 | يزعجني دخول الزوار للسؤال عن مرضاهم في غير وقت الزيارة | | | |
| 54 | يزعجني عدم التزام الزوار و العاملين في موعد الزيارة | | | |
| 55 | يزعجني عدم توفر المريول، القناع، غطاء الرأس، وغطاء القدم للزوار | | | |
| 56 | سماحي بدخول زوار بعض الحالات دون غيرهم في غير موعد الزيارة يضعني في صراع نفسي | | | |
| 57 | وجود رجال أمن لتنظيم الزيارة يريحني من عبئ المواجهة مع الزوار | | | |
| هـ | بعد العلاقة مع المسئولين | نادرا | أحيانا | دائما |
| 58 | يزعجني كثرة التعليمات و التوجيهات من رئيسي المباشر | | | |
| 59 | أتوتر كلما أردت تغيير جدول مناوبتي بعد إقراره | | | |
| 60 | أشعر أن علاقتي بمسئولي المباشر ممتازة | | | |
| 61 | يزعجني التمييز الواضح بين زملائي من قِبَل المسئول المباشر | | | |
| 62 | يزعجني عدم وجود معايير واضحة للترقيات | | | |
| 63 | أنفذ تعليمات مسئولي المباشر حسب سياسة المستشفى | | | |
| 64 | أشعر أن المسئول يحرص على تطوير أدائي في العمل | | | |

| و | بعد المستلزمات الطبية | نادرا | أحيانا | دائما |
|---|---|---|---|---|
| 65 | يزعجني ضياع وقت كبير من العمل في البحث عن الأجهزة السليمة | | | |
| 66 | يزعجني عدم توفر المستلزمات الطبية والأدوية الضرورية للعمل بشكل كاف | | | |
| 67 | عدم توفر الأجهزة بشكل كاف يشعرني بالتقصير | | | |
| 68 | خدمات صيانة الأجهزة الطبية ممتازة | | | |
| 69 | يزعجني تكدس الأجهزة الطبية المعطلة في القسم | | | |
| **5** | **البعد المادي** | نادرا | أحيانا | دائما |
| 70 | يزعجني عدم مكافئة الراتب لمقدار الجهد المبذول مقارنة بالأقسام الأخرى | | | |
| 71 | يزعجني عدم توفير حوافز مالية مناسبة | | | |
| 72 | يزعجني عدم وجود حوافز معنوية | | | |
| 73 | يزعجني عدم تطبيق قانون الثواب والعقاب في القسم بشكل عادل | | | |
| 74 | الراتب الشهري لا يلبي احتياجاتي الأساسية | | | |

## (Annex 9)

## Brief Symptoms Inventory in Arabic

**تقييم الحالة النفسية (BSI) :**

**أمامك قائمة مشاكل أو شكاوي يعاني منها بعض الناس . اقرأ كل واحدة بتمعن وضع دائرة حول الرقم الذي يبين إلى أي مدى عانيت من هذه المشكلة في الشهر الأخير حتى اليوم. الرجاء عدم ترك أي جملة.**

| إلى أي مدي عانيت من : | | | | | |
|---|---|---|---|---|---|
| | مطلقا | نادرا | أحيانا | غالبا | دائما |
| 1. العصبية | 0 | 1 | 2 | 3 | 4 |
| 2. الشعور بالإعياء أو الإغماء أو الدوخة | 0 | 1 | 2 | 3 | 4 |
| 3. الاعتقاد بأن شخصاً ما يستطيع السيطرة على أفكارك | 0 | 1 | 2 | 3 | 4 |
| 4. إلقاء اللوم على الآخرين في معظم متاعبك | 0 | 1 | 2 | 3 | 4 |
| 5. صعوبة في تذكر الأشياء | 0 | 1 | 2 | 3 | 4 |
| 6. الشعور بسرعة المضايقة والاستثارة | 0 | 1 | 2 | 3 | 4 |
| 7. الإحساس بألم في القلب أو الصدر | 0 | 1 | 2 | 3 | 4 |
| 8. الشعور بالخوف في الأماكن المفتوحة أو الشوارع | 0 | 1 | 2 | 3 | 4 |
| 9. التفكير في إنهاء حياتك | 0 | 1 | 2 | 3 | 4 |
| 10. الشعور بعدم الثقة في معظم الناس | 0 | 1 | 2 | 3 | 4 |
| 11. ضعف الشهية للطعام | 0 | 1 | 2 | 3 | 4 |
| 12. الخوف أو الرعب المفاجئ بدون سبب | 0 | 1 | 2 | 3 | 4 |
| 13. نوبات من الغضب لا تستطيع السيطرة عليها | 0 | 1 | 2 | 3 | 4 |
| 14 .الشعور بالوحدة عندما تكون مع مجموعة أشخاص | 0 | 1 | 2 | 3 | 4 |
| 15. عدم القدرة على إتمام أعمالك | 0 | 1 | 2 | 3 | 4 |
| 16. الشعور بالوحدة والعزلة | 0 | 1 | 2 | 3 | 4 |
| 17. الشعور بالحزن و الانقباض | 0 | 1 | 2 | 3 | 4 |
| 18. الشعور بعدم الاهتمام بما حولك | 0 | 1 | 2 | 3 | 4 |
| 19. الشعور بالخوف | 0 | 1 | 2 | 3 | 4 |

| إلى أي مدي عانيت من :- | مطلقا | نادرا | أحيانا | غالبا | دائما |
|---|---|---|---|---|---|
| 20. الإحساس بأن مشاعرك يمكن أن تجرح بسهولة | 0 | 1 | 2 | 3 | 4 |
| 21. الشعور بعدم صداقة الناس لك أو أنهم لا يحبونك | 0 | 1 | 2 | 3 | 4 |
| 22. الشعور بأنك أقل من الآخرين (الشعور بالنقص) | 0 | 1 | 2 | 3 | 4 |
| 23. غثيان أو مغص في المعدة (البطن) | 0 | 1 | 2 | 3 | 4 |
| 24. الشعور بأن الآخرين يراقبونك أو يتحدثون عنك | 0 | 1 | 2 | 3 | 4 |
| 25. صعوبة الاستغراق في النوم | 0 | 1 | 2 | 3 | 4 |
| 26. محاسبة النفس(تحاسب نفسك على كل صغيرة وكبيرة) | 0 | 1 | 2 | 3 | 4 |
| 27. الشعور بصعوبة في اتخاذ القرارات | 0 | 1 | 2 | 3 | 4 |
| 28. الخوف من الركوب في الباص أو المواصلات العامة | 0 | 1 | 2 | 3 | 4 |
| 29. الشعور بصعوبة في التنفس | 0 | 1 | 2 | 3 | 4 |
| 30. الإحساس بنوبات من السخونة والبرودة في جسمك | 0 | 1 | 2 | 3 | 4 |
| 31. الاضطرار إلى تجنب أشياء أو أفعال أو أماكن معينة لأنها تسبب لك الإحساس بالخوف | 0 | 1 | 2 | 3 | 4 |
| 32. الشعور بأن ذهنك خالي من الأفكار | 0 | 1 | 2 | 3 | 4 |
| 33. تـنميل أو خدران في أجزاء من جسمك | 0 | 1 | 2 | 3 | 4 |
| 34. الشعور بالذنب وأنك تستحق العقاب على خطئك | 0 | 1 | 2 | 3 | 4 |
| 35. الشعور بالتوتر أو أنك مشدود داخلياً (غير مرتاح) | 0 | 1 | 2 | 3 | 4 |
| 36. صعوبة التركيز | 0 | 1 | 2 | 3 | 4 |
| 37. الشعور بالضعف في جميع أنحاء جسدك(انك مرهق) | 0 | 1 | 2 | 3 | 4 |
| 38. عدم القدرة على القيام بأعمال على أحسن وجه كالآخرين | 0 | 1 | 2 | 3 | 4 |
| 39. التفكير بالموت (الخوف من الموت) | 0 | 1 | 2 | 3 | 4 |
| 40. الإحساس بدافع ملح لأن تضرب أو تجرح أو تؤذي شخصاً معيناً | 0 | 1 | 2 | 3 | 4 |
| 41. الاندفاع لتخريب وتكسير الأشياء | 0 | 1 | 2 | 3 | 4 |
| 42. الإحساس بالخجل والهيبة في وجود الآخرين | 0 | 1 | 2 | 3 | 4 |
| 43. الشعور بعدم الراحة النفسية بأن كل شيء عناء في عناء ( الدنيا تعب في تعب) | 0 | 1 | 2 | 3 | 4 |

| | | | | | |
|---|---|---|---|---|---|
| 44. الشعور بالوحدة والاغتراب حتى في وجود الآخرين | 0 | 1 | 2 | 3 | 4 |
| 45. نوبات من الخوف و الفزع بدون سبب | 0 | 1 | 2 | 3 | 4 |
| 46. الدخول في كثير من الجدل والمناقشات | 0 | 1 | 2 | 3 | 4 |
| 47. الشعور بالغضب عندما تكون وحيداً | 0 | 1 | 2 | 3 | 4 |
| 48. الشعور بأن الآخرين لا يعطونك ما تستحق من ثناء وتقدير على أعمالك وإنجازاتك | 0 | 1 | 2 | 3 | 4 |
| 49. الشعور بعدم الاستقرار لدرجة لا تمكنك من الجلوس هادئاً في مكان (تكثر حركتك) | 0 | 1 | 2 | 3 | 4 |
| 50. الشعور بأنك عديم الأهمية | 0 | 1 | 2 | 3 | 4 |
| 51. الشعور بأن الناس يستغلونك | 0 | 1 | 2 | 3 | 4 |
| 52. الشعور بالذنب لأتفه الأسباب | 0 | 1 | 2 | 3 | 4 |
| 53. الشعور بأن شيء ما لا تحمد عقباه قد يحدث لك (مصيبة مثلا) | 0 | 1 | 2 | 3 | 4 |

شاكراً ومقدراً حُسنَ تعاوُنكم ،،،

## (Annex 10)

**AL-Quads University**

**Deanship of Graduate Studies**

Dear brother / Dear sister:

I am a researcher / Mohammed Merfeg Al Shrafi master student at the University of Jerusalem, faculty of graduate studies-public health program- specialty in community mental health. I make this research as a key prerequisite of the requirements for a master's degree, as this study aimed to identify the stress and psychological problems among workers in the sections of intensive care units. The questionnaire contains a number of scales, so I hope you to answer the questionnaire properly and explicitly, while ensuring the confidentiality of the information provided and this research will only be used for scientific research purposes.

Thank you very much

**Researcher**

Mohammed M. Al Shrafi

mohammed.alshrafi@hotmail.com

**Mobile:** 00972599406610

## Sociodemographic data in English

**1 - Gender:** Male ( ) Female ( )

**2 - Age:** less than 30 years ( ) from 30-40 year ( )

from 41 to 50 years ( ) more than 50 years ( )

**3 - Place of Residence / governorate:** North ( ) Gaza City ( )

Mid-Zone ( ) Khan-Younis ( ) Rafah ( )

**4 - Marital Status:** Single ( ) Married ( ) Otherwise ( )

**5 - Profession:** Doctor ( ) Nurse ( ) physiotherapy ( )

**6 – Educational Degree:** Doctorate ( ) Master ( ) Bachelor ( )

Diploma of two years ( ) Diploma of three years ( ) Otherwise ( )

**7 - Years of service in the profession:**

- Less than 3 years ( ) from 3 - 6 years ( )
- from 7- 9 years ( ) more than 10 years ( )

**8 - Place of work:**

Kamal Adwan Hospital ( ) Al-Shifa Hospital ( ) Al-Aqsa Martyrs Hospital ( )

Mohamed Al-Durra Hospital ( ) El Nassir pediatric Hospital ( ) European Gaza Hospital ( )

Abdel Aziz El Rantisee Hospital ( ) Nasser Hospital ( )

**9 – Department :**

Adult Intensive care unit-AICU ( ) Neonate Intensive Care Unit-NICU ( )

Cardiac Intensive care Unit-CICU ( ) Pediatric Intensive Care Unit-PICU ( )

Burn Intensive care unit-BICU ( ) Cardiac Surgery Intensive care Unit-CSICU ( )

**10 - Number of years of work in the department**: ..... years.

## (Annex 11)

## Stress questionnaire in English

| No | Item | | | |
|---|---|---|---|---|
| 1 | **Psychological Dimension** | Rarely | Sometimes | Always |
| 1 | I feel sluggish most of the time at work | | | |
| 2 | I have no desire to come to work | | | |
| 3 | I feel uncomfortable when I am in the ward | | | |
| 4 | I become tense quickly for the most trivial reasons due to stress of work | | | |
| 5 | I blame my self firmly on the simplest things | | | |
| 6 | I have bad dreams related to work | | | |
| 7 | I suffer from sleeping problems | | | |
| 8 | I feel depressed without justification | | | |
| 9 | I suffer from frequent forgetfulness of things happened nearly | | | |
| **2** | **Physical Dimension** | Rarely | Sometimes | Always |
| 10 | My hands are extremely sweaty during work hours | | | |
| 11 | I suffer from a headache always out of work | | | |
| 12 | I've got a headache most of the time of work | | | |
| 13 | I feel tired and exhausted after any activity even it was simple | | | |
| 14 | I have pains in the joints | | | |
| 15 | I have a lower back pain during the work | | | |
| 16 | I suffer from cramps in my muscles | | | |
| 17 | I suffer from acidity in the stomach | | | |
| 18 | I suffer from stomach disorders that make me unable to enjoy food | | | |

| | | | | |
|---|---|---|---|---|
| 19 | I have an increase of heart beats during the work | | | |
| **3** | **Political Dimension** | Rarely | Sometimes | Always |
| 20 | It bothers me the handling of the political situations at work | | | |
| 21 | I suffer from different political views between me and my colleagues | | | |
| 22 | The political circumstances prompt me to offer interest to work on my own | | | |
| 23 | I avoid working in a team contradicts me in political views | | | |
| 24 | I treat all patients equally, regardless of their political tendencies | | | |
| **4** | **Work Environment Dimension. It is divided into six dimensions** | | | |
| A | Place Environment Dimension and the Provided Services | Rarely | Sometimes | Always |
| 25 | I feel that the stress and workload in the section is large | | | |
| 26 | It bothers me the work with shift system "evening or night" | | | |
| 27 | I'm worried about the possibility of catching an infectious diseases because of my work in the ward | | | |
| 28 | It bothers me the many sounds of the devices within the ward | | | |
| 29 | I feel nervous whenever the phone or the door bell rang in the ward | | | |
| 30 | It bothers me the continuous bright lights in the ward around the clock | | | |
| 31 | It bothers me that the ward's temperature is inappropriate for the external atmosphere temperature "High temperature or severe cold" | | | |
| 32 | It bothers me that the rest periods during work hours are few | | | |

| | | | | |
|---|---|---|---|---|
| 33 | Drinking tea, coffee and juice during working hours makes me relaxed | | | |
| 34 | The way of providing meals for the working team is inappropriate | | | |
| 35 | The amount of provided food is high of quality | | | |
| B | The Relationship with Colleagues Dimension | Rarely | Sometimes | Always |
| 36 | I rebel quickly against colleagues for trivial reasons | | | |
| 37 | My vocational relationship with colleagues is tense | | | |
| 38 | I feel nervous whenever my colleague was late to receive work | | | |
| 39 | The upgrading of some colleagues who are in the same level of me makes me stressful | | | |
| 40 | My social relationship with colleagues is limited to work hours only | | | |
| 41 | It bothers me the sudden entering of some of my colleagues on the patient while working with him and without asking permission | | | |
| 42 | I feel annoyed from the non-existence of colleagues in the ward all the time | | | |
| 43 | I feel upset from receiving the prescriptions of dangerous cases on the phone | | | |
| 44 | It bothers me some carelessness from some colleagues in the ward | | | |
| 45 | My relationship with colleagues is excellent | | | |
| C | The Dimension of Relationship with Patients | Rarely | Sometimes | Always |
| 46 | I work with the largest concentration with the cases of war injuries | | | |
| 47 | The Crises and disasters increase my motivation to work | | | |
| 48 | I do my duty towards the patients at work, regardless of the material proceeds | | | |

| | | | | |
|---|---|---|---|---|
| 49 | I feel that my patients thank others instead of me | | | |
| 50 | I enjoy my work with patients | | | |
| 51 | I feel that the medical service provided to patients is in need of improvement | | | |
| D | The Dimension of Relationship with the Visitors | Rarely | Sometimes | Always |
| 52 | I become tense when the time of the visit is getting closer | | | |
| 53 | It bothers me the entrance of visitors to ask about their patients not in the time of the visit | | | |
| 54 | It bothers me the lack of commitment of the visitors and workers in the time of the visit | | | |
| 55 | It bothers me the lack of gown , mask, hood and foot cover for visitors | | | |
| 56 | My permission of entering some cases but not others not in the time of the visit is makes me in conflict with myself | | | |
| 57 | The presence of security men to organize the visit comfort me from the burden of confrontation with the visitors | | | |
| E | The Dimension of the Relationship with the Officials | Rarely | Sometimes | Always |
| 58 | It bothers me the many instructions and guidance from my direct official | | | |
| 59 | I feel tense whenever I want to change the shift schedule after its approval | | | |
| 60 | I feel that my relationship with my direct official is excellent | | | |
| 61 | It bothers me the clear distinction between my colleagues by the direct official | | | |
| 62 | It bothers me the lack of clear criteria for promotion | | | |
| 63 | I carry out the instructions of my direct official according to the policy of the hospital | | | |

| | | | | |
|---|---|---|---|---|
| 64 | I feel that the official is keen to develop my performance at work | | | |
| F | The Dimension of the Medical Supplies | Rarely | Sometimes | Always |
| 65 | It bothers me the waste of much time from work to search for sound devices | | | |
| 66 | It bothers me the lack of medical supplies and medicines that are necessary to work | | | |
| 67 | I feel careless in the case of the lack of equipments | | | |
| 68 | The maintenance services of medical devices are excellent | | | |
| 69 | It bothers me the accumulation of the broken medical devices in the ward | | | |
| **5** | **The Material Dimension** | Rarely | Sometimes | Always |
| 70 | It bothers me the non- equivalent salary to the amount of exerted effort if it compared to other ward | | | |
| 71 | It bothers me the failure to provide appropriate financial incentives | | | |
| 72 | It bothers me the lack of moral incentives | | | |
| 73 | It bothers me that the law of reward and punishment isn't applied fairly in the section | | | |
| 74 | The monthly salary does not meet my basic needs | | | |

## (Annex 12)

## Brief Symptoms Inventory in English

You have a list of problems or complaints that some people suffered from it. Read each one carefully and circle the number that shows to what extent you suffered from this problem in the last month until today. Please don't leave any item.

| To what extent you suffered from : | | | | | |
|---|---|---|---|---|---|
| | Never | Rarely | Sometimes | Often | Always |
| 1. Nervousness | 0 | 1 | 2 | 3 | 4 |
| 2. Faintness or dizziness | 0 | 1 | 2 | 3 | 4 |
| 3. The belief that someone else can control your thoughts | 0 | 1 | 2 | 3 | 4 |
| 4. Feeling others are to blame for most of your troubles | 0 | 1 | 2 | 3 | 4 |
| .5. difficulty in remembering things | 0 | 1 | 2 | 3 | 4 |
| 6. Feeling easily annoyed or irritated | 0 | 1 | 2 | 3 | 4 |
| 7. Pains in the heart or chest | 0 | 1 | 2 | 3 | 4 |
| 8. Feeling afraid in open spaces or street | 0 | 1 | 2 | 3 | 4 |
| 9. Thoughts of ending your life | 0 | 1 | 2 | 3 | 4 |
| 10. Feeling that most people cannot be trusted | 0 | 1 | 2 | 3 | 4 |
| 11. Poor appetite | 0 | 1 | 2 | 3 | 4 |
| 12. Sudden fear or scare for no reason | 0 | 1 | 2 | 3 | 4 |
| 13. Temper outbursts that you could not control | 0 | 1 | 2 | 3 | 4 |
| 14. Feeling lonely even when you are with people | 0 | 1 | 2 | 3 | 4 |
| 15. inability to finish your work | 0 | 1 | 2 | 3 | 4 |
| 16. Feeling lonely | 0 | 1 | 2 | 3 | 4 |

| | | | | | |
|---|---|---|---|---|---|
| 17. Feeling sad or depressed | 0 | 1 | 2 | 3 | 4 |
| 18. Feeling no interest in things | 0 | 1 | 2 | 3 | 4 |
| 19. Feeling afraid | 0 | 1 | 2 | 3 | 4 |
| 20. Your feelings are easily hurt | 0 | 1 | 2 | 3 | 4 |
| 21. Feeling that people are unfriendly or dislike you | 0 | 1 | 2 | 3 | 4 |
| 22. Feeling inferior to others | 0 | 1 | 2 | 3 | 4 |
| 23. Nausea or upset stomach | 0 | 1 | 2 | 3 | 4 |
| 24. Feeling that you are watched or talked about by others | 0 | 1 | 2 | 3 | 4 |
| 25. Difficulty in falling asleep | 0 | 1 | 2 | 3 | 4 |
| 26. Having to check and double check what you do | 0 | 1 | 2 | 3 | 4 |
| 27. Difficulty in making decisions | 0 | 1 | 2 | 3 | 4 |
| 28. Feeling afraid to travel on buses, or public transport | 0 | 1 | 2 | 3 | 4 |
| 29. Difficulty in breathing | 0 | 1 | 2 | 3 | 4 |
| 30. Hot or cold spells in your body | 0 | 1 | 2 | 3 | 4 |
| 31. Having to avoid certain things, activity, or palaces because they frighten you | 0 | 1 | 2 | 3 | 4 |
| 32. Feeling that your mind is blank | 0 | 1 | 2 | 3 | 4 |
| 33. Numbness or tingling in parts of your body | 0 | 1 | 2 | 3 | 4 |
| 34. Feeling guilty and that you should be punished for your sins | 0 | 1 | 2 | 3 | 4 |
| 35. Feeling tense or uncomfortable | 0 | 1 | 2 | 3 | 4 |
| 36. Difficulty in concentration | 0 | 1 | 2 | 3 | 4 |
| 37. Feeling weak in parts of your body (you're exhausted) | 0 | 1 | 2 | 3 | 4 |
| 38. Inability to do very well as others | 0 | 1 | 2 | 3 | 4 |

| | | | | | |
|---|---|---|---|---|---|
| 39. Thoughts of death or dying | 0 | 1 | 2 | 3 | 4 |
| 40. Having urges to beat, injure or harm someone | 0 | 1 | 2 | 3 | 4 |
| 41. Having urges to break or smash things | 0 | 1 | 2 | 3 | 4 |
| 42. Feeling very self-conscious with others | 0 | 1 | 2 | 3 | 4 |
| 43. Feeling that every thing in the life is difficult | 0 | 1 | 2 | 3 | 4 |
| 44. feeling lonely even in the presence of people | 0 | 1 | 2 | 3 | 4 |
| 45. Spells of terror or panic without reason | 0 | 1 | 2 | 3 | 4 |
| 46. Getting into frequent arguments and discussion | 0 | 1 | 2 | 3 | 4 |
| 47. Feeling angry when you are alone | 0 | 1 | 2 | 3 | 4 |
| 48. feeling that others are not giving you the proper credit for your achievements | 0 | 1 | 2 | 3 | 4 |
| 49. Feeling so restless that you couldn't sit still | 0 | 1 | 2 | 3 | 4 |
| 50. Feelings of worthlessness | 0 | 1 | 2 | 3 | 4 |
| 51. Feeling that people will take advantage of you | 0 | 1 | 2 | 3 | 4 |
| 52. Feeling of guilt for trivial things | 0 | 1 | 2 | 3 | 4 |
| 53. The idea that something wrong could happen to you | 0 | 1 | 2 | 3 | 4 |

Thank you very much

# (Annex 13)

**Table (1)**

The correlation coefficient between each paragraph in the field and the whole field

**(Psychological, physical, political, work environment and material dimension)**

| No. | Statement | Pearson coefficient | p-value |
|---|---|---|---|
| **1** | **Psychological Dimension** | | |
| 1 | I feel sluggish most of the time at work | 0.544 | 0.011 |
| 2 | I have no desire to come to work | 0.708 | 0.000 |
| 3 | I feel uncomfortable when I am in the ward | 0.664 | 0.001 |
| 4 | I become tense quickly for the most trivial reasons due to stress of work | 0.519 | 0.016 |
| 5 | I blame my self firmly on the simplest things | 0.568 | 0.007 |
| 6 | I have bad dreams related to work | 0.547 | 0.010 |
| 7 | I suffer from sleeping problems | 0.481 | 0.027 |
| 8 | I feel depressed without justification | 0.487 | 0.025 |
| 9 | I suffer from frequent forgetfulness of things happened nearly | 0.583 | 0.006 |
| **2** | **Physical Dimension** | | |
| 10 | My hands are extremely sweaty during work hours | 0.502 | 0.021 |
| 11 | I suffer from a headache always out of work | 0.596 | 0.004 |
| 12 | I've got a headache most of the time of work | 0.652 | 0.001 |
| 13 | I feel tired and exhausted after any activity even it was simple | 0.637 | 0.002 |
| 14 | I have pains in the joints | 0.659 | 0.001 |
| 15 | I have a lower back pain during the work | 0.643 | 0.002 |
| 16 | I suffer from cramps in my muscles | 0.842 | 0.000 |
| 17 | I suffer from acidity in the stomach | 0.491 | 0.024 |
| 18 | I suffer from stomach disorders that make me unable to enjoy food | 0.633 | 0.002 |
| 19 | I have an increase of heart beats during the work | 0.842 | 0.000 |
| **3** | **The Political Dimension** | | |
| 20 | It bothers me the handling of the political situations at work | 0.571 | 0.001 |

| | | | |
|---|---|---|---|
| 21 | I suffer from different political views between me and my colleagues | 0.608 | 0.000 |
| 22 | The political circumstances prompt me to offer interest to work on my own | 0.491 | 0.006 |
| 23 | I avoid working in a team contradicts me in political views | 0.710 | 0.000 |
| 24 | I treat all patients equally, regardless of their political tendencies | 0.810 | 0.000 |

**Table (2)**

The correlation coefficient between each paragraph in the field and the whole field of work environment dimension. It is divided into six dimensions

| **4** | **Work Environment Dimension. It is divided into six dimensions** | Pearson coefficient | p-value |
|---|---|---|---|
| **A** | **Place Environment Dimension and the Provided Services** | | |
| 25 | I feel that the stress and workload in the section is large | 0.732 | 0.000 |
| 26 | It bothers me the work with shift system "evening or night" | 0.542 | 0.011 |
| 27 | I'm worried about the possibility of catching an infectious diseases because of my work in the ward | 0.609 | 0.003 |
| 28 | It bothers me the many sounds of the devices within the ward | 0.735 | 0.000 |
| 29 | I feel nervous whenever the phone or the door bell rang in the ward | 0.688 | 0.001 |
| 30 | It bothers me the continuous bright lights in the ward around the clock | 0.919 | 0.000 |
| 31 | It bothers me that the ward's temperature is inappropriate for the external atmosphere temperature "High temperature or severe cold" | 0.913 | 0.000 |
| 32 | It bothers me that the rest periods during work hours are few | 0.791 | 0.000 |
| 33 | Drinking tea, coffee and juice during working hours makes me relaxed | 0.866 | 0.000 |
| 34 | The way of providing meals for the working team is inappropriate | 0.868 | 0.000 |
| 35 | The amount of provided food is high of quality | 0.824 | 0.000 |
| **B** | **The Relationship with Colleagues Dimension** | | |
| 36 | I rebel quickly against colleagues for trivial reasons | 0.614 | 0.003 |
| 37 | My vocational relationship with colleagues is tense | 0.538 | 0.012 |
| 38 | I feel nervous whenever my colleague was late to receive work | 0.926 | 0.000 |

| | | | |
|---|---|---|---|
| 39 | The upgrading of some colleagues who are in the same level of me makes me stressful | 0.800 | 0.000 |
| 40 | My social relationship with colleagues is limited to work hours only | 0.034 | 0.883 |
| 41 | It bothers me the sudden entering of some of my colleagues on the patient while working with him and without asking permission | 0.633 | 0.003 |
| 42 | I feel annoyed from the non-existence of colleagues in the ward all the time | 0.529 | 0.014 |
| 43 | I feel upset from receiving the prescriptions of dangerous cases on the phone | 0.789 | 0.000 |
| 44 | It bothers me some carelessness from some colleagues in the ward | 0.692 | 0.001 |
| 45 | My relationship with colleagues is excellent | 0.739 | 0.000 |
| **C** | **The Dimension of Relationship with Patients** | | |
| 46 | I work with the largest concentration with the cases of war injuries | 0.749 | 0.000 |
| 47 | The Crises and disasters increase my motivation to work | 0.818 | 0.000 |
| 48 | I do my duty towards the patients at work, regardless of the material proceeds | 0.834 | 0.000 |
| 49 | I feel that my patients thank others instead of me | 0.740 | 0.000 |
| 50 | I enjoy my work with patients | 0.774 | 0.000 |
| 51 | I feel that the medical service provided to patients is in need of improvement | 0.669 | 0.000 |
| **D** | **The Dimension of Relationship with the Visitors** | | |
| 52 | I become tense when the time of the visit is getting closer | 0.697 | 0.000 |
| 53 | It bothers me the entrance of visitors to ask about their patients not in the time of the visit | 0.708 | 0.000 |
| 54 | It bothers me the lack of commitment of the visitors and workers in the time of the visit | 0.642 | 0.000 |
| 55 | It bothers me the lack of gown , mask, hood and foot cover for visitors | 0.580 | 0.001 |
| 56 | My permission of entering some cases but not others not in the time of the visit is makes me in conflict with myself | 0.589 | 0.001 |
| 57 | The presence of security men to organize the visit comfort me from the burden of confrontation with the visitors | 0.685 | 0.000 |

| | | | |
|---|---|---|---|
| **E** | **The Dimension of the Relationship with the Officials** | | |
| 58 | It bothers me the many instructions and guidance from my direct official | 0.481 | 0.007 |
| 59 | I feel tense whenever I want to change the shift schedule after its approval | 0.527 | 0.003 |
| 60 | I feel that my relationship with my direct official is excellent | 0.716 | 0.000 |
| 61 | It bothers me the clear distinction between my colleagues by the direct official | 0.757 | 0.000 |
| 62 | It bothers me the lack of clear criteria for promotion | 0.719 | 0.000 |
| 63 | I carry out the instructions of my direct official according to the policy of the hospital | 0.854 | 0.000 |
| 64 | I feel that the official is keen to develop my performance at work | 0.800 | 0.000 |
| **F** | **The Dimension of the Medical Supplies** | | |
| 65 | It bothers me the waste of much time from work to search for sound devices | 0.844 | 0.000 |
| 66 | It bothers me the lack of medical supplies and medicines that are necessary to work | 0.800 | 0.000 |
| 67 | I feel careless in the case of the lack of equipments | 0.781 | 0.000 |
| 68 | The maintenance services of medical devices are excellent | 0.558 | 0.001 |
| 69 | It bothers me the accumulation of the broken medical devices in the ward | 0.482 | 0.007 |
| **5** | **The Material Dimension** | | |
| 70 | It bothers me the non- equivalent salary to the amount of exerted effort if it compared to other ward | 0.501 | 0.006 |
| 71 | It bothers me the failure to provide appropriate financial incentives | 0.393 | 0.031 |
| 72 | It bothers me the lack of moral incentives | 0.764 | 0.000 |
| 73 | It bothers me that the law of reward and punishment isn't applied fairly in the section | 0.483 | 0.007 |
| 74 | The monthly salary does not meet my basic needs | 0.540 | 0.002 |

**Table (3)**

The correlation coefficient between each paragraph in the field and the whole field (BSI)

| No. | Statement | Pearson coefficient | p-value |
|---|---|---|---|
| | **To what extent you suffered from** | | |
| 1 | Nervousness | 0.517 | 0.003 |
| 2 | Faintness or dizziness | 0.574 | 0.001 |
| 3 | The belief that someone else can control your thoughts | 0.543 | 0.002 |
| 4 | Feeling others are to blame for most of your troubles | 0.432 | 0.017 |
| 5 | Difficulty in remembering things | 0.681 | 0.000 |
| 6 | Feeling easily annoyed or irritated | 0.524 | 0.003 |
| 7 | Pains in the heart or chest | 0.514 | 0.004 |
| 8 | Feeling afraid in open spaces or street | 0.627 | 0.000 |
| 9 | Thoughts of ending your life | 0.511 | 0.004 |
| 10 | Feeling that most people cannot be trusted | 0.548 | 0.002 |
| 11 | Poor appetite | 0.473 | 0.008 |
| 12 | Sudden fear or scare for no reason | 0.623 | 0.000 |
| 13 | Temper outbursts that you could not control | 0.503 | 0.005 |
| 14 | Feeling lonely even when you are with people | 0.512 | 0.004 |
| 15 | Inability to finish your work | 0.650 | 0.000 |
| 16 | Feeling lonely | 0.550 | 0.002 |
| 17 | Feeling sad or depressed | 0.486 | 0.006 |
| 18 | Feeling no interest in things | 0.703 | 0.000 |
| 19 | Feeling afraid | 0.701 | 0.000 |
| 20 | Your feelings are easily hurt | 0.500 | 0.005 |
| 21 | Feeling that people are unfriendly or dislike you | 0.666 | 0.000 |
| 22 | Feeling inferior to others | 0.508 | 0.004 |
| 23 | Nausea or upset stomach | 0.385 | 0.036 |
| 24 | Feeling that you are watched or talked about by others | 0.631 | 0.000 |
| 25 | Difficulty in falling asleep | 0.625 | 0.000 |

| | | | |
|---|---|---|---|
| 26 | Having to check and double check what you do | 0.684 | 0.000 |
| 27 | Difficulty in making decisions | 0.516 | 0.004 |
| 28 | Feeling afraid to travel on buses, or public transport | 0.627 | 0.000 |
| 29 | Difficulty in breathing | 0.625 | 0.000 |
| 30 | Hot or cold spells in your body | 0.724 | 0.000 |
| 31 | Having to avoid certain things, activity, or palaces because they frighten you | 0.404 | 0.027 |
| 32 | Feeling that your mind is blank | 0.579 | 0.001 |
| 33 | Numbness or tingling in parts of your body | 0.599 | 0.000 |
| 34 | Feeling guilty and that you should be punished for your sins | 0.482 | 0.007 |
| 35 | Feeling tense or uncomfortable | 0.496 | 0.005 |
| 36 | Difficulty in concentration | 0.741 | 0.000 |
| 37 | Feeling weak in parts of your body (you're exhausted) | 0.690 | 0.000 |
| 38 | Inability to do very well as others | 0.666 | 0.000 |
| 39 | Thoughts of death or dying | 0.668 | 0.000 |
| 40 | Having urges to beat, injure or harm someone | 0.384 | 0.036 |
| 41 | Having urges to break or smash things | 0.591 | 0.001 |
| 42 | Feeling very self-conscious with others | 0.771 | 0.000 |
| 43 | Feeling that every thing in the life is difficult | 0.789 | 0.000 |
| 44 | Feeling lonely even in the presence of people | 0.424 | 0.019 |
| 45 | Spells of terror or panic without reason | 0.574 | 0.001 |
| 46 | Getting into frequent arguments and discussion | 0.528 | 0.003 |
| 47 | Feeling angry when you are alone | 0.542 | 0.002 |
| 48 | Feeling that others are not giving you the proper credit for your achievements | 0.739 | 0.000 |
| 49 | Feeling so restless that you couldn’t sit still | 0.485 | 0.007 |
| 50 | Feelings of worthlessness | 0.468 | 0.009 |
| 51 | Feeling that people will take advantage of you | 0.491 | 0.006 |
| 52 | Feeling of guilt for trivial things | 0.583 | 0.001 |
| 53 | The idea that something wrong could happen to you | 0.698 | 0.000 |

## (Annex 14)

### Diagnostic criteria for major depressive episode

A. Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure.

   Note: Do not include symptoms that are clearly due to a general medical condition, or mood-incongruent delusions or hallucinations.

1. Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful). Note: In children and adolescents, can be irritable mood
2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation made by others)
3. Significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day. Note: In children, consider failure to make expected weight gains.
4. Insomnia or hypersomnia nearly every day
5. Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down)
6. Fatigue or loss of energy nearly every day
7. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick)
8. Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others)
9. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide

B. The symptoms do not meet criteria for a mixed episode.

C. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

D. The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hypothyroidism). The symptoms are not better accounted for by bereavement, i.e., after the loss of a loved one, the symptoms persist for longer than 2 months or are characterized by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation. (APA, DSM-IV-TR, 2000).

## (Annex 15)

### Diagnostic criteria for generalized anxiety disorder

A. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance) .

B. The person finds it difficult to control the worry.

C. The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms present for more days than not for the past 6 months), Note: Only one item is required in children.

(1) restlessness or feeling keyed up or on edge

(2) being easily fatigued

(3) difficulty concentrating or mind going blank

(4) irritability

(5) muscle tension

(6) sleep disturbance (difficulty falling or staying asleep, or restless unsatisfying sleep)

D. The focus of the anxiety and worry is not confined to features of an Axis I disorder, e.g., the anxiety or worry is not about having a Panic Attack (as in Panic Disorder), being embarrassed in public (as in Social Phobia), being contaminated (as in obsessive compulsive disorder), being away from home or close relatives (as in separation anxiety disorder), gaining weight (as in anorexia nervosa), having multiple physical complaints (as in somatization disorder), or having a serious illness (as in hypochondriasis), and the anxiety and worry do not occur exclusively during posttraumatic stress disorder.

E. The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

F . The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hyperthyroidism)

and does not occur exclusively during a mood disorder, a psychotic disorder, or a pervasive developmental disorder (APA, DSM-IV, 2000).

**العنوان :** الضغوط والمُشكلات النفسية لدى العاملين في أقسام العناية المُركزة في مستشفيات وزارة الصحة الفِلسطينية قطاع غزة_ فِلسطين

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**الملخص :** تهدف هذه الدراسة إلى التعرف على الضغوط و المشكلات النفسية لدى العاملين في أقسام العناية المركزة في مستشفيات وزارة الصحة في قطاع غزة. تكونت عينة الدراسة من (366) شخصاً من العاملين في أقسام العناية المركزة، (87) إناث و (279) من الذكور، موزعين علي النحو التالي: (119) طبيب، (233) ممرض و (14) أخصائي علاج طبيعي ، وقد استخدم الباحث الدراسة الوصفية التحليلية. ولتحقيق هدف الدراسة استخدم الباحث مقياس الضغوط ومقياس (BSI) لقياس المشكلات النفسية، وقد أظهرت نتائج الدراسة أن الضغوط التي يعاني منها العاملين في أقسام العناية المركزة على مستوى متوسط بوزن نسبي (% 67.60) وقد جاء البعد المادي في المرتبة الأولى بوزن نسبي (86.63%), يليها أبعاد بيئة العمل (% 73.70) ثم البعد السياسي (67.41%)ثم البعد الجسدي (% 51.68) ثم البعد النفسي في المرتبة الأخيرة وبوزن نسبي (% 50.17).أيضا مجموع أبعاد مقياس المشكلات النفسية (BSI) حصل على مستوى منخفض وبوزن نسبي (% 43.14) وقد كانت أعلى بنود المشاكل النفسية هي كالتالي : محاسبة النفس ( تحاسب نفسك على كل صغيرة وكبيرة ) بوزن نسبي (% 65.30)، والعصبية (63.39%)، والشعور بأن كل شيء في الحياة صعب (% 58.20) ، الشعور بأن الآخرين لا يعطونك ما تستحق من ثناء وتقدير على أعمالك وإنجازاتك (% 57.49)، وأظهرت نتائج البحث وجود فروق ذات دلالة إحصائية واضحة في الضغوط تُعزَى للمهنة لصالح التمريض، ومكان العمل لصالح مستشفى الشفاء، وأظهرت نتائج البحث أيضا وجود فروق ذات دلالة إحصائية واضحة في مقياس المشكلات النفسية تعزى للجنس (لصالح الإناث) والعمر( لصالح الفئة أقل من 30 سنة ) ومكان المحافظة لصالح (خان يونس)، وسنوات الخدمة في المهنة ( لصالح الفئة من 3-6 سنوات)، ونوع القسم (لصالح قسم عناية حديثي الولادة) ، وعدد سنوات العمل في القسم (لصالح الفئة من 3-4 سنوات). وفي النهاية يلخص الباحث بأن الإناث العاملات في أقسام العناية المركزة لحديثي الولادة، والعاملين في محافظه خان يونس والعاملين الذين تقل أعمارهم عن 30 عاما يحتاجون للمزيد من الاهتمام لأنهم أكثر عرضة لتطوير مشاكل نفسية.