

**Deanship of Graduate Studies
Al-Quds University**



**Psychological Well-Being and Depression Symptoms
among Emergency Departments' Medical Staff of Gaza
Governmental Hospitals**

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M. Sc. Thesis

Jerusalem- Palestine

1442 / 2021

**Psychological Well-Being and Depression Symptoms
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Governmental Hospitals**

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Thesis Submitted in Partial Fulfillment of Requirements for
the Degree of Master of Community Mental health-
Psychotherapy Track\ School of Public Health\
Al-Quds University - Palestine

1442 / 2021

Al-Quds University
Deanship of Graduate Studies
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1442 / 2021

Declaration

I certify that this thesis submitted for the degree of a master is the results of my own research, except where otherwise acknowledged, and that this thesis or any of its parts has not been submitted for a higher degree to any other university or institution.

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Signed:

Osama Mohammed Hammad Abdou

16/1/2021

Acknowledgment

The Researcher would like to express his deepest feelings of gratitude and appreciation to all persons who contributed to the success of this thesis. Special appreciation and deep admiration should be expressed towards the man who changed me deeply, through his awesome teaching and guiding method. A lifetime of academic faith & devotion will be for **Dr. Bassam Abu- Hamad**, the man who seriously contributed to a new me.

To my Thesis supervisor **Dr. Marwan Diab**, I was honored by your supervision. You are very special in this work, without your close follow-up, availability, patience, and also your insights, this work wouldn't have seen the light. My thanks are also extended to our greatest Academic Advisor **Dr. Khitam Abu Hamad**, for her eye-opening advice, guidance, and instructions. My deepest gratitude, love, and devotion to my wife **Diana** who kept her patience, motivation, care, and support available for me during the years of study and the preparation of this thesis.

Sincere thanks are given to all colleagues, and friends who contributed to making this study possible for their unlimited motivation and support during this academic journey.

To Médecins Du Monde management team for their support and again to my lovely and caring family including my lovely eldest son Mohammed who made the time pass smoothly through his jokes and high sense of humor during the writing of this thesis.

Faithfully,

Osama Mohammed Hammad Abdou

Abstract

The psychological well-being of emergency medical staff working in general hospitals is a public health concern locally and internationally. Emergency departments in Gaza serve in a complex context with an overstressed health system that was weakened through the repetitive rounds of violence for the last 15 years. Socio-cultural attitudes towards emergency medical services in Gaza general hospitals continue to be a source of overload and pressure upon emergency medical teams who are expected to resume their roles with high quality continuously despite the severe shortages in tools, equipment, technical support, and human resources. This study, therefore, aimed to determine the level of psychological well-being and depressive symptoms among emergency medical staff in Gaza General Hospitals.

Methodology: The design of this study is mixed-method and was conducted among emergency medical staff at governmental hospitals in Gaza using the Beck Depression Inventory (BDI) and Warwick Psychological Well-being Scale (WPWS). Besides, three focus group interviews were conducted among emergency medical staff from 3 major hospitals representing North, Middle, and South Governorates in the Gaza Strip.

Results: A total of 202 emergency medical staff participated in the study and filled the study questionnaires. 54.5% of the participants reported high psychological well-being, 43% indicated moderate psychological well-being. More than two-thirds (72.3%) of study participants indicated not having depressive symptoms, 18.3% had mild depressive symptoms, 7.4% had moderate depressive symptoms and 2% had severe depression, added to that, 0.5% of participants had moderate depressive symptoms and Low Psychological well-being. Study results also found a statistically significant inverse relationship between psychological well-being and depressive symptoms, where an increase by 1 point on the psychological well-being scale leads to a decrease of 0.5 in depressive symptoms. Demographic variables including gender, age, academic degrees, place of residence, duty station, and years of experience were not found statistically significant in our sample for psychological well-being. For the qualitative part, most staff indicated that they feel good about their mental well-being and feel that they have the skills to cope with stressful working conditions as they have accumulated experience throughout their years of work, however, they reported high stress levels in their work environment in the emergency departments.

Conclusion: Emergency medical staff working at Gaza Governmental Hospitals screened showed high levels of psychological well-being and low depressive symptoms, despite lacking governmental preventive actions to ensure good psychological health among emergency medical staff. Besides, urgent action should be taken by public health decision-makers towards the design and promotion of specialized mental health and psychosocial support services targeting those 10% of emergency medical staff who showed moderate-severe degrees of depressive symptoms.

Keywords: *Psychological Well-being; Depression Symptoms, medical staff, emergency department, Gaza strip*

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List of Abbreviations

APA	American Psychological Association
ED	Emergency Department
GAS-7	the Generalized Anxiety Disorder-7
GHQ	General Health Questionnaire
GP	General Practitioner
GS	Gaza Strip
HMO`s	health maintenance organizations
HSS	Human Services Survey
IDP`s	Internally Displaced Persons
MoH	Ministry of Health
PCBS	Palestinian Bureau of Statistics
PHQ-9	Patient Health Questionnaire-9
RFQ	Risk Factors Questionnaire
SADS	The standardized Hospital Anxiety and Depression Scale
SAS	the self-rating anxiety scale
SCSQ	the simplified coping style questionnaire
SRDS	self-rating depression scale
SSS	Social Support Scale
WHO	World Health Organization

Chapter 1

Introduction

Background

Emergency Departments` (ED) staff in Gaza hospitals are working in a complex situation. Emergency medical staff in Gaza governmental hospitals work in a complex environment within a volatile socio-political context and a health suffering from chronic emergencies that may have compromised medical staff welfare and psychological health due to the continuously pressing lifesaving medical activities prioritization. Emergency departments in Gaza General Hospitals receive hundreds of patients on daily basis in crowded spaces, the types of cases received are ranging from non-urgent that could be received and managed by PHCC`s or other general health service providers, the thing that results in overloading the emergency medical staff and the health system. Besides, different studies have found that healthcare staff who were in direct and continuous contact with human physical and emotional suffering (mainly emergency medical staff), were found highly exposed to secondary traumatization and PTSD (Trudgill et.al, 2020).

The work structure in Gaza General Hospitals has been repetitively reported to be highly distressing and demanding. Shortages in human resources, drugs, and disposables, and supplies, salary problems, humanitarian crisis, blockade, internal political conflicts all contributed to ineffective governmental policies that led to the current conditions that are highly exposing ED Staff to a lower level of psychological well-being and psychological issues. Emergency Teams are expected to be ready to respond to various types of urgent and non-urgent medical needs, as a result of the unexpected political situation that requires a clear emergency preparedness plan that is beyond the capacity of the whole health system including the equipment, the finance, the services, and the human resources as well. This

research will contribute to the body of knowledge about the mental well-being of medical staff working in an environment of high stress and uncertainty, in addition to filling the research gap regarding the mental well-being and depression symptoms of Medical Emergency Staff in the Gaza Strip. Such data will provide the policymakers with evidence-based data that may help in setting short and long-term plans that aim at improving the well-being and quality of life of the medical staff, thus improving the performance and quality of provided services.

1.1 Research Problem:

This research is necessary to obtain an up to date data regarding the psychological health of emergency department staff at governmental hospitals in the Gaza Strip. The research is expected to contribute to the body of knowledge about the psychological well-being of medical staff working in an environment of high stress and uncertainty, in addition to filling the research gap regarding the mental well-being and depression symptoms of Medical Emergency Staff in the Gaza Strip as this specific field remains somewhat out of the reach of researchers in The Gaza Strip. Although important, studies on PTSD may have provided useful information about the consequences of trauma-related stress, little research is available about the broader health consequences (i.e. psychological wellbeing, and depression) of difficult conditions for medical staff working in emergency departments of Gaza strip hospitals (Barber, McNeely & Spellings, 2012).

ED's in Gaza hospitals and globally serve in a complex context, emergency departments are functioning under high-pressure specialty with exposure to disturbing events including psychosocial risks (Oliveira, Pinel, Gonçalves, & Diniz, 2019). Clinical incidents may negatively influence the physical and mental health and well-being of the medical emergency staff in the ED (Wimberley, Crowe & Body, 2018). They are expected to be

ready to respond to various types of urgent and non-urgent medical needs, as a result of the unexpected political situation that requires a clear emergency preparedness plan that is beyond the capacity of the whole health system including the equipment, the finance, the services, and the human resources as well. Such data will provide the policy-makers with evidence-based data that may help in setting short and long-term plans that aim at improving the well-being and quality of life of the medical staff, thus improving the performance and quality of provided services.

1.2 Problem justification:

Globally speaking, there is a growing interest and focus on emergency departments, in terms of workplace stress and the psychological well-being of emergency medical teams as service providers. This research was conducted to shed the light on Gaza emergency medical teams working in governmental emergency departments which are functioning in a context of prolonged crisis and accumulation of shortages. The research will benefit the researcher in obtaining new data about the psychological health of ED medical staff and is expected to benefit also the policymakers in designing relevant service packages targeting the maintenance of ED staff's psychological well-being; in addition, the research will benefit other interested researchers in the same field. The exposure of ED medical staff to distressing conditions on daily basis for long periods, having to provide care for a vulnerable and fragile population in a volatile political atmosphere, which is characterized by high uncertainty. Moreover, the hospitals working conditions that are distressing and overwhelming including the administrative, the managerial, and the technical entities. Besides, ED lacks proper and regular support (technical and emotional). Furthermore, the physical and psychological threats and attacks on medical emergency staff affect their psychological well-being and some mental health aspects. Moreover, the unstable political situation and the economic hardships affect the general population, and directly and

indirectly, impact the emergency medical staff by adding a burden on them and their wellbeing. This study will explore the scope of the potential mental health consequences (mainly, psychological well-being and depression) of working in the stressful conditions of emergency departments.

Previous studies investigated negative psychological functioning, most often trauma-related stress (typically referred to, as post-traumatic stress disorder [PTSD]), as the primary indicator of health (Barber & Schluterman, 2009). The current study will explore the psychological wellbeing and depression among a sample of Palestinian medical staff, working in the emergency medical departments to provide the stakeholders with solid data that may help in setting short and long-term plans that aim at improving the wellbeing and quality of life of the medical staff, thus improving the performance and quality of provided services.

1.3 Overall Aim

The study aims to assess the level of psychological well-being and the presence of depressive symptoms among medical emergency staff working in the emergency department of general hospitals in the Gaza strip. Ultimately, this will provide policymakers with evidence-based data that may assist in setting effective plans to ensure a good level of psychological well-being of the medical emergency staff in the Gaza Strip, which will be reflected positively on their work with their patients.

1.4 Specific Objectives:

- 1) To measure the psychological well-being of the emergency medical staff in the Gaza Strip.
- 2) To assess the presence of depression symptoms among the emergency medical staff in the Gaza Strip.

- 3) To explore the work-related conditions those are relevant to the psychological well-being and the depressive symptoms among the medical emergency staff in the Gaza Strip.

1.5 Research questions:

Research questions consisted of the following 5 main questions that reflected that guided the researcher within his attempt to understand the levels of psychological well-being and depressive symptoms among medical emergency staff in Gaza Governmental Hospitals' emergency departments.

- 1) What is the level of psychological well-being among ED Staff?
- 2) What is the degree of depressive symptoms among ED Staff in Gaza?
- 3) Is there a statistically significant relationship between psychological well-being and depressive symptoms among medical emergency staff in Gaza Governmental Hospitals?
- 4) Is there a statistically significant relationship between psychological well-being and depressive symptoms and demographic differences including age, gender, education, place of residence, duty station, position, years of experience?
- 5) What are the work-related stressors that are related to the psychological well-being and depressive symptoms among the medical emergency staff in the Gaza Strip?

1.6 Context:

(Including health context):

The Gaza Strip is a small area of 362 square kilometers populated by approximately two million people. Under the external occupation of Israel, citizens, including health professionals, have been severely impacted by 13 years of Israeli military siege and by an international economic boycott (World Bank report, 2015). The wars and military operations since 2006 have destroyed hospitals, schools, and public areas. Access to clean water and regular electricity is almost absent. The living conditions are extremely difficult

in Gaza, where the 2007 blockade has raised the unemployment rate to 53% (PCBS, 2018), and caused scarcities of basic goods. The Palestinian territories have a poor infrastructure with basic and congested hospitals.

For the last decade, Palestinians living in the Gaza Strip have been exposed to various and ongoing stressful situations; including home demolition, killing, and continuous social and economic adversities. It was reported that Palestinians continued to witness persistent rocket attacks on civilians and pervasive experiences of loss of life of friends and family members and massive destruction (Office of the United Nations Commissioner for Human Rights, 2009; Palestinian Centre for Human Rights, 2015). Similar to the citizens of Gaza, the health providers, living in Gaza, have been exposed to social injustice and unsafe living conditions. Several factors harm the psychological well-being of the population. The research found that the main reported cause of the suffering of Gazans is the Israeli imposed siege, followed by the effects of the Israeli attack on the strip and the internal Palestinian factional violence (Abu-Rmeileh et al., 2011).

The health system is suffering a protracted emergency for over a decade characterized by chronic shortages of drugs and disposables with an average percentage of 50% of shortages in drugs and 30% of shortages in disposables, Palestinian Ministry of Health (2020). Years of socioeconomic decline, conflict, and closure have left the health sector across the Gaza Strip lacking adequate infrastructure and clinical skills-building programs. Socio-political conditions and the continued deterioration of the humanitarian situation kept pressing and overstressing health structures in Gaza. Health services frequently face to face with the problem of power shortages (electricity cuts) cuts. These challenges further threaten the health of the population, which is already at increased risk. Food insecurity and rising poverty mean that most residents cannot meet their daily caloric requirements, while over

90% of the water in Gaza has been deemed unfit for human consumption. It's worth mentioning that the existing shortage of medicines related to the treatment of chronic diseases, affecting especially those who have cancer and need kidney dialysis. Taking into consideration the increasing speed of the COVID-19 pandemic and the limited capacities of the health system in the availability of medical supplies including Personal Protection Equipment (PPE), ICU services, and COVID-19 laboratories capacities. Even though MoH and MoI are coordinating to improve response capacity and have decreed selective confinements in different areas of Gaza, this situation has an important impact on the continuum access to essential services of the health of almost two million of the population due to the relocation of the staff from the primary healthcare centers to quarantine facilities (OCHA, Covid-19, Emergency Report, 8th Sept 20).

Due to the current Palestinian conflict and division in the health system and other factors related to the siege and ongoing traumas and violence, the medical staff at the emergency department are working under difficult circumstances that increase their stressors and their workload. The research found that helpers operating in war-like conditions have frequently been classified as vulnerable and at risk of experiencing stress and burnout (Abdallah, 2009).

Professional practitioners and volunteers are directly and indirectly exposed to traumatic episodes, such as a threat to their lives, violence, and many other forms of targeting. Besides, health professionals engaged with traumatized populations, resulting from political violence, are highly likely to be secondarily exposed to traumatic events and to experience symptoms of secondary trauma. The most common syndromes developed as a consequence of working with such populations have been classified as 'vicarious traumatization' and compassion fatigue' (Al-Krenawi et al., 2004). Consequently, this

could affect the effectiveness of emergency workers' medical interventions during large-scale crises (Bauwens, & Tosone, 2010).

1.7 Operational definitions:

Psychological well-being refers to inter-and intra-individual levels of positive functioning that can include one's relatedness with others and self-referent attitudes that include one's sense of mastery and personal growth (Nancy A. Pachana, 2017).

Depression (major depressive disorder) is a common and serious medical illness that negatively affects how you feel, the way you think, and how you act. The World Health Organization defines depression as: "A common mental disorder, involving persistent sadness or loss of interest or pleasure accompanied by several of the following symptoms: disturbed sleep or appetite, feelings of guilt or low self-worth, feelings of tiredness, poor concentration, difficulties making decisions, agitation or physical restlessness, talking or moving more slowly than normal, hopelessness, and suicidal thoughts or acts. A person with depression has considerable difficulty with daily functioning (e.g. at home, school or work)". (WHO, 2016)

According to the Diagnostic and Statistical Manual of Mental Disorders (5th ed). (DSM-5), Major Depressive Disorder includes the following diagnostic criteria:

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 attributable to another medical condition.

1. Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad, empty, and hopeless) 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).

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 gain.)

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.

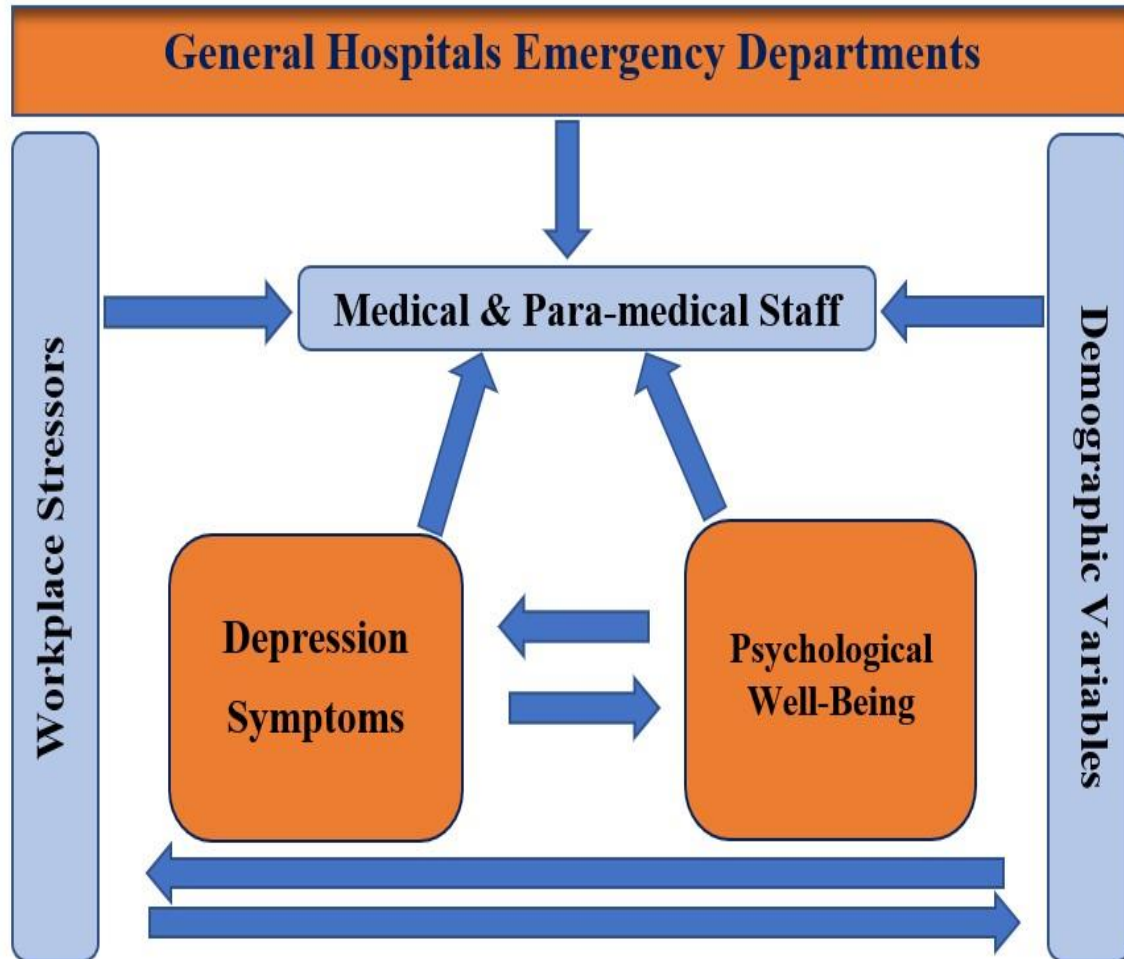
B. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

C. The episode is not attributable to the physiological effects of a substance or another medical condition. (DSM-5, 2013)

Chapter 2

Literature

2.1 Conceptual Framework:



As appears in the conceptual framework illustration, the focus of this study will be assessing the presence of depression symptoms in addition to assessing the level of psychological well-being among emergency departments' medical staff in general hospitals. Furthermore, investigating the presence of depressive symptoms in association with psychological well-being and possible relationship between both study variables, taking into consideration different contextual and work structure-related factors and demographic variables. The study will thrive to answer the questions related to the current work-related structure and management issues in addition to contextual (environmental and

cultural factors) that may be contributing to mental health difficulties among emergency medical staff.

Meadors and Lampson (2008) found that providers working in emergency units needed to be aware of compassion fatigue symptoms and techniques to contain or diminish their symptoms. Taking care of the providers on a personal and professional level had a substantial effect on the amount of stress and compassion exhaustion displayed by health care professionals.

2.2 Literature Review:

This chapter sheds the light on different discussions, arguments, and relevant studies that have been made locally and internationally regarding the mental health and psychological well-being of emergency medical staff. The sensitive nature of the work in emergency departments with the main aim of saving lives and managing critical medical cases which require full preparedness and vigilance continuously by department staff. The high volume of work, the intensity, and many works, environment, socio-cultural components all may contribute to highly demanding and stressful work conditions which have attracted the attention of researchers and scholars to dig more under those conditions and variables trying to understand and/or to contribute to the body of knowledge in this field that may benefit professionals, decision-makers and communities at the end of the road by ensuring understanding of needs and proper response to those needs. This part of the study will start by introducing the conceptual framework and then will go through previous studies and literature.

2.2.1 Psychological Well-being among ED Staff:

Few studies have examined the factors impacting the subjective well-being of health practitioners in the Palestinian context in terms of life satisfaction, positive affect, and

emotions (Shier & Graha, 2010). Similarly, a cross-sectional quantitative study (Abu-Rmeileh et al., 2011) of a representative sample of households in the Gaza Strip found that Palestinian scores on psychological well-being were lower than in other contexts.

Studies have stated the fact that medical emergency staff may be working in non-supportive work environments. Studies have shown that work structure and conditions have been highly predisposing medical staff (especially ED staff) for increased emotional suffering. Less technical and emotional care on regular basis, long working hours, high-frequency repetitive night shifts, low wages, poor social interactions, high population demands, political conflicts, increasing incidence of domestic violence, and many other work and environmental factors have been found by international studies precipitating and perpetuating mental health conditions among medical staff.

It has been shown that preserving psychological well-being and mental strength needs serious individual and official efforts for mainstreaming policies, procedures, and practices that would support an acceptable level of mental well-being of medical staff and specifically the ED Staff. The work environment is an important factor that affects the wellbeing of the individuals besides the resilience, social support, and economic status. For emergency health-care personnel, emergency treatment is related to stress, conflict with the public, medical disputes, overwhelming work, and patient complaints. Helpers working in war areas report high levels of subjective well-being in terms of personal, emotional, and psychological growth, increases sensitivity and empathy, and gains in resilience and competency (Veronese et al., 2013). Also, acute and posttraumatic symptoms and consequences of exposure to war conditions are often mitigated by individual factors, including personal resources (Veronese & Pepe, 2014). However, in uncertain conditions such as those affecting the Gaza Strip, the psychological well-being of professional helpers

may be influenced by a wide range of individual and contextual factors (Veronese et al., 2013).

Medical personnel is among the least professionals asking for support when they need it (Berg, 2019). Also, mental health stigma among medical staff was found to be a challenging fact preventing medical (ED) staff to ask for help in times of psychological weakness and emotional suffering. Studies have shown serious concern regarding mental health crises among medical staff, vicarious traumatization, PTSD, Depressive symptoms, irritability, sleep problems, and anxious mood are among the issues that were found (Trudgill, Gorey & Donnelly, 2020).

Because of these overwhelming conditions, emergency work has always been one of the least popular jobs that preserve the wellbeing of individuals in Taiwan. This correlates significantly with the workload, quality of work, and supports of the environment (Chen, Hsieh, Hu, & Laj, 2017).

A study on dissatisfaction and burnout among Flemish emergency physicians was conducted in Belgium using a qualitative method by in-depth interviewing (semi-structured interviews). The study targeted 7 emergency professionals and aimed to determine the factors leading to dissatisfaction and burnout among Flemish emergency physicians. Common contributors were found to be the working schedule, the increasing number of patients, the mental and physical impact of the job, and the relatively low income. In addition to that, the most important barrier to seek help is the existence of an unforgiving medical culture (Bogaert, Depuydt & Hashimi-Idrissi, 2019).

Rio de Janeiro State University researchers have conducted a qualitative, exploratory, and descriptive study regarding emergency units' psycho-social risks. The study targeted 12 emergency department nurses through semi-structured interviews. Study results have

shown that psychosocial risks identified are derived from occupational stress, such as lack of human resources and equipment, ambiguity in paperwork, and violence (Oliveira, Pinel, Gonçalves, & Diniz, 2019).

A qualitative study of Emergency Department Medical Staff's well-being on events in emergency medicine and how they impact doctors' psychological well-being, was conducted in the UK by Howard, Wibberley, Crowe, and Body (2018). The study aimed to identify clinical events that resulted in emotional disruption and the impact of these events on the well-being of physicians working in an ED. By using narrative interviews, 17 ER doctors have been interviewed. The results have shown that traumatic deaths of patients or situations that physicians could relate to, also, witnessing the impact of death on relatives, were associated with emotional disruption. Psychological disruption was leading to substance misuse, sleep disruption, and neglecting their own physical needs (Wibberley, Crowe & Body, 2018).

A study about psychological distress and burnout aimed to identify differences in psychological distress among different age groups of doctors. 158 doctors were targeted through this mixed-method study which had used Self-Administered questionnaires and semi-structured interviews. Study results showed that doctors with more years of experience had significantly lower scores on Maslach Burnout Inventory-MBI subscales. Being in private practice was associated with increased scores on MBI subscales of depersonalization and emotional exhaustion. Qualitative data supported the data regarding older doctors, who perceived less psychological distress compared to their earlier years of career as they reported having developed more protective mechanisms in their doctor-patient relationships (Latifb, Wilhelma, & Williams, 2018).

An Assessment of psychological needs in emergency medical staff conducted in Northern Ireland and aimed to assess whether psychological distress is experienced by emergency medical staff and if so, what is the expressed need within this population? (McAleese, Diamond & David, 2016). The study aimed to assess whether psychological distress is experienced by emergency medical staff, and if so, what is the expressed need within this population? The assessment targeted 107 Emergency Staff from 2 emergency departments and 12 Ambulance Bases in Northern Ireland. The researchers adopted the mixed-method design using GHQ, STSS, and assessment of need questionnaire. Survey results showed an increased level of psychological distress within each profession except ambulance service clinical support officers. Among the results, the fact of an increased level of secondary trauma symptomatology was also found; the highest was within some nursing grades and junior doctors. The qualitative data identified sources of stress to include low morale where a total of 65% of participants thought that work-related stressors had negatively affected them (McAleese, Diamond & David, 2016).

Factors supporting the psychological health of emergency medical staff were investigated by Yates, Benson, Harris, and Baron (2011). The study aimed to determine the influence of coping strategies and the support people receive from their colleagues. Seventy-three medical emergency staff have been targeted through a comparative design, where General Health Questionnaire-12, Hospital Anxiety, and Depression Scale, Brief COPE, and questions relating to social identity and social support. Results have found higher levels of psychological distress among participants than expected in normal individuals. Better psychological health was associated with greater use of problem-focused coping and less use of maladaptive coping; and social support was associated with better psychological health and greater use of problem-focused coping (Yates, Benson, Harris, & Baron, 2011).

Job characteristics, organizational conditions, and distress/well-being among Italian and Dutch nurses in a cross-national comparison were conducted in Italy. The aim was to compare job characteristics, organizational conditions, and strain reactions in 609 Italian and 873 Dutch nurses and to what extent various job characteristics and organizational conditions explain occupational and general strain. Study results found that Italian nurses perceived their job characteristics, organizational conditions, and well-being as more unfavorable than their Dutch colleagues. Results have also shown that high job demands, low skill discretion, and low social support from supervisors were the most consistent predictors of occupational and general strain across study participants. In addition to that, lack of personnel was a stronger predictor of burnout in the Italian nurses than in the Dutch nurses (Pisanti, et al., 2011).

A national survey of the health and wellbeing of junior doctors conducted by Australian researchers and aimed to determine the prevalence of secondary trauma (compassion fatigue), burnout, and job satisfaction level. It was shown that 71% of the junior doctors reported being concerned about their physical or mental health during the previous year. The study which was based on a 96-item Self-reporting scale targeted 290 junior doctors, also showed that two-thirds of participants (63%) had been concerned about the health of a colleague (Markwell & Wainer, 2009).

The well-being of emergency health work personnel was different according to age and expertise. The junior doctors who are engaged in the work are relatively characterized by enthusiasm, motivation, energy, and willingness to work. However, when they face the workload, the patients' and caregivers' complaints, the huge duties, the managerial style, and the risk of working under pressure, they show less tolerance to cope with those stressors. As a result, the well-being among juniors is worse than others, and the health

care system in both the USA and Canada designed specific programs that aim at improving the wellbeing of those people (Hassed, DE Lisle, Sullivan, & Pier, 2009).

Psychological well-being and psychosocial work environment characteristics among emergency medical and nursing staff were studied in Spain by Escribà-Agüir and Pérez-Hoyos (2007). The study aimed to determine if the effect of the psychosocial work environment on psychological well-being was different for doctors and nurses who work in emergency departments in Spain. The cross-sectional study was carried out among 945 emergency doctors and nurses. Study results have shown that: bad mental health and high emotional exhaustion were higher among doctors than nurses. Low job control and low co-workers' social support at work were associated with poor psychological well-being only among doctors; Low job supervisors' social support increased the risk of poor mental health among doctors and of high emotional exhaustion among nurses (Escribà-Agüir & Pérez-Hoyos, 2007).

A study of the psychological well-being of healthcare staff about organizational risk factors and the psychological well-being of health care employees targeted 706 healthcare staff from the Netherlands. The study aimed to study the relationship between work conditions and outcomes (job satisfaction, emotional exhaustion, psychological distress, and somatic complaints). It was found that communication and training opportunities were of central importance to careers' job satisfaction; Social hindrance, job skills, and material resources explained a substantial amount of unique variance on the negative outcomes investigated (Akerboom & Maes, 2007)

Previous research in the US has shown that physicians are more likely to suffer from emotional exhaustion, depersonalization, and overall burnout than the public. Although burnout and well-being are different entities, they are strongly correlated. It was found that

the well-being of the emergency health work personnel is much worse than other physicians who work in different departments, and the burnout among them exceeds the normal level (Rosen, Gimotty, Shea, & Bellini, 2006).

Many studies had found that people with high levels of well-being have more friends and better social support than others. It is also related to the performance of staff in the workplace (Marks & Fleming, 1999). For example, people with high levels of well-being are more creative, productive, and efficient, and even earn more money (Harker & Kelter, 2001).

2.2.2 Concluding remarks on psychological well-being

Based on the above revision of various studies, it is apparent that maintaining an acceptable and desirable level of psychological well-being of medical emergency staff is challenged by different work-related conditions. Their well-being might be compromised due to the high work environment psycho-social risks and demands. Research has shown the critical need to consider supporting emergency department staff's psychological well-being as they practice their highly sensitive role and tasks of saving and maintaining the lives of individuals daily. Senior staff has gained more experience and knowledge as well as ways of coping with stressful working conditions than their junior counterparts. The junior staff seem to be less privileged and are in great need of support, particularly in their first years of practice. Communication difficulties, low income-level, chronic stress, violence, compassion fatigue are among the factors that were found to be associated with the low psychological well-being of medical emergency personnel.

2.2.3 Depressive Symptoms among ED Staff:

Depression is considered among the most common mental disorders. Individual's losses, having to deal with other person's losses and being close to patients and their caregiver's

suffering, feelings of guilt, responsibility and control were commonly found in depressed medical staff. Hidden depressive symptoms have been leading to a high risk of suicide among medical staff. Exposure to chronically distressing events, lacking effective skills to deal with life stressors, accumulating work stress, uncertainty, un-protective work structure increased the possibility for mental health problems among medical staff, especially depression.

A cross-sectional study conducted by Elhadi, et al. (2020) aimed to identify the prevalence of depression and anxiety among physicians working in the emergency departments in Libya, found that (45.4%) of physicians had significant depression and anxiety levels. The study targeted 108 physicians using the Maslach Burnout Inventory–Human Services Survey (MBI-HSS), (GAD-7) questionnaire, and the (PHQ-9). Results found that 45.4% of physicians had significant depression and anxiety scores; also showed that 65.7% of study participants reported exposure to incidents of verbal violence, and 24.1% reported physical violence or abuse by militias, while 28 participants reported receiving direct threats by militants (Elhadi, et al. 2020).

A study of Burnout, anxiety, and depression risk in medical doctors working in South African government hospitals in a generalized HIV epidemic setting, targeted 150 medical staff and aimed to determine the prevalence of stress, anxiety, and depression it was shown that medical staff had high scores on burnout scale (59.0% screened positive for burnout), (20%) of participants screened positive for anxiety, and (21%) screened high for depressive symptoms. Burnout was significantly associated with depression and anxiety. Organizational factors, such as lack of clinical supervisor support and hospital resources, were significantly associated with burnout (Naidoo, Tomita & Paruk 2020).

Another study of stress, anxiety, and depression among medical staff from Ghana targeted 125 physicians, by Ebenezer Owusu Wireko (2019). The study aimed to determine the prevalence of stress, anxiety, and depression among medical doctors at the Cape Coast Teaching Hospital. The researcher used a quantitative design including a structured questionnaire and the modified DASS-2. Study results showed that medical doctors were experiencing stress, anxiety, and depression. The workload was shown to be considered as a major determinant of stress. Association between stress, anxiety and depression with different professional ranks and gender was not found statistically significant (WERIKO, 2019).

A cross-sectional survey conducted in China by Zhu, et al. (2020) aimed at finding the prevalence and the influencing factors of anxiety and depressive symptoms in first-line anti-epidemic medical staff and targeted 79 doctors and 86 nurses using (SAS), (SDS), and (SCSQ). It was found that the prevalence rates of anxiety and depressive symptoms among doctors was 11.4% and 45.6%, respectively. The study also found that a history of depression or anxiety was shown to be a risk factor for anxiety symptoms in doctors. While among nurses, it was found that 27.9% showed anxiety and 43.0% showed depressive symptoms. Study results also pointed to the history of depression or anxiety as a common risk factor for depression and anxiety symptoms, at the same time, being male was found to be a protective factor (Zhu, et al., 2020).

Depression, Anxiety, Stress symptoms, and associated factors in Emergency Medical Officers were also studied by Malesian researchers in 2018 through a cross-sectional study targeting 140 medical staff and using the Anxiety, Depression, and Stress Scale (DASS). Study results showed the highest prevalence was for Anxiety symptoms (28.6%) followed by depression (10.7%) and lastly, for stress, it was found at (7.9%). The results also showed no significant differences between medical staff working in different hospitals on

this scale. At the same time, Male medical officers significantly showed higher anxiety symptoms than female medical officers. However, depression and stress symptoms between male and female medical officers were not found significantly different. The study concluded that the 3 study topics were neither associated with personal characteristics like age, years of experience, and marital status nor with work structure including the type of the system adopted and the number of shifts (Yahaya SN, et al., 2018).

A study regarding work-related violence as a predictor of stress and correlated disorders in Emergency Department healthcare Professionals was conducted in 2019 and targeted 323 Healthcare workers at the emergency department of a Psychiatric Hospital in Rome. The study design used mixed methods (self-administered questionnaire and individual interviews) and aimed at investigating the type, causes, and consequences of violence and aggression experienced by emergency department medical staff during their interactions with patients. It was found that 87% of emergency healthcare workers experienced violence by patients or their caregivers and that there were emotional consequences experienced by those informants as a result of exposure to aggression and violent acts by patients and caregivers. One-third of the study sample showed negative coping strategies like an increase in tobacco and food consumption, and disturbances in sleep and social relationships (Cannavò, et al., 2019).

A control survey studying stress among nurses working in emergency, anesthesiology, and intensive care units conducted by Trousselard, Dutheil & Naughton (2016) in France and used the JDCA model. The survey targeted 200 nurses working in anesthesiology, emergency, and intensive care units aiming to compare the differences in perceived demands, control, and social support between targeted nurses and to evaluate the role of the level of nursing qualification in the demands–control balance. Survey results showed that nurses from acute care units were located in the high-stress quadrant. Conversely,

other nurses were commonly located in the “active” quadrant, which sheds the light on the stressful nature and structure of emergency and intensive care units (Trousselard, Duthie, & Naughton 2016).

An assessment of psychological needs was conducted by McAleese, Diamond, and David (2016) to assess whether psychological distress is experienced by emergency medical staff, and if so, what is the expressed need within this population? The assessment targeted 107 Emergency Staff from 2 emergency departments and 12 Ambulance Bases in Northern Ireland. The researcher adopted the mixed method design using GHQ, STSS, and assessment of need questionnaire. Survey results showed an increased level of psychological distress within each profession except ambulance service clinical support officers. Among the results, was found the fact of an increased level of secondary trauma symptomatology was also found; the highest was within some nursing grades and junior doctors. The qualitative data identified sources of stress to include low morale where a total of 65% of participants thought that work-related stressors had negatively affected them McAleese, Diamond & David 2016).

A South African study on the impact of overcrowding in the pediatric Emergency Department (ED) upon Registered Nurses, used purposeful sampling and targeted 8 registered nurses (using semi-structured interviews). The study aimed to explore the effect of overcrowding in the pediatric emergency department on the practice of registered nurses. The results showed that ED Nurses were having relationship difficulties with ED physicians who had more power and authority over patients allocations in addition to nurses lacking leadership skills capacity were obstacles to optimum functioning and were leading to a negative work environment in the ED (Meissen Heimer, 2014).

A Turkish study of burnout, job satisfaction, and depression among medical staff at emergency departments was conducted in Gazi Antep by Gökçen, et al., (2013) and found significant differences between those who willingly chose the job and the ones who unwillingly chose the job. The study sample consisted of 347 participants, working in the emergency department of a university hospital, in the emergency departments of the state hospitals, and in 112 emergency services. Beck Depression Inventory was among the study tools which also included (MBI), and (MSQ). Study results included a significant difference between those working in state hospital ED`s and their peers working in non-governmental hospitals towards elevated emotional exhaustion and depression rates (Gökçen, et al., 2013).

The assessment of Depression, Anxiety, and Stress Among Nationally Certified EMS Professionals conducted in the USA by Bentley, et al., (2012) and targeted medical emergency professionals using the DASS 21 Questionnaire found according to DASS classification that 7.1% of EMS professionals as depressed, and 6.3% as anxious, and 6.2% as stressed (Bentley, et al., 2012).

Medical staff working in the emergency departments are consistently reporting higher stress compared to other health professionals (Williams & Smith, 2013). This affects their job satisfaction while invoking feelings of inadequacy which can lead to burnout and compromised well-being of medical staff. Such effects have implications for productivity and performance (Najimi, Goudarzi, & Sharifirad, 2012).

Work-related stress and its impact on doctors have caught recently the attention in the US and Canada, as the mental health impact including depression, anxiety, stress, and even suicide have been more frequent either because the numbers are rising or because the public and doctors have become more aware. It was noted and documented that mental

health impacts have affected the performance of the doctors and physicians and exceeded the ranges among the population. Yet, developing countries considerably larger (Erdur, Ergin, Turcuer, Parlak, Ergin, & Boz, A study of depression and anxiety among doctors working in emergency units in Denizli Turkey, 2006).

In a study conducted among 192 Emergency Doctors in Turkey and aimed at determining anxiety and depression levels and the influential factors leading to such conditions, it was found that ER Doctors who had no hobbies showed high anxiety scores. The study which used a cross-sectional method and targeted ER Doctors from governmental and non-governmental hospitals, Primary Health Care Centers, and 112 Emergency Services also found that being a female with low income correlated positively with high depression scores; additionally, the number of years spent in emergency units and having high depression scores contributed significantly to high levels of anxiety among ER doctors (Erdur, et al., 2004)

A meta-analysis study of 14 studies found that the relative risk of suicide in physicians compared with the general population is between 1.1 and 3.4 for men and 2.5 to 5.7 for women, and the major trigger for attempting suicide is depression (Lindeman, Laara, & Hakko, 1996). In contrast, another study in England has shown that the prevalence of depression and suicide was higher in female compared to the general population, but not high among male, which raised the issue of gender as a risk factor for increasing the risk of depression and suicide among female (Hawton, Clement, & Sakaroyvitch, 2001).

2.2.4 Concluding remarks on depression studies

The above review has shown with no doubt how emergency departments may be under the effects of a wide variety of influential factors internal and external, technical, and structural. Even though some of the studies have shown contradicting information like

Doctors being more prone to depressive symptoms and anxiety, some other studies showed that nurses may be under more and higher pressure, lacking more means and sources of support which may lead to showing depressive symptoms. However, most of the reviewed studies have agreed on the fact that medical staff working at emergency departments are continuously exposed to highly stressful work conditions (environment) and that depression, anxiety, and burnout may be at the top of possible mental health conditions that medical staff may suffer from.

Structural problems like patient allocations, well-defined role and responsibilities, authority distribution, leadership, and management skills, maybe among the factors leading in the short term to stress and exhaustion and in long term, possibly to the development of mental health conditions that may require specialized attention. In addition to that, technical issues like lacking regular supervision and support from superiors and not having a strong capacity and skills-building approach also might be among the factors compromising the expected high level of quality and standards of emergency medical services.

Chapter 3

Study Methodology

This chapter discusses the methodology used in this research. The methodology used for the completion of this study uses the following techniques: research design, population and sample size, data collection, questionnaire design, and statistical data analysis, content validity, and reliability. This chapter explains the materials used, explains the calculations made to analyze the results, and mentions the statistical tests

3.1 Study design

The study design is a descriptive cross-sectional and mix-method. It will include quantitative and qualitative approaches aiming to obtain a comprehensive in-depth understanding of the study topic in addition to relational structures and different factors. A triangulation approach will be used to obtain a deeper understanding of the current ED work structure, stressors, needs, challenges, and difficulties using focus groups and the scales for depressive symptoms and psychological well-being of the ED medical staff. The research strategy is the general plan for how data is collected, how it is collected, and how results are analyzed. The selected search plan will affect the type and quality of the data being collected (Ghuri & Grønhaug, 2010). To investigate the research questions and hypotheses about psychological well-being and the presence of depressive symptoms among medical staff working in emergency departments in government hospitals in the Gaza Strip, a quantitative and qualitative survey approach has been adopted. The research technique was chosen as questionnaire research to measure objectives

This study has been implemented by the researcher within targeted hospitals. There are six main General hospitals in the Gaza Strip, the study was implemented within those 6 main hospitals which are covering the secondary health care needs of 5 Gaza Strip Governorates.

Questionnaires have been presented to the targeted staff face to face by the researcher. For the qualitative part, the focus groups have also been conducted inside the hospitals in an appropriate place that ensures the privacy and confidentiality of participants.

3.2 Study population:

3.2.1 Quantitative part:

The study population included all medical staff working in emergency departments in government hospitals in the Gaza Strip, as their number is (230) distributed according to the profession (doctors, nurses).

Table (3.1): Distribution of study population by profession

Medical hospital	Doctors	Nurses	Total
North (Indonesian Hospital)	10	23	33
Gaza (Shifa Hospital)	25	50	75
Dair Al Balah Aqsa Hospital)	11	19	30
Khanyounis (Nasir + European Hositals)	27	46	73
Rafah (Najjar Hospital)	7	12	19
Total	80	150	230

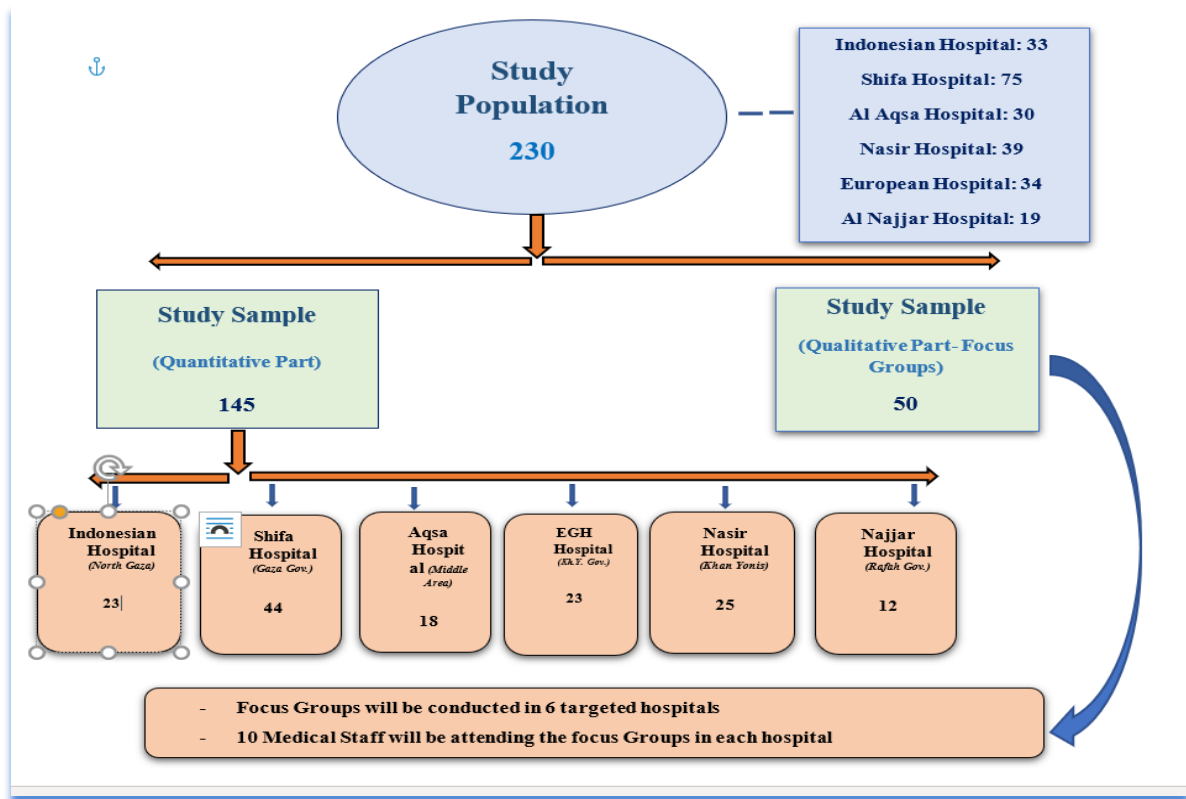
The study population consisted of 230 ED Staff. The study sample was calculated at a 95% confidence level and a 7.38% margin error to be 145 participants using the EPI info software. Participants will be defined and selected proportionally according to the current number of ED staff in each targeted hospital, the researcher will recruit the sample from 6 hospitals that cover the five governorates of the Gaza Strip.

The general hospitals that will be targeted throughout the study will be as follows:

- Indonesian Hospital – North Gaza Governorate
- Shifa Hospital – Gaza Governorate
- Aqsa Hospital – Middle Area Governorate
- Nasir Hospital – Khan Yonis Governorate
- European Hospital - Khan Yonis
- Najjar Hospital – Rafah Governorate

3.2.2 For the qualitative part:

Three focus group discussions were conducted in 3 major hospitals located in 3 geographical areas covering North, Middle, and South Areas. 10 were selected and invited to participate in each focus group for every targeted hospital, the total number of focus groups was 3. The researcher has ensured the needed appropriate representation of the study sample considering the sampling procedure and sample size. The focus groups (3 groups) included only eligible participants as doctors and nurses working at emergency departments with a certain level of practical experiences and not less than 8 participants per group in each session.



3.3 Eligibility Criteria:

3.3.1 Inclusion:

Inclusion criteria comprised:

- Category of medical staff including doctors and nurses working in the emergency department of general hospital hospitals.

- To be eligible, doctors and nurses had to have worked in the hospital for one month or longer.

3.3.2 Exclusion

- Unregistered medical staff (students and volunteers)
- Medical Staff that works in other departments other than the emergency department.
- Other staff like physiotherapists, radiologists, and administrative employees
- Doctors and nurses exclusively performing other duties (not emergency).
- Doctors and nurses working mainly in other departments.
- Doctors and nurses who have worked for less than one month in the hospital.
- Doctors working in other health facilities, outside of the hospitals.

3.4 Study Period:

The research was conducted upon 14 months duration starting from (September 2019) to (November 2020) including 3 main semesters. The first semester included agreeing on the study plan and tools, the second semester included data collection, entry, and analysis, and semester 3 was spent on results, discussions, and thesis finalization.

Annex (1) shows the timeline of the proposed study.

3.5 Sampling & Sample Size

Study Samples were selected through a census sampling method. The researcher systematically recruited the sample according to the registered lists obtained from the administrative office of each hospital. This was done to ensure that all emergency department medical staff working in 6 governmental hospitals (doctors and nurses) were targeted within the scope of the study sample. The permission to conduct the study and start contacting the participants inside each hospital was obtained from the Ministry of Health, and the Palestinian Health Council- Helsinki Committee, as well as special

permission from the General Administration of Governmental Hospitals and also from the General Director of each hospital. Participation was voluntary and short informative sessions were conducted in each emergency department to share study-related info. to ensure the participants are well informed before the start of the implementation process. Voluntary participation, the right not to participate & the right to stop participation at any point of the implementation, confidentiality, and anonymity were ensured to each participant within the informed consent utilization.

The study sample consists of two types, the first is the pilot sample, and the second type is the total sample. We will explain each type separately through the following:

3.5.1 Pilot sample:

A pilot sample of 40 individuals was randomly selected from the medical staff working in the emergency departments of government hospitals in the Gaza Strip, to verify the psychometric properties of the study tools (they were also included in the study sample), which are validity and reliability coefficients of the study tools.

3.5.2 Total sample:

The total sample in the study was 230 medical staff working in the emergency departments of government hospitals in the Gaza Strip (response rate= 87.8%), they were targeted by a census sampling method. Out of 230 total study population size, 28 medical staff (12%) could not be reached by the researcher due to their heavy working schedules including working in different hospitals at the same time or working in same hospital's different departments due to the chronic shortage in the medical staff at the MoH in Gaza, where doctors are required to cover emergency department work and other departments in the hospital. In addition, some staff was not available due to being on long holidays (for external training or travel) at the time of the study. The identification of the demographic characteristics of the respondents was done according to the following:

3.6 Research Instruments

In light of the research hypotheses and the variables they included, we had to choose the appropriate tools to collect data, and that is because the methods used in collecting data are used in choosing the study hypotheses. The goal of any study can only be achieved through tools that are used in this study, which enable us to test its hypotheses, and as long as the nature of the hypotheses, the sample and the variables included in it are the ones that control the selection of appropriate tools, so we should have chosen the tools and measures appropriate for the Palestinian environment.

1. Psychological Well-Being Scale

-Warwick-Edinburgh Mental Well-being Scale (WEMWBS):

Warwick Edinburgh Mental Well-being Scale (WEMWBS): Warwick Edinburgh Mental Well-being Scale (WEMWBS), is a core questionnaire for measuring wellbeing, it can be used as mentoring, evaluation, or follow upscale also can be used as a self-wellbeing assessment questionnaire. The tool measures mental well-being which relates to a person's psychological functioning, life satisfaction, and ability to develop Psychological well-being includes the ability to maintain a sense of autonomy, self-acceptance, personal growth, purpose in life, and self-esteem. Annex (4) shows the Warwick Edinburg Mental Well-being Scale. The scale was used previously in the Palestinian Context through a research Al Quds University researcher who studied the topic "Child Marriage- Triggers and Consequences"

- **Scale description**

The scale aims to identify the level of psychological well-being of medical staff working in government hospitals in the Gaza Strip, as the scale contained in its final form (14) items, as each paragraph in the scale is related to the level of psychological well-being. In front of each paragraph there are five answers, the first (Always /Continuously), the second (Most

of the time), the third (Sometimes), the fourth (Little /rarely), and the fifth (No). The respondent places a sign (x) in front of the phrase that is consistent and expresses her feelings. All the expressions are correct and have a hierarchy that starts from absolute negation and ends with affirmation and correlation of these feelings. The answer is to one of the options in front of the paragraph.

- **Scale correction**

The degrees of the scale range from 0 to 56 degrees, and the answer to the scale falls in five levels (always/ continuously, most of the time, sometimes, little/ rarely, not) and the score for each statement ranges between (four degrees, zero degrees), meaning if it is Answer (4: always/ continuously, 3: most of the time, 2: sometimes, 1: little/ rarely, 0: no), where a high score indicates a high level of psychological well-being.

Psychometric properties of the scale

To identify the psychometric properties of the scale, the researcher calculated the validity and reliability coefficients of the scale as follows:

First: validity of the psychological well-being scale

To verify the validity of the scale, the researcher calculated the validity of the internal consistency as follows:

Internal consistency validity

Internal consistency of the scale was measured by the scouting sample (the sample of the pilot study), which consisted of 40 questionnaires. It was done by measuring the correlation coefficients between the scale paragraphs and the total score of the scale. This is to find out the extent to which each paragraph is related to the total score of the scale, as shown in the following table:

Table (3.2): The correlation coefficients between the paragraphs of the psychological well-being scale and the overall score of the scale (n = 40)

No.	Paragraphs	Correlation coefficient	P. value
1.	I was feeling optimistic about the future.	0.665**	0.000
2.	I felt like a person of benefit.	0.727**	0.000
3.	I was feeling relaxed.	0.533**	0.000
4.	I felt interested in other people.	0.630**	0.000
5.	I felt like I had a lot of energy.	0.760**	0.000
6.	I was handling the problems well.	0.649**	0.000
7.	I was thinking clearly / clearly.	0.604**	0.000
8.	I was feeling good about myself.	0.683**	0.000
9.	I felt close to other people.	0.653**	0.000
10.	I was self-confident / I feel self-confident.	0.671**	0.000
11.	I was making decisions about things myself.	0.524**	0.000
12.	I was feeling loved.	0.588**	0.000
13.	I was interested in new things.	0.668**	0.000
14.	I was feeling joy/pleasure.	0.692**	0.000

****Statistically significant at 0.01 *Statistically significant at 0.01 //Not statistically significant**

The results shown in table (3.2) showed that the paragraphs of the psychological well-being scale have strong correlation coefficients and statistically significant at a significance level of 0.05 and 0.01. This indicates that the paragraphs of the psychological well-being scale have high validity coefficients. Therefore, the researcher used the scale to answer the objectives and hypotheses of the study.

Second: Reliability of the scale

The 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 most purposes, reliability coefficients above 0.7 are considered to be

satisfactory. To measure the Reliability of the scale, the researcher used Cronbach's coefficient alpha and Split Half Method through the SPSS software.

1. Cronbach's Coefficient Alpha

The psychological well-being scale was applied to a pilot sample of (40) medical staff working in government hospitals in the Gaza Strip, and after applying the scale, Cronbach's coefficient alpha ($C\alpha$) was calculated to measure reliability. The normal range of Cronbach's coefficient alpha ($C\alpha$) value is between 0.0 and +1 and the higher value reflects a higher degree of internal consistency. As shown in table (3.3), the general reliability equals (0.89), this range is considered high, where it is above 0.7 Thus, the result ensures the reliability of the scale.

2. Split Half method

The psychological well-being scale was applied to a pilot sample of (40) medical staff working in government hospitals in the Gaza Strip, and after applying the scale, reliability was calculated by the Half Split method. This method depends on finding the Pearson correlation coefficient between the means of questions with odd rank and questions with even rank of the scale. Then, correcting the Pearson correlation coefficient can be done by using the 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 Pearson correlation coefficient. The normal range of corrected correlation coefficient $2r/(r+1)$ is between 0.0 and +1.0. As shown in table (3.3) the general reliability for the scale equal to 0.83. This is evidence that the scale has high reliability, which indicates the validity of the scale, and thus the researcher adopted this scale as a tool to collect data and to answer the study hypotheses and questions.

Table (3.3): Reliability of the scale (psychological well-being) using Cronbach's Coefficient Alpha and Half Split method (n = 40)

Scale	Number of paragraphs	Cronbach's Coefficient Alpha	Half Split		Guttman
			Correlation coefficient	Spearman-Brown	
Psychological well-being	14	0.89	0.72	0.83	0.83

2. Beck Depression Inventory (BDI)

- Scale description**

The study tool contains the Beck Depression Inventory (BDI), where the scale consists of twenty-one paragraphs, each of which has four sub-clauses, and the subject must determine the extent to which any of the sub-clauses apply to it, by putting a circle around the number of the statement that agrees with his opinion. (Abdel-Khaleq, 1996) translated the menu items and instructions with permission from (Aaron Beck) from English into plain Arabic, then the translation was subjected to numerous reviews by specialists in psychology and in the Arabic language, and the instructions for implementing the list were short and simple, and are specified for the subject. Directly required of him when answering, and the following is the text of the instructions: "This poll includes (21) groups of phrases, after you read each group of them carefully, circle one of the numbers (0,1,2,3) that precedes the phrase that fully describes the situation that you have been feeling during the past week, including on that current day, and if you see that several phrases in one group apply equally to you, then circle each number that corresponds to it. Make sure that you read all the phrases in each group before you choose one of them. The Beck list is corrected by

adding the ratings given by the respondent to each of the twenty-first items, and each item consists of four statements estimated from (0-3). The maximum overall score is (63). And if the subject chose more than one statement, he used the phrase with the highest grade to calculate the score. The internal reliability of the scale was calculated and the alpha coefficient was 0.81, and the reliability coefficient = (0.82) ((Beck, 1988). Several researchers codified the scale on the Arab and Palestinian environment, and the reliability of this scale was using the alpha coefficient = 0.79 (Gharib, 2000). This scale was used in other studies in the Palestinian environment, and its reliability was high (Abu Laila, 2008 and Abu Saif, 2007), (Shaheen, 2014).

- **Scale coring:**

The degree of each sub-statement of the scale phrases ranges from 0 to 3 degrees, so that if the subject puts a circle around the first statement, he does not get a score and his degree is zero, and he gets one score if he puts the circle around the number of the second phrase, while if it is placed around the number of the third phrase He gets two points, and gets three if he puts the circle around the number of the fourth phrase. The scores on the scale range between (0-63), and the low score indicates that the subject is not depressed, while the high score indicates a high level of depression for the subject.

Psychometric properties of the scale

To identify the psychometric properties of the scale, the researcher calculated the validity and reliability coefficients of the scale as follows:

First: Validity of the depression scale

To verify the validity of the scale, the researcher calculated the validity of the internal consistency as follows:

Internal consistency validity

To verify the validity of the internal consistency, the correlation coefficient between the paragraphs of the scale was calculated with the total score of the scale, to know the extent of the correlation of each paragraph with the total score of the scale. The following table(3.4) shows the extent to which the paragraphs are related to the overall score of the scale.

Table (3.4): The correlation coefficients between the paragraphs of the depression scale and the overall score of the scale

No.	Paragraphs	Correlation coefficient	P. value
1.	Sorrow	0.635**	0.000
2.	Pessimism	0.616**	0.000
3.	Failure	0.532**	0.000
4.	Loss of enjoyment	0.604**	0.000
5.	Feelings of guilt	0.442**	0.000
6.	Feelings of punishment	0.622**	0.000
7.	Lack of self-love	0.550**	0.000
8.	Self-criticism	0.450**	0.000
9.	Suicidal thoughts or desires	0.504**	0.000
10.	Cry	0.528**	0.000
11.	Irritability or agitation	0.533**	0.000
12.	Loss of interest	0.656**	0.000
13.	Frequency	0.685**	0.000
14.	Worthlessness	0.533**	0.000
15.	Loss of energy	0.662**	0.000
16.	Changes in sleep pattern	0.562**	0.000
17.	Prone to anger or irritation	0.634**	0.000
18.	Changes in appetite	0.605**	0.000
19.	Difficulty concentrating	0.678**	0.000
20.	Fatigue or stress	0.621**	0.000
21.	Loss of interest in sexual behavior	0.552**	0.000

****Statistically significant at 0.01 *Statistically significant at 0.01 //Not statistically significant**

The results shown in table (3.4) showed that the paragraphs of the depression scale have strong correlation coefficients and statistically significant at a significance level of 0.05 and 0.01. This indicates that the paragraphs of the depression scale have high validity coefficients. Therefore, the researcher used the scale to answer the objectives and hypotheses of the study.

Second: Reliability of the scale

To measure the Reliability of the scale, the researcher used Cronbach's coefficient alpha and Split Half Method through the SPSS software.

1. Cronbach's Coefficient Alpha

The depression scale was applied to a pilot sample of (40) medical staff working in government hospitals in the Gaza Strip, and after applying the scale, Cronbach's coefficient alpha ($C\alpha$) was calculated to measure reliability. As shown in table (3.5), the general reliability equals (0.89), and this result ensures the reliability of the scale.

2. Split Half method

The depression scale was applied to a pilot sample of (40) medical staff working in government hospitals in the Gaza Strip, and after applying the scale, reliability was calculated by Half Split method. This method depends on finding Pearson correlation coefficient between the means of questions with odd rank and questions with even rank of the scale. Then, correcting the Pearson correlation coefficient 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 Pearson correlation coefficient. The normal range of corrected correlation coefficient $2r/(r+1)$ is between 0.0 and +1.0. As shown in table (3.5) the general reliability for the scale equal 0.85. This is evidence that the scale has high

reliability, which indicates the validity of the scale, and thus the researcher adopted this scale as a tool to collect data and to answer the study hypotheses and questions.

Table (3.5): Reliability of the scale (depression) using Cronbach's Coefficient Alpha and Half Split method (n = 40)

Scale	Number of paragraphs	Cronbach's Coefficient Alpha	Half Split	
			Correlation coefficient	Spearman Brown
depression	21	0.892	0.740	0.850

Measurements:

Analysis of the data was undertaken using IBM SPSS Statistics (Statistical Package for the social Science) Version 22 (IBM). The following quantitative measures were used for the data analysis.

- ◆ **Frequencies and Relative frequency.**
- ◆ **Statistical measures such as (mean and standard deviation).**
- ◆ **Cronbach's alpha and Half Split method for reliability statistics**
- ◆ **Pearson's correlation coefficient “product-moment correlation coefficient”.**
- ◆ **Independent sample t-test:**

Used to examine if there was a statistically significant difference between two means among the respondents (male, female).

- ◆ **One-way Analysis of Variance (ANOVA):**

Used to examine if there was a statistically significant difference between several means among the respondents (more than two groups).

- ◆ **Scheffe's method for multiple comparisons:**

Scheffé's method applies to the set of estimates of all possible contrasts among the factor level means.

◆ **Person Correlation Coefficient:**

Shows the linear relationship between two sets of data (the strength and the direction of the relationship between two quantitative Variables)

◆ **Multiple linear regression:**

To identify the independent variables that influences the dependent variables.

-Focus group discussions:

We conducted three focus groups (covering 3 main hospitals serving the 3 main geographical areas in Gaza Strip: North, Middle, and South) to assess deeply the perspectives of the participants about their work-related stressors and the link between work conditions and psychological well-being. Annex (5) shows the questions for the focus group. Qualitative data were collected through 3 focus group sessions with doctors and nurses working at Emergency Department in general hospitals. Data analysis was done through; First, examination, classification, scheduling or re-linking of evidence, in order to address the primary objective of the study. Data analysis processes began while collecting data, by skillfully facilitating discussion and generating rich data from the interview, supplementing it with notes, and writing down the recorded information. This stage was followed by getting acquainted with the data, which was achieved by listening to the tapes, reading the texts several times, and reading the notes taken during the interview and the brief written notes immediately after the interview. The goal was to be attentive and to get all possible details and to get a feel from the interview as a whole before breaking it into smaller pieces. At this point major themes began to emerge, in this stage metadata was formed and analysis was carried out on the data under the interrogation path. The third stage, indexing, included sifting the data, highlighting sorting, transferring, and making comparisons, both within and between subjects. While at the fourth stage, the diagram was

created, including a drawing of the most important topics raised in the interviews, and was arranged under the appropriate content.

3.7 Ethical Considerations

- Administrative approval has been obtained from Al-Quds University. Ethical approval has also been obtained from the Palestinian Health Research Council-Helsinki Committee.
- To ensure participants' rights, a covering letter has been presented to participants indicating that participation is voluntary, and confidentiality will be assured for all of them.
- An informed consent letter has been presented to all participants, before their engagement in the study.
- The key informants have been asked for their permission to tape-record the semi-structured focus groups.
- Records of the participants have been stored in a closed cabinet in the researcher's office with a lock.

3.8 Data collection:

We started data collection after getting the necessary approvals from the Ministry of Health. For the quantitative part, we offered the participants to participate and obtained informed consent. We translated and back-translated the questionnaire in Arabic, the main spoken language among the participants. We ensured the privacy and adequacy of the environment to order to facilitate the process of data collection.

For the qualitative parts, we scheduled dates with the participants and conducted the focus groups in Arabic using probing techniques to deeply understand their perspectives about their mental health and work-related conditions.

Data was collected between July - August 2019. Hospitals were visited in a pre-arranged timetable. Information on the study and procedures were presented; the information included information on the aim and objectives of the study, the structure of the questionnaire and how to fill it in, informed consent, anonymity and how to give feedback. Doctors and nurses were given a chance to ask questions before the data collection.

3.9 Response Rate:

The study population consisted of all Gaza Governmental Hospital`s emergency departments` staff which consisted of a total of 230 medical emergency staff covering 6 governmental general hospitals` emergency departments (80 doctors and 150 nurses), among them, 202 participated in the study and filled the questionnaire, this means that the response rate of the study was 87.8%.

A higher response rate by nurses (73.3%) than Doctors (26.7%) was identified. The main reasons for that lie in the fact that Doctors were not assigned to work at the ED only, they were covering Emergency Department Activities while they were located at other hospital departments at the same time, the thing that made the availability of doctors more challenging. The opposite was found among nursing staff where they were fully dedicated to work at the ED.`s which made their availability more achievable.

3.10 Scientific rigor

3.10.1 Validity

The study tools were created based on internationally recognized scales (for example Beck Depression Inventory, Warwick Edinburg Mental Wellbeing Scale) that have been adapted and used in the Palestinian Context and showed good psychometric properties. The questionnaires were also evaluated by experts to assess their relevance, and their comments were taken into consideration. Such a procedure, enhanced the validity of the questionnaire after modifying it (if needed) to be better understood.

3.10.2 Reliability

The following steps were taken to ensure study tools reliability:

- Data entry on the same day of data collection would allow possible interventions.
- To check the data quality or to re-fill the questionnaire when required.
- Re-entry of 5% of the data after finishing data entry assured correct entry procedure and decreased entry errors.

3.11 Data entry and analysis

To achieve the above-mentioned objectives using quantitative measures, we analyzed the demographic information of the participants. In addition to conducting descriptive measures to assess the degree of depressive symptoms and mental health wellbeing of the participants. Furthermore, we conducted inferential statistics to assess the differences according to the demographic data.

To achieve the objectives employing qualitative research methodology, focus groups are recorded, transcribed, and entered into Atlas ti, a computer program that assists in the analysis of textual data by enabling an investigator to manage large amounts of text with the use of linking and search functions. Atlas. ti facilitates textual analysis and interpretation through various coding procedures. The analysis of the data focused on the content of the participants' perspectives, opinions, and experiences. The analysis was conducted using the categorizing process in the thematic analysis (Glaser & Strauss, 1967). This process of categorization involved open coding, selective coding, comparison and categorization, and re-reading and modifying. Categories then were created by identifying similarities and differences in the content of the statements that are labeled. Finally, we modified the structure of the findings by re-reading the original narratives and modifying the analyzed data accordingly. The above process resulted in a composite list of

overarching themes that represented mental health wellbeing, depressive symptom, and work-related conditions.

3.12 limitations of the study:

- ☐ Including only Governmental Hospitals
- ☐ Availability of nurses more than doctors

HA higher response rate by nurses (73.3%) than Doctors (26.7%) was identified. The main reasons for that lie in the fact that Doctors were not assigned to work at the ED only, they were covering Emergency Department Activities while they were located at other hospital departments at the same time, the thing that made the availability of doctors more challenging. The opposite was found among nursing staff where they were fully dedicated to work at the ED's which made their availability more achievable.

Chapter 4

Results and discussion

This chapter included an analysis and discussion of the results that have been collected from field surveys. A total of 202 completed copies had been returned. Data were analyzed quantitatively using IBM (SPSS) version 25 including descriptive and inferential statistical tools. The researcher presented the results obtained using the study tools and statistical treatments according to the study questions and hypotheses.

Demographic, educational and professional characteristics of the respondents

To identify the demographic, family, educational, and professional characteristics of the respondents, frequencies, and percentages of these variables were found, and they will be presented through the following table:

The results of the study's questions were presented, and then the results of the study's hypotheses were presented as follows:

Table (4.1): Distribution of the sample members according to the personal and scientific demographic variables of the sample members (n = 202)

Variable	Category	N	%	Variable	Category	N	%
Gender	Male	146	72.3	Qualification	Diploma	27	13.4
	Female	56	27.7		Bachelor	140	69.3
	Total	202	100.0		Master and above	35	17.3
Age	30 years or less	84	41.6		Total	202	100.0
	31-40 years	68	33.7	Governorate	North	26	12.9
	41 years and over	50	24.8		Gaza	40	19.8
	Total	202	100.0		Mid zone	36	17.8
Occupation	Doctor	54	26.7		Khan Younis	46	22.8
	Nurse	148	73.3		Rafah	54	26.7
	Total	202	100.0		Total	202	100.0
Years of experience	10years or less	112	55.4	Hospital	Al Shifa Hospital	42	20.8
	11 years and over	90	44.6		Indonesia Hospital	25	12.4
	Total	202	100.0		Al Aqsa Martyrs Hospital	25	12.4
Marital status	Single	48	23.8		Nasser Medical Complex	41	20.3
	Married	151	74.8		European Gaza Hospital	41	20.3
	Divorced	2	1.0		Abu Yousef Al. Najjar Hospital	28	13.9
	Widow	1	0.5		Total	202	100.0
	Total	202	100.0				

The results showed that 72.3% of the respondents are males, while 27.7% are females. The average age for members of the sample 35 years and a standard deviation of 9.1 years, it was observed that 41.6% of respondents were aged 30 years or less, while 33.7% aged between (31-40 years), while 24.8% of respondents aged greater than 40 years. Doctors in the sample accounted for 26.7%, while nurses 73.3%. The years of experience of the respondents ranged between (2.0 - 35.0) years with a mean of 10.6 years and a standard deviation of 7.6 years. It was found that 55.4% of the respondents have years of experience of 10 years or less, while 44.6% have years of experience with 11 years or more. As for marital status, 23.8% of the respondents are unmarried, and 74.8% are married, while only 1% are divorced, and 0.5% are widows. Concerning the academic qualification, 13.4% of the sample hold an intermediate diploma, while 69.3% have a university degree, while 17.3% have a master's degree or above. According to the place of residence, 26.7% of the respondents live in Rafah governorate, 22.8% in Khan Younis governorate, 17.8% in the mid zone, 19.8% in Gaza governorate, and 12.9% in the North Governorate. As for the hospital, 20.8% of the respondents work in Al Shifa Hospital, 12.4% work in the Indonesian Hospital, 12.4% in the Al Aqsa Martyrs Hospital, and 20.3% in Nasser Medical Hospital, while 13.9% work in Abu Yousef Al. Najjar Hospital.

4.1 Results of Quantitative Part:

4.1.1 Descriptive Statistics:

4.1.1.1 Psychological Well-being among Medical Emergency Staff:

To find out the level of psychological well-being of medical staff working in emergency departments in government hospitals in the Gaza Strip, the researcher calculated the descriptive statistics, i.e. Means, Standard Deviations (SD), Relative Important Index (RII). The outcomes of the analysis were shown in table (4.2).

Table (4.2): Means, Standard Deviations (SD), Relative Important Index (RII) of the psychological well-being scale among medical staff (n = 202)

Scale	No. of paragraphs	Total score	Mean	Standard deviation	Relative important %
Total score of psychological well-being	14	56	37.5	9.1	66.9%

Relative Important Index = (Mean ÷ Total score) X 100

The results shown in table (4.2) indicated that the mean overall score of the psychological well-being scale was 37.5, a standard deviation of 9.1, and a relative important index of 66.9%. This indicates that the level of psychological well-being was above average among medical staff working in emergency departments in government hospitals in the Gaza Strip. In order to identify the levels of psychological well-being of the sample members, the scores of the scale were divided into three levels, (low score from 0-18, moderate score from 19-37, and high score from 38-56). The results of the study showed that more than half of the sample, (54.5%), have a high level of psychological well-being; while (43.1%) have a moderate level of psychological well-being, Yet, only (2.5%) have low psychological well-being. We can conclude that working medical staff in the emergency departments of government hospitals enjoy a “good, more than average” degree of psychological well-being.

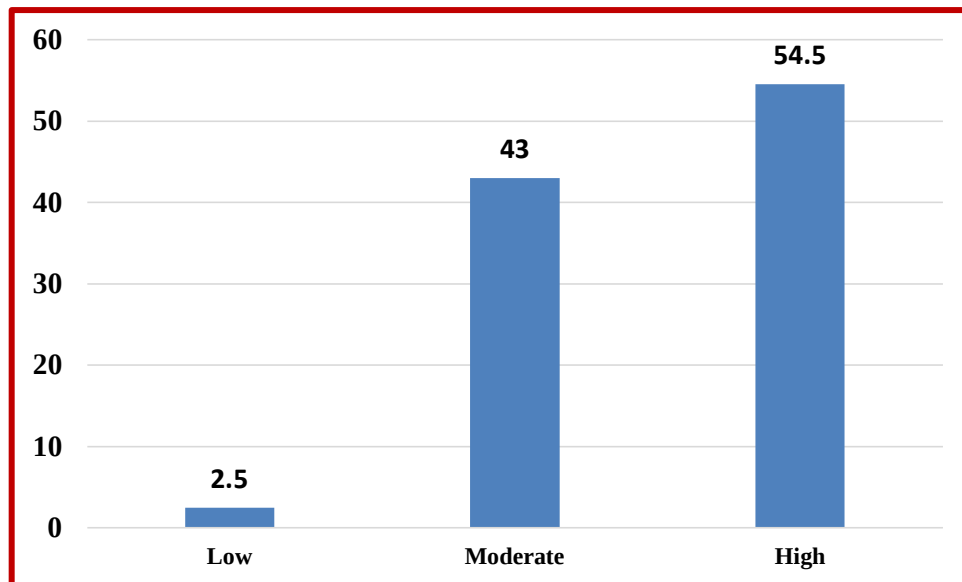


Figure (1): *Levels of psychological well-being for medical staff in emergency departments in government hospitals in the Gaza Strip.*

Based on the analysis of the wellbeing scale, the results presented below in table (4.3) showed that (38.6%) of the respondents feel that they are permanently useful people, while (38.1%) often feel this; it was found also that (35.1%) of respondents always think that they are confident of themselves and have a sense of self-confidence, while (41.1%) often feel this way. It was also noted that (24.8%) always feel good about themselves, and (45%) often feel good about themselves; while it was noticed that (10.4%) of the respondents do not feel absolute joy and pleasure, (5%) do not feel close to others, and (13.9%) do not feel relaxed at all, and (12.9%) do not feel optimistic about the future.

Table (4.3): Descriptive Statistics of well-being items (n=202)

#	Items of psychological well-being scale	Never	Rarely	Sometimes	Often	Always	Mean	Standard Deviations	Relative Important Index (%)
1	I was feeling optimistic about the future.	12.9%	10.9%	26.7%	32.2%	17.3%	2.30	1.25	57.5
2	I felt like a person of benefit.	3.0%	4.5%	15.8%	38.1%	38.6%	3.05	1.00	76.2
3	I was feeling relaxed.	13.9%	22.3%	39.6%	20.8%	3.5%	1.78	1.04	44.4
4	I was feeling interested in other people.	4.0%	5.0%	20.8%	50.0%	20.3%	2.78	0.96	69.4
5	I felt like I had a lot of energy.	7.9%	9.9%	25.7%	34.7%	21.8%	2.52	1.17	63.1
6	I was handling the problems well.	1.5%	5.4%	20.8%	51.5%	20.8%	2.85	0.86	71.2
7	I was thinking clearly / clearly.	2.5%	6.4%	22.8%	51.0%	17.3%	2.74	0.90	68.6
8	I was feeling good about myself.	4.0%	5.9%	20.3%	45.0%	24.8%	2.81	1.01	70.2
9	I felt close to other people.	5.0%	6.9%	25.2%	48.0%	14.9%	2.61	0.99	65.2
10	I was self-confident / I felt self-confident.	1.5%	4.5%	17.8%	41.1%	35.1%	3.04	0.92	76.0
11	I was making decisions about things myself.	2.0%	4.0%	18.3%	50.5%	25.2%	2.93	0.88	73.3
12	I was feeling loved.	1.5%	2.0%	18.3%	48.5%	29.7%	3.03	0.83	75.7
13	I was interested in new things.	4.5%	3.0%	32.2%	39.6%	20.8%	2.69	0.98	67.3
14	I was feeling joy/pleasure.	10.4%	8.4%	36.6%	30.2%	14.4%	2.30	1.14	57.4

4.1.1.2 Level of Depressive Symptoms among medical emergency staff:

To find out the level of depressive symptoms among medical staff working in emergency departments in government hospitals in the Gaza Strip, the researcher calculated the descriptive statistics, i.e. Means, Standard Deviations (SD), Relative Important Index (RII), frequency, and percentage of degrees and levels of depressive symptoms for the sample members and the outcomes of the analysis were shown in table (4.4).

Table (4.4): Means, Standard Deviations (SD), Relative Important Index (RII) of the Beck Depression Inventory for the depression symptoms among medical staff (n = 202)

Scale	No. of paragraphs	Total score	Mean	Standard deviation	Relative important %
Total score of depression	21	63	15.7	10.5	24.9%

Relative Important Index = (Mean ÷ Total score) X 100

The results shown in table (4.4) showed that the mean overall score of the Beck Depression Inventory was 15.7, a standard deviation of 10.5, and a relative important index of 24.9%.

This indicates that the level of depressive symptoms is low among medical staff working in emergency departments in government hospitals in the Gaza Strip. According to Beck Depression Inventory (BDI), it was noticed that the majority of respondents (72.3%) had no depressive symptoms, while (18.3%) had mild depressive symptoms, while (7.4%) had moderate depressive symptoms, and only 2.0% had severe depressive symptoms.

Table (4.5): Frequencies and percentages of levels of depression symptoms among emergency medical staff (n = 202)

Depressive symptoms	Frequency	Percentage %
No symptoms (20-0)	146	72.3
Mild symptoms (31-21)	37	18.3
Moderate symptoms (42-32)	15	7.4
Severe symptoms (63-43)	4	2.0
Total	202	100.0

As shown below in table (4.5), the most common symptoms of depression among the respondents who got the highest scores for the items of the scale were as follows; (16.3% self-criticism, 16.3% crying, 9.9% feelings of punishment, 8.9% loss of enjoyment, 7.9% sadness, 7.9% irritability and arousal, 8.4% fatigue and stress).

The level of self-criticism among respondents 43.2%, and the level of sadness among respondents 26.9%, while the level of pessimism 31.7%, the level of loss of enjoyment was 37%, the level of pain feelings among respondents was 30.5%, and the level of loss of interest was 29.4%.

It was noticed that the level of susceptibility to anger or upset among the respondents was 28.9%, the sample showed that there were changes in the sleep pattern at the level of 30.4%, as well as 30.4% in the level of energy loss, the level of fatigue or stress 33.2%, and the level of changes in appetite reached 27.2% As well as 27.2% difficulty concentrating, as shown in Table (4.6)

Table (4.6): Descriptive Statistic of depression items (n=202)

#	Depression Symptoms Items	0 No symptoms	1 Mild	2 Modearte	3 Severe	Mean	Standard Deviations	Relative Important Index (%)
1	Sorrow	43.1%	41.1%	7.9%	7.9%	.81	.891	26.9
2	Pessimism	36.6%	38.1%	18.8%	6.4%	.95	.902	31.7
3	Failure	76.2%	10.4%	11.9%	1.5%	.39	.753	12.9
4	Loss of enjoyment	25.7%	46.5%	18.8%	8.9%	1.11	.891	37.0
5	Feelings of guilt	28.2%	55.4%	12.9%	3.5%	.92	.738	30.5
6	Feelings of punishment	41.6%	39.1%	9.4%	9.9%	.88	.946	29.2
7	Lack of self-love	81.7%	5.9%	8.4%	4.0%	.35	.797	11.6
8	Self-criticism	31.2%	24.3%	28.2%	16.3%	1.30	1.079	43.2
9	Suicidal thoughts or desires	89.6%	5.9%	4.0%	.5%	.15	.490	5.1
10	Cry	62.9%	11.9%	8.9%	16.3%	.79	1.154	26.2

#	Depression Symptoms Items	0 No symptoms	1 Mild	2 Moderate	3 Severe	Mean	Standard Deviations	Relative Important Index (%)
11	Irritability or agitation	61.4%	22.3%	8.4%	7.9%	.63	.939	21.0
12	Loss of interest	42.1%	34.2%	17.3%	6.4%	.88	.917	29.4
13	Frequency	55.0%	32.7%	8.9%	3.5%	.61	.792	20.3
14	Worthlessness	79.7%	12.4%	6.9%	1.0%	.29	.638	9.7
15	Loss of energy	41.1%	32.7%	20.3%	5.9%	.91	.921	30.4
16	Changes in sleep pattern	38.6%	37.6%	17.8%	5.9%	.91	.893	30.4
17	Susceptibility to anger or upset	39.1%	42.1%	11.9%	6.9%	.87	.879	28.9
18	Changes in appetite	43.6%	36.6%	14.4%	5.4%	.82	.876	27.2
19	Difficulty concentrating	42.1%	39.1%	13.9%	5.0%	.82	.853	27.2
20	Fatigue or stress	31.7%	45.5%	14.4%	8.4%	1.00	.895	33.2
21	Loss of interest in sex	62.9%	22.8%	8.9%	5.4%	.57	.868	19.0

4.1.2 Inferential Statistics:

4.1.2.1 Relationship between psychological well-being and Depression Symptoms among medical staff working in emergency departments in government hospitals in the Gaza Strip:

The Pearson's correlation coefficient was used to measure the strength and the direction of the relationship (linear association/ correlation) between psychological well-being and depression symptoms among medical staff working in emergency departments in government hospitals in the Gaza Strip, and the results related to this hypothesis are shown in table (4.7).

Table (4.7): Pearson correlation coefficient between psychological well-being and depressive symptoms among medical staff

Depression Symptoms psychological well-being	Pearson's correlation coefficient	The level of significance
Psychological well-being and depression Symptoms	-0.43	**0.001

****Statistically significant at 0.01**

*** Statistically significant at 0.05**

According to the results of the test that shown in Table (4.7), psychological well-being is negatively correlated with depression symptoms among medical staff working in emergency departments in government hospitals in the Gaza Strip, with a Pearson correlation coefficient of ($r = -0.43$) and the significance value is less than 0.01 (P-value < 0.001). This indicates that the higher the level of psychological well-being, the lower the depressive symptoms of the medical staff working in the emergency departments of government hospitals in the Gaza Strip and vice versa. This is a significant finding which will be crucial to maintain a high level of psychological well-being among medical staff. Considering the psychological well-being of medical staff will help them cope with the work challenges and will enhance their overall level of satisfaction, which ultimately will reduce their levels of depression as a result of the high job demands due to the nature of their work in a stressful environment.

4.1.2.2 Relationship between level Depression Symptoms and study variables among medical staff working in emergency departments in government hospitals in the Gaza Strip:

Multiple linear regression was performed to identify the role of the following variables (age, gender, marital status, educational qualification, type of work, years of experience, monthly salary, psychological well-being) to predict the significance of Depressive Symptoms (the dependent variable). In addition, to identify the importance of variables in

explaining the Depressive symptoms among medical staff working in the emergency department of government hospitals in the Gaza Strip, and the relevant results are shown in the following table (4.8):

Table (4.8): Multiple linear regression analysis to predict depressive symptoms through study variables for medical staff

Independent variables	Unstandardized Coefficients		Standardized Coefficients	T	P-value
	B	Std. Error	Beta		
Constant	24.060	11.636		2.068	0.041*
Age	0.144	0.282	0.089	0.512	0.610//
Gender	2.431	2.113	0.098	1.150	0.252//
Marital status	-2.059	2.291	-0.084	-0.899	0.371//
Type of work	1.887	2.479	0.080	0.761	0.448//
Work Experience	0.094	0.367	0.045	0.257	0.797//
Salary	0.001	0.001	0.045	0.406	0.686//
Education	-0.366	2.023	-0.017	-0.181	0.857//
Night shifts	0.742	0.369	0.193	2.013	0.047*
Well-being	-0.523	0.091	-0.484	-5.765	0.000**
F-test	4.5**				
R ²	0.260				

**Statistically significant at 0.01 * Statistically significant at 0.05 // not significant

The results showed a statistically significant effect of some of the study variables (psychological well-being, number of night shifts) on depressive symptoms among medical staff in the Gaza Strip; and this model explained 26% of the total variance in the level of depressive symptoms of medical staff in the Gaza Strip ($F=4.5$, $P<0.01$). It was found that the higher the levels of psychological well-being by one degree, the more that led to a decrease in the level of depressive symptoms among medical staff by 0.52 degrees. Whereas, it was found that the more times the medical staff shifts one night, the more this leads to an increase in the level of depressive symptoms of the medical staff by 0.74 degrees.

Interestingly, various demographic variables seem to have no impact of the level of psychological well-being or depression among medical staff. This result is worth investigating further as it is assumed that age, gender, years of experience, marital status...etc should have significance on wellbeing and depression. For example, in a study of a sample of health professionals, it was found that women reported lower psychological well-being and more health problems than men. The total effect of gender on both well-being and health problems was found to be significant (Gomez-Baya, D., Lucia-Casademunt, A. M., & Salinas-Pérez, J. A., 2018).

Based on this result, future research should focus further on such factors and measure their impacts more closely.

Depression Symptoms = 34.56 – 0.50 (Psychological well-being)

From the previous equation, we find that the increase in the degrees of psychological well-being by one degree leads to a decrease in depressive symptoms among medical staff by 0.50 degrees.

4.1.2.3 Degrees of psychological well-being and depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip due to gender:

An independent sample t-test was found to detect differences in degrees of psychological well-being and degrees of depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip concerning gender (males, females), and the results related to this hypothesis are shown in the following table (4.9):

Table (4.9): results of independent sample t-test to examining the differences in degrees of psychological well-being and degrees of depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip, due to gender

Variable	Gender	N	Mean	Standard deviation	T-test	Sig.
psychological well-being	Male	146	37.4	9.2	-0.12	//0.90
	Female	56	37.6	8.9		
Depressive symptoms	Male	146	15.3	10.7	-1.41	//0.16
	Female	56	17.6	10.0		

**Statistically significant at 0.01 *Statistically significant at 0.01 //Not statistically significant

Regarding the “psychological well-being” scale:

It was found that there were no statistically significant differences ($\alpha > 0.05$) in the total score of the psychological well-being score of medical staff working in emergency departments of government hospitals in the Gaza Strip concerning gender (males, females), and this indicates that Male and female medical staff have similar degrees of psychological well-being.

Regarding the “Depressive Symptoms” scale:

There were no statistically significant differences ($\alpha > 0.05$) in the overall score of the Depressive Symptoms Scale for medical staff working in the emergency departments of government hospitals in the Gaza Strip concerning gender (males, females), and this indicates that males Female medical staff had similar degrees of depressive symptoms.

4.1.2.4 Degrees of psychological well-being and depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip due to occupation (specialization):

An independent sample t-test was found to detect differences in degrees of psychological well-being and degrees of depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip concerning the occupation (doctors-nurses), and the results related to this hypothesis are shown in the following table (4.10):

Table (4.10): results of independent sample t-test to examining the differences in degrees of psychological well-being and degrees of depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip, due to occupation

Variable	Occupation	N	Mean	Standard deviation	T test	Sig.
psychological well-being	Doctor	54	35.9	10.4	-1.49	//0.14
	Nurse	148	38.0	8.6		
Depressive symptoms	Doctor	54	14.6	10.6	-1.07	//0.28
	Nurse	148	16.4	10.5		

**Statistically significant at 0.01 *Statistically significant at 0.01 //Not statistically significant

Regarding the “psychological well-being” scale:

It was found that there were no statistically significant differences ($\alpha > 0.05$) in the total score of the psychological well-being score of medical staff working in emergency departments of government hospitals in the Gaza Strip concerning the occupation (doctor, nurse), and this indicates that doctor and nurse medical staff have similar degrees of psychological well-being.

Regarding the “Depressive Symptoms” scale:

There were no statistically significant differences ($\alpha > 0.05$) in the overall score of the Depressive Symptoms Scale for medical staff working in the emergency departments of government hospitals in the Gaza Strip concerning the occupation (doctor, nurse), and this indicates that doctor and nurse medical staff have similar degrees of depressive symptoms.

4.1.2.5 Degrees of psychological well-being and depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip due to age:

One Way ANOVA test was created to detect differences in degrees of psychological well-being and degrees of depressive symptoms for medical staff working in emergency departments of government hospitals in the Gaza Strip for age groups (30 years and less,

31-40 years, 41 years, and above), and the results related to this hypothesis are explained through the following table (4.11):

Table (4.11): the results of the analysis of variance test (One Way ANOVA) to detect differences in degrees of psychological well-being and degrees of depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip due to age

Scale	Source of variances	Sum of Squares	Df	Mean Square	F	Sig.
Psychological well-being	Between Groups	366.9	2	183.4	2.2	0.109//
	Within Groups	16320.5	199	82.0		
	Total	16687.4	201			
Depressive symptoms	Between Groups	231.4	2	115.7	1.0	0.353//
	Within Groups	21986.5	199	110.5		
	Total	22217.9	201			

**Statistically significant at 0.01
significant

*Statistically significant at 0.01

//Not statistically significant

Regarding the “psychological well-being” scale:

It was found that there were no statistically significant differences ($\alpha > 0.05$) in the total score of the psychological well-being scale for medical staff working in the emergency departments of government hospitals in the Gaza Strip for the age groups (30 years and less, 31-40 years, 41 years and above). This indicates that the medical staff working in the emergency departments of different age groups have similar averages of psychological well-being, and it gives an indication that the variable of age groups does not affect the degree of psychological well-being of the medical staff working in the emergency departments in the governmental hospitals in Gaza Strip.

Regarding the “Depressive Symptoms” scale:

There were no statistically significant differences ($\alpha > 0.05$) in the overall score of the Depression scale for medical staff working in the emergency departments of government hospitals in the Gaza Strip for the age groups (30 years and less, 31-40 years, 41 years and above). This indicates that medical staff working in emergency departments of different age groups have similar averages of psychological depressive symptoms, and it gives an

indication that the age group variable does not affect the degree of depressive symptoms among medical staff working in emergency departments in government hospitals in the Gaza Strip.

4.1.2.6 Degrees of psychological well-being and depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip due to place of residence:

One Way ANOVA test was created to detect differences in degrees of psychological well-being and degrees of depressive symptoms for medical staff working in emergency departments of government hospitals in the Gaza Strip concerning places of residence (North, Gaza, mid zone, Khan Younis, Rafah) The results related to this hypothesis are shown in the following table (4.12):

Table (4.12): the results of the analysis of variance test (One Way ANOVA) to detect differences in degrees of psychological well-being and degrees of depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip due to places of residence

Scale	Source of variances	Sum of Squares	Df	Mean Square	F	Sig.
Psychological well-being	Between Groups	277.1	4	69.3	0.8	0.51//
	Within Groups	16410.3	197	83.3		
	Total	16687.4	201			
Depressive symptoms	Between Groups	132.4	4	33.1	0.3	0.88//
	Within Groups	22085.5	197	112.1		
	Total	22217.9	201			

**Statistically significant at 0.01 *Statistically significant at 0.01 //Not statistically significant

Regarding the “psychological well-being” scale:

It was found that there were no statistically significant differences ($\alpha > 0.05$) in the total score of the psychological well-being scale of medical staff working in emergency departments of government hospitals in the Gaza Strip concerning places of residence (North, Gaza, mid zone, Khan Younis, Rafah). This indicates that medical staff working in emergency departments in different places of residence have similar averages of

psychological well-being, and it also gives an indication that the place of residence variable does not affect the degree of psychological well-being of medical staff working in emergency departments in government hospitals in the Gaza Strip.

Regarding the “Depressive Symptoms” scale:

It was found that there were no statistically significant differences ($\alpha > 0.05$) in the overall score of the psychiatric depression scale for medical staff working in the emergency departments of government hospitals in the Gaza Strip concerning places of residence (North, Gaza, mid zone, Khan Younis, Rafah). This indicates that medical staff working in emergency departments in different places of residence have close averages of depressive symptoms, and it also gives an indication that the place of residence variable does not affect the degree of depressive symptoms among medical staff working in emergency departments in government hospitals in the Gaza Strip.

4.1.2.7 Degrees of psychological well-being and depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip due to workplace (Scientific Qualification):

One Way ANOVA test was created to detect differences in degrees of psychological well-being and degrees of depressive symptoms for medical staff working in emergency departments of government hospitals in the Gaza Strip concerning due to the workplaces of medical staff (Al Shifa- Indonesia- Al Aqsa Martyrs- Nasser- European- Abu Yousef Al. Najjar) Hospital. The results related to this hypothesis are shown in the following table (4.13):

Table (4.13): the results of analysis of variance test (One Way ANOVA) to detect differences in degrees of psychological well-being and degrees of depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip due to the workplaces of medical staff

Scale	Source of variances	Sum of Squares	Df	Mean Square	F	Sig.
Psychological well-being	Between Groups	557.7	5	111.53	1.36	0.24//
	Within Groups	16129.7	196	82.29		
	Total	16687.4	201			
Depressive symptoms	Between Groups	418.2	5	83.63	0.75	0.59//
	Within Groups	21799.7	196	111.22		
	Total	22217.9	201			

**Statistically significant at 0.01 *Statistically significant at 0.01 //Not statistically significant

Regarding the “psychological well-being” scale:

It was found that there were no statistically significant differences ($\alpha > 0.05$) in the total score of the psychological well-being scale of medical staff working in emergency departments of government hospitals in the Gaza Strip concerning workplaces of medical staff (Al Shifa- Indonesia- Al Aqsa Martyrs- Nasser- European- Abu Yousef Al. Najjar) Hospital. This indicates that medical staff working in emergency departments in their various workplaces have similar averages of psychological well-being, and it also gives an indication that the workplace variable does not affect the degree of psychological well-being of medical staff working in emergency departments in Governmental hospitals in the Gaza Strip

Regarding the “Depressive Symptoms” scale:

It was found that there were no statistically significant differences ($\alpha > 0.05$) in the overall score of the depression scale for medical staff working in the emergency departments of government hospitals in the Gaza Strip with respect to workplaces of medical staff (Al Shifa- Indonesia- Al Aqsa Martyrs- Nasser- European- Abu Yousef Al. Najjar) Hospital,

and this indicates that the medical staff working in the emergency departments in their various workplaces have similar averages of psychological depressive symptoms, and it also gives an indication that the workplace variable of the medical staff does not affect the degree of depressive symptoms of the medical staff working in Emergency departments in government hospitals in the Gaza Strip.

4.1.2.8 Degrees of psychological well-being and depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip due to workplace (Scientific Qualification):

The One Way ANOVA test was created to detect differences in degrees of psychological well-being and degrees of depressive symptoms for medical staff working in emergency departments of government hospitals in the Gaza Strip due to scientific qualification. The results related to this hypothesis are shown in the following table (17):

Table (4.14): the results of analysis of variance test (One Way ANOVA) to detect differences in degrees of psychological well-being and degrees of depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip due to scientific qualification

Scale	Source of variances	Sum of Squares	Df	Mean Square	F	Sig.
Psychological well-being	Between Groups	76.2	2	38.1	0.46	0.63//
	Within Groups	16611.1	199	83.5		
	Total	16687.4	201			
Depressive symptoms	Between Groups	673.7	2	336.8	3.11	0.05*
	Within Groups	21544.2	199	108.3		
	Total	22217.9	201			

**Statistically significant at 0.01 *Statistically significant at 0.01 //Not statistically significant

Regarding the “psychological well-being” scale: It was found that there were no statistically significant differences ($\alpha > 0.05$) in the total score of the psychological well-being scale of medical staff working in emergency departments of government hospitals in the Gaza Strip concerning scientific qualification (diploma, bachelor's, master's and above),

and this It indicates that medical staff working in emergency departments, with their various educational qualifications, have close averages of psychological well-being, and it also gives an indication that the scientific time limit variable does not affect the degree of psychological well-being of medical staff working in emergency departments in government hospitals in the Gaza Strip.

Regarding the “Depressive Symptoms” scale: It was found that there were statistically significant differences ($\alpha < 0.05$) in the total score of the depression scale for medical staff working in the emergency departments of government hospitals in the Gaza Strip with regard to academic qualification (diploma, bachelor’s, master’s and above), and to reveal the differences Among the academic qualifications, a Scheffe test was found for dimensional comparisons of the homogeneity of variance. It was found that medical staff who obtained a postgraduate degree or above had less depressive symptoms than those with a bachelor’s degree or below, and these differences are statistically significant, while no differences between other educational qualifications. This indicates that the higher the educational qualification, the lower the level of depression symptoms among medical staff working in the emergency departments of government hospitals in the Gaza Strip

Table (4.15): Scheffe test to study the dimensional differences in degrees of depressive symptoms for medical staff working in emergency departments in government hospitals in the Gaza Strip attributable to scientific qualification

Scale	Scientific qualification	Number	Mean	Standard deviation	Multiple comparisons		
					1	2	3
Depressive symptoms	Diploma	27	18.1	11.4	1	0.463	0.026*
	Bachelor	140	16.5	10.7		1	0.028*
	Master and above	35	12.1	7.9			1

**Statistically significant at 0.01 *Statistically significant at 0.01 //Not statistically significant

4.1.2.9 Degrees of psychological well-being and depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip due to years of experience:

An independent sample t-test was found to detect differences in degrees of psychological well-being and degrees of depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip concerning years of work experience (10 years or less, 11 years, and more). The results related to this hypothesis are shown through the following table (19):

Table (4.16): results of independent sample t-test to examining differences in degrees of psychological well-being and degrees of depressive symptoms of medical staff working in emergency departments of government hospitals in Gaza, due to years of experience

Variable	Years of experience	N	Mean	Standard deviation	T-test	Sig.
Psychological well-being	10 years or less	112	36.6	10.4	-1.51	//0.13
	11 years and more	90	38.5	7.2		
Depressive symptoms	10 years or less	112	16.0	10.4	0.08	//0.93
	11 years and more	90	15.9	10.8		

**Statistically significant at 0.01 *Statistically significant at 0.01 //Not statistically significant

Regarding the "psychological well-being" scale:

It was found that there were no statistically significant differences ($\alpha > 0.05$) in the total score of the psychological well-being score of medical staff working in the emergency departments of government hospitals in the Gaza Strip concerning years of experience (10 years or less, 11 years and more) This indicates that medical staff who have less or more than 10 years of experience have similar degrees of psychological well-being.

Regarding the “Depressive Symptoms” scale:

There were no statistically significant differences ($\alpha > 0.05$) in the overall score of the Depressive Symptoms Scale for medical staff working in the emergency departments of government hospitals in the Gaza Strip for years of experience (10 years or less, 11 years, and more), This indicates that medical staff who have less or more than 10 years of experience have similar degrees of depressive symptoms.

4.1.2.10 Degrees of psychological well-being and depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip due to marital status of medical emergency staff:

An independent sample t-test was found to detect differences in degrees of psychological well-being and degrees of depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip for marital status (single, married). The results related to this hypothesis are shown through the following table (20):

Table (4.17): results of independent sample t-test to examining the differences in degrees of psychological well-being and degrees of depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip, due to marital status

Variable	Marital status	N	Mean	Standard deviation	T-test	Sig.
Psychological well-being	Single	48	37.1	11.0	-0.15	//0.88
	Married	151	37.3	8.5		
Depressive symptoms	Single	48	17.3	10.8	0.98	//0.33
	Married	151	15.6	10.4		

**Statistically significant at 0.01 *Statistically significant at 0.01 //Not statistically significant

Regarding the "psychological well-being" scale:

It was found that there were no statistically significant differences ($\alpha > 0.05$) in the total score of the psychological well-being score of medical staff working in the emergency departments of government hospitals in the Gaza Strip about marital status (single,

married), and this indicates That the unmarried medical staff and the married medical staff had similar degrees of psychological well-being.

Regarding the “Depressive Symptoms” scale:

There were no statistically significant differences ($\alpha > 0.05$) in the overall score of the Depressive Symptoms Scale for medical staff working in the emergency departments of government hospitals in the Gaza Strip about marital status (single, married), and this indicates that the staff Single medical personnel and married medical staff had similar degrees of depressive symptoms.

4.2 The Qualitative Part:

The qualitative part of the study consisted of 3 focus group sessions in 3 main governmental hospitals covering 3 main geographical areas of The Gaza Strip as follows:

- North Gaza Strip represented by The Indonesian Hospital
- Middle Area Governorate represented by Aqsa Martyrs Hospital
- South Gaza Governorate represented by Nasir Hospital

Participation in the focus group sessions was voluntary and short informative sessions were conducted in each emergency department among the three hospitals selected for focus group sessions to share study-related info. to ensure the participants are well informed before the start of the implementation process. Voluntary participation, the right not to participate & the right to stop participation at any point of the implementation, confidentiality, and anonymity were ensured to all participants within the informed consent utilization.

One focus group session was conducted in each hospital. Emergency staff from each hospital was invited to participate in the focus group sessions. The sessions lasted between

90–120 minutes each. The total number of participants in the 3 sessions came as 26 emergency medical staff participants distributed as follows:

- Indonesian Hospital Session: 8 participants
- Aqsa Martyrs Hospital Session: 10 participants
- Nasir Hospital Session: 8 Participants

During the sessions, questions were introduced to the participants one by one and the participants were all invited to share their thoughts and feelings by answering each question. The analysis of the 3 sessions` content showed that the answers of the participants revolved around certain and similar topics that caused continuous suffering and were described by the participants as stress-provoking. The participants in the 3 groups representing 3 different geographical areas almost showed high consensus about those items that were described as the main challenges which needed to be resolved as soon as possible, as participants reported.

However, the participants also reported feeling ok in themselves and that their mental health status is good in general, and that they have found their ways to manage their emotions resulting from those challenging conditions at work (emergency department) and not to let high-stress levels at work affect their personal and family life. The focus group participants reported also being able to accept and to manage technical challenges like the difficult type of cases which may arrive at the ED`s, high volume severe injuries and wounds during military attacks where highly destructive weapons were used and repetitively upon civilian communities, the thing that was leading to complicated cases flooding at the emergency departments in high numbers within a very short time the thing that was described as overwhelming for the emergency departments, according to the participants.

Group members talked about the awareness about mental health. They spoke about the qualitative increase in mental health knowledge and a change of thought and the correct view of mental and community health, noting the importance of the emergency team and emergency work that is more than dealing with people`s injuries and much beyond the physical components only. This was clearly stated,

“It is required to pay attention to emergency teams because they are considered the line of defense within hospitals, while the rest of the administrative departments are not as important as the emergency team”. (Dr. N. H. from Aqsa Hospital)

The main items that were collectively described by the participants as continuously stress-provoking and as challenges to be resolved areas listed below:

- The Salary issue: (all participants were not receiving full salary due to governmental financial crisis).
- Chaotic environment, high levels of stress.
- Lack of support by the administrative and management levels.
- Overload and repetitive night shifts.
- Aggressive and disrespectful attitudes by the service users and their caregivers who show on many occasions agitated behavior which exposed the ED Staff.
- Shortages and lack of HR, equipment, and drugs.

A common terminology was used and the most said words were;Keywords repeatedly used by the participants in the 3 focus group sessions:

- Stressful
- Violence (Aggression)
- Overload / Nightshifts

The main themes that came out will be discussed

1. Emergency Department as a stressful workplace

Several participants among the 3 groups repeatedly mentioned the word “Stressful” and that the nature of the work in the ED is stress-provoking in general because it is a workplace that requires continuous attention and readiness, according to the participants:

“It is stressful, sometimes you can not have the time to meet your personal needs, it could be very depressing,” (K.K. 31 years old Male Dr. from Indonesian Hospital).

“I lost the taste of pleasure, so we worked at the expense of the home, the wife, the children, and the private life” (M. A. 33 years old Nasir Hospital Emergency Doctor).

Participants reported being highly susceptible to negative stress and that emergency department work is restless and demanding and that medical staff can't enjoy the highest mental health levels if they are exposed to high levels of stress. This was presented;

“It is very stressful indeed, I feel vulnerable, it's impossible for ED Staff exposed to all this level of stress daily to enjoy highest levels of psychological well-being.” (M. Q. 28 years old Female Dr. from Nasir Hospital).

“We are exposed to political and financial and financial stress,” (I. Sh. 29 years old Male Emergency Nurse from Indonesian Hospital).”

This is supported by a previous study for the assessment of Depression, Anxiety, and Stress Among Nationally Certified EMS Professionals conducted in the USA by Bentley, et al., (2012) and targeted medical emergency professionals using the DASS 21 Questionnaire. The study found according to the DASS classification that 7.1% of EMS

professionals as depressed, and 6.3% as anxious, and 6.2% as stressed (Bentley, et al., 2012). Another study results have shown that Medical staff working in the emergency departments are consistently reporting higher stress compared to other health professionals (Williams & Smith, 2013).

Work-related stress and its impact on doctors have caught recently the attention in the US and Canada, as the mental health impact including depression, anxiety, stress, and even suicide have been more frequent either because the numbers are rising or because the public and doctors have become more aware. It was noted and documented that mental health impacts have affected the performance of the doctors and physicians and exceeded the ranges among the population. Yet, developing countries considerably larger (Erdur, Ergin, Turcuer, Parlak, Ergin, & Boz, A study of depression and anxiety among doctors working in emergency units in Denizli Turkey, 2006)

On the other hand, focus group participants reported having good psychological well-being and that they can manage work-related stress, in addition, participants reported also being able to make a separation between work demands and personal life. An Emergency Nurse said:

“Life is stressful in general - administrative work - social - all situations work under stress, but I always try to end the situation immediately and completely separate the hospital”. (M.B. 35 years old, Emergency Nurse from Aqsa Hospital).

Also, a surgeon from Indonesian Hospital reported:

“Concerning physical stress, it is a general situation and thus forced us to adapt to this situation”. (S.A.N. 37 years old, Emergency Surgeon from Indonesian Hospital).

A third emergency department nurse stressed;

“As for administrative stress, dealing with immediate solutions flexibility is needed” (M.A. 28 years old, Male Nurse from Nasir Hospital).

A female doctor from Aqsa hospital described her mental health states as follows:

“My psychological state is excellent. I went through job instability, but now it is stable. As for some of my colleagues (doctors working at the emergency department and other hospital departments), their mental health may be poor due to a lack of clarity of vision for the stability of the job situation, not to mention the major problem that we feel hopeless about which is the low salary problem” (30 years old, N.H. Emergency Doctor from Aqsa Hospital)

“We try as much as possible to understand people and make every effort to explain to them, and in case we are not able, we have to seek the help of security personnel” (M.A. 28 Years old, female Emergency Nurse-Nasir Hospital).

One emergency doctor from the Nasir Hospital emergency team said that he tries to avoid hospital work stress due to overwhelming and un-resolved administrative issues and lack of supervisor support.

“putting aside the administrative matters that I see as wrong and stress-provoking because there is no life to those you are calling, and I return home and resume my life as a normal person.” (A.A.A. 40 years old, a male emergency doctor from Indonesian Hospital).

Following participants' point of view, research in war-affected areas has shown that helpers working in war areas report high levels of subjective well-being in terms of personal,

emotional, and psychological growth, increases sensitivity and empathy, and gains in resilience and competency (Veronese et al., 2013).

The participants reported having enough confidence in their technical capacities as they have gained strong experience in critical emergencies due to the repetitive wars on Gaza that resulted in too many cases including very complicated ones.

“At the end of the day, you will be affected by those difficult cases, even if you are technically working good some of patient stories and situations will negatively impact you psychologically. (M.E. 37 years old, Male Dr. from Nasir Hospital).

“There is coexistence with this thing. The stress lives with us, moment by moment, and they have become normal. There is nothing but acceptance, especially administrative and physical stress, which is exhausting” (H.M. 37 years old, female emergency nurse from Aqsa Hospital).

The participants reported having problems in communications internally between hospital staff and with patients and their caregivers, and those communication gaps remain a continuous stressful challenge for us. However, an experienced nursing supervisor emphasized the fact that the more experienced staff are more effective in resolving such issues and that they are less impacted on the psychological level than young emergency staff. This was supported by an international study about psychological distress and burnout aimed to identify the differences in psychological distress among different age groups of doctors. Study results showed that older doctors perceived less psychological distress compared to their earlier years of career as they reported having developed more protective mechanisms in their doctor-patient relationships (Latifb, Wilhelma, & Williams, 2018).

2. Violence & Lack of Safety and protection

One of the components that were much emphasized by the participants was their sense of insecurity and the incidence of violence at the ED.

“Sometimes I don’t feel safe, people can be aggressive and it’s too late until help arrives,” (A. S. 32 years old, Emergency Dr. from Nasir Hospital).

Another doctor reported feeling a lack of safety during work,

“There is no respect to our work by the audience, they attack us verbally on many occasions and we receive threats also from some family members who think that we are looking after some other ED patients’ needs and are not prioritizing the needs of their patients, it is very disrespectful,” (S.K. 27 years old, female emergency nurse from The Indenosian Hospital).

“It is important to feel appreciated and respected by the people you are serving, some people who are receiving the services show respect to our directives but many others do the exact opposite, they form an obstacle and a challenge and a threat.” said (A. B. 33 years old, Emergency Nurse from Aqsa Hospital)

“There is a lot of insulting and shouting at the doctors and nurses by the patients and their companions” reported (M. T. 29 Emergency Department Doctor from Nasir Hospital)

Previous research (using the qualitative method) conducted by Rio de Janeiro State University researchers showed that psychosocial risks identified are derived from occupational stress, such as lack of human resources and equipment, ambiguity in paperwork, and violence (Oliveira, Pinel, Gonçalves, & Diniz, 2019). Another study on

dissatisfaction and burnout among Flemish emergency physicians was conducted in Belgium using a qualitative method showed that the relatively low income and the unforgiving medical culture were among the common factors that lead to dissatisfaction and burnout among the medical teams (Bogaert, Depuydt & Hashimi-Idrisi, 2019).

3. Overload & Night shifts

The well-being of emergency health work personnel was different according to age and expertise. The junior doctors who are engaged in the work are relatively characterized by enthusiasm, motivation, energy, and willingness to work. However, when they face the workload, the patients' and caregivers' complaints, the huge duties, the managerial style, and the risk of working under pressure, they show less tolerance to cope with those stressors. As a result, the well-being among juniors is worse than others, and the health care system in both the USA and Canada designed specific programs that aim at improving the wellbeing of those people (Hassed, DE Lisle, Sullivan, & Pier, 2009).

“Most of the cases that are brought to the emergency department are not emergencies,” said (M. Q. 28 years old, Female emergency department doctor from Nasir Hospital).

The focus group participants reported that the shortage in healthcare personnel due to the financial crisis in MoH results in overloading the current emergency department staff. They also reported lacking a proper triage system at the general hospital ED's in addition to the fact that many cases are overloading the ED's while they are not emergency cases and could be treated at primary healthcare centers but they need proper guidance and knowledge to do that. One doctor from the Indonesian Hospital reported the shortage in HR:

“The number of cases we face every day is a lot higher and much exceeds the capacity of medical staff sometimes it's like a flooding,” he said (Male Dr.,45, Indonesian Hospital).

We need to have a more controlled and better-organized patient flow, triage systems need to be properly implemented” (W.S. 45 Years old, Pediatrics Emergency Doctor at Aqsa Hospital).

Similar to our results, it was found that due to these overwhelming conditions, emergency work has always been one of the least popular jobs that preserve the wellbeing of individuals in Taiwan. This correlates significantly with the workload, quality of work, and supports of the environment (Chen, Hsieh, Hu, & Laj, 2017).

“There has been an increase in the number of night shifts and the number of the working hours,” said (T. A. 32 years a female emergency department doctor from Nasir hospital).

“I tried to travel abroad last year but they told me we need you to stay here during this period because many emergencies are occurring these days due to the Great Return March, I couldn't go on a vacation, everyone deals with us as a machine.” (W.S. 45 Years old, Pediatrics Emergency Doctor at Aqsa Hospital).

As we can see, based on our focus group discussion, the participants indicated three main themes, including Emergency Department as a stressful workplace, Violence & Lack of Safety and protection, and Overload & Night shifts.

Participants stressed that working in an emergency is very stressful due to overload and excessive working hours. They also lack their sense of safety and security due to working in an unhealthy living environment as well as being exposed to verbal and physical

violence from patients and caregivers. Moreover, participants feel that they work extensive hours and feel overloaded, and can not keep up with work standards due to high demands.

Research studies support our finding stating that the emergency department environment is stress-provoking (Trousselard, Duthie, & Naughton 2016). It was also found that work overload could contribute to stress among emergency staff (Trudgill et.al, 2020). Furthermore, the research found that violence is one of the psychosocial risks in emergency departments and contributing to mental health difficulties among staff (Oliveira, Pinel, Gonçalves, & Diniz, 2019).

4.3 Results Discussion:

Study results have shown that Gaza general hospitals` medical emergency staff enjoy a considerable level of positive psychological well-being. The results indicated that (54.5%) of the sample had a high level of psychological well-being; whereas (43.1%) had a moderate level of psychological well-being, while only (2.5%) had poor psychological well-being. However, the results did not support similar international study results that aimed at studying the well-being of emergency department staff and have found emergency teams suffering from the psychological disruption caused by incidents at the emergency department (Wibberley, Crowe & Body, 2018). Another study targeted USA emergency physicians, has found that the well-being of the emergency health work personnel is much worse than other physicians who work in different departments, and the burnout among them exceeds the normal level (Rosen, Gimotty, Shea, & Bellini, 2006).

There is no doubt that the protracted crisis in the Occupied Palestinian Territories especially in The Gaza Strip (after almost 15 years of the blockade) continued to weaken the health system and resources which continue to suffer from shortages on all levels

(drugs, disposables, HR, logistics, and infrastructure). Those conditions and hardships may have contributed to building accumulative experiences in emergency cases management and shifting the working mode from regular to emergency mode with high flexibility and adaptability. The repetitive critical incidents like several wars and many low scale emergencies within the last decade have contributed to more predictable emergency situations in terms of expected damage, type of cases that may arrive to the ED's after each critical incident and the management needs, resources, responsibilities and pathways for the management of those emergency cases, this has lead to situation where the medical emergency staff feeling "technically" more confident in the work they are doing and in the capacity and skills they have, the thing that ensured higher levels of resilience and better coping and adaptive skills. The above results came also in agreement with the focus group session outcomes with the majority of key informants reporting being able to manage the daily workplace stress (technical requirements stress) faced at the emergency department. They emphasized that stress related to technical requirements (task-related) was understandable, while they reported negatively affected by stressors related to their unsupportive superiors and hospital management levels; *"I am subjected to negative stress from management, but workplace stress could be overcome with comfort. There is also daily stress that you can live with"* (H.M. Aqsa Hospital, Female Emergency Nurse). Another nurse stated; *"Concerning physical stress, it is a general situation and this forced us to adapt and cope with this situation"* (M.A. Nasir Hospital, Male Emergency Nurse). A third one said; *"Nothing: I'm trying to get used to this stress and live my life as it is"* (M.A. Nasir Hospital, Female Emergency Doctor).

Attitudes of Gazan Emergency medical staff working in general hospitals towards workplace and position conditions requirements showed considerable abilities to accept ED demands and daily work stress with flexibility and positive coping which is likely to

have functioned as a protective factor for their psychological health. This was answered by the first and main study question regarding the understanding of the psychological well-being level among emergency medical staff working in the Emergency Department in General Hospitals in Gaza.

The study results regarding the second main question of the study concerning the level of depressive symptoms among medical emergency staff in Gaza general hospitals came also positive and positively correlating with the results of the psychological well-being level in the first question of the study. The results have shown that only 2% of ED medical personnel had severe depression. This score is below the global estimations by the World Health Organization for depressive disorders which were estimated at 4.4% (WHO, 2017). Also in terms of moderate symptoms of depression, the study results came at 7.4% for medical emergency staff working at ED in Gaza General hospitals which was also found way under WHO global estimations which were recently published, indicating that the percentage of people suffering from diagnosable mental health conditions (depression and anxiety) due to living in conflict and disaster areas are expected to be as high as 20% (WHO, 2019). In this regard, the numbers obtained through this study reflect considerable psychological health by Gazan medical emergency teams.

The relatively positive results obtained for the second study question concerning the level of depressive symptoms among medical emergency staff in Gaza Hospitals were compatible with the qualitative results by the focus group sessions conducted among ED medical staff from 3 hospitals representing the 3 main geographical areas in the Gaza Strip (North, Middle, and South), where key informants confirmed the presence of stressful and challenging work conditions in general hospitals emergency departments. However, they

expressed being able to manage, to adapt themselves, and that they have enough skills to cope and maintain a considerable level of psychological health.

For instance, a female doctor from Aqsa hospital described her mental health states as follows:

“My psychological state is excellent. I went through job instability, but now it is stable. As for some of my colleagues (doctors working at the emergency department and other hospital departments), their mental health is poor due to a lack of clarity of vision for the stability of the job situation” (30 years old, H. N.) Emergency Doctor.

Another nurse added,

“Life is stressful in general - administrative work - social - all situations work under stress, but I always try to end the situation immediately and completely separate the hospital” says M.B. (32 years old, Male Nurse, Aqsa Hospital). A third nurse stressed; *“As for administrative stress, dealing with Intermediate solutions (flexibility of dealing)”* (28 years old, M.A. Male Nurse from Nasir Hospital)

Dr. (M. T.) from Nasir Hospital emergency team said that he tries to avoid hospital work stress due to overwhelming and un-resolved administrative issues and lack of supervisor support.

“putting aside the administrative matters that I see as wrong and stress-provoking because there is no life to those you are calling, and I return home and resume my life as a normal person,” (40-year-old male doctor).

Those who have the skills to positively manage their work stress and can enjoy their personal and social life separately may find in this adaptive behavior and attitude the

needed resources to maintain their psychological well-being at the workplace. They can maintain a feeling of wellness, which will indicate the absence of depressive symptoms because depression is characterized by “loss of interest, depressed mood, and feeling helpless and worthless. Such symptoms were not found among the vast majority of the medical emergency staff who participated in this study as (72%) had no presence of any depressive symptoms and (66.9%) had good psychological well-being.

Concerning the study hypothesis, the results have shown that there is a statistically significant inverse relationship between psychological well-being and depressive symptoms among medical staff working in emergency departments in government hospitals in the Gaza Strip, and this indicates that the higher the level of Psychological well-being among emergency medical staff working in emergency departments of government hospitals in the Gaza Strip, the lower the depressive symptoms will be among the same teams. The study has also found a statistically significant inverse relationship between high psychological well-being and low depressive symptoms among medical staff working in emergency departments of governmental hospitals in The Gaza Strip.

In terms of demographics, 8 demographic variables were studied and analyzed: gender, position, age, place of residence, duty station, education, years of experience, and marital status. The study results found no statistically significant differences at the level of ($\alpha < 0.05$) in degrees of psychological well-being and degrees of depressive symptoms of medical staff working in emergency departments of government hospitals in the Gaza Strip due to none of the above-mentioned demographic variables.

Those results have been supported by the focus group results which showed that female doctors/nurses and male doctors/nurses had similar responses to questions related to

workplace stress, management challenges, psycho-social context, and personal life. For instance, one medical staff indicated that;

“Sometimes it becomes very tough, no matter how much we try on a personal level, but we keep trying to relieve each other” says (34, M. Q.) a female doctor from Nasir Hospital.

Moreover, one key informant said;

“I face this stress by practicing things I love at home. As for work, I have adapted to this stress because this is my profession” reported (A.S.) a male doctor from Nasir Hospital.

Further statements included;

“Life is stressful in general - administrative work - social - all situations work under stress, but I always try to end the situation immediately and completely separate the hospital,” said (age, M.B.) a male nurse from Aqsa hospital.

The insignificant demographic variables may be explained by an atmosphere of same working conditions between males and females in the emergency department, and that workplace conditions do not significantly distinguish between emergency teams according to qualifications, and finally an equal opportunity for training, upgrading is enjoyed by all emergency medical staff, the thing that finally supports the psychological well-being and good mental health of the emergency teams. This is evident by focus group results where none of the key informants have added any information related to a situation of inequity, discrimination, advantage, or disadvantage based on demographic difference as they were encouraged to list all stress-provoking workplace conditions, however, they were not asked directly about whether they suffered from incidents of discrimination and/or inequality. These results came in a contradictory position with international studies where statistical significance was found according to age as in McAleese, Diamond, and David's (2016)

study, where statistical significance was found in terms of trauma symptomatology by experienced ED staff and junior doctors and nurses. Also, in terms of position as between ED doctors vs ED nurses, where statistically significant relationship was found by (Meissenheimer, 2014), and other demographic variables.

Chapter 5

Conclusions and Recommendations

5.1 Conclusion:

This study presents a snapshot concerning the mental health of the emergency department's staff at general hospitals in Gaza. Specifically psychological well-being and depressive symptoms have been studied and a possible relationship between them has been determined. It has been found that levels of psychological well-being and depressive symptoms levels among emergency medical staff are within the limits of globally expected levels, as research results published by The World Health Organization has indicated that populations living in protracted emergencies may show up to 20% diagnosable moderate mental health conditions (WHO, 2019). It was also shown that demographic differences among emergency medical staff did not play a significant role in determining psychological vulnerability due to the fact that the medical staff work in similar conditions and share similar duties at the emergency department based on their specializations, also no difference based on place of residence as all participants lived in the Gaza Strip and share similar life conditions and cultural norms. On the other hand, participants were close to each other in terms of age categories. Study Results have also shown that despite the good level of psychological well-being and resilience enjoyed by the medical emergency teams, there is still a level of psychological suffering and depressive states that need attention. Working in challenging workplace ED's will continue to maintain certain levels of exposure to the medical staff, even though most of those staff seem to have built adaptive skills and strategies to cope overwhelming workplace requirements and daily stressful experiences and managed to protect themselves psychologically to certain degrees as study results have shown.

A continuous effort by public health policymakers is needed to include emergency departments under their ongoing attention and focus through assessments, revisions, and evaluations. Developmental programs are needed to capacitate the emergency department's medical staff as a supportive and preventive procedure that may positively contribute to their psychological well-being. It is also needed to keep revising and assessing workplace conditions and find creative solutions for stress triggering practices and conditions including overload, long working hours, overwhelming caregivers' behaviors. Furthermore, it is vital to resolve the salary issue, because this is putting the huge risk of chronic psychological distress due to the fact that emergency department's medical staff have not been receiving their full salaries and social benefits for several years by the date of this study, due to internal political conflicts and dispute.

5.2 Recommendations:

5.2.1 General Recommendations:

1- To promote mental health and psychological-wellbeing among medical Staff on all healthcare levels.

Policymakers are recommended to exercise proactive efforts to promote mental health and psycho-social well-being continuously and progressively among all healthcare staff within the MoH health system through adequate policies, strategies, and programming. More efforts by decision-making entities regarding medical staff well-being. The healthcare system should be witnessing a tangible increase in the investments and the budget allocations on annual basis for this aim.

2- To integrate Mental Health and Psychosocial support services, accessible and affordable for service users on all healthcare levels.

The MoH is recommended to take revolutionary steps regarding the MHPSS service provision. An available, accessible and affordable mental health care based on a bio-psycho-social approach will ensure: 1) Capacitated medical staff, 2) Decreased stigma towards mental health needs and services among medical staff, and 3) Well capacitated medical staff may be more motivated and encouraged to use a service that they are highly aware and sensitized about.

5.2.2 Specific Recommendations:

1- To create Specialized MHPSS Services for emergency department staff suffering from moderate to severe mental health conditions.

The results of this research have shown that 2% of the participants were found severely depressed. Also over 7% of study samples were found moderately depressed, which could be considered an alarm for MoH decision-makers to consider ensuring the availability of

specialized MHPSS services for at least 10% of emergency department staff who are currently in need of immediate interventions.

2- To apply the highest safety measures possible and ensure protection to the ED staff against physical and verbal assault.

The hospital management is recommended to take the highest precautions and measures at the emergency departments by ensuring availability of protection technically and physically for the ED Staff. To organize the emergency department works by preparing triage areas and MHPSS professionals to provide PFA and Preliminary assessment for distressed (agitated) patients and caregivers. Also, to sensitize the service users about the importance of their collaborative attitudes and to make sure that they understand their rights and duties also in maintaining a functional ED by never attack, insult or threaten an ED staff. In addition, emergency teams should be training in managing agitated clients.

3- To resolve emergency staff salary issues as soon as possible.

The MoH is recommended to urgently revise the financial policies concerning healthcare staff. The results have shown that not receiving a full salary and not having the salary on time is a high source of distress for the medical teams. The teams should be able to meet their daily basic needs for themselves and their families. The dignity and humanity of the emergency staff should be maintained at any cost possible by the MoH.

4- To reconsider staffing policies for hospitals taking into consideration stability component, organization of the work schedules, and night shifts:

The researcher recommends the Hospitals` HR departments reconsider the staffing procedures inside emergency departments by allocating and capacitating emergency teams who are not obliged to resume technical roles in other departments which is a continuous overload. In addition, to ensure adequate balancing in the number of night shifts The

research has shown that the emergency teams were not satisfied by the number of monthly night shifts.

5- To re-establish the relationship between technical and administrative departments.

Hospital management is recommended to mainstream and promote the need to have proper administrative procedures among emergency teams and vice-versa. Continuous communication between both is needed to keep a smooth flow of written and verbal communications upon the understanding of each department's needs. Hospital management is required to take the needed measures to mitigate any possible burden of the administrative procedures upon the overloaded medical staff.

6- Structured technical supervision is a must.

It is the right of the medical emergency staff to receive functional supervisory activities within their work structure. Emergency teams are required to have regular supervision sessions (individual and/or group). Supervision sessions should be used for different purposes including supportive, managerial, and skills developmental goals. Regular and structured supervision methodology will contribute to the creation of a learning environment. Regular supervision sessions also contribute to the overall feeling of safety and protection by medical emergency practitioners, the thing that will help increase the sense of self-confidence, self-esteem, and professional growth, and higher quality of services.

7- Financial and social benefits problem resolution.

The data obtained showed that above all challenges experienced during emergency department regular work, comes the problem of having emergency medical staff not receiving their full salary for several years. It is recommended to find creative solutions

and alternatives for this problem. It should not be expected from medical teams to resume their full tasks and responsibilities in an optimum way while having no financial resources to feed their families and cover their normal living expenses and basic needs including transportation costs.

8- To Promote regular self-care practices and leisure activities as a preventive and protective measure among emergency teams:

This recommendation is towards the creation of a culture within emergency medicine practice in Gaza through their educational modules, media campaigns, regular Psychosocial and mind-body activities, media campaigns and specifically designed short publications, inside the MoH that values self-care practices among emergency teams. ED staff should be enrolled in self-care classes. Sport centers, meditation, mindfulness, self-compassion, yoga, breathing and relaxation exercises, life skills training including communication skills, assertiveness, problem-solving skills, planning, time management, and many others may be among a long list of possible activities that should be mainstreamed and promoted among emergency teams.

5.3 Further studies

Local study literature concerning the psychological health of emergency department medical staff is considerably weak. This attempt should be continued and followed with further steps to better understand the ED workplace environment and re-establish a better responding system to ED Staff needs.

- To determine the underlying causes of medical emergency staff resilience and positive psychological well-being in Gaza.
- To understand the Socio-cultural context as a determinant of work styles, policies, and procedures in Gazan secondary healthcare service structures.
- To identify the personality traits and characteristics of Palestinian healthcare professionals in Gaza.
- To assess stress and stress-related conditions among emergency medical staff in the Gaza Strip.
- Prevalence studies regarding common mental health conditions among medical staff.

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Annexes:

Annex 1: Study Time plan

Activity	Duration	Jan-2020	Feb 2020	Mar-2020	April 2020	May 2020	June 2020	July 2020	Aug 2020	Sep -2020	Oct-2020	Nov-2020	Dec 2020
Proposal Approval	1 month												
Data Collection & entry	1 month												
Data Analysis	2 months												
Thesis finalization	2 months												
Thesis First Draft submission	2 months												
Thesis Discussion													

Annex 2: Budget

NO.1	Activities	Items	Total \$
1	Field researcher	3*300 \$	900
2	Data entry SPSS, cleaning and analysis (support)	1*500 \$	500
3	Data cleaning and analysis.	1*500 \$	500
4	Transportation Costs.	300 \$	300
5	Other expenses, unforeseen.	500 \$	500
Subtotal.			2700

Annex 3: Beck Depression Inventory

This depression inventory can be self-scored. The scoring scale is at the end of the questionnaire.

1.	0	I do not feel sad
	1	I feel sad
	2	I am sad all the time and I can't snap out of it
	3	I am so sad and unhappy that I can't stand it
2.	0	I am not particularly discouraged about the future
	1	I feel discouraged about the future
	2	I feel I have nothing to look forward to
	3	I feel the future is hopeless and that things cannot improve
3.	0	I do not feel like a failure
	1	I feel I have failed more than the average person
	2	As I look back on my life, all I can see is a lot of failures
	3	I feel I am a complete failure as a person
4.	0	I get as much satisfaction out of things as I used to
	1	I don't enjoy things the way I used to
	2	I don't get real satisfaction out of anything anymore
	3	I am dissatisfied or bored with everything
5.	0	I don't feel particularly guilty
	1	I feel guilty a good part of the time
	2	I feel quite guilty most of the time
	3	I feel guilty all of the time
6.	0	I don't feel I am being punished
	1	I feel I may be punished
	2	I expect to be punished
	3	I feel I am being punished
7.	0	I don't feel disappointed in myself
	1	I am disappointed in myself
	2	I am disgusted with myself
	3	I hate myself

8.	0	I don't feel I am any worse than anybody else
	1	I am critical of myself for my weaknesses or mistakes
	2	I blame myself all the time for my faults
	3	I blame myself for everything bad that happens
9.	0	I don't have any thoughts of killing myself
	1	I have thoughts of killing myself, but I would not carry them out
	2	I would like to kill myself
	3	I would kill myself if I had the chance
10.	0	I don't cry any more than usual
	1	I cry more now than I used to
	2	I cry all the time now
	3	I used to be able to cry, but now I can't cry even though I want to
11.	0	I am no more irritated by things than I ever was
	1	I am slightly more irritated now than usual
	2	I am quite annoyed or irritated a good deal of the time
	3	I feel irritated all the time
12.	0	I have not lost interest in other people
	1	I am less interested in other people than I used to be
	2	I have lost most of my interest in other people
	3	I have lost all of my interest in other people
13.	0	I make decisions about as well as I ever could
	1	I put off making decisions more than I used to
	2	I have greater difficulty in making decisions more than I used to
	3	I can't make decisions at all anymore
14.	0	I don't feel that I look any worse than I used to
	1	I am worried that I am looking old or unattractive
	2	I feel there are permanent changes in my appearance that make me look unattractive
	3	I believe that I look ugly
15.	0	I can work about as well as before
	1	It takes an extra effort to get started at doing something
	2	I have to push myself very hard to do anything
	3	I can't do any work at all

16.	0	I can sleep as well as usual
	1	I don't sleep as well as I used to
	2	I wake up 1-2 hours earlier than usual and find it hard to get back to sleep
	3	I wake up several hours earlier than I used to and cannot get back to sleep.
17.	0	I don't get more tired than usual
	1	I get tired more easily than I used to
	2	I get tired from doing almost anything
	3	I am too tired to do anything
18.	0	My appetite is no worse than usual
	1	My appetite is not as good as it used to be
	2	My appetite is much worse now
	3	I have no appetite at all anymore
19.	0	I haven't lost much weight, if any, lately
	1	I have lost more than five pounds
	2	I have lost more than ten pounds
	3	I have lost more than fifteen pounds
20.	0	I am no more worried about my health than usual
	1	I am worried about physical problems like aches, pains, upset stomach, or Constipation
	2	I am very worried about physical problems and it's hard to think of much else
	3	I am so worried about my physical problems that I cannot think of anything else
21.	0	I have not noticed any recent change in my interest in sex
	1	I am less interested in sex than I used to be
	2	I have almost no interest in sex
	3	I have lost interest in sex completely

Annex 4: Warwick Edinburgh Mental Well-being Scale

STATEMENTS	1	2	3	4	5
I've been feeling optimistic about the future					
I've been feeling useful					
I've been feeling relaxed					
I've been feeling interested in other people					
I've had energy to spare					
I've been dealing with problems well					
I've been thinking clearly					
I've been feeling good about myself					
I've been feeling close to other people					
I've been feeling confident					
I've been able to make up my own mind about things					
I've been feeling loved					
I've been interested in new things					
I've been feeling cheerful					

Annex 5: FOCUS GROUP Questions:

Semi-structured interview questions for emergency medical staff

- 1- What is your job? What are your qualifications? What type of patients do you deal with?
- 2- Are you under stress in your work at the ED? Pls. mention those stressors?
- 3- How do you deal with the stress you face at work?
- 4- Does ED stress affect your personal life? In what way?
- 5- What solutions do you think would help the medical staff with ED Workplace stress?
- 6- How would you describe your mental health and your psychological state during the previous and current period at the ED? Does the workplace environment affect your mental health? How would you describe (the psychological state) of the emergency department employees in general?
- 7- How do you assess the quality of life for you and the medical staff in the hospital's emergency department?
- 8- What sources of support do you have to continue performing your tasks qualitatively?
- 9- To what extent do you feel ready to receive a big number of emergency cases?
- 10- Describe the work of the emergency department in a word

Annex 6: MoH Free Access Letter

State of Palestine Ministry of health		دولة فلسطين وزارة الصحة
التاريخ: 22/12/2019	السيد : رامي عبد سليمان العبادل المحترم	
رقم المراسلة 412306		
مدير عام بالوزارة / الإدارة العامة لتنمية القوى البشرية - /وزارة الصحة		
السلام عليكم ...		
<u>الموضوع/ تسهيل مهمة الباحث// أسامة عبدو</u>		
التفاصيل // بخصوص الموضوع أعلاه، يرجى تسهيل مهمة الباحث/ <u>أسامة محمد عبدو</u> الملتحق ببرنامج ماجستير الصحة النفسية والمجتمعية - تخصص علاج نفسي - كلية الصحة العامة - جامعة القدس أبديس في إجراء بحث بعنوان:- الرفاه النفسي والأعراض الإكتئابية لدى الطواقم الطبية العاملة في أقسام الطوارئ في مستشفيات غزة الحكومية حيث الباحث بحاجة لتعبئة استبانة من عدد من مقدمي الخدمات الصحية في أقسام الطوارئ في المستشفيات (م. الاندونيسي - مجمع الشفاء الطبي - م. الأقصى - م. الأوربي - مجمع ناصر الطبي - م. النجار)، وكذلك عقد مجموعات بؤرية مع عدد منهم، بما لا يتعارض مع مصلحة العمل وضمن أخلاقيات البحث العلمي، وكون تحمل الوزارة أي أعباء أو مسؤولية. وتفضلوا بقبول التحيّة والتقدير،،، ملاحظة / 1. تسهيل المهمة الخاص بالدراسة أعلاه صالح لمدة 6 أشهر من تاريخه. 2. البحث المذكور حصل على موافقة لجنة أخلاقيات البحث الصحي (لجنة هلسنكي)		
محمد إبراهيم محمد السرساوي مدير دائرة/ الإدارة العامة لتنمية القوى البشرية -		
		
التحيات ■ محمد إبراهيم محمد السرساوي (مدير دائرة) ← رامي عبد سليمان العبادل (مدير عام بالوزارة) إجراءكم بالخصوص (22/12/2019)		
المرفقات ■ أسامة عبدو استبانة.pdf		
Gaza	Tel. (+970) 8-2846949 Fax. (+970) 8-2826295	غزة تلفون. (+970) 8-2846949 فاكس. (+970) 8-2826295

عنوان الدراسة: الرفاه النفسي و الاعراض الاكتئابية لدى الطواقم الطبية العاملة في أقسام الطوارئ في مستشفيات غزة الحكومية.

إعداد: أسامة محمد حماد عبدو.

إشراف: د. مروان دياب.

ملخص الدراسة:

تعتبر العافية النفسية (الرفاه النفسي) لدى الطواقم الطبية العاملة في أقسام الطوارئ في المستشفيات العامة مصدر قلق لهيئات الصحة العامة محليًا ودوليًا. تعمل أقسام الطوارئ في مستشفيات قطاع غزة في سياق معقد، في ظل نظام صحي مرهق تم إضعافه خلال جولات العنف المتكررة على مدار السنوات الـ 15 الماضية.

لا تزال الاتجاهات الاجتماعية والثقافية تجاه الخدمات الطبية الطارئة في مستشفيات غزة العامة تشكل مصدراً لضغط و إرهاق للنظام الصحي ولفرق و أقسام الطوارئ والتي من المطلوب أن تستمر في ممارسة و أداء مهامها ودورها بمستوى عال من الجودة رغم العجز الحاد و المستمر في الأدوات و المعدات و القوى العاملة. ولذلك فإن هذه الدراسة قد هدفت إلى تحديد مستوى الرفاه النفسي والأعراض الاكتئابية لدى طواقم الطوارئ الطبية في مستشفيات غزة العامة.

منهجية الدراسة: تم إجراء تصميم مقطعي متعدد الأساليب بين طاقم الطوارئ الطبي في المستشفيات الحكومية في غزة باستخدام مقياس بيك للاكتئاب (BDI) ومقياس وارويك للرفاه النفسي (WPWS). إلى جانب ذلك، تم إجراء تنظيم ثلاث مجموعات مركزة (مجموعات بؤرية) بين طواقم الطوارئ الطبية من 3 مستشفيات رئيسية تمثل محافظات الشمال والوسط والجنوب في قطاع غزة.

نتائج الدراسة: شارك في الدراسة ما مجموعه 202 من الكوادر الطبية العاملة في أقسام الطوارئ، حيث قاموا بملى استبانات الدراسة. أشارت نتائج الدراسة الى ابلغ 54.5% من المشاركين عن مستوى مرتفع من الرفاه النفسي، بينما أبلغ 43% من المشاركين إلى مستوى متوسط (معتدل) من الرفاه النفسي. وقد اظهرت نتائج الدراسة ان اكثر من ثلثي المشاركين (72.3%) أبلغوا عن عدم وجود أي أعراض اكتئابية، و أن 18.3% لديهم أعراض اكتئاب خفيفة ، و 7.4% لديهم أعراض اكتئاب متوسطة، و أن 2% من المشاركين قد عانوا من اكتئابية حادة، بالاضافة الى ان الاعراض الاكتئابية المتوسطة مع مستوى منخفض من الرفاه النفسي قد ظهرت لدى ما نسبته 0.5% من المشاركين. وقد كشفت الدراسة عن وجود علاقة عكسية ذات دلالة إحصائية بين الرفاه النفسي والأعراض الاكتئابية، حيث تؤدي الزيادة بمقدار نقطة واحدة على مقياس الرفاه النفسي إلى انخفاض بنسبة 0.5 في الأعراض الاكتئابية. كذلك لم تظهر نتائج الدراسة أي علاقة ذات دلالة إحصائية بين المتغيرات الديمغرافية (الجنس، العمر، مكان السكن، الدرجة العلمية، و عدد سنوات الخبرة) فيما يتعلق بمستوى الرفاه النفسي داخل عينة الدراسة. فيما يتعلق بالجزء النوعي للدراسة، أشار معظم الموظفين إلى أنهم يشعرون بالرضا عن صحتهم العقلية ويشعرون أن لديهم المهارات اللازمة للتعامل مع ظروف

العمل المجهدة حيث اكتسبوا الخبرة المتراكمة طوال سنوات عملهم، بينما أبلغوا في نفس الوقت عن وجود مستويات مرتفعة من الضغوط داخل بيئة العمل في أقسام الطوارئ في المستشفيات العامة.

الاستنتاجات: لقد أظهرت الطواقم الطبية العاملة في أقسام الطوارئ في المستشفيات العامة في قطاع غزة مستويات عالية من الصحة النفسية وانخفاض في الأعراض الاكتئابية، ذلك على الرغم من الافتقار إلى الإجراءات و التدخلات الوقائية الحكومية لضمان مستويات أعلى من الصحة النفسية بين الكوادر الطبية العاملة في أقسام الطوارئ. بالإضافة إلى ذلك، فإنه يتوجب على صناع القرار في قطاع الصحة العامة اتخاذ الإجراءات اللازمة بإتجاه تصميم و تقديم خدمات صحة نفسية ودعم نفسي اجتماعي متخصصة تستهدف ما نسبته على الأقل 10% من كوادر الطوارئ الطبية، و الذين أظهرت نتائج الدراسة ان لديهم مستويات حادة ومتوسطة من الأعراض الاكتئابية.

كلمات مفتاحية: الرفاه النفسي، الأعراض الاكتئابية، طواقم طبية، أقسام الطوارئ، قطاع غزة.