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The Relationship between Stressors, War Trauma, Anxiety, and Depression in Patients with Cancer in Gaza Strip

Reema Awni Bseiso

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Prepared by:

Reema Awni Bseiso

Bachelor of Pharmacy Al –Azhar University, Palestine

Supervised by:

Prof. Abdel Aziz Mousa Thabet

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Prepared By: Reema Awni Bseiso

Registration No.: 21312664

Supervisor by: Prof. Abdel Aziz Mousa Thabet

Master thesis submitted and accepted. Date: / /

The names of signatures of the examining committee members are as follows:

1. Head of committee: Dr. Abdel Aziz Thabet Signature D. A. Thabet
2. Internal examiner: Dr. Bassam Abu Hamad Signature Ba Hamad
3. External examiner: Dr. Khaled Thabet Signature...

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بسم الله الرحمن الرحيم

﴿فَلْيَعْبُدُوا رَبَّ هَذَا الْبَيْتِ ۞ الَّذِي أَطْعَمَهُمْ مِنْ جُوعٍ وَآمَنَهُمْ مِنْ خَوْفٍ﴾

صدق الله العظيم

قريش آية (3، 4)

Dedication

I dedicate this work for ……..

Rafiq Musalam, my husband for his unlimited support and patience.

The Souls of my parents

My sister Nebras, for her unvalued support and encouragement

My daughters and sons Tala, Farah, Mohammad, and Ahmad

Patients suffering from Cancer

Declaration

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

Signed…….

Reema Awni Bseiso
Date: / / 2015

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Abstract:

The study aimed to investigate the relationship between stressors due to siege, war trauma, anxiety and depression among cancer patients in Gaza strip. The study sample consisted of 380 cancer patients (128 male and 252 female). The researcher used descriptive –analytical design to describe the study variables using; Gaza Scale for Socio-demographic status ; Gaza Stressful Situations Checklist:; Beck Depression Inventory Short form 13 item, translated into Arabic by Thabet; Hamilton Anxiety Scale .

The finding revealed that, the most common reported stressors due to siege were : 92.9% said prices are sharply increased due to closure, 90.3% said they feel that they are in big prison , 85.5% their work affected so much due to cut-off of electricity and shortage of gas (85.5%).

The most common traumatic experiences reported by patients were: hearing shelling of the area by artillery (100%), hearing the loud voice of drones (99.9%), and watching mutilated bodies in TV (97.6 %). The results showed that 9.3% males and 9.5% females have mild traumatic events; 44.5% male and 56.7% females have moderate traumatic events; 46.2% males and 33.8% females have severe traumatic events.

The study showed that the most common depression symptoms were: discouraged about the future (52.9%) and feel sadness (46.6%), while the least common depression symptom was thoughts of killing self (13.7%).

The study showed that the commonly reported anxiety symptoms among cancer patients were; being tense and restless (61.3%), had insomnia (56.3%), had cardiovascular symptoms (51.1%), and worried (50%). The results showed that 10.8% of males had no anxiety, 8.2% had mild to moderate, and 14.7% had moderate to severe anxiety.

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Table of Abbreviations

Acrynom	Description
AHMD	The American Heritage Medical Dictionary
APA	American Psychiatric Association
DSM -5	Diagnostic and Statistical Manual of Mental Disorders 5th ed.
DSM IV	Diagnostic and Statistical Manual of Mental Disorders 4th edition
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition
ESAS	Edmonton Symptom Assessment System
GAS	General Anxiety Stress
GCMHP	Gaza Community Mental Health Programme.
HADS	Hospital Anxiety and Depression Scale
HISU	Health Information System Unit
HRQOL	World Health Organization Quality of Life – Short Version
IBM	International Business Machines Corporation IBM Statistics SPSS
MOH	Ministry of Health
NGOs	Non-Governmental Organizations
NIMH	National Institute of Mental Health,
NODE	New Oxford Dictionary of English
OCHA	Office for the Coordination of Humanitarian Affairs
PCBS	Palestinian Central Bureau of Statistics
PHIC	Director of Palestinian Health Information Center (PHIC)
PTSD	Post-Traumatic Stress Disorder
SCL	Symptom Checklist-90-Revised
SPSS	Statistical Package of Social Sciences
UCI	University of California – Irvine
UN	United Nations
UNICEF	United Nations International Children's Emergency Fund
UNRWA	United Nations For Relief and Work Agency .
WHO	World Health Organization.

CHAPTER ONE

INTRODUCTION

1. Introduction

1.1 back ground

For the last 7 years, there were an increasing number of the cancer patients among the Palestinian people that call actions and interventions by researchers and clinicians to stand on the basis and the nature of the cancer.

Cancer mortality rates show remarkable increase in Palestine during 2013 compared with 2007 and 2010, from (10.3%) in 2007 to (10.8%) in 2010 then increases to reach (13.3 %) from the total deaths in Palestine in 2013(MOH, 2014). Breast cancer ranked first, with (401) reported cases, (18.3%) from all reported cases. Breast cancer is the highest among females and focus in the age group between 20 -59, where Colon cancer ranked second, with (236) reported cases and (10.8%) from all reported cancers (MOH, 2014). According to MOH cancer considered the second leading cause to death in Palestine.

Cancer or terminally ill patients cannot receive any more treatment in Cairo or Israel for the closure of the borders (Morgantini, 2006) . Unfortunately, through the closed border crossings, only in few days per week and for few hours per day - and in which many hundreds of Palestinian patients have died and continue to die because of the lack of medical care as well as a lack of those permits issued by the Israeli Authorities allowing them to go to hospitals abroad for treatment(Morgantini, 2009).

Patients with cancer suffer from wide range of stressors including but not limited to stress, anxiety, depression, physical health disturbance, malnutrition and mood imbalance. Subsequently, the war and siege aggregate these stressors and increase the chance of death as a result of limited medications, equipment, and transfer procedures.

Palestinian breast cancer patients and survivors reported considerably higher levels of cancer-related posttraumatic stress symptoms than Danish women with comparable disease severity (Zachariae et al, 2011) . Furthermore, the stressors of the cancer patients at Shifa hospital were state anxiety was at the highest rank 60.8%, followed by trait anxiety 54.6%; re-experiencing PTSD at the third rank 47.0%, PTSD 42.5%, hyper-arousal 40.5%, avoidance 40.1% (Al-Jadili, 2009).

There are many stressors that face women diagnosed with cancer, including the fear of possible death, stress of informing family members, and the stress associated with being informed that their life is going to be drastically change. Disruption, social stigmatization, side effects of treatment, and other stressors more specific to the disease and treatment are also pertinent(Singh & Verma, 2007). These stressors can occur in the context of a disrupted family and other ongoing sources of stress.

Psychiatric problems have been frequently reported in cancer patients (Bukberg, Penman, & Holland, 1984; Derogatis & Fitzpatrick, 2004), the most common of which are depression, anxiety, and adjustment problems as these patients having cancer recognize it as a 'real killer' and that can lead to intense pain, disability, disfigurement, sexual dysfunctions; and can lead to various problems if the outcomes are not as expected(Ahlberg et al, 2004; Stanton et al, 1998) . The common emotional reactions in patients diagnosed to have cancer are shock, denial, disbelief, anxiety, anger, guilt, and depression. The major sources of continuing emotional distress are fear of incurability, pain, disfigurement, recurrence of disease, and a sense of helplessness over its treatment. Life stressors due to war and siege are linked to exacerbation of chronic medical conditions and mental health problems in a variety of populations including cancer patients.

Due to continued war and siege the population in Gaza has thus suffered ever-increasing infringements of their economic, social, civil, political and security rights and on their freedom of movement (Thabet, 2014). Also the study concluded that restrictions on movement and access, as well as the worsening humanitarian situation, generate daily stressors that strongly affect the well-being of both adults and children.

War and siege has several dangerous effects on social, political, economic, educational, as well as psychological impacts (Dyregrov et al, 2000; Husain et al, 1998). The siege led to an increase in the need of medical equipment's and other medical supply, also, the war and siege limits the entrance of medical equipment and instruments, drugs and medications, goods and all life basics (Lubbad & Thabet, 2009).

The dynamic process of the war affected the general life as well as hospitals, clinics, and also the patients who critically ill and waiting for treatment or transfer. The limited resources of medications, drugs, or transfer for the cancer patients reflected negatively on the patients' psychological health, emotional, and physical stability.

Furthermore, the war and siege of Gaza entitled every sector and specially medical sector that affect the patients generally and cancer patients especially because of their urgent need of medical help and treatment.

There is many reports that conducted by OCHA concerning the effects of war and siege on Gaza strip which found that availability of medical supplies at Ministry of Health (MOH) facilities: 105 of the 416 essential drugs (25.2%) and 203 of the 596 essential medical supplies (34%) were at zero availability in December due to the lack of financial resources. These drugs include six first-line pediatric antibiotics and oncology drugs needed by 135 patients (OCHA, 2008). Approximately 1,000 different spare parts for medical and non-medical equipment remain

unavailable in MOH stocks and on the local market and cannot be imported into Gaza due to the current import restrictions (OCHA, 2008). This study will investigate the relationship between stressors due to siege, war trauma, anxiety and depression among cancer patients in Gaza strip.

1.2 Research Problem

In Gaza strip, we live in one of the most devastating areas considered ever, we struggle with war, poverty, internal conflict and siege which is the worst ever due to its critical consequences on the general population and on the patients specifically.

The patients with cancer struggle the disease and its prognosis in addition to the stressors of the siege which prevent entrance of essential medications, medical equipment, and prevent patients referral to Egypt or West Bank for treatment. These conditions let the patients suffer from additional metal health problems including depression and anxiety and fear of death.

The increasing number of patients with cancer and the continued war on Gaza strip considered a critical alarm for deterioration in medical help as well as mental health of large group of people.

Recent studies investigated the impact of war on Gaza strip found that cancer patients can't receive treatment outside Gaza and the decreased medical supplies threaten the patient's life and affect their mental health (Morgantini, 2006, 2009; Abdelaziz Thabet, EL-Buhaisi, & Vostanis, 2014).

This critical and alarming issues urge us to lookup those people with cancer and stand beside them to identify their "stressors" and "war trauma" stemming from the war, and to explore their suffering and how they affected by the war regarding their health status. The researcher

conceptualize the problem statement in the following **"**The relationship between stressors due to siege, war trauma, anxiety and depression among cancer patients in Gaza strip".

1.3 Study Justification

By looking at the study variables we conclude that every variable was studied extensively by other researchers (Lubbad & Thabet, 2009; Morgantini, 2006, 2009), but its significance generated from its target group "cancer patents" that selected for investigation and research under severe conditions that not bearable by general population. Furthermore, these patients in need for extensive study due to their critical health status that reflected on their psychological domain in addition, they need continuous follow up and treatment for long time period in the absence of the basic requirements for survival due to war.

The dramatic changes in the health status of the cancer patients and its connection with psychological health should be the focus of the researchers in the upcoming years. The researcher knowledge in this sector will be helpful and play important role in defining the concepts of the cancer patients through her role as a pharmacist who working as a director for governmental pharmacies for long time period and have good experience in drugs and medications that required for those people.

1.4 Study objectives

1.4.1 General Objective

The aim of the study is to **explore the relationship between stressors due to siege, and anxiety and depression among cancer patients in Gaza strip**

1.4.2 Specific Objectives

1. To explore the types and severity of stressors due to siege among cancer patients in Gaza Strip.
2. To explore the types and severity of war trauma among cancer patients in Gaza Strip.
3. To find prevalence of depression and anxiety among patients with cancer.
4. To explore the relationship between stressors due to siege, war trauma, depression and anxiety among cancer patients in Gaza strip.
5. To investigate the relationship between stressors due to siege, war trauma, anxiety and depression and other socio-demographic variables.

1.5 Research Questions

1. What are the types and severity of stressors due to war on patients with cancer in the Gaza Strip?.
2. Is there a relationship between stressors due to siege on war trauma, anxiety and depression among cancer patients in Gaza Strip?
3. Is there a relationship between stressors due to siege, war trauma, anxiety and depression among cancer patients in Gaza Strip?
4. Are there differences between stressors due to siege, war trauma, anxiety and depression among cancer patients related to gender?
5. Are there differences between stressors, war trauma, anxiety and depression among cancer patients related to age?
6. Are there differences between stressors, war trauma, anxiety and depression among cancer patients related to place of residence?

7. Are there differences between stressors, anxiety and depression among cancer patients related to educational level?
8. Are there differences between stressors, anxiety and depression among cancer patients related to family income?

1.6 Operational Definition

- **Stress** occurs when we have difficulty coping. *Any event or stimulus that requires you to change in some way has the potential to cause stress.* Stress can be caused by something as routine as driving to work, or something as rare as losing all of your belongings in a house fire.
- **Anxiety:** We all experience some anxiety sometimes, but many people don't really know what it is. According to one dictionary definition, *anxiety can be defined as a strong and unpleasant feeling of nervousness or distress in response to a feared situation, often accompanied by physiological effects such as nausea, trembling, breathlessness, sweating, and rapid heartbeat.*
- **Psychological stress** *is what you feel when you are under pressure or having difficulty coping with a situation or stimulus.* You can think of it as your emotional response to stressful events.
- **A Stressor** *is anything (physical or psychological) that produces stress (negative or positive) is considered a stressor.*
- **Siege:** *the act or process of surrounding and attacking a fortified place in such a way as to isolate it from help and supplies, for the purpose of lessening the resistance of the defenders and thereby making capture possible.*

- 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. Fortunately, it is also treatable (APA, 2013). Depression causes feelings of sadness and/or a loss of interest in activities once enjoyed. It can lead to a variety of emotional and physical problems and can decrease a person's ability to function at work and at home.

1.7 Context of the Study

Gaza strip

The **Gaza Strip** or **Gaza**, is a pene-exclave region of Palestine on the eastern coast of the Mediterranean Sea that borders Egypt on the southwest for 11 kilometers (6.8 mi) and Israel on the east and north along a 51 km (32 mi) border (oxforddictionaries, 2014). Gaza makes up part of the Palestinian territories which includes the West Bank, and in 2012 the United Nations General Assembly "accorded Palestine non-Member Observer State status in the United Nations (UN, 2014).

In 1994, Israel granted the right of self-governance to Gaza through the Palestinian Authority. Prior to this, Gaza had been subject to military occupation, most recently by Israel (1967–94) and by Egypt (1948–67), and earlier by Great Britain (1918–48) and Turkey when Gaza had been part of the Ottoman Empire. Gaza has, just like Palestine, never been a sovereign state or territory. Since 2007, the Gaza Strip has been *de facto* governed by Hamas, a Palestinian group claiming to be the representatives of the Palestinian National Authority and the Palestinian people. Gaza forms a part of the Palestinian territory defined in the Oslo Agreements and UNSC Resolution 1860 (UN, 2014).

Gaza has an annual population growth rate of 2.91% (2014 est.), the 13th highest in the world, and is overcrowded(Rubenberg, 2003). There is a limited capability to construct new homes and facilities for this growth. The territory is 41 kilometers (25 mi) long, and from 6 to 12 kilometers (3.7 to 7.5 mi) wide, with a total area of 365 square kilometers (141 sq mi) (Arnon,2007) . As of 2014, Palestinians of the Gaza Strip numbered around 1.82 million people. Sunni Muslims make up the predominant part of the Palestinian population in the Gaza Strip (Rubenberg, 2003).

The Gaza Strip acquired its current northern and eastern boundaries at the cessation of fighting in the 1948 war, confirmed by the Israel–Egypt Armistice Agreement on 24 February 1949) (Arie, 2007). Article V of the Agreement declared that the demarcation line was not to be an international border. At first the Gaza Strip was officially administered by the All-Palestine Government, established by the Arab League in September 1948. All-Palestine in the Gaza Strip was managed under the military authority of Egypt, functioning as puppet state, until it officially merged into the United Arab Republic and dissolved in 1959. From the time of the dissolution of the All-Palestine Government until 1967, the Gaza Strip was directly administered by an Egyptian military governor. Israel captured the Gaza Strip from Egypt in the Six-Day War in 1967) (Arie, 2007). Pursuant to the Oslo Accords signed in 1993, the Palestinian Authority became the administrative body that governed Palestinian population centers while Israel maintained control of the airspace, territorial waters and border crossings with the exception of the land border with Egypt. In 2005, Israel withdrew from the Gaza Strip under their unilateral disengagement plan. In July 2007, after winning the 2006 Palestinian legislative election, Hamas became the elected government. In 2007 Hamas expelled the rival party Fatah from Gaza. This

broke the Unity Government between Gaza Strip and the West Bank, creating two separate governments for the Occupied Palestinian Territories.

Population Size and Structure:

The total number of Palestinian people according to the estimation 2013 was (4,485,459) of which (50.8%) are males and (49.2%) are females(MOH, 2014).

Age and Sex Distribution:

Age distribution of the population has important implications for the health status of the population, due to the different health needs, the differential patterns of health care utilization and the different health status among the various age groups.

The below population pyramid shows age and sex distribution of population (39.9 %) is under 15 years old. The age group (0-4) years is (14.8%), while for the ages over 65 years constitutes only (2.9 %.) (MOH, 2014).

Population Growth:

According to the PCBS figures in 2013, the natural increase of population in Palestine was (2.9%) in the West Bank (2.6 %) and in the Gaza Strip (3.4%)(PCBS, 2013).

Births:

Reported Live Births:

The total number of reported live births in Palestine was (116,207); (61,405) ((52.8%) in west Bank and (54,802) (47.2%) in Gaza Strip(MOH, 2014).

Reported Crude Birth Rate:

Despite progressive decline over the years, the number of live births per 1,000 of population per year is still high compared with other countries. The reported crude birth rate (CBR) in 2013 was

(25.9 \ 1,000) of population in 2013, in West Bank (22.3\ 1,000) and (31.7 \ 1,000) in Gaza Strip (MOH, 2014).

Health services

Health Services Providers:

In Gaza strip, there are (147) primary health care centers run by four main providers:

1- Government: (54) primary health care centers.

2- UNRWA: (20) primary health care centers.

3- NGOs: (66) primary health care centers.

4- PMMS: (7) primary health care centers.

In the West Bank there are (622) primary health centers run by four main providers:

1- Government: (425) primary health care centers.

2- UNRWA: (41) primary health care centers.

3- NGOs: (140) primary health care centers.

4- PMMS: (16) primary health care centers.

Secondary and Tertiary Health Care:

The hospital services are operated by the government and non-government sectors. The hospitals in both sectors have improved in terms of facilities, technical and support services over the years by adding new departments and diagnostic equipment, as well as providing continuous professional training.

Hospital facilities:

There are (80) hospitals in Palestine; (50) in West Bank and (30) in Gaza Strip, with total number of (5,619) beds in government and non-government hospitals; (58.1%) in West Bank and

(41.9%) in Gaza Strip. (59.5%) of them are general beds, (57.1%) specialized beds, (3.7%) rehabilitation beds and (13.2%) maternity beds. In Palestine, there are (12.5) beds per 10,000 of populations; (11.8) bed in West Bank and (13.6) bed in Gaza Strip(MOH, 2014).

Cancer in Palestine:

The Information Center at the Ministry of Health in Ramallah said that cancer was the second-leading cause of death in Palestine during the last year, after heart disease. Cancer had been the third-leading cause of death for many years (MOH, 2014).

The Information Center at the Ministry of Health issued a statement in February 2013 according to which 12.4% of the total deaths in Palestine were caused by cancer in 2011, compared to a rate of 10.8% in 2010 (MOH, 2014). Furthermore, MOH in Gaza strip indicated that deaths resulting from cancer in the Gaza Strip amounted to 12% of all deaths, making cancer the second-leading cause of death in the Gaza Strip after heart disease (HISU, 2015).

1. Distribution of Cancer patients according to sex:

In 2013 (2189) new cancer cases were reported in West Bank, (1127) cases were females (51.5%) and (1062) were males (48.5%). In 2013 the cancer incidence rate was (79.5) per 100,000 of population (MOH, 2014).

In Gaza Strip the reported new cancer cases during 2013 were 1414, were 629 case reported between male, 775 reported between females with incidence rate of 81.7 per 100,000 according to the Health Information System Unit (HISU, 2015).

2. Distribution of cancer patients according to age group:

According to MOH (738) reported cancer cases ware 65 years old and over which formed (33.7%), where (1313) cases (60%) were between 15 – 64 of age and (138) cases (6.3%) were less than of 15 years of age (MOH, 2014) . According to Health Information System Unit at the ministry of health, the reported cases among adults during the 2013 were 1355 case, while the children under age of 12 reported 59 case (HISU, 2015).

The geographical distribution of reported cancer cases shows that Bethlehem governorate reports the highest figures with an incidence rate (123.7) per 100,000 population (257) cases, while Nablus governorate ranked the second place with (383) cases and incidence rate (103.9) per 100,0000 population. Tulkarm in the third place with an incidence rate (100.5) per 100,000 of population and (178) reported cases (MOH, 2014).

3. Most common cancer cases:

In West Bank, Breast cancer ranked first, with (401) reported cases, (18.3%) from all reported cases. Breast cancer is the highest among females and focus in the age group between 20 -59. Where Colon cancer ranked second, with (236) reported cases and (10.8%) from all reported cancers. Colon cancer is the second type of cancer in males with (124) cases (11.7%) and the second one among females with (112) cases (9.9%). Lung cancer was in third place according to reported figures, with (222) reported cases (10.1%), of the all reported cases. Lung cancer was in the first place among males. Leukemia's (6.2%), Brain (5.3%), Bladder (4.1%), Rectum(3.2%), Liver (3.1%), Prostate (3.0%), Stomach (3.0)(MOH, 2014).

In Gaza Strip, breast cancer ranked first, with 278 reported cases (19.7%), and considered the highest among females. Where colo-rectal cancer ranked the second, with 116 reported cases and (11.9%) from all reported cases. Colo-rectal cancer ranked the first in males with 91 cases 14.2% and the third among female with 77 cases 9.9%. lymphoma was the third according to the reported cases with 116 cases 8.2% from all reported cases, where lymphoma considered the second among males with 62 cases 12.2%. Thyroid 7.1%, leukemia 6.2%, brain 5.1%, lung 4.5%, prostate 4.1%, urinary bladder 3.6%, uterine 3.4%, and other 26.2% (HISU, 2015).

4. Leading cause of death:

In 2013, the 2nd leading cause of death in Palestine was cancer.

5. Cancer mortality:

The reported figures by MOH shows remarkable increase in Cancer mortality in West Bank 2013 compared with 2007 and 2010, from (10.3%) in 2007 to (10.8%) in 2010 then increases to reach (13.3 %) from the total deaths in West Bank in 2013. Lung cancer was the highest one; it was (17.9 %), Colon cancer (15.2%) and Breast cancer (9.1%). Cancer mortality in males is higher than in females (55.7%) and (44.3%) (MOH, 2014).

The most reported cancer cases in Gaza strip were breast cancer with 278 (19.7%) from all reported cases, followed by colorectal cancer with 168 (11.9%) from all reported cases, and lymphoma with 116 cases (8.2%). Among males it was colon cancer with 91 cases (14.2%); lymphoma with 66 cases (10.3%); and followed by prostate cancer with 57 (8.9%). Among female it was breast cancer with 265 cases (34.2%); thyroid cancer with 78 cases (10.1%); and colorectal with 77 cases (9.9%) (HISU, 2015).

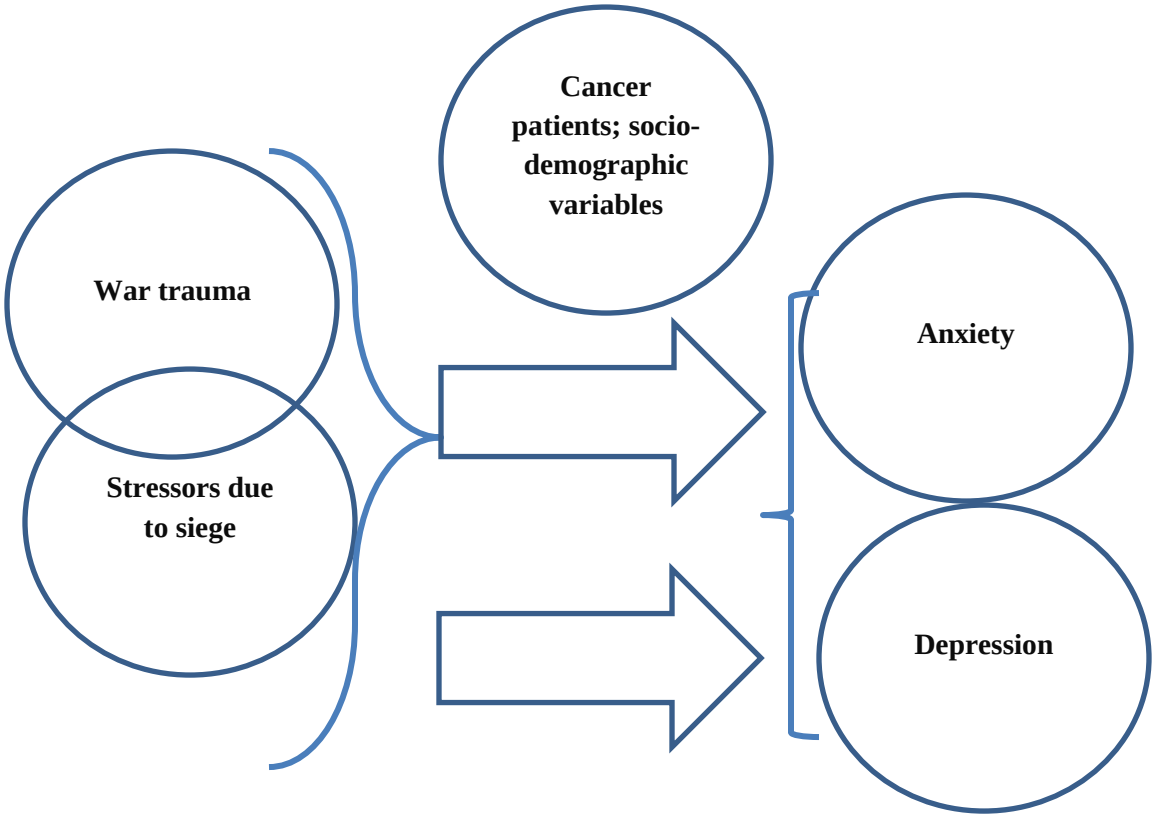
CHAPTER TWO

CONCEPTUAL FRAMEWORK AND

LITERATURE REVIEW

Chapter Two: Conceptual Framework And Literature Review:

In this chapter the researcher introduced the main theoretical framework for the study variables including cancer; stressors, war trauma, anxiety; and depression. The researcher explained fully the variables focusing on the definitions, types and significant information clarifying the target variable, putting on the hand a complete data regarding every concept suggested in the study. This chapter divided into two parts the first section talked about the concepts and theories of the study variables, while the second part handling the previous studies that undertaken for such variables.



Conceptual Framework by the researcher

2.1 Study Conceptual Framework:

In this part the researcher presented the concepts and theories of cancer; stressors, war trauma, anxiety and depression respectively in six sections.

2.1.1 Section One: Cancer

2.1.1.1 Definitions of cancer:

Cancer begins when cells in a part of the body start to grow out of control. There are many kinds of cancer, but they all start because of out-of-control growth of abnormal cells.

Cancer, a disease which occurs in complex multicellular organisms, appears to reflect a "throw-back" in the evolutionary process (J. E. Trosko & Ruch, 1998): cancer cells resemble primitive bacterial cells that survive in relatively unstructured cell colonies, characterized by uncontrolled proliferation, which do not functionally differentiate to support colony survival. In contrast, normal cells in higher multicellular organisms have genes coding connexins –proteins that determine the structural and functional relation of specific cells in a tissue by the alignment of cell pores and ion channels for intercellular communication.

However, The term cancer refers to a heterogeneous group of more than 100 specific types of cancer that are characterized by dysregulated and rapid cell growth and the potential for invasive or metastatic growth(AMA, 1989; Delhanty & Baum, 2001). Cancer damages the DNA inside cells. Cancer preys on the host and continues to grow indefinitely competing with normal tissues for nutrition.

The origin of the word cancer is credited to the Greek physician Hippocrates (460-370 BC), who is considered the "Father of Medicine Hippocrates used the terms *carcinos* and *carcinoma* to describe non-ulcer forming and ulcer forming tumors (Adams, 1929; Gallucci, 1984). In Greek,

these words refer to a crab, most likely applied to the disease because the finger-like spreading projections from a cancer called to mind the shape of a crab.

The Roman physician, Celsus (28-50 BC), later translated the Greek term into *cancer*, the Latin word for crab. Galen (130-200 AD), another Greek physician, used the word *oncos* (Greek for swelling) to describe tumors (Gallucci, 1984). Although the crab analogy of Hippocrates and Celsus is still used to describe malignant tumors, Galen's term is now used as a part of the name for cancer specialists – oncologists.

2.1.1.2 Theories of Cancer

1. Humoral Theory

Hippocrates believed that the body had 4 *humors* (body fluids): blood, phlegm, yellow bile, and black bile. When the humors were balanced, a person was healthy. The belief was that too much or too little of any of the humors caused disease. An excess of black bile in various body sites was thought to cause cancer. This theory of cancer was passed on by the Romans and was embraced by the influential doctor Galen's medical teaching, which remained the unchallenged standard through the Middle Ages for over 1,300 years (Hippocrates & Chadwick, 1950). During this period, the study of the body, including autopsies, was prohibited for religious reasons, which limited progress of medical knowledge (Adams, 1929).

2. Lymph Theory

Among theories that replaced the humoral theory of cancer was the formation of cancer by another body fluid, lymph. Life was believed to consist of continuous and appropriate movement of the fluid parts of the body through the solid parts. Of all the fluids, the most important were blood and lymph. Stahl and Hoffman theorized that cancer was composed of fermenting and degenerating lymph, varying in density, acidity, and alkalinity (King, 1963). The lymph theory gained rapid support. John Hunter, the Scottish surgeon from the 1700s, agreed that tumors grow from lymph constantly thrown out by the blood.

3. Blastema Theory

In 1838, German pathologist Johannes Muller demonstrated that cancer is made up of cells and not lymph (Bisen, Khan, & Bundela, 2013), but he believed that cancer cells did not come from normal cells. Muller proposed that cancer cells developed from budding elements (blastema) between normal tissues. His student, Rudolph Virchow (1821-1902), the famous German

pathologist, determined that all cells, including cancer cells, are derived from other cells (Bisen et al., 2013) .

4. Chronic Irritation Theory

Virchow proposed that chronic irritation was the cause of cancer, but he believed incorrectly that cancers "spread like a liquid." In the 1860s, German surgeon, Karl Thiersch, showed that cancers metastasize through the spread of malignant cells and not through some unidentified fluid (Bisen et al., 2013) .

5. Trauma theory

Despite advances in the understanding of cancer, from the late 1800s until the 1920s, trauma was thought by some to cause cancer (Bisen et al., 2013). This belief was maintained despite the failure of injury to cause cancer in experimental animals.

6. Infectious disease theory

Zacutus Lusitani (1575-1642) and Nicholas Tulp (1593-1674), concluded at almost the same time that cancer was contagious (Bisen et al., 2013). They made this conclusion based on their experiences with breast cancer in members of the same household. Lusitani and Tulp publicized the contagion theory in 1649 and 1652, respectively (Bisen et al., 2013). They proposed that cancer patients should be isolated, preferably outside of cities and towns, in order to prevent the spread of cancer.

Throughout the 17th and 18th centuries, some believed that cancer was contagious. In fact, the first cancer hospital in France was forced to move from the city in 1779 because people feared cancer would spread throughout the city(Kardinal & Yarbro, 1979). Although human cancer, itself, is not contagious, we now know that certain viruses, bacteria, and parasites can increase a person's risk of developing cancer (Kardinal & Yarbro, 1979).

7. Somatic mutation theory of carcinogenesis:

Somatic mutation theory of carcinogenesis was the most dominant theory during most of the twentieth century that inspired cancer researchers. It sipposes the monoclonality of tumorigenesis –i.e that cancer is caused by successive DNA mutations in a single cell. Its mechanisms include an altered growth factor signaling pathways, altered cell cycle effectors (cellular oncogenes, cyclins, etc.), altered inhibitory factors and suppressors genes, regulation of cell death, and differentiation pathways. The somatic mutation theory identifies carcinogenesis as operating at both the cellular and the subcellular –molecular levels (Sonnenschein & Soto, 2000) .

8. The stem cell theory of carcinogenesis

The stem cell theory of carcinogenesis suggest that cancer develops from a single normal stem cell which has undergone a series of discrete genetic changes. All tissues consist of two types of cells: (i) differentiated cell which are the main component of the most tissues and (ii) stem cells from which various differentiated cells arise, and from which malignant tumors may also develop (J. Trosko & Tai, 2006) . The stem cell theory of carcinogenesis has recently been given a revival in that isolated human adults stem cells have been shown to be "targets" for neoplastic transformation, e.g, the oct4 (octamer-4, a homeodomain transcription factor, that is critically involved in the self-renewal of undifferentiated cells) has been associated with adults stem cells, as well as their immortalized and tumorigenic derivatives, but not with normally differentiated daughter (Tai et al, 2005).

9. Mutations versus Epigenetic theories of carcinogenesis

Mutagenesis is the process that brings about a qualitative alteration of nuclear genetic information. An epigenetic process alters the expression of genetic information at the transcriptional, translational, or posttranslational levels (Tai et al., 2005). There can also be chromosomal mutations (i.e., a translation or a nondisjunction of chromosome) that can induce an epigenetic events (i.e., the extra chromosome 21 in Down syndrome can alter gene expression without mutation) (J. E. Trosko & Ruch, 1998). While the mutation theory of carcinogenesis has a long history, the idea that nonmutagenic events might play a role, during either the entire or a specific, phase of carcinogenesis, has not. That has caused some investigators to think that mutagenesis alone explains all of carcinogenesis. Both mutagenic and epigenetic mechanisms likely operate stochastically to generate a complex, multistage (J. Trosko & Tai, 2006; J. E. Trosko & Ruch, 1998), and possibly multiphase process of carcinogenesis. Other theories of carcinogenesis, such as initiation/ promotion/ progression, stem cell, and "nature of nurture" theories could each integrate the mutation and epigenetic theory.

2.1.2 Section Two: Stressors

2.1.2.1 Definition of Stress:

Despite a significant increase in research on stress, researchers and people interested in stress are still not in agreement about the meaning and nature of stress (Dua, 1994). The word stress is derived from the Latin word Strinere, meaning to draw tight, and was used in the 17th century to describe adversity or suffering. During the late 18th century, stress denotated force, pressure, strain and strong effort, referring primarily to an individual's organs or mental powers (Hinkle, 1974). In the 19th century (Sauter, Murphy, & Hurrell, 1992) defined stress as an interaction between the person and his or her environment. This interaction is perceived as a load that is so strong that it exceeds a person's coping mechanisms or sources of support.

After 1992, (Dua, 1994) defined stress as a response to challenging events, as an event that places demands on the individual, as an environmental characteristic which poses a threat to the individual, and as a realisation by the individual that he or she is unable to deal adequately with the demands placed upon him or her.

However, Stress is considered closely related to anxiety. According to (McGrath, 1970), stress can be defined as "a substantial imbalance between demand (physical and/or psychological) and response capability, under conditions where failure to meet that demand has important consequences.'' A person might get stressed if he or she feels incapable of meeting the demands and expectations placed on him or her. (McGrath, 1970; Weinberg & Gould, 2014) proposed, that stress consists of four interrelated stages: Environmental demand; Perception of demand; Stress response ; and Behavioral consequences.

Following the work by (Jex, 1998; Sauter et al., 1992) was of the opinion that stress can be defined as firstly a stimulus, which implies that it refers to the stimuli in the environment that may require some adaptive response on the part of the individual. Secondly, stress can be defined as a response, this refers to the feelings that an individual could experience when the demands of the job or personal life exceed the individual's ability to cope. Lastly, stress can be defined as a stimulus-response, which implies that stress refer to the overall process experienced by the individual.

Cooper (Cooper et al, 1988) , describe stress as a response to a situation in which individuals are unable to meet the demands placed on them, resulting in a negative outcome. Researchers argue that this definition acknowledges that the sources of stress and its effects are multiple and not limited to a particular situation. Therefore, stress is viewed not just as a function of being under pressure in an occupational sense, but as a function of an individual's whole life situation. This includes aspects intrinsic to the job like relationships at work, organisational structure, or role conflict (Cox, 1993).

Individuals do not respond to the events with uniform stress responses. The most widely used model of stress was developed by (Lazarus, 2000), as a transaction between the individual and the environment, rather than a property of either the person or the environment. Stress entails an individual perception that demands of the environment exceed available psychosocial resources. Stress depends on the meaning of an event to the individual: An event that fills one individual with excitement can make another feel anxious. The extent to which an event is experienced as stressful therefore depends on the individual's appraisal of both the situation and his or her ability to cope with it(Lazarus, 2000, 2006). This transactional model consists of two stages in

the process of stress and coping, namely; primary appraisal of the situation and secondary appraisal of the situation(Coats & Feldman, 2000).

Primary appraisal of the situation is an assessment of an event to determine whether its implications are positive, neutral or negative. If the individual determines that the implications are negative, they appraise the event in terms of how harmful it has been in the past, how threatening it appears to the future and how likely it is that the challenge can be addressed successfully. Secondary appraisal of the situation is the assessment of whether one's coping abilities and resources are adequate to overcome the harm, threat, or challenge posed by the potential stressor. During this stage, individuals seek to determine whether their personal resources are sufficient to meet the dangers posed by the situation (Coats & Feldman, 2000). The experience of stress is the outcome of both primary and secondary appraisal(Coats & Feldman, 2000).

Most researchers agree that when studying stress models it is important to distinguish between two closely related items, namely stressors and stress (Francis & Barling, 2005).

2.1.2.2 Definition of Stressors

Stressors are defined as the external events such as difficult relationships in the social life that contribute to the experience of stress (Murphy et al, 1995), and the physical and psychological stimulus to which an individual responds (Quik et al, 2001). Stress is considered to be an individual internal response to stressors and is characterized by arousal and displeasure. When stress is defined as a stimulus-response, the term stressor is used to indicate the psychological condition(Jex, 1998).

(Le Fevre, Matheny, & Kolt, 2003) used the term "stressor" to describe the external force or influence acting on the individual and "stress" to denote the resulting reaction, terminology adopted by many others e.g (Langan-Fox, Wirth, Code, Langfield-Smith, & Wirth, 2001; Quick et al., 2001). Usually a stressor is threatening when it will have a big impact on the individual. According to Sauter (Sauter et al., 1992) **stressors** can be divided into four main areas namely: physical and psychological stressors, past, present and futures stressors, positive and negative stressors, and acute and chronic stressors.

2.1.2.3 Types of stressors:

1. Physical and Psychological Stressors

- **Physical stressors** include everything from lack of sleep to invasive surgery.
- **Psychological stressors** evoke distressing emotions, such as hate, anger, sadness and fear.

2. Past, Present And Futures Stressors

- **Past stressors**, such as traumatic childhood experiences, may continue to exert pressure in the present.
- **Present stressors** include work deadlines and sales quotas.
- **Future stressors** include things that have not yet happened but that we worry about anyway.

3. Positive And Negative Stressors

- **Positive stressors** Stress can be positive (getting a promotion, getting married) positive stressors are usually better, they can be stressful because often something is given up when something is gained. For example, one may trade the ease and comfort of an old job for the excitement of a new job, but the new job includes challenges, too.

- **Negative stressors :** losing a job, getting divorce.

4. Acute And Chronic Stressors

- **Acute stress** comes on suddenly and lasts for a relatively short time, such as your babysitter calling in sick on the same day you have to give a big presentation at work.
- **Chronic stress** is long lasting. It may stem from an unsatisfying job, an unhappy relationship or living in poverty. Chronic stress may also arise from traumatic childhood experiences. Chronic stress is far more damaging than acute stress.

According to (Fairbrother & Warn, 2003) there are two further divisions of acute and chronic stressors.

Acute And Chronic Stressors Include:

- **Daily hassles stressors:** include everyday stressors also known as daily hassles. This is the stress created by the demands of daily life, including our work, our families and our social life, also referred to as work and non-work stressors. The most often cited everyday stressor is work. In today's world of doing more with less, employees find themselves with more work, fewer resources, and less time. Individuals have tight deadlines and a competitive work environment in which only the best performers are guaranteed continued employment. All of these factors add up to a very stressful work environment (Fairbrother & Warn, 2003).
- **Home demands stressors:** Other everyday stressors can include home demands: These are taking care of aging parents and trying to raise children and maintain a home. Normal daily hassles such as too many things to do, juggling different responsibilities, time pressures, traffic noises, job dissatisfactions, poor health, negative attitudes, relationship

demands, or financial problems can also cause significant stress (Emmons & McCullough, 2003).

2.1.2.4 Theories of Stressors:

1. Systemic Stress: Selye's Theory

The popularity of the stress concept in science and mass media stems largely from the work of the endocrinologist Hans Selye (Selye, 1956). In a series of animal studies he observed that a variety of stimulus events (e.g., heat, cold, toxic agents) applied intensely and long enough are capable of producing common effects, meaning not specific to either stimulus event. (Besides these nonspecific changes in the body, each stimulus produces, of course, its specific effect, heat, for example, produces vasodilatation, and cold vasoconstriction.)

According to Selye, these nonspecifically caused changes constitute the stereotypical, i.e., specific, response pattern of systemic stress. Selye (Selye, 1976) defines this stress as `a state manifested by a syndrome which consists of all the nonspecifically induced changes in a biologic system.'

According to Selye (Selye, 1976) this stereotypical response pattern, called the `General Adaptation Syndrome' (GAS), proceeds in three stages.

1. **The alarm reaction**

   Comprises an initial shock phase and a subsequent counter-shock phase. The shock phase exhibits autonomic excitability, an increased adrenaline discharge, and gastro-intestinal ulcerations. The counter-shock phase marks the initial operation of defensive processes and is characterized by increased adrenocortical activity.

2. **stage of resistance**

If noxious stimulation continues, the organism enters the stage of resistance. In this stage, the symptoms of the alarm reaction disappear, which seemingly indicates the organism's adaptation to the stressor. However, while resistance to the noxious stimulation increases, resistance to other kinds of stressors decreases at the same time.

3. **Stage of exhaustion**

If the aversive stimulation persists, resistance gives way to the stage of exhaustion. The organism's capability of adapting to the stressor is exhausted, the symptoms of alarm reaction stage reappear, but resistance is no longer possible. Irreversible tissue damages appear, and, if the stimulation persists, the organism dies. Although Selye's work influenced a whole generation of stress researchers, marked weaknesses in his theory soon became obvious. First of all, Selye's conception of stress as a reaction to a multitude of different events had the fatal consequence that the stress concept became the melting pot for all kinds of approaches.

Thus, by becoming a synonym for diverse terms such as, for example, anxiety, threat, conflict, or emotional arousal, the concept of stress was in danger of losing its scientific value (Engel, 1985). Besides this general reservation, specific critical issues have been raised. One criticism was directed at the theory's core assumption of a nonspecific causation of the GAS.

Mason (Mason, 1971, 1975b) pointed out that the stressors observed as effective by Selye carried a common emotional meaning: they were novel, strange, and unfamiliar to the animal. Thus, the animal's state could be described in terms of helplessness, uncertainty, and lack of control. Consequently, the hormonal GAS responses followed the

(specific) emotional impact of such influences rather than the influences as such. In accordance with this assumption, Mason (Mason, 1975a) demonstrated that in experiments where uncertainty had been eliminated no GAS was observed. This criticism lead to a second, more profound argument: unlike the physiological stress investigated by Selye, the stress experienced by humans is almost always the result of a cognitive mediation (Arnold, 1960; Janis, 1989; Lazarus, 1966; Lazarus & Launier, 1978). Selye, however, fails to specify those mechanisms that may explain the cognitive transformation of `objective' noxious events into the subjective experience of being distressed. In addition, Selye does not take into account coping mechanisms as important mediators of the stress–outcome relationship. Both topics are central to psychological stress theories as, for example, elaborated by the Lazarus group.

2. Holmes and Rahe- Life events theory:

"Stress occurs when the situation requires more resources than are available"

A derivative of the systemic approach is the research on *critical life events*. An example is the influential hypothesis of Holmes and Rahe (Holmes & Rahe, 1967), based on Selye's work, that changes in habits, rather than the threat or meaning of critical events, is involved in the genesis of disease. The authors assumed that critical life events, regardless of their specific (e.g., positive or negative) quality, stimulate change that produces challenge to the organism. Most of this research, however, has not been theoretically driven and exhibited little empirical support for this hypothesis.

3. Psychological Stress: The Lazarus Theory

Lazarus was the initiative in explaining the psychological stress according to appraisal and coping. Two concepts are central to any psychological stress theory: appraisal, i.e., individuals'

evaluation of the significance of what is happening for their well-being, and coping, i.e., individuals' efforts in thought and action to manage specific demands (Lazarus, 1966, 1993). Since its first presentation as a comprehensive theory (Lazarus, 1966), the Lazarus stress theory has undergone several essential revisions (Lazarus, 1991; Lazarus & Launier, 1978). In the latest version (Lazarus, 1991), stress is regarded as a relational concept, i.e., stress is not defined as a specific kind of external stimulation nor a specific pattern of physiological, behavioral, or subjective reactions. Instead, stress is viewed as a relationship (`transaction') between individuals and their environment.

Psychological stress refers to a relationship with the environment that the person appraises as significant for his or her well-being and in which the demands tax or exceed available coping resources' (Lazarus & Folkman, 1986). This definition points to two processes as central mediators within the person–environment transaction: cognitive appraisal and coping.

The concept of *appraisal*, introduced into emotion research by(Arnold, 1960) and elaborated with respect to stress processes by Lazarus (Lazarus, 1966; Lazarus & Launier, 1978), is a key factor for understanding stress-relevant transactions. This concept is based on the idea that emotional processes (including stress) are dependent on actual expectancies that persons manifest with regard to the significance and outcome of a specific encounter. This concept is necessary to explain individual differences in quality, intensity, and duration of an elicited emotion in environments that are objectively equal for different individuals. It is generally assumed that the resulting state is generated, maintained, and eventually altered by a specific pattern of appraisals. These appraisals, in turn, are determined by a number of personal and situational factors. The most important factors on the personal side are motivational dispositions,

goals, values, and generalized expectancies. Relevant situational parameters are predictability, controllability, and imminence of a potentially stressful event.

4. Resource Theories of Stress:

Unlike approaches discussed so far, resource theories of stress are not primarily concerned with factors that create stress, but with resources that preserve well-being in the face of stressful encounters. Several social and personal constructs have been proposed, such as social support (Schwarzer & Leppin, 1991), sense of coherence (Antonovsky, 1979), hardiness (Kobasa, 1979), self-efficacy (Bandura, 1977), or optimism (Scheier & Carver, 1992). Whereas self-efficacy and optimism are single protective factors, hardiness and sense of coherence represent tripartite approaches. Hardiness is an amalgam of three components: internal control, commitment, and a sense of challenge as opposed to threat. Similarly, sense of coherence consists of believing that the world is meaningful, predictable, and basically benevolent. Within the social support field, several types have been investigated, such as instrumental, informational, appraisal, and emotional support.

5. Conversation of Resources Theory (COR): Theory of Hobfoll, 1989

The recently offered conservation of resources (COR) theory (Hobfoll, 1989; Hobfaoll et al, 1996) assumes that stress occurs in any of three contexts: when people experience loss of resources, when resources are threatened, or when people invest their resources without subsequent gain. Four categories of resources are proposed: object resources (i.e., physical objects such as home, clothing, or access to transportation), condition resources (e.g., employment, personal relationships), personal resources (e.g., skills or self-efficacy), and energy resources (means that facilitate the attainment of other resources, for example, money, credit, or knowledge).

Hobfoll and co-workers outlined a number of testable hypotheses (called principles) derived from basic assumptions of COR (Hobfoll et al, 1996) . Loss of resources is the primary source of stress. This principle contradicts the fundamental assumption of approaches on critical life events (Holmes & Rahe, 1967) that stress occurs whenever individuals are forced to readjust themselves to situational circumstances, may these circumstances be positive (e.g., marriage) or negative (e.g., loss of a beloved person). In an empirical test of this basic principle, (Hobfoll & Lilly, 1993) found that only loss of resources was related to distress.

1. Resources act to preserve and protect other resources. Self-esteem is an important resource that may be beneficial for other resources. (Hobfoll & Leiberman, 1987), for example, observed that women who were high in self-esteem made good use of social support when confronted with stress, whereas those who lacked self-esteem interpreted social support as an indication of personal inadequacy and, consequently, misused support.
2. Following stressful circumstances, individuals have an increasingly depleted resource pool to combat further stress. This depletion impairs individuals' capability of coping with further stress, thus resulting in a loss spiral. This process view of resource investment requires to focus on how the interplay between resources and situational demands changes over time as stressor sequences unfold. In addition, this principle shows that it is important to investigate not only the effect of resources on outcome, but also of outcome on resources (Hobfoll et al., 1996).

6. Theory of Kobasa and colleagues- Hardiness theory:

One’s attitude toward the events determines stress, not the event. Kobasa (Kobasa, 1979) considered that people in high stress condition has personality trait consisted of commitment,

control and challenge, based on existential personality theories (Kobasa & Maddi, 1977; Maddi, 1988, 1989). Commitment is the tendency to involve oneself fully in one's total life spece. Control, including responsibility, is the tendency to believe and act as if one can influence the course of events within reasonable limits. Challenge is based on the belief that change rather than stability is the normative mode of life, anticipated as an opportunity for personal growth (Orr & Westman, 1990).

Hardiness is considered as the measure of one's tendency to make relationship to oneself and one's outside world. It is not a mere rigidness or stress "endurance", but a power to cultivate one's way under difficult conditions and go through stressful events. It is not like an reckless attack, but an ability to understand conditions around oneself, an ability to self-decision.

2.1.3 Section Three: Siege

2.1.3.1 Definitions of siege

Siege can be defined as “the act or process of surrounding and attacking a fortified place in such a way as to isolate it from help and supplies, for the purpose of lessening the resistance of the defenders and thereby making capture possible”.

A **siege** is a military blockade of a city or fortress with the intent of conquering by attrition or assault. The term derives from sedere, Latin for "to sit"(Wiki, 2014).

Siege: the act or process of surrounding and attacking a fortified place in such a way as to isolate it from help and supplies, for the purpose of lessening the resistance of the defenders and thereby making capture possible (Dectionary, 2014).

Siege warfare is an operational strategy to facilitate capture of a fortified place, such as a city, in such a way as to isolate it from relief in the form of supplies or additional defensive forces(Kraska, 2009). Siege warfare is a form of constant, low-intensity conflict characterized by one party holding a strong, static defensive position.

A **blockade** is an effort to cut off supplies, war material or communications from a particular area by force, either in part or totally(Wiki, 2014). A blockade should not be confused with an embargo or sanctions, which are legal barriers to trade. It is also distinct from a siege in that a blockade is usually directed at an entire country or region, rather than a fortress or city. While most blockades historically took place at sea, blockade is still used on land to prevent someone coming into a certain area.

An **embargo** (from the Spanish "embargo", meaning hindrance, obstruction, etc. in a general sense, a trading ban in trade terminology and literally "distraint" in juridic parlance) is the partial or complete prohibition of commerce and trade with a particular country or a group of countries (UCI, 2013). Embargoes are considered strong diplomatic measures imposed in an effort, by the imposing country, to elicit a given national-interest result from the country on which it is imposed. Embargoes are similar to economic sanctions and are generally considered legal barriers to trade, not to be confused with blockades, which are often considered to be acts of war (Snyder & Herbener, 2004).

2.1.3.2 Siege Stressors

The Palestinian territories west bank and Gaza Strip exposed to collective punishment for over than 10 years since 2006. The punishment and terrorism of the Israel government start with siege

and recurrent wars imposed on Gaza strip. The siege and wars affected all life aspects of the Palestinian people and generated a wide range of multiple and mixed stressors.

Israel has imposed a severe siege on the Gaza Strip since Hamas' winning of the parliamentary elections in January, 2006 (Qouta & Kassab, 2008). However, Hadar says that, The siege situation is only the most extreme case in which Israeli policies aim to enclose large Palestinian populations and separate them from the rest of the world (Hadar, 2008).

Deprivation, poverty, feelings of anger, frustration, hopelessness, feelings of powerlessness and despair characterize the situation for the people in Gaza today as a result of the continuous siege and escalating violence (GCMHP, 2007). Gaza Community Mental Health Program added that, the situation does gravely impact the mental health of the population and the psychological pain the people experience is being manifested in the high levels of domestic, tribal and community violence.

The continued siege resulting in destruction of the basic material infrastructure and the severe obstruction of the flow of supplies essential to maintain life, health, and the institutions of social support and control. Consequently, a threat to health and the health care determinants of catastrophic proportions(Allodi, 2008).

Gaza Strip reveals that 9.6 percent of the overall mortality during the last 8 years was attributed to the Israeli military operations and siege, this proportion of deaths attributable to Israeli operations inside the Gaza Strip is close to the proportion of deaths attributable to malignant neoplasm (10.3%), which is the third cause of deaths in the OPT after heart diseases (21%) and cerebrovascular diseases(11%)(MOH, 2006).

1. Psychological stressors

The living under siege is critical and overwhelming situation for children and adult, it push the individuals to be nervous, anxious, fearful, always looking for something unknown, hostile and unlimited psychological problems that leads finally to development of psychological disorders.

The increase in the siege status leads to more psychological suffering like being existed, anxiety, depression, hostility and sensitivity (Qouta & Kassab, 2008).

The Israeli recurrent military operations in the Gaza Strip are also associated with disrupting the performance of health care services facilities, changing the pattern of morbidity, and increasing the burden of psychological and psychosocial disorders(Mohammad Ashour, 2008).

A state of siege constitutes an attack on the possibility of ordinary life, and so is also an attack on children's psychosocial and cognitive development(First, 2008).

2. Social Stressors

Socially the Palestinians were connected to each other by interrelations that depict the image of their culture and norms over the time. But the effects of the siege broken all these connections and made them isolated at their home, and limited their participation in the social situations and events due to deterioration in the economic situations.

Qouta revealed there was a reduction in the social visits between citizens by 79% due to worsening of financial and social conditions. It was also indicated by the study that most of the interviewees of the study expressed that they do not tend to stay long outside the home due to the conditions of work or other reasons. The siege impacted about 92% on the behaviors of citizens regarding participating in social events (Qouta & Kassab, 2008).

3. Living in stressors

The living stressors that generated by the siege uncountable, and disseminated among the Palestinian families affecting every living condition. These stressors let them feel that they in a big prison. They live in frustration and hopeless situations and unable to proceed over to take action for their future.

The Israeli siege pushed around 84% of Palestinian families to change the patterns of their lives; while about 93% of them gave up their daily living requirements. About 95% of the families in Gaza, expressed their dissatisfaction of the fact that Gaza Strip is converted into a big prison, where they live in throughout the night and day(Qouta & Kassab, 2008).

4. Health stressors

The magnitude of the siege stressors appear mostly in the health status of the Palestinian population. Due to continued siege and closure of the Gaza strip there is a decrease in medical supply, medical equipment, transfer rate, and medication for patients. The siege deteriorate medical health and health status of the Palestinians living in Gaza Strip.

The restricted supplies of fuels and the decreased supplies of electricity from Israel has led during the last year to frequent and prolonged electricity cuts and to limit power available to run health facilities' generators, interrupting the performance of intensive care units, operating theatres, and emergency rooms and disturbing the refrigeration of perishable medical supplies, including vaccines in the Central Drug Store(WHO, 2008).

Qouta denoted that 47% of patients in Gaza are not able to get the medicine they needed after Israel tightened its control over the crossings and prevented aid convoys and medical supplies to

enter the hospitals in Gaza. The suffering of 38% of the patients by not receiving medical services has increased as well(Qouta & Kassab, 2008).

The effects of Israeli policy and practices of closing the Gaza Strip is not limited to the referral of patients for tertiary and specialized medical care outside it. Sealing the strip prevents medical students and health professionals from medical and postgraduate training which is not available in it(Mohammad Ashour, 2008).

The health care situation in Gaza has been severely affected by the Israeli blockade. Hospitals and medical facilities experience frequent shortages of electricity, lack of equipment, spare parts and medications due to the blockade (Nilsson, 2008).

5. Economic stressors

The economic status considered the backbone of life in the world as well as Gaza Strip. The export and import of goods are essential for life, without the goods and equipment we are unable to survive or do anything like, buying goods, building and construction, rebuilding of destroyed houses, and trading. The siege destroy the general and specific life aspects in Gaza Strip, and all the Palestinians suffering from the economic stressors that generated by the siege.

Due to the continued siege, 95% of the citizens could not find the objects and goods that they were looking for; while the prices rose 99% as the income of citizens were reduced with 68%; 45% of whom were fired from their jobs; moreover, 77% of the workers were suspended of their jobs in the construction sector and they were unable to sustain their work due to lack of basic materials for construction of cement and iron and others (Qouta & Kassab, 2008).

2.1.3.3 Stressors and Cancer:

Cancer patients experience different types of stressors that generated form the cancer itself that presented to the patients suffering from cancer. Cancer is a chronic, rather than acute stressor (Gurevich et al, 2002) and presents a series of different traumatic events over time, including diagnosis, disease progression, treatment, adverse physical effects (e.g. disfigurement) and recurrence (Kangas et al, 2002). However, although the nature of cancer as a stressor may be distinctive, (Smith et al, 1999) argued that some characteristics may not be unique to the cancer experience. For example, combat veterans may experience a number of stressful events over a long period of time, and fear of recurrence may also be true of other victims, such as victims of floods or hurricanes(M. Y. Smith et al., 1999). However, as well as being prolonged, (Green et al, 1997) argued that the cancer experience is different because it represents an internal, rather than external threat (e.g. in the case of a natural disaster such as a Tsunami), where the threat arises from within rather than from an outside source and is thus impossible to separate from oneself. (Green et al., 1997) also suggested that the cancer experience can be conceptualised as an informational as well as an immediate threat, so that initial emphasis may be on thinking about the future and information pertaining to prognosis, and later experiences (e.g. surgery to remove cancer) may represent more immediate threat to the self.

Patients with cancer face most of the stressors associated with diagnosis, illness and treatment. These stressors may generate coping strategy, which may affect the mental health (Deimling et al., 2006). Cancer affects patients' lives and those of their families in different aspects. Cancer diagnosis and treatment brings changes in patients' personal paths of life, in their daily activities, work, relationships, and family roles, and it is associated with a high level of patient psychological stress. This stress shows up as anxiety and/or depression (Zabalegui et al, 2005). .

Stress is one of the most frequently noted characteristics of cancer patients, accompanying them throughout all stages and treatments (Mcbride et al, 2000; Redd, 1995).

2.1.4 Section Four: War trauma

war trauma and traumatic events considered the major stressors for a wide range of people everywhere, the individuals and soldiers who experienced combat and war should suffer from different type of symptoms like (e.g., being fired upon, becoming a prisoner of war, sustaining an injury, or witnessing serious injury or death). However, civilians who are not directly involved in the war effort are also frequently confronted with war related stressors. Some typical civilian stressors include life threat; being bombed, shot at, threatened, or displaced; being confined to one's home; losing a loved one or family member; suffering from financial hardships; and having restricted access to resources such as food, water, and other supplies. Particularly horrific stressors experienced by some civilians during war include torture, beatings, rape, forced labor, witnessing sexual abuse of or violence toward a family member, and mock execution.

2.1.4.1 Definitions of trauma:

Trauma is used to refer both to negative events that produce distress and to the distress itself. Technically, “trauma” refers only to the event, not the reaction, and should be reserved for major events that are psychologically overwhelming for an individual.

The Diagnostic and Statistical Manual of Mental Disorders, 4th edition, Text Revision (DSM-IV-TR; American Psychiatric Association (APA, 2000) specifically defines a trauma as direct personal experience of an event that involves actual or threatened death or serious injury, or other threat to one’s physical integrity; or witnessing an event that involves death, injury, or a threat to the physical integrity of another person; or learning about unexpected or violent death,

serious harm, or threat of death or injury experienced by a family member or other close associate (Criterion A1). The person's response to the event must involve intense fear, helplessness, or horror (or in children, the response must involve disorganized or agitated behavior) (Criterion A2).

2.1.4.2 Trauma Types:

1. Natural Disasters

Natural disasters can be defined as large-scale, not directly human-caused, injury- or death producing environmental events that adversely affect a significant number of people (Briere & Elliott, 2000). Typical disasters include earthquakes, large fires, floods, avalanches, hurricanes, tornados, and volcanic eruptions.

2. Mass Interpersonal Violence

Intentional violence that involves high numbers of injuries or casualties— but does not occur in the context of war—is a newer category in the trauma field(Briere & Elliott, 2000).

3. Large-Scale Transportation Accidents

Transportation accidents involve events such as airline crashes, train derailments, and maritime (for example, ship) accidents. These events often involve multiple victims and high fatality rates. Although the incidence of such events is not easily determined, large-scale transportation accidents can be especially traumatic to survivors, since such events frequently occur over a relatively extended period of time during which the victims are exposed to ongoing terror and fear of death(Briere & Elliott, 2000).

4. House or Other Domestic Fires

Although fires are often listed as disasters in the trauma literature, a significant number of victims seen by trauma clinicians have experienced smaller-scale fires. These include house

fires, often caused by smoking in bed or by electrical short circuits, and gas explosions due to leaking propane tanks, stoves, or heaters. Physical injuries from fire can be particularly traumatic(Briere & Elliott, 2000).

5. Motor Vehicle Accidents

Approximately 20 percent of individuals in the United States have experienced a serious motor vehicle accident (MVA) (Blanchard & Hickling, 1997). A substantial number of these people go on to develop significant psychological disturbance, especially if the accident involved major injury or resulted in the death of others. In the latter case, grief and self-blame may increase subsequent psychological effects.

6. Rape and Sexual Assault

Rape can be defined as nonconsensual oral, anal, or vaginal sexual penetration of an adolescent or adult through the use of threat or physical force, or when the victim is incapable of giving consent. The term sexual assault typically denotes any forced sexual contact short of rape, although some authorities consider sexual assault to involve any forced sexual contact, including rape (Briere & Elliott, 2000).

7. Stranger Physical Assault

Stranger assault refers to muggings, beatings, stabbings, shootings, attempted strangulations, and other violent actions against a person not well known to the assailant. The motive for such aggression is often robbery or the (sometimes random) expression of anger, although in gang and "drive-by" situations the intent may also be to define or protect turf or to otherwise assert dominance.

8. Partner Battery

Partner battery (also known as wife battering, spouse abuse, or domestic violence) is usually defined as physically or sexually assaultive behavior by one adult against another in an intimate, sexual, and usually (but not inevitably) cohabiting relationship. In the majority of cases, there is emotional abuse as well (Straus et al, 1990) .There may also be threats toward or violence against children, pets, and/or property.

9. Torture

Torture has been defined by the United Nations as "any act by which severe pain or suffering, whether physical or mental, is intentionally inflicted on a person for such purposes as obtaining from him [sic] or a third person information or confession, punishing him for an act he has committed or is suspected of having committed, or intimidating him or a third person (Vesti & Kastrup, 1997).

10. War

War is a common and relatively powerful source of enduring psychological disturbance. Posttraumatic difficulties have been described in veterans of the American Civil War and both world wars, as well as in those who fought in Afghanistan, Korea, Vietnam, the Persian Gulf (including Iraq), Israel, Armenia, the Falklands, Somalia, and Bosnia.; (Blake et al., 1995).

Unfortunately, Palestine and especially Gaza Strip was added to the most hot areas in the world that exposed to wide range of wars and conflicts (Thabet et al, 2012, 2008, 2007, 2006, 2000, 1999). War involves a very wide range of violent and traumatic experiences, including immediate threat of death and/or disfigurement, physical injury, witnessing injury and/or death of others, and involvement in injuring or killing others (both combatants and civilians). For some, war includes witnessing or participating in atrocities, as well as undergoing rape, capture,

and prisoner-of war experiences such as confinement, torture, and extreme physical deprivation. These traumas, in turn, can produce a variety of symptoms and disorders.

In a study by Altawil examining the war trauma, the researchers found that the most prevalent types of trauma exposure for Palestinian children were as follows: 99% of children had suffered humiliation (either to themselves or a family member); 97% had been exposed to the sound of explosions/bombs; 85% had witnessed a martyr's funeral and 84% had witnessed shelling by tanks, artillery, or military planes (Altawil et al, 2008) .

2.1.4.3 Effects of war-zone stressors:

Most of the research on the effects of war on civilians has been conducted on refugee samples and people who were displaced as a result of war. Compared to other war-exposed civilians, these individuals' experiences may be more traumatic not only because of the situations that led to their exile but also because of stressors experienced in refugee camps and during the process of resettlement. In general, refugees exhibit high rates of PTSD and depression as well as other psychiatric problems, particularly if they were tortured (J. De Jong, Scholte, Koeter, & Hart, 2000). For example, in a survey of Bosnians from a refugee camp in Croatia who experienced on average more than six traumatic events, approximately one third had depression and one quarter had PTSD. Twenty percent met criteria for both disorders. Refugees with both depression and PTSD were five times more likely to report being physically disabled than refugees with no psychiatric symptoms (McInnes et al, 1999).

PTSD and other problems are prevalent in non-refugee samples as well. An article in a 2001 issue of the Journal of the American Medical Association reported on PTSD in survivors of war or mass violence in four low-income countries (De Jong et al, 2001) . Rates of PTSD were 37.4% in Algeria, 28.4% in Cambodia, 17.8% in Gaza, and 15.8% in Ethiopia. These rates are

considerably higher than the U.S. rate of 8% (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). One suggested explanation for the significantly higher rate in Algeria is that the terrorist attacks were still ongoing when PTSD was assessed. Overall, several risk factors for PTSD were identified, including torture and the experience of trauma after the age of 12.

Results from studies of refugees and impoverished countries may be difficult to generalize to Western cultures. However, findings from more industrialized settings such as Israel and Beirut may be more relevant to American civilians. Studies from the Gulf War suggest that, during the early weeks of the war, there was a marked rise in stress for people of all ages. However, the stress level dropped off within a few weeks (Milgram, 1993). For example, data were collected on all casualties that arrived in the emergency departments of 12 local hospitals after actual missile attacks and false alarms. Almost 75% of admissions were for stress reactions or unjustified atropine injections. The highest number of psychological casualties occurred during the first two missile attacks, after which the numbers declined (Bleich, Dycian, Koslowsky, Solomon, & Wiener, 1992). Another study found that while approximately half of the participants in a study sample reported sleep problems during the war, there was significant improvement 30 days after the war ended (Askenasy & Lewin, 1996).

Similar results were found in a study following the 1982 Lebanon-Israel war. Almost 12,000 Israelis (civilians?) were interviewed regarding their mood on eleven different occasions between 1979 and 1984. Outbreak of war coincided with an increase in depression. Incidence of depressed moods peaked at the time of the Palestinian massacre at the refugee camps, and then it dropped below baseline even though conflict continued. Thus, many civilians respond to

prolonged war with various stress symptoms, but as time passes people seem to recover and stress levels return to normal.

2.1.4.4 Long-term effects war stressors:

Although most civilians who are exposed to war stress will not develop long-term mental-health problems, some will, particularly if they have been exposed to severe stressors. Much research on this topic has been conducted with Holocaust survivors. In a study of 124 Jewish Holocaust survivors, 46% met criteria for PTSD. In a community sample of Israelis age 75 and older, 27% of male and 18% of female Holocaust survivors met criteria for PTSD as compared to 4% percent of males and 8% of females who did not experience the Holocaust (Landau & Litwin, 2000). These statistics make it clear that PTSD symptoms will persist throughout Holocaust survivors' lifetimes. Similarly, data from a long-term follow-up study of civilians in Holland 50 years after World War II indicate that 4% of the population exposed to a war related event have PTSD. Only 1.5% of non-exposed individuals in this same category have PTSD (Bramsen & Ploeg, 1999).

2.1.4.5 War stressors and physical health problems:

There is accumulating evidence that PTSD is associated with long-term physical health problems. In terms of research on civilians exposed to war, there is evidence from an epidemiological study of civilians in Beirut that exposure to war events is associated with higher mortality rates (Sibai, Fletcher, & Armenian, 2001). In a previous study on heart disease and wartime stressors, it was found that people with heart disease were five times more likely to have crossed the "green-line" (demarcation lines that divide the capital of Beirut into two sectors and

separate the belligerent parties) than patients without heart disease. This suggests that there is a relationship between heart disease and wartime stress (Sibai et al, 1989). There is also evidence that war may affect the immune system, as evidenced by a sample of displaced women from Croatia who had altered psychological, hormonal, and immunological activity (Sabioncello et al., 2000).

2.1.4.6 War Trauma and Cancer

Psychological trauma is caused by events that are sudden, unexpected and which the individual perceives as a dramatic loss of personal control and personal safety (Ehlers & Steil, 1995). Cancer can be encompassed within this definition (Brennan, 2001) because such an extreme life event threatens core assumptions about the world including the belief that a) the world is benevolent; b) the world is meaningful and c) the self is worthy (Janoff-Bulman, 2010). Since the introduction of life-threatening illness as a potential PTSD stressor in the Diagnostic and Statistical Manual of Mental Disorders (APA, 2000), the application of posttraumatic stress disorder models to the cancer experience has been the focus of considerable research interest (Kangas et al., 2002). In terms of dual representation theory of PTSD (Brewin, Dalgleish, & Joseph, 1996) individuals diagnosed with cancer may be at risk of developing pathological stress response symptoms due to a potentially severe and prolonged stressor. Individuals diagnosed with cancer may have existing assumptions about health and well-being violated and struggle to incorporate new, traumatic information into pre-existing schemata. Indeed, the types of events that (Brewin et al., 1996) included within their trauma framework involve signals that the world is unpredictable and uncontrollable and includes “major illness or disability” . (Kangas et al., 2002) also noted that denial as part of the response process may represent the avoidance aspect

of models of PTSD and further inhibit emotional processing via maladaptive information integration.

Cancer and stress disease are both characterized by a huge complexity, heterogeneity and multi-factorial pathogenesis. It is well accepted that cancer growth involves the microenvironment, a space where tumor cells receive nutrients from the host tissue, produce angiogenetic factors and form new vessels (Denaro, Tomasello, & Russi, 2014).

Epidemiological and clinical studies over the past 30 years have provided strong evidence for links between chronic stress, depression, social isolation and cancer progression. By contrast, there is only limited evidence for the role of these behavioral factors in cancer initiation (Denaro et al., 2014). Recent cellular and molecular studies have identified specific stress-induced signaling pathways that impact on cancer growth and metastasis (Moreno-Smith, Lutgendorf, & Sood, 2010).

Herbert Snow, very famous surgeon for the "invention" of elective lymph node dissection in melanoma, (1893) argues repeatedly that "mental depression is a precursor to cancer". He was the first author to describe on 250 patients the association stress events-cancer, in the Snow Cancer Hospital; among these patients in 156 he detects "acute stress in the run-up", such as the loss of a close relative, in 32 reported "the hardness of the work", in 43 "stories of hardship that would allow to suspect a mechanical injury" while only 19 had no causal relationship (Kenney, 1946).

Whereas evidence for the role of psychosocial factors in cancer initiation is limited and some-what contradictory (Duijts et al, 2003; Michael et al, 2009), support is stronger for links between psychological factors such as stress, depression and social isolation and disease progression (Satin et al, 2009; Steel et al, 2007). Chronicity of negative affect, as manifested by depressed

mood or hopelessness, appears to have stronger relationships with outcomes than do stressful events, suggesting that sustained activation of negative affective pathways may provide the strongest links to cancer progression (Buccheri, 1998; Everson et al., 1996).

2.1.5 Section Five: Anxiety

Anxiety considered an emotional state that affect every one human or animal. So, it is important to understand anxiety as a normal feeling or emotional state in response to certain situations and that it constitutes a common response to different daily stressful situations. This means that a certain degree of anxiety is even desirable for the normal treatment of day-to-day demands. Only when this exceeds a certain intensity or the person's adaptive capacity does anxiety become pathological, causing significant discomfort with symptoms that affect the person physically, psychologically, and behaviorally.

2.1.5.1 Anxiety definitions:

Anxiety is defined as "a state of intense apprehension, uncertainty, and fear resulting from the anticipation of a threatening event or situation, often to a degree that normal physical and psychological functioning is disrupted" American Heritage Medical Dictionary (AHMD, 2007).

Furthermore, Anxiety is defined as a negative emotional state. It involves nervousness, worry, and fear. Thus, anxiety has a component called cognitive anxiety (Weinberg & Gould, 2014). Cognitive anxiety shows up as troubles to remember or execute any given task. Also executing any performance in own ability level might be difficult when in a state of anxiety (YLI-PIIPARI, Liukkonen, & Jaakkola, 2009).

Anxiety also has a component of somatic anxiety. Somatic (Weinberg & Gould, 2014) It refers to body functions. Somatic anxiety shows up as a feel of pressure in chest, breathing problems, dizziness, or some other pain (YLI-PIIPARI et al., 2009).

Anxiety is also divided in to **state anxiety** and **trait anxiety**.

State anxiety is defined as an emotional state "characterized by subjective, consciously perceived feelings of apprehension and tension, accompanied by or associated with activation or arousal of the autonomic nervous system (Spielberger, 2010).

State anxiety changes all the time even during competition. For example in ice hockey the level of state anxiety might be slightly elevated before a game, a lower level once he or she is settled into the pace of game, and then an extremely high level in the final minutes of a close game (Weinberg & Gould, 2014).

Trait anxiety is part of the personality. It predisposes an individual to see different situations as more threatening than they really are. Thus the level of state anxiety increases. Usually, the higher the level of trait-anxiety a person has, the higher the level of state anxiety is (Spielberger, 2010).

According to (C. Karageorghis, 2007) anxiety occur in three different levels: Cognitive (thought process); Somatic (physical response; and Behavioral (patterns of behavior).

- **Cognitive signs of anxiety** include for example difficulty in concentration, negative thoughts, lack of self-confidence and fear of failure.
- **Somatic signs of anxiety include** increased heart rate, excessive sweating, muscular tension and constant need to urinate.
- **Behavioral signs of anxiety** are for example playing safe, avoidance of eye contact, biting fingernails and introversion (C. Karageorghis, 2007; Costas Karageorghis & Terry, 2011).

2.1.5.2 Classification of Anxiety according to Disorder type:

1. Separation Anxiety Disorder

Separation Anxiety Disorder was moved from Disorders Usually First Diagnosed in Infancy, Childhood, or Adolescence (DSM-IV-TR) to the Anxiety Disorders. The age-of-onset requirement (‘‘before age 18 years’’) was been dropped; thus allowing for diagnosis of Separation Anxiety Disorder in adults (Maffei et al., 1997). Prevalence rates are as follows: children (4%); adolescents, (1.6%); and adults, (0.9% to 1.9%) (Mohr & Schneider, 2013). Separation Anxiety Disorder is the most prevalent Anxiety Disorder in children, with girls more susceptible than boys.

2. Selective Mutism

Selective Mutism–the voluntary refusal to speak (typically occurring outside of the home or immediate family). This is a new diagnosis in the Anxiety Disorders chapter of the DSM-5, due to the restructuring of the chapters and the removal of the Disorders Usually First Diagnosed in Infancy, Childhood, or Adolescence(APA, 2013).

Selective Mutism is a refusal to verbally communicate outside of the home or with people other than immediate family/caregivers. Selective Mutism typically has an age of onset of under 5 years and is often first noticed in school settings (APA, 2013).

3. Specific Phobias

Specific Phobia represent the existence of fear or anxiety in the presence of a specific situation or object. This is called the “phobic stimulus” (APA, 2013). This fear or anxiety must be markedly stronger than the actual threat of the object or situation (i.e., likelihood of being stuck on a well-maintained elevator).

Specific Phobias can develop after a traumatic event or from witnessing traumatic events. Individuals with Specific Phobia will avoid situations of exposure to the stimulus. The fear or anxiety happens every time the person is exposed to the stimulus and may include symptoms of panic attack.

4. Social Anxiety Disorder

Social phobia was originally classified as a mental disorder in the *DSM-III* and has been renamed Social Anxiety Disorder (SAD) in the *DSM*-5. The main feature of SAD is ongoing fear and worry surrounding myriad social situations (Gille & Hoffman, 2013). It is one of the most common mental disorders with a lifetime prevalence rate of slightly greater than 10%. The majority of diagnoses are made during childhood or early adolescence (Marques et al., 2011). SAD is often seen in conjunction with Major Depressive Disorders, other Anxiety Disorders, and Substance Use Disorders (APA, 2013).

5. Panic Disorder

Panic Disorder is defined as recurrent, unexpected panic attacks and was initially classified in the *DSM-III*. There is a median age of onset ranging from 20 to 24 years with a small percentage of individuals first diagnosed in childhood. Panic Disorder is not usually first seen in individuals over the age of 45. There is an annual U.S. prevalence rate of 2.1% to 2.8%; this is one of the highest prevalence rates worldwide (Marques, Robinaugh, LeBlanc, & Hinton, 2011).

The essential features of Panic Disorder are: (1) persistent fear or concern of inappropriate fear responses with recurrent and unexpected panic attacks (2) including physiological changes such as accelerated heart rate, sweating, dizziness, trembling, and chest pain.

Panic Disorder has physical and cognitive symptoms and involves numerous, unexpected panic attacks (although it is important to note that individuals with Panic Disorder can have expected panic attacks too).

6. Generalized Anxiety Disorder (GAD)

Generalized Anxiety Disorder (GAD), in existence since the *DSM-III*. GAD is one of the most common of all mental disorders with an annual prevalence rate of 2.9% among adults in the U.S. Excessive worry or anxiety about a number of events is the key feature of GAD with the experience of the anxiety or worry in discord with the actual or expected event. Although the *DSM-5* Task Force proposed changes to GAD that would have resulted in a lowered diagnostic threshold, this disorder remains largely unchanged from the *DSM-IV-TR.*

Essential features include anxiety or worry that takes place across a number of settings and more days than not for at least six months. The individual experiences at least three characteristic symptoms including: restlessness or feeling keyed up or on edge; being easily fatigued; difficulty concentrating or mind going blank; irritability; muscle tension; and sleep disturbance(APA, 2013).

7. Anxiety Disorder Due to Another Medical Condition

Medical conditions can cause the development of an Anxiety Disorder, but they must cause clinically significant distress.

APA reports "unclear" prevalence rates of Anxiety Disorder Due to Another Medical Condition resultant from the extreme difficulty with differential diagnosis for this category(APA, 2013).

It is especially important for clinicians to carefully rule out differential diagnoses and consult with a physician before using the diagnosis of Anxiety Disorder Due to Another Medical Condition.

Marked anxiety attacks occur and can be directly attributed to an existing medical condition. The development of the anxiety can parallel the course of the illness.

Examples of medical conditions that cause Anxiety Disorder Due to Another Medical Condition include endocrine disease, cardiovascular disorders, respiratory illness, metabolic disturbance, and neurological illness(APA, 2013).

2.1.5.3 Anxiety theories:

1. Freud's Toxic Theory of anxiety

Freud's first theory of anxiety has traditionally been referred to as his *toxic theory* of anxiety. In examining Freudian theory, it can be useful to differentiate Freud's *meta-psychological theory* from his clinical theory (Sigmund Freud & Strachey, 1964). Klein (R. G. Klein, 1991) suggested that whereas Freud's metapsychology may be unsupportable, as its scaffold is often based on anachronistic nineteenth century biology, Freud's clinical theory—based as it is on insights deriving from the psychoanalytic situation—may remain relevant to the contemporary practitioner. Freud's first meta-psychological explanation of anxiety is that dammed-up libido (i.e., libido that is non-discharged, warded-off, or repressed) leads to anxiety. Repressed libido is transformed into a distressing symptom, such as some sort of anxiety disorder. Initially, for Freud, anxiety was not a central theoretical construct but rather a distressing psychiatric symptom to be explained by reference to other theoretical constructs. In 1905, Freud published his theory of infantile sexuality codifying his libidinal drive theory so that from then on instinctual drives became the fuel that drove the mind—a mind conceived as operating analogously to a machine (i.e., mind as mental apparatus) (Sigmund Freud, 1905/1953). The empirical basis for the dammed-up libido theory of anxiety was the presumption that people who were sexually frustrated developed nervous anxiety. Freud (Sigmund Freud, 1936) differentiated

the actual neuroses from the neuro-psychoses of defense. The actual neuroses derive from sexual frustration such as may accrue from coitus interruptus. Sexual frustration presumably results in some sort of biochemical imbalance or build-up of noxious or toxic substances that leads to anxiety. In contrast to the actual neuroses, the neuro-psychoses of defense lead to sexual frustration more indirectly through repression. Sexual wishes are defended against and, as a consequence of their inhibition, are frustrated, resulting in non-discharged libido which in some sort of biochemical manner is transformed into anxiety (Sigmund Freud, Strachey, & Strachey, 1936).

2. Freud's Theory of signal anxiety

In Freud's second theory of anxiety the so-called signal theory of anxiety, Freud shifted from looking at anxiety as a result to looking at anxiety as a cause. Defenses did not so much cause anxiety by preventing affective expression as anxiety caused defenses to be brought into play(Sigmund Freud, 1936). Freud (1926) suggested that anxiety serves as a signal, as an anticipation of danger, which triggers defense mechanisms. Thus anxiety is an unconscious process, a sort of barometer of the intensity of unconscious conflict (Sigmund Freud et al., 1936). The greater the conflict, the greater the anxiety, and therefore the greater the need for defense. In this model, anxiety is understood as a cognition, usually an unconscious one, rather than as an affect. Anxiety reflects an unconscious appraisal by the ego assessing the likelihood that a situation of danger is approaching. Signal anxiety requires such cognitive operations as anticipation of a future event, judgment as to the likelihood that different actions will lead to different dreaded consequences, and appraisal of the dangerousness of an anticipated consequence. Signal anxiety reflects an assessment of cause/effect relationships, especially the relationship between the expression of a wish and its consequence.

3. The Interpersonal Theory Of Anxiety

Sullivan (Sullivan, 1952) developed a theory of anxiety in which anxiety was construed as an interpersonal rather than an exclusively intra-psychic event. As an interpersonal event, anxiety can be understood as a communication between persons in regard to the state of an interpersonal relationship. Sullivan described how an anxious mother communicates that anxiety to her baby, who becomes anxious as a result of registering the communication. Sullivan believes that the baby is capable of a primitive form of empathy with the mother based on emotional contagion so that the baby always knows in some intuitively immediate manner what the mother is feeling. As a communication, anxiety sends the message that the state of the relationship is insecure and precarious so that there is cause for alarm.

4. The Self Psychological Theory Of Anxiety

Self-psychology takes as its starting point the quest for an integrated sense of self. For self-psychologists, the superordinate motivational principle of human functioning is the effort to maintain what (Lachmann & Stolorow, 1980; Stolorow & Lachmann, 1984) have referred to as the cohesiveness, temporal continuity, and positive affective coloring of the self. Kohut and Wolf (Kohut & Wolf, 1978) defined the self as a center of initiative guided by nuclear ideals and ambitions. Anxiety in self psychology is at bottom always fragmentation or disintegration anxiety, reflecting the loss of self-cohesion, self-continuity, and self-esteem. The sense of self, though, cannot be maintained in a vacuum but requires what (Kohut & Wolf, 1978) called self-objects. Self-objects are extensions of the self that function to bolster the sense of self. When self-objects fail, the sense of self falters. Kohut (Kohut & Wolf, 1978)delineated three major self-object functions. Mirroring self-objects bolster the self's need for validation and affirmation. The loss of mirroring evokes anxiety about the loss of self-esteem. Idealizing self-objects bolster

the self's sense of safety and belonging in allowing the self to be connected to something greater than itself. The failure of idealizing self-objects evokes anxiety about being vulnerable to hostile forces. Alter-ego or twin-ship self-objects bolster the self's sense of normalcy and of being human in being like someone else. When alter-ego self-objects fail, anxiety is evoked about being abnormal, alien, and inhuman. Wolf (1988) delineated several other self-object functions. Efficacy self-objects bolster the self's sense of mastery (Benjamin B. Wolman & Stricker, 1990). The failure of efficacy self-objects evokes anxiety about inadequacy and incompetence. Adversarial self-objects bolster the self's sense of being different from others through defining the self in contradistinction to the adversarial self-object. The failure of adversarial self-objects evokes anxiety about the loss of the sense of individuality.

5. Learning Theory

The two-stage theory Mowrer (Mowrer, 1960) of fear acquisition has been highly influential, and despite some serious criticisms, it still plays a prominent role in current thinking of the development of phobias. Mowrer explicitly distinguished between a classical conditioning process, responsible for the conditioning of fear, and an operant conditioning or instrumental learning process, responsible for the conditioning of the avoidance response. The model was developed on the basis of animal experiments. In training procedures, animals receive repeated pairings of a warning signal (for example, a tone) and an aversive stimulus (for example, a shock). After some time, the tone will acquire aversive properties and the animal will experience anxiety on tone presentation when no shock is applied. This phase of the experimental procedure represents the first stage of learning, in which anxiety is attached to previously neutral cues through classical conditioning. In the second stage, the animal learns to terminate the tone by making escape responses, reducing thereby the anxiety. The termination or avoidance of aversive

stimuli leads to negative reinforcement (anxiety reduction), thus strengthening the avoidance behavior. This second stage of learning involves operant conditioning.

6. **Existential Theories**

For existentialism and existential psychotherapy in particular, anxiety is the heart of the matter, the central concern. Whatever the vast differences between existential practitioners and ambiguities or contradictions in each, an understanding that anxiety is central to human existence unites them all.

6.1 Kierkegaard

From Kierkegaard (Kierkegaard, 1959), the important concepts that are applied are the struggle for individual existence and the role of commitment in becoming an individual; and "Angst."

Kierkegaard was also a major and early figure in the conceptualization of anxiety (variously translated as "angst" and "dread"). This anxiety, far from a self-contained emotion, is a defining characteristic of human existence. He differentiates between "fear," which has an object, and "anxiety," which has none (Fischer, 1988; Yalom, 1980). Kierkegaard uses "dizziness" (others speak of "vertigo") to characterize this basic experience of anxiety.

In Kierkegaard's view, anxiety is the enemy of certainty and "finiteness," to which it must succumb. In doing so, freedom is lost. Note that alongside, and perhaps in contradiction to, the pessimistic note struck at the beginning of this quote, is an optimistic finish, in which one might "learn the ultimate," and through anxiety indeed experience the possibility of freedom. Anxiety is thus a teacher (Yalom, 1980).

6.2 Heidegger

Heidegger, perhaps the central "existentialist" for the existential psychotherapists, saw his work as a species of phenomenology (D. Cooper, 1990). But it was a phenomenology that did not

"bracket" and try to step outside of lived experience; on the contrary, it embraced and tried to theorize just this experience. The key concepts adapted from Heidegger by existentialist psychotherapists are *Dasein*; clearing and world design; "thrownness;" the modes of being-in-the-world; and further explication of anxiety.

Dasein is the fundamental concept in the Heidegerrian, and perhaps entire existentialist, world-view. It literally means "the There-being," and has numerous connotations in defining the existentialist stance regarding human existence. The central concept contained herein is that dichotomies of person and world, subject and object, mind and body, are abstractions that obscure the fundamental unity of existence. *Relation* is central to being; we are always being-in-relation (Boss, 1990). Thus the concept "being-in-theworld." It is the experience of existence as a unity that Heidegger seeks to illuminate.

For Heidegger, anxiety is the unavoidable and essential corollary to *Dasein* and its forms. It springs from our knowledge of our own death as the ultimte limit, one that we do not dwell on normally, but one that anxiety forces us to see. According to Heidegger, anxiety is a dread of non-being (Stolorow & Lachmann, 1984). It is only through a confrontation with this nonbeing, with death, that we really experience life. Anxiety "may compel us to face the fact that we will die, and that this fact distinguishes us as humans" (Stolorow & Lachmann, 1984)

2.1.6 Section Six: Depression

2.1.6.1 Definitions of depression:

The word *depression* has been used in several different ways, to describe somewhat different issues. Since it usually relates to affects, it belongs to the class of *Affective Disorders* in DSM-III (APA, 2000). Depressed individuals undergo mood changes, thus depression is included in DSM-III-R (APA, 2000) in the class of *Mood Disorders.* In daily use, depression connotes a variety of negative feelings, such as disappointment, frustration, defeat, sadness, despair, weakness, helplessness, hopelessness, and so on. Apparently no scientific research could put all these feelings into one nosological class, and scientists have tried to offer a more precise and concise definition.

Abraham (1927) and Freud (1917/1956) stressed self-criticism and self-hatred (Abraham, 1927; S Freud, 1917). Bibring (1953), Seligman (1975), and others pointed to the feelings of defeat and helplessness(Bibring, 1953; Martin EP Seligman, 1975) . Beck (1967) and his followers emphasized a pessimistic outlook on life and a feeling of one's own hopelessness (A. T. Beck, 1967). Sadock (Sadock, 2005) pointed to feelings of loneliness and sadness.

The *Random House Dictionary* has several definitions of depression. Depression in psychiatry and psychology is defined as "emotional dejection greater and more prolonged than that warranted by any objective reason." Other definitions are: "a low state of vital powers or functional activity," or "dejection, sadness, gloom."

Wolman's *Dictionary of Behavioral Science* (Benjamin B Wolman, 1989) gives the following definition: "**Depression**, as opposed to other negative feelings, such as sadness, unhappiness, frustration, sorrow or grief, is a *feeling of helplessness and blaming oneself for being helpless.* Depression is self -directed hatred usually associated with hatred directed toward others.

Depression is *endogenous* when it comes from within; it is *exogenous* when it is a reaction to misfortunes." This definition limits depression to the combination of a feeling of helplessness and self-directed accusation; it excludes other negative feelings.

2.1.6.2 Types of depression sources

1. Exogenous Depression

Every human being is exposed to stressful events; some events are exceedingly stressful and cause *exogenous* depression(Dohrenwend & Dohrenwend, 1974).

Exogenous depression is normal provided it is, like all other normal human emotions, appropriate, proportionate, controllable, and adjustive. Achievement and victory produce elation; frustration and defeat cause depression. When depression corresponds to what has really taken place, it does not indicate poor mental health, but feeling unhappy in victory and enjoying defeat are morbid emotional reactions. Usually joy and sorrow correspond to the magnitude of fortunate and unfortunate events. When one is ecstatically happy at irrelevant achievements and reacts with feelings of despair to mild frustrations, the reactions are pathological(Benjamin B. Wolman & Stricker, 1990).

2. Endogenous Depression

Apparently, the depression comes from within; it is *endogenous.* A decrease in self-esteem and a low estimate of one's power form the common denominator of depressive states (Benjamin B. Wolman & Stricker, 1990). The less realistic one's estimate is of one's ability to cope with hardships, the more severe is the depression. No human being can always be successful in dealing with his or her problems, and every human life represents a chain of successes and failures. Endogenous depression reflects one's disbelief in oneself and in one's ability to cope

with difficulties. It is a feeling of being weak and unable to withstand hardship, of helplessness and resentment for being helpless(Benjamin B. Wolman & Stricker, 1990).

2.1.6.3 Syndromes of Manifest Depressive Psychosis

According to Benjamin (Benjamin B. Wolman & Stricker, 1990) there were five syndrome manifest depressive psychosis:

1. Major Depression

In the first syndrome, *major depression,* the ego has lost its control over the id and the superego. The patients are at the mercy of their irrational impulses and are unable to follow a rational path of behavior. They torture themselves with guilt feelings for true or imaginary transgressions.

2. Mania

The second syndrome is *mania,* a frantic and hyper-optimistic frame of mind that aims at covering up the deep and torturous depression.

3. Paranoia

The third syndrome is *paranoia.* When the ego, battered by the superego, resorts to projection and externalizes superego pressure, the patient perceives the world as a rejecting and punishing mother who someday will be forced to accept her suffering child.

4. Agitated Depression

The fourth syndrome is *agitated depression.* When the weak ego is unable to withstand the assaults of the superego and can't control the demanding id, the patient is continuously irritable, hates oneself and the whole world, and is in the throes of depression. Agitated depression often leads to suicidal attempts.

5. Simple Deterioration

The last syndrome is *simple deterioration,* when both the ego and the superego are defeated and the primitive, uninhibited impulses of the id take over.

2.1.6.4 Theories Of Depression:

1. Biological Theories of Depression

Biological theories regarding the etiology of depression date back to antiquity. Hippocrates is credited with advancing one of the first biological hypotheses (c.-c. B. Hippocrates & Jones, 1923). He felt that the accumulation of "black bile" and phlegm affected brain functioning, "darkening the spirit and making it melancholic" (Lewis, 1934). Over the centuries, theories have continued to be proposed, often reflecting the general scientific interests and advancements of the times. During the past quarter century, hypotheses as to the biological pathogenesis of depressive illness have rapidly evolved (Benjamin B. Wolman & Stricker, 1990). Some general patterns can be discerned from this evolution. Early modern proposals emphasized a deficiency model of depressive illness in which an inadequate amount of a particular substance, such as the neurotransmitter norepinephrine, was identified as the causative factor. This deficiency model of depression probably had its roots in two types of clinical data. The first of these consisted of observations of mood states of medical patients suffering from diseases involving the deficiency of a particular neurotransmitter, vitamin, or hormone, such as occurs in patients with hypothyroidism. The second consisted of observations of depressive reactions caused by pharmacological therapies which were thought to deplete particular substances, such as the depletion of norepinephrine stores by the antihypertensive agent reserpine(Golden & Potter, 1986).

2. Psychoanalytic Views on Depression

2.1 Freud's Theory 1905-1953

The evolution of psychoanalytic concepts of depression has kept in step with the development of the general theory of psychoanalysis. The psychosexual phases of development, the structural theory, the broadening of the concepts of orality and anality, the increased understanding of self-esteem, and the deepening insight into the determinants of self-esteem are among the developments of the general psychoanalytic theory which became reflected in the gradually evolving understanding of depressive illness.

In 1905, Freud sketched out his theory of psychosexual development, according to which infants and children make their way through the oral, anal, and phallic phases. If this development is blocked or meets traumatic hurdles at any stage, fixation points may develop at the oral, anal, or phallic phase and ominous consequences may become integrated into the personality structure of the individual (Sigmund Freud, 1905/1953).

2.2 Abraham 1924 -1927

Abraham in 1924 -1927 (Abraham, 1927) corroborated and expanded Freud's observations. He very discerningly noted a relationship between obsessional neurosis and manic-depressive psychosis in two patients he had analyzed and in other patients he had treated more briefly. He reported the presence, in the manic-depressive's free periods, of ambivalence and other similarities to the typical obsessional patient, such as emphasis on cleanliness, obstinacy, and rigid attitudes about money and possessions. Abraham theorized that, in the anal stage of psychosexual development, the patient "regards the person who is the object of his desire as something over which he exercises ownership, and that he consequently treats that person in the same way as he does his earliest piece of private property, i.e. the contents of his body, his

faeces." Abraham noted the anal way in which the obsessional reacts to loss—with diarrhea or constipation, depending on certain unconscious dynamics. He believed that the depressive may regress even beyond the anal level to the oral phase, in his or her fantasies. And when recovery takes place, Abraham postulated, the patient progresses to the controlling, retentive, constipatory phase in which he or she functions fairly well— not unlike the obsessional neurotic .

2.3 Rado 1928

Rado, (Rado, 1928) although using some of the same language, distanced himself somewhat from the gastrointestinal tract and focused instead on the psychological aspects of orality: the depressives' "intensely strong craving for narcissistic gratification" and their extreme "narcissistic intolerance." Rado saw depressives as overwhelmingly dependent for their self-esteem on the love, attention, approval, and recognition of others rather than on their own activity and achievements. He perceived depressives as unhealthily dependent on "external narcissistic supplies" and as having a correspondingly high intolerance for narcissistic deprivation—the trivial disappointments and offenses that the secure individual can shrug off.

2.4 Gero 1936

When Gero (Gero, 1936) outlined the analysis of two depressed patients in 1936, he brought understanding of the melancholic condition down from the heights of intriguing theorization to the relatively solid ground of therapeutic work. He was able to demonstrate clearly the narcissistic hunger, the intolerance of frustration, and the introjection of the love object. From analysis of one of these patients he felt able to disagree with his predecessors about the universality of the obsessional character structure in depression.

2.5 Melanie Klein 1934-1940

At this point mention should be made of Melanie Klein (1934, 1940) (M. Klein, 1930) who, in England, making use of an unfamiliar dialect of the psychoanalytic tongue, had much to do with shifting the emphasis to object-relationships. Disregarding the many objectionable aspects of her formulations and despite her tendency to discern phases of incredible savagery and hatred which she presumed to be taking place during early infancy, we must remember that it was Melanie Klein who first elaborated the theory that the predisposition to depression depended not so much on one trauma or even a series of traumatic incidents or disappointments, but rather on the quality of the mother-child relationship in the first year of life. If this relationship does not promote in the child the feeling that he or she is secure and good and beloved, the child is, according to Klein, never able to overcome a pronounced ambivalence toward love objects and is forever prone to depressive breakdowns.

The predisposition to depression, then, is not particularly characterized by specific traumatic events or overwhelming disappointments but is simply the result of the child's lack of success in overcoming early depressive fears and anxieties and the child's failure to establish an optimal level of self-esteem.

Thus, Melanie Klein's basic contribution to the theory of depression was the concept of a developmental phase during which the child has to learn how to modify ambivalence and retain self-esteem despite periodic losses of the "good mother."

2.6 Bibring 1953

Of the two, (Bibring, 1953) appears easier to read but his views departed more radically from classical theory. Bibring agreed with Rado and others that the predisposition to depression results

from traumatic experiences in early childhood, which bring about a fixation to a state of helplessness and powerlessness.

2.7 Jacobson 1953-1971

Edith Jacobson (Edith Jacobson, 1953, 1954; E JACOBSON, 1971) saw self-esteem as central in depression also, and, like Bibring, considered self-esteem to be influenced by a number of variables. Jacobson sketched out a most elaborate and comprehensive model for the determinants of self-esteem and its relevance to depression. Her theoretical model is a tightly knit, complex construction based on careful exposition of the development of self- and object-representatives, the self, ego identifications, the ego ideal, and the superego.

3. Cognitive And Behavioral Theories

3.1 Reinforcement Theory 1973

One of the first to apply a behavioral analysis to the problem of depression was Charles Ferster (Ferster, 1973), who viewed depression as a generalized reduction of rates of response to external stimuli. Behavior was then no longer under the control of reinforcers that once were effective. Ferster's basic analogy in learning terms was to the process of extinction. Major losses in life could be seen as losses of important sources of reinforcement. Generalization of the effects of the loss occurred because other behavior was chained to or organized by the central source of reinforcement. The concept of chaining referred to the situation where one response was dependent on a later response, because the first functioned to gain access to the second. For example, for a man who becomes depressed after the break-up of a romance, the woman in the relationship could be thought of as having been an important and central source of reinforcement. His relationship with her may have organized much of the man's behavior, chaining it to this source of reinforcement. If in his depression he no longer goes to movies, a

previously enjoyable activity (reinforcing), it is because he formerly went with her and now that source of reinforcement is not available. He might also stop reading the newspaper section that contains movie advertisements and reviews. His depression can be seen in the many behaviors that are reduced in rate.

3.2 Learned Helplessness Theory 1974-1975

Martin E. P. Seligman's (Martin E Seligman, 1974; Martin EP Seligman, 1975) learned helplessness theory of depression began with an animal model for the disorder. Seligman observed a phenomenon wherein animals exposed to unavoidable shock were subsequently deficient in learning an escape or avoidance response in a shuttle box apparatus (Martin E Seligman & Maier, 1967). Seligman assumed that the animals had acquired a generalized helplessness—a perception of lack of contingency between responses and outcomes. Contingency was seen as the critical factor since animals with equivalent but response-contingent shock learned later to escape and avoid like animals with no precondition.

Seligman saw in the behavior of these animals may analogies to human depression. Induction by inescapable shock was seen as parallel to the traumatic loss that often precipitates depression. The animals' behavior showed passivity, which Seligman felt paralleled the reduction in instrumental behavior typical of depressed people. Other symptom parallels included weight loss and lack of appetite. The learned helplessness effect dissipated with time, as does normal depression.

3.3 Self-Control Theory

The relevance of models of self-control to depression was commented on early in the history of social learning approaches to psychopathology (Bandura, 1971; Marston, 1964; Mathews, 1977). Models of self-control are concerned with the ways in which people manage their behavior in

order to obtain long-term goals (e.g., quit smoking, or start exercising for long-term health). In depression, people are hopeless about long-term goals and feel helpless to manage their own behavior. When a person becomes depressed, behavior organized by long-term goals deteriorates first. The depressed person may continue to meet the immediate demands of daily existence but behavior without immediate consequences is not performed.

Rehm (Rehm, 1977) presented a self-control model of depression which was an attempt to integrate aspects of the theories of Lewinsohn, Beck, and Seligman under a self-control framework. The framework was an adaptation of Kanfer's (Kanfer, 1970) model of self-control. Kanfer described people's efforts at controlling their behavior to obtain long-term goals in terms of a three-stage feedback-loop process. When people see the need to change behavior to achieve a delayed goal, they begin to pay conscious attention to the relevant behavior (e.g., number of cigarettes smoked). This is the first or self-monitoring stage of the loop.

4. Cognitive Theory

4.1 Beck's Cognitive Theory 1972

Aaron T. Beck (A. Beck, 1972) developed a cognitive theory that initially focused on depression and has been expanded to other areas of psychopathology and psychotherapy. Beck became dissatisfied with his psychodynamic training because he felt it did not adequately account for clinical and research phenomena he was seeing. He read George Kelly's *The Psychology of Personal Constructs* (1955) and was attracted to the cognitive conception of unique construct systems through which each individual construes the world. From modern cognitive psychology he adopted the theoretical construct of "schema." Schemata are structural units of stored information that also function to interpret new experience. They act as templates against which new information is compared and incorporated. Schemata vary from representations of simple

concepts (e.g., a chair schema operates in the simple act of identifying an object as a chair) to complex interpretive rules (e.g., applying a schema about hotels allows a person to see that the bellhop is hesitating because he expects a tip).

Beck's (1972) theory defined depression in cognitive terms. He saw the essential elements of the disorder as the "cognitive triad": (a) a negative view of self, (b) a negative view of the world, and (c) a negative view of the future. The depressed person views the world through an organized set of depressive schemata that distort experience about self, the world, and the future in a negative direction(A. Beck, 1972).

2.1.6.5 Depression and Cancer:

Psychiatric problems have been frequently reported in cancer patients (Bukberg et al., 1984; Derogatis et al., 1983), the most common of which are depression, anxiety, and adjustment problems as these patients having cancer recognize it as a 'real killer' and that can lead to intense pain, disability, disfigurement, sexual dysfunctions; and can lead to various problems if the outcomes are not as expected (H. Stanton et al., 1998). Greer (Steven Greer, 1983) classifies psychiatric morbidity in relation to cancer in three types: (a) morbidity related to diagnosis, (b) related to treatment modality; and (c) related to terminal phases of cancer.

The common emotional reactions in patients diagnosed to have cancer are shock, denial, disbelief, anxiety, anger, guilt, and depression (Aitken-Swan & Easson, 1959).

The major sources of continuing emotional distress are fear of incurability, pain, disfigurement, recurrence of disease, and a sense of helplessness over its treatment. Among the psychiatric morbidity observed in the family members of cancer patients are enuresis, school phobia, and depression in the siblings, conversion reactions, psychosomatic, psychosexual, and psychosocial problems in the parents (S Greer, 1985; Patel, Sinah, & Shaha, 1987), and anxiety and depression in the spouse.

Deimling et al found that cancer-related symptoms are the strongest predictors of depression and the PTSD sub-dimension of hyper-arousal. These effects persist even when the effects of other stressors and non-cancer illness symptoms are statistically controlled (Deimling, Kahana, Bowman, & Schaefer, 2002).

2.2 Part Two: The literature Review

This section introduce the literature review of the study variables including cancer, war trauma, depression and anxiety. Furthermore, it including the studies of depression and anxiety among cancer patients, siege stressors , war related trauma and cancer patients.

Moubayed et al (2015) The study aimed to identify clinical factors that are predictive of depression and quality of life (QOL) among long-term survivors of head and neck squamous cell carcinoma and to develop predictive scores using these factors. Cohort study Setting. A total of 209 post-treatment (median follow-up, 38.7 months) head and neck cancer patients were prospectively evaluated using the Hospital Anxiety Depression Scale (HADS), the European Organization for Research and Treatment of Cancer (EORTC) Quality of Life Questionnaire Core 30, and the EORTC Quality of Life Questionnaire Head and Neck 35, and pretreatment patient-related, tumor-related, and treatment-related predictors were identified using chart review. Bivariate (x2 and t test) and multivariate (linear regression) analyses were used to construct predictive models. The results found significant pretreatment predictors of depression were identified on multivariate analysis as smoking at diagnosis, .14 alcoholic drinks per week, T3 or T4 status, and .3 medications (P\.001). Two or more of these factors yielded an 82.3% sensitivity in detecting significant depressive symptoms (defined as a HADS cutoff score of 5). Significant predictors of fatigue, global health/QOL, social contact, speech, pain, swallowing, and xerostomia were also identified.

Ellis et al (2015) the study aimed to assess the prevalence of general anxiety and depression, as well as procedure-related worry and pain in patients undergoing local anaesthetic flexible cystoscopy and to determine whether these conditions occur more frequently in subsets of the population. Patients referred for flexible cystoscopy were invited to participate. Patients were

asked to complete a questionnaire containing the Hospital Anxiety and Depression Scale (HADS), a worry score and a question regarding the most stressful event in the diagnostic pathway. Following the procedure patients were also asked to complete a pain score. A total of 175 patients participated in the study. The prevalence of significant anxiety was 15% and depression 3.5%. This was higher in younger, female and unmarried patients. Procedure-related worry and pain were generally low.

Eljedi and Nofal, 2014, The purpose of this study was to assess the health related quality of life among breast cancer patients in Palestine based on socio-demographic and clinical characteristics by using the World Health Organization Quality of Life – Short Version Questionnaire. The data collected from 107 female breast cancer patients who were recruited from the outpatient clinic in two governmental hospitals in Gaza, Palestine in 2010. T-test and ANOVA were performed to compare means between groups regarding HRQOL subscales. Logistic regressions stratified by low or high HRQOL were used to identify factors associated with poor HRQOL. The results found that the mean age was 52.4 ± 11.4. The majority of the participants were married (70.8%), unemployed (86.5%), with low monthly income (66.7%). The physical domain score was strongly reduced (61.3 points of the 0–100 score), followed by the environmental and psychological domains (64.6; 65.8 respectively). By multiple regression analysis, patients who were employed, with high education and high income were more likely to have high score of HRQOL, with ORs (95% CI) of 4.60 (1.51-13.98), 4.57 (1.17-17.84) and 9.95 (2.10-47.07) respectively, while patients who underwent surgical intervention only and receiving hormonal therapy were more likely to have poorer HRQOL with ORs of 2.18 (1.75-2.72) and 3.15 (1.00-10.61) respectively. Age, marital status, chemotherapy, radiotherapy and combination of all types of treatment did not significantly influence HRQOL.

Thabet and Thabet (2014) conducted a report for Oxfam funded by European Union to explore the resilience among Palestinian in face of stress and traumatic events. A sample consisting of 502 randomly selected parents and 502 children from 16 districts in the Gaza Strip agreed to take part in the study. Both quantitative and qualitative methods of data collection were used as a result of consulting with community-based organizations. They gave their educated opinions on the most important stresses and trauma affecting the people in the community and ways to support data collection. Staff from each organization participating in the study was invited to attend a three day training course in scientific research. Following this initial training, five people were selected to carry out the data collection. Measures for collecting data from adults include Stressful Situations Scale, Traumatic Events Checklist, Symptom Checklist, World Health Organization Quality of Life, and Resilience scale. Data from children was gathered using Traumatic Events Checklist, Security scale, Post traumatic stress disorder scale, Children's Manifest Anxiety Scale, and Resilience Scale for Adolescents. For qualitative data, five focus groups for adults were conducted in five district areas of the Gaza Strip. The results found that the most common stressful situations due to blockade identified during the study are: General feeling of living in a big prison; The inability to finish construction and repair work in people's homes due to a chronic shortage in cement and building materials; The sharp increase in prices in commodities in recent years; The inability to upkeep social and family relationships, including social and religious visits to the West Bank/East Jerusalem; The negative impacts on daily life and work due to repeated cut-off of electricity and shortage of gas and fuel. Traumatic experiences due to the November 2012 eight day military escalation was identified as another risk factor affecting the mental health of people in the Gaza Strip. There were eight main traumatic events reported by parents. The most common traumatic experiences reported were; 1)

hearing shelling of the nearby area by artillery; 2) hearing the sonic sounds of fighter jets; 3) hearing loud noises of drones; 4) watching mutilated bodies on television. The study clearly showed that overall males found these experiences significantly more traumatic than females did. People living in cities reported a higher number of traumatic experiences than people living in villages or refugee camps. Simple workers and less educated mothers were more traumatized by these events than people with better jobs and higher education. Stress and trauma have proven to have a direct impact on people's mental health, quality of life and resilience factors. The study found that traumatic experiences due to the conflict in Gaza increased psychological problems, with identified problems including depression, somatization, and anxiety in parents. However, the study showed that the short exposure to traumatic events had less impact on people than the effect of long-term stress. Palestinian parents reported anxiety symptoms such as nervousness or trembling, feeling tense or locked up. Reported symptoms of depression included general sad feelings and feeling weak in parts of the body. However, people seldom reported feelings of worthlessness and thoughts of ending life. Mothers showed similar signs of anxiety and somatization symptoms as fathers did, but at a lesser degree. In addition, general psychological symptoms, somatization, depression, and anxiety were significantly higher in families with monthly incomes below $300 /month. Similarly, less educated parents were found to experience a higher degree of general psychological symptoms and anxiety. In addition, general psychological and somatisation symptoms were found more frequently in unemployed fathers. Among mothers, these symptoms were found more frequently among those with no formal education, and depression symptoms were found more frequently among housewives, than among employed mothers.

Thabet et al, 2013, The aim of study was to establish the relationship between war traumatic experiences due to last war on Gaza, PTSD, traumatic grief, death anxiety, and general mental health. The study was conducted in the Gaza Strip; in areas exposed to war for 23 days. The sample included 374 adults aged from 22 to 65 years with mean age 40.13. Participants completed measures of experience of traumatic events (Gaza Traumatic Checklist-War on Gaza), PTSD, Grief inventory, Arabic Version of Death Anxiety Scale, and GHQ-28. The results found that Palestinians experiences variety of traumatic events: The most common reported traumatic events were: 95.7% said they hear of shelling and bombardment of the their area, 94.7% reported watching mutilated bodies in TV, 92.8 % reported seeing the bombardment effects on ground, 71.7% said they had lack of water, food and electricity during the war, and 72.2% said they moved to save place during the war. Each person reported 13.80 traumatic events. The results showed that no one felt safe at home, 2.1% of fathers said they were able to protect their children, while 2.8% of mothers said they were safe at homes. The study showed that 3.1% fathers were able to protect their children compared to 6.6% of mothers, 2.8% of fathers were able to protect themselves compared to 6.1% of mothers, and 3.1% of fathers said that someone outside the home were able to protect him compared to 2.8% of mothers. The study showed that 71 persons lost someone from their family included extended family which represented 18.8 % of the participants and 303 did not loss anyone (81.2%) from their families (first, second, third relatives) during the war compared. The study showed that mean grief reaction was 11.52 (SD = 4.82). The study showed that mean grief reactions reported by male were 10.1 and mean in female was 12.69. There were statistically significant differences toward females in grief reactions. Using scoring of DSM-IV of one intrusion symptom, three avoidance, and two arousal symptoms, 248 people rated as PTSD which represented 66.6 % of the sample and 125 persons

reported no PTSD (35.5%). The results showed that PTSD was reported more in females compared to males. The results showed that mean death anxiety in males was 37.4 compared to female mean = 44.9. There were statistically significant differences toward females. The study showed than mean GHQ-28 was 15.6, somatization mean was 4.3, anxiety mean was 5, social dysfunction mean was 3.2, and depression mean was 3.2. Using the previous cutoff point of the GHQ-28 (4/5), the result showed that 90.9% were rated as cases and need further investigation, while 9.1% were not cases.

Lutgendorf et al, 2013, The goal of the present study was to examine associations between non-cancer life stressors and QOL in 123 women with invasive epithelial ovarian cancer who were followed prospectively and longitudinally for one year. Methods. Mixed models for repeated measures were used to examine the relationship between life stressors and QOL pre-surgery and one year later, while adjusting for age, cancer stage, depressive symptoms, anxiety, and chemotherapy status (at one year). Prospective associations between QOL pre-surgery and one-year QOL were also examined. Results. Number and severity of life stressors were unrelated to QOL of participants before surgery. At one year, however, participants experiencing a greater number of life stressors reported poorer concurrent physical well-being (PWB) (p=0.015), functional well-being (FWB) (p b 0.0001), social well-being (SWB) (p = 0.0003), and total QOL (p b 0.0001). Similar effects were found for life event severity. Finally, experiencing a greater number of life stressors pre-surgery predicted poorer overall QOL one year post-diagnosis (p b 0.0001).

Gogne et al (2011) The aim was to evaluate and correlate anxiety and depression levels with response to neoadjuvant chemotherapy in patients with breast cancer. The study also assessed the effects of family support on distress levels. It was a prospective study in a cohort of 84 patients

with locally advanced breast cancer. These assessments were done using the Hospital Anxiety and Depression Scale (HADS). A prospective study in a developing world setting. Participants Eighty-four patients with locally advanced breast cancer receiving neoadjuvant chemotherapy were included after taking an informed consent and ethical committee clearance. A significant correlation was observed between response to neoadjuvant chemotherapy and depression levels in breast cancer patients. Joint family and literacy levels also had an impact on the levels of depression observed. The mean depression score in responders after neoadjuvant chemotherapy was found to be 5.6 (range 1–16), whereas the mean score in nonresponders was 10.2 (range 4–20). Twenty-four (70.5%) non-responders were found to suffer from depression compared with only 11 (22.0%) of the responders. Thus, the correlation of depression and response to neoadjuvant chemotherapy was found to be statistically significant (chi-square test, P value <0.05). Seventeen (51.5%) of the 33 patients who received more than three neoadjuvant chemotherapy cycles showed depression, while 33 (64.7%) of the 51 patients who had received less than three cycles did not suffer from depression . This correlation, however, was not found to be statistically significant. Thus, the number of cycles of neoadjuvant chemotherapy does not appear to be as important a criterion as the response to chemotherapy cycles for determining the psychological status of the patients. Depression was found to be higher in literate (25, 54.3%) and employed (14, 53.8%) patients. However, these data were not found to be statistically significant.

Zachariae et al, 2011, The aim was to investigate breast cancer-related post-traumatic stress symptoms in a sample of Palestinian breast cancer patients and survivors and to explore the associations with non-cancer traumatic events, e.g., witnessing war and combat, and centrality of event, i.e. the extent to which a memory for a stressful event forms a reference point for

personal-identity. Participants were 489 women (Age:18–68 yrs; response rate:76%) attending treatment or control visits for breast cancer (BC) during a 3-month period at the two main departments responsible for treating cancer patients in the Gaza Strip. Assessments included: Demographic and disease- and treatment-related factors, BC-related post-traumatic stress symptoms (Impact of Events Scale - Revised (IES-R-BC)), the most traumatic non-cancer event (MTNCE), MTNCE-related post-traumatic stress symptoms (IES-R-MTNCE), centrality of event (CES) for BC and MTNCE, and the order in which the BC and MTNCE were experienced. A cohort of 3343 Danish women treated for primary breast cancer served as comparison group. The results found that Palestinian breast cancer patients and survivors reported considerably higher levels of cancer-related posttraumatic stress symptoms than Danish women with comparable disease severity assessed at equivalent time points following their treatment. Hierarchical multivariate regression showed symptom severity (IES-R-BC) as independently associated with several factors, including: a) Having metastatic and recurrent cancer, b) having children, c) having been exposed to another non-cancer-related traumatic event (MTNCE), in particular other life-threatening events, d) the severity of post-traumatic stress symptoms associated with MTNCE, and e) centrality of both BC and the MTNCE. The final model explained 59% of the variance in IES-R-BC. Palestinian women report considerably higher levels of cancer-related post-traumatic stress than Danish women with comparable disease severity. Their distress associated with other non-cancer events, especially other life-threatening events, and the perceived centrality of such events were important independent predictors of cancer-related posttraumatic stress.

Pedersen et al, 2011, The aim was to investigate the prevalence and predictors of positive and negative religious coping in a sample of Palestinian breast cancer patients and survivors.

Participants were 489 women (mean age 43,7, response rate 76%) attending treatment or control visits for breast cancer (BC) during a 3 month period at the two departments responsible for treating cancerpatients in the Gaza Strip. Variables measured were: Demographic and disease- and treatmentrelated factors, BC-related post-traumatic stress symptoms (Impact of Events scale-Revised (IES-RBC)), Centrality of Event (CE-BC), general religiosityand religious coping measured by the Brief Religious Coping Scale (Brief RCOPE). Religious coping strategies were prevalent among Palestinian breast cancer patients as 61.7% reported to use positive religious coping and 61.9% used negative religious coping a moderate to high degree. Hierarchical multiple regressions were used to determine possible predictors of religious coping. Results suggested radiotherapy and perceiving cancer as a central event to be positively associated with positive religious coping, while time since diagnosis, metastases and chemotherapy were negatively associated. Predictors of negative religious coping were relapse and higher education, while mastectomy was negatively associated. This study suggests that having cancer may elicit both positive and negative religious coping among Palestinian breast cancer patients. However, the predictors related differentially to these two patterns of religious coping. Positive religious coping may be a more hopeful, optimistic response to arecent diagnosis, participation in treatment, and appreciation for the profound life-shaping character of the illness. In contrast, religious struggles may grow out of greater illness severity and higher levels of hopelessness.

Mehlsen et al, 2011, The researchers examine whether: 1) cancer is expected to occur in a certain period of life, 2) expected time when developing cancer depends on own age at cancer diagnosis, and 3) discrepancy between age at diagnosis and expected cancer-time is associated with distress. Participants were 489 women (Age: 18–68 yrs; response rate: 76%) attending treatment or control visits for breast cancer during a 3-month period at the two main departments

responsible for treating cancer patients in the Gaza Strip. Assessments included: Demographic, disease- and treatment-related factors including age at diagnosis, post-traumatic stress symptoms (IES-R subscales: avoidance, intrusion, hyperarousal), religious coping (Brief-Cope subscales: positive and negative). Expected cancer-time was measured by the question: How old would an ordinary woman be when she gets cancer?. The results found that Cancer was most frequently expected between 40–60 yrs (69%). Average cancer-time was 54.7 yrs (SD58.7), and did not differ between younger, middle-aged or older women (F(2,383)51.155, p50.316). Expected cancer-time did not correlate with age at diagnosis (r5_0.011, p50.805). At diagnosis, 73% were more than 5 years younger than expected cancer time, 18 % were within 5 years of expected cancer time, and only 9% were more than 5 years older than expected cancer-time. Women who were younger at diagnosis than expected cancer-time showed more avoidance and hyperarousal and used more negative and less positive religious coping when adjusting for age (F:3.934–13.0,po0.05). In this sample of Palestinian women with breast cancer, cancer was mainly expected to occur in midlife, and no one suggested cancer to occur after 70 in an ordinary woman's life. The perception of what is the ''normal'' cancer-time were neither dependent on present age nor the time of own cancer diagnosis. Age at diagnosis differed for most women from their expectations to an ordinary woman's life. When they had breast cancer, the majority were younger than their expectation to ''normal'' cancer-age. These women showed higher levels of post-traumatic stress symptoms and used religious coping in a non-adaptive way.

Karabulutlu et al, 2011, This study was performed to determine the levels of depression and anxiety, and coping strategies, and the effects of the levels of depression and anxiety on strategies for coping with stress in cancer patients. The study was designed as a definitive and correlation searching investigation and has been performed at the Medical Oncology Clinic of

Ataturk University Research Hospital between the dates July-August 2005. The study was carried out on 96 cancer patients. The question form prepared with the purpose of determining demographic and disease-related features (type of treatment, duration of disease and treatment) of the patients, and the Hospital Anxiety and Depression Scale (HAD), Strategies for Coping with Stress Scale in collecting the data. It was determined that the type of treatment of 84.4% of the patients was chemotherapy only and mean duration of disease was 15.02±14.05 months, mean duration of treatment was 14.05±14.16 months. Anxiety was determined in 61.5% and depression in 81.3% of the patients. It has been found that patient benefited most from social support seeking strategy. This has been followed by problem solving strategy and avoidance strategy. A positive, statistically significant relationship was found between the avoidance strategy, and anxiety and depression levels of the patients. Patients experience moderate anxiety and depression. It was concluded that patients recruited active coping strategies mostly. Patients are observed to avoid stressful events with the increasing levels of anxiety and depression.

Al-Jadili, **2009**, the study aimed to examine the mental health status of the patients with cancer and the coping strategies that adopted by them in front of stressful situation. The study sample consisted of 358 patients (114 males and 244 females) with different types of cancer from Al-shifa hospital. The researcher used socio-demographic questionnaire; state –trait anxiety inventory by Spielberger 1970; PTSD scale by Davidson 1987; and the WAYS of coping scale by Folkman 1986. Socio-demographic data revealed that 24.9% from the cancer patients were from North Gaza, 60.1% from Gaza, 15.1% from middle area. The study finding reveals that state anxiety was at the highest rank 60.8%, followed by trait anxiety 54.6%; re-experiencing PTSD at the third rank 47.0%, PTSD 42.5%, hyper-arousal 40.5%, avoidance 40.1%. The coping strategies of the cancer patients was as the follow; the affiliation coping at the highest rank

81.6%, reinterpretation 75.5%, self-control 75.3%, problem solving 72.3%, wish and avoidance thinking 69.0%, trouble and escape 61.8%, and the accountability coping was at the lowest rank 53.0%.

Thabet et al, 2009, The study aimed to investigate the effect of siege on Palestinian children and adolescents locus of control and well-being. The sample consisted of 164 children aged 8-18 years with mean age 14.69 years. The researchers used socio-demographic scale, Gaza siege checklist for children; and kid –screen HRQoL questionnaire.

The results showed that the most common items of siege checklist; learning problems due to shortage of electricity and teachers unable to come schools 82.6%; I feel I'm in a big prison 79.3%; I was not able to go to school due to shortage of fuel and absence of transportation 75%; I can't find some of the necessary things for study such as books and stationary 68.5%. the results found the total siege scores was positively predicted by general mood, self-perception and negatively predicted by financial resources.

Lubbad and Thabet, 2009, The study aimed to examine the impact of the siege on the mental health (anxiety and depression) of the universities students. The sample consisted of 392 students from the four selected universities by representative sample 183 male and 209 females. The researcher used descriptive –analytical design utilizing socio-demographic scale; siege checklist by GCMHP; Taylor Manifest Scale; and Beck depression scale. The results showed that 42.3% had moderate anxiety, 15.8% had severe anxiety. While 37.3% had moderate depression, 3.1% had severe depression. The results indicated that there were positive significant correlation between siege, anxiety, and depression. The results found significant differences in siege and depression according to sex in favor of males.

Thabet et al, 2008, in study investigating the exposure to war trauma confirmed that there has been little reported research into the effect of war on the behaviour and emotional well-being of pre-school children. The study aimed to investigate the relationship between exposure to war trauma and behavioural and emotional problems among pre-school children. A total of 309 children aged 3^ 6 years were selected from kindergartens in the Gaza Strip, and were assessed by Parental reports in regard to their exposure to war trauma, using the Gaza Traumatic Checklist, and their behavioural and emotional problems, using the Behaviour Checklist (BCL) and the Strengths and Difficulties Questionnaire (SDQ). The results found that pre-school children were exposed to a wide range of traumatic events. The total number of traumatic events independently predicted total BCL and SDQ scores. Exposure to day raids and shelling of the children's houses by tanks were significantly associated with total behavioural and emotional problems scores.

Thabet et al, 2008, in a study aimed to establish the relationship between ongoing war traumatic experiences, PTSD and anxiety symptoms in children, accounting for their parents' equivalent mental health responses. The study was conducted in the Gaza Strip, in areas under ongoing shelling and other acts of military violence. The sample included 100 families, with 200 parents and 197 children aged 9-18 years. Parents and children completed measures of experience of traumatic events (Gaza Traumatic Checklist), PTSD (Children's Revised Impact of Events Scale, PTSD Checklist for parents), and anxiety (Revised Children's Manifest Anxiety Scale, and Taylor Manifest Anxiety Scale for parents). The results found that both children and parents reported a high number of experienced traumatic events, and high rates of PTSD and anxiety scores above previously established cut-offs. Among children, trauma exposure was significantly associated with total and subscales PTSD scores, and with anxiety scores. In

contrast, trauma exposure was significantly associated with PTSD intrusion symptoms in parents. Both war trauma and parents' emotional responses were significantly associated with children's PTSD and anxiety symptoms.

Al –arjani and Thabet (2008) The study aimed to examine the traumatic events that experienced by martyrs' children and the coping strategies that adopted by them in front of stressful situations and father loss crisis. The sample consisted of 250 children from the martyrs families in Gaza strip governorates by representative sample of 112 males and 138 females aged 10-16 years old. The researcher used descriptive analytical design to represent the entire sample of the population. However, the researcher used some of modified scales from which; socioeconomic questionnaire for martyrs' children developed by the researcher; Gaza Traumatic event checklist (Thabet, 2004); and A COPE (Carver, 1989) translated and modified to Palestinian community by the researcher**.** The major findings were: The most common traumatic event for martyrs' children was witnessing photos of martyrs and injured in TV by 92.8%. There were significant differences between trauma levels according to sex in favor of males from the martyrs children. There were significant differences between trauma levels according to age in favor of older children who classified between "13-16" years. The most used coping strategy was religious coping (86.4%), but the lowest coping strategy was substance use (30.3%). There were significant differences between positive reinterpretation and growth, religious coping according to sex in favor of females. There were significant differences between the means of positive reinterpretation and growth, mental disengagement, focus on and venting of emotion, use of instrumental social support, active coping, religious coping, restraint, and planning according to trauma levels in favor of severe traumatic events. There were significant differences between the means of denial, restraint, and suppression of competing activities according to the type of

residence to the advantage of martyrs' children who live in villages. There were significant differences between the means of use of instrumental social support, active coping, denial, behavioral disengagement, acceptance, and suppression of competing activities according to mothers' educational level for the benefit of illiterate mothers.

Qouta et al, 2008, studied "the Relation-ship Between the Siege , the quality of life and psychological conditions in Gaza". The study explored the "relationship between the siege and its impact on the economic and social areas and the quality of life of Palestinian families" beside the psychological consequences of the Palestinian children and adults. The researchers used the quantitative and qualitative approach using stratified random sample involved 244 heads of the family with average age (38) years, distributed in cities and camps and villages in Gaza Strip. The researcher conducted the study using tools to measure the economic and social levels as well as the World Health Organization (WHO) quality of life scale, and SCL.

The finding showed that the Israeli siege pushed around 84% of Palestinian families to change the patterns of their lives; while about 93% of them gave up their daily living requirements. About 95% of the families in Gaza, expressed their dissatisfaction of the fact that Gaza Strip is converted into a big prison, where they live in throughout the night and day. The results of the study showed that 47% of patients in Gaza are not able to get the medicine they needed after Israel tightened its control over the crossings and prevented aid convoys and medical supplies to enter the hospitals in Gaza. The suffering of 38% of the patients by not receiving medical services has increased as well. The results showed that there has been a reduction in the social visits between citizens by 79% due to worsening of financial and social conditions. It was also indicated by the study that most of the interviewees of the study expressed that they do not tend to stay long outside the home due to the conditions of work or other reasons. The siege impacted

about 92% on the behaviors of citizens regarding participating in social events. Furthermore, due to the continued siege, 95% of the citizens could not find the objects and goods that they were looking for; while the prices rose 99% as the income of citizens were reduced with 68%; 45% of whom were fired from their jobs; moreover, 77% of the workers were suspended of their jobs in the construction sector and they were unable to sustain their work due to lack of basic materials for construction of cement and iron and others.

Ashour, 2008, studied "Health in the Gaza Strip: Siege, Fire and Internal Division" Gaza Strip is going through an acute political turmoil and socioeconomic adversity in the context of a protracted political conflict; this situation, which is exacerbated by the Israeli policies and practices and the internal Palestinian division, has tremendous influences on the performance and the outcomes of the health care system.

The effects of Israeli siege are manifested by restricting the access of patients to health services outside it, increasing the economic recession and its impacts on the population's health and the health services delivery system, and limiting the import of supplies necessary for the regular performance and the future development of the health care system. The effects of recurrent military operations and incursions are manifested by the increased burden of conflict related health conditions; and the disruption of the regular performance of health care facilities.

The effects of the internal Palestinian division on the health care system are manifested by the semi-collapse of some health services' delivery institutions, duplicated administrative orders in the governmental health care facilities which disrupt the delivery and the quality of their provided services, shifting the population to seek care outside the Ministry of Health (MoH) facilities, increasing the burden of internal conflict related health conditions, limiting the

stewardship function of the national health authorities, and hindering the planning and priority sitting for the health care system.

There will not be a normal performance of the health care system without a solution of the Palestinian question; meanwhile, neutralizing the health issues from the political motives, respecting the right to health, and increasing the involvement of international health organizations in the health affairs could give a window of opportunities to prevent further deterioration of the health care system in the Gaza Strip.

Fadel Abu Hein, 2008, studied "Siege and Mental Health, Siege Stress, Emotional and Behavioral Problems of Palestinian Children and their Parents Living under Siege: "Gaza Experience". The study sample consisted of 2300 family from them 2286 children aged between 8-15 years old, (1055 males, and 1231 females). The study revealed that 55% from the total population suffering from moderate anxiety, and 12% suffering from severe anxiety. While 42% of the total population suffering from moderate depression, and 9% suffering from severe depression

Emad Nasrallah, 2008, The study aimed to show the impact of the Israeli siege on the cultural situation in Gaza provinces ,therefore the aim of the study is to seek the effects of the Israeli siege on three main aspects presented in : libraries, theatre and visual art. The paper has adopted a descriptive research approach, which classified the libraries to Municipal libraries that were taken from each of the five provinces municipality, and then take a sample random of the other public libraries which 6 of them respond. Also another sample random has been selected from institutions which produce and present plays and 5 of them respond and had an interviews; Also a sample random was selected from a group of artists from different Gaza provinces and a questionnaire was distributed to them.

The results of the study showed that the siege had a negative effects. where the acquisition of books had stopped for most of public libraries and the loan services and many others. Also the theatre work reduced from the number of plays and presented shows. and the artists production had been effected from their production and participation in exhibitions and workshops for Foreign Affairs.

Singh and Verma, 2007, The present study is a venture to unfold the psychopathological profile of breast cancer patients. A sample of 140 breast cancer female patients aged 20 to 65 years was taken from the patients undergoing treatment in Rajiv Gandhi Cancer Institute and Research Centre, Delhi. The selected subjects were tested with Personality Assessment Inventory (PAI) and an interview was also conducted. The obtained data were processed by employing Product Moment Correlation, and Principal Component Factor Analysis. Factor analysis yielded five varimaxly rotated factors identified as (1) Subjective Somatic Distress and Affective Disruption; (2) Objective Distress; (3) Social Detachment,; (4) Dominance, and (5) Alcohol Abstinence. Extracted factors have accounted for 70.77% of total variance. These factors and contents of interview have revealed significant information about the psychopathology and other behavioural problems, the patients develop after being diagnosed for breast cancer.

Kreitler et al, 2007, The purpose of the study was to examine the effect of different stressors on various domains of quality of life (QOL) in cancer patients. The study focused on testing a model describing interrelations between two kinds of stress antecedents, two mediating variables}perceived stress and self-efficacy}and QOL. The participants were 60 cancer patients of both genders and various diagnoses. They were administered questionnaires of background information, QOL, perceived stress and general self-efficacy. Two stress indices were defined empirically: health stress (based on advanced disease stage, long disease duration, and

undergoing treatment) and social stress (based on unemployment, recent immigration, and older age). Confirmatory factor analysis enabled defining five factors of QOL. Hierarchical regression analyses showed that the index of social stress was related to more QOL scales than the index of health stress and very few interactions with the mediating variables. Structural equation modeling provided a more comprehensive and accurate view. It showed that the index of health stress affected QOL mainly through perceived stress, and that self-efficacy affected QOL by reducing perceived stress and increasing QOL. The major conclusions are that QOL is affected negatively by both health stresses and social stresses, but the former are mediated primarily by the experience of perceived stress.

Mehner and Koch, 2007, the study aimed at the identification of acute and post-traumatic stress responses, and comorbid mental disorders in breast cancer patients. Structured clinical interviews for DSM-IV (SCID) were conducted post-surgery with 127 patients (t1). Screening measures were used to assess post-traumatic stress responses, anxiety, and depression at t1 and at 6 months follow-up (t2). Based on the SCID, prevalence rates were 2.4% for both, cancer-related ASD and PTSD. Experiences most frequently described as traumatic were the cancer diagnosis itself and subsequent feelings of uncertainty. Patients with lifetime PTSD (8.7%) were more likely to meet the criteria for cancer-related ASD or PTSD ðOR ¼ 14:1Þ: Prevalence estimates were 7.1% for Adjustment Disorder, 4.7% for Major Depression, 3.1% for Dysthymic Disorder and 6.3% for Generalized Anxiety Disorder. Using the screening instruments, IES-R, PCL-C and HADS, we found PTSD in 18.5% at t1 and 11.2–16.3% at t2. The estimates of anxiety and depression reveal rates of 39.6% (t1) and 32.7% (t2) for anxiety, as well as 16.0% (t1) and 13.3% (t2) for depression (t1) (cut-off58). The diagnosis of a life-threatening illness has been included as a potential trauma in the DSM-IV. However, it has to be critically evaluated whether

subjective feelings of uncertainty like fears of treatment count among traumatic stressors, and thus, whether the diagnosis of PTSD is appropriate in this group of cancer patients. However, a large number of women with emotional distress illustrate the need for psychosocial counseling and support in this early treatment phase.

Thabet et al. (2004) study that aimed to examine the prevalence and nature of co morbid post – traumatic stress reactions and depressive symptoms, and the impact of exposure to traumatic events on both types of psychopathology, among Palestinian children during war conflict in the region. Method: 403 children aged 9-15 year. The study findings were children reported experiencing a wide range of traumatic events, both direct experience of violence and through the media. CPTSD– RI, and MFQ scores were significantly correlated. Both CPTSD–RI and MFQ Scores were independently predicted by the number of experienced traumatic events, and this association remained after adjusting for socioeconomic variables, Exposure to traumatic event, strongly predicted MFQ scores. As well as sleep disturbance, somatic complaints, constricted affect, impulse control, and difficulties in concentration.

Chen et al (2004) Depression and symptom severity are predictive of survival in cancer patients, but are often correlated with each other. This paper compares the physical symptom profiles of depressed and nondepressed cancer patients and further examines the predictive ability of multiple symptoms on depressive status. Data were collected from 121 hospitalized patients with breast, oesophageal and head and neck cancer. Patients were categorized as depressed (n=30) or nondepressed (n=91) using the Hospital Anxiety and Depression Scale. Occurrence of symptoms was evaluated with the Patient Disease Symptom/Sign Assessment Scale. The most prevalent symptom in the total sample was insomnia (occurrence rate =67%). Insomnia, pain, anorexia, fatigue, and wound or pressure sore occurred significantly more often in depressed patients, with

no difference in occurrence rates of nausea/vomiting and dyspnoea. Significantly more symptoms were observed in depressed than in nondepressed patients (mean =3.77 versus 2.52). Both groups showed similar rankings of symptom occurrence rates. Patients simultaneously experiencing insomnia, pain, anorexia and fatigue had a higher risk of depression (odds ratio= 5.03).

Smith et al (2003) To investigate the hypothesis that a) illness severity, pain, anxiety and depression are all associated with impaired health-related quality of life and b) once the effects of illness severity have been adjusted for, there is further independent contribution to quality of life from anxiety and depression. Consecutive patients with advanced cancer under the care of palliative care services were screened. Sixty-eight patients were evaluated for levels of anxiety and depression, severity of illness, pain severity and health-related quality of life. The results found that thirty-three males and 35 females were recruited and had an age range of 41¡/93 years (median 71). The results found that Seventeen (25%) of patients were anxious [anxiety score]/11 on the Hospital Anxiety and Depression Scale (HADS)], 15 (22%) were depressed (HADS depression score]/11). After controlling for the effects of pain and illness severity, anxiety and depression were independently associated with global health status, emotional and cognitive functioning, and fatigue. Anxiety further contributed significantly towards social functioning, nausea and vomiting.

Deimling et al, 2002, This investigation proposes a conceptual model for understanding general psychological distress (anxiety, hostility and depression) and symptoms of posttraumatic stress (hyper-arousal, avoidance and intrusiveness) that may be associated with cancer survivorship among older adults. Findings from a survey of 180 older adult, long-term cancer survivors are used to illustrate the key features of this model. Results of multivariate analysis show that most

older adult long-term cancer survivors do not demonstrate clinical levels of posttraumatic stress disorder (PTSD), although over 25% evidence clinical levels of depression. However, many survivors display important symptoms of psychological distress that are related to the continuing effects of cancer and its treatment. Current cancer-related symptoms are the strongest predictors of depression (beta=0.27, p ¼ 0:046) and the PTSD sub-dimension of hyper-arousal (beta=0.377, p ¼ 0:004). These effects persist even when the effects of other stressors and non-cancer illness symptoms are statistically controlled. Additionally, it appears in this sample that symptoms of PTSD are significantly correlated with traditional measures of psychological distress.

De Jong et al, 2001, the study aimed to establish the prevalence rates of and risk factors for posttraumatic stress disorder (PTSD) in 4 post-conflict, low-income countries. Epidemiological survey conducted between 1997 and 1999 among survivors of war or mass violence (aged _16 years) who were randomly selected from community populations in Algeria (n=653), Cambodia (n=610), Ethiopia (n=1200), and Gaza (n=585). Prevalence rates of PTSD, assessed using the PTSD module of the Composite International Diagnostic Interview version 2.1 and evaluated in relation to traumatic events, assessed using an adapted version of the Life Events and Social History Questionnaire. The prevalence rate of assessed PTSD was 37.4% in Algeria, 28.4% in Cambodia, 15.8% in Ethiopia, and 17.8% in Gaza. Conflict-related trauma after age 12 years was the only risk factor for PTSD that was present in all 4 samples. Torture was a risk factor in all samples except Cambodia. Psychiatric history and current illness were risk factors in Cambodia (adjusted odds ratio [OR], 3.6; 95% confidence interval [CI], 2.3-5.4 and adjusted OR,1.6; 95% CI, 1.0-2.7, respectively) and Ethiopia (adjusted OR, 3.9; 95% CI, 2.0-7.4 and adjusted OR, 1.8; 95% CI, 1.1-2.7, respectively). Poor quality of camp was associated with PTSD in Algeria (adjusted OR, 1.8; 95% CI, 1.3- 2.5) and in Gaza (adjusted OR, 1.7; 95% CI, 1.1-2.8). Daily

hassles were associated with PTSD in Algeria (adjusted OR, 1.6; 95% CI, 1.1-2.4). Youth domestic stress, death or separation in the family, and alcohol abuse in parents were associated with PTSD in Cambodia (adjusted OR, 1.7; 95% CI, 1.1-2.6; adjusted OR, 1.7; 95% CI, 1.0-2.8; and adjusted OR, 2.2; 95% CI, 1.1-4.4, respectively).

Dyregrov et al (2000) they aimed to assess trauma exposure and psychological reactions to genocide among Rwandan children. A total of 3030 children age 8–19 years from Rwanda was interviewed about their war experiences and reactions approximately 13 months after the genocide that started in April 1994. Rwandan children had been exposed to extreme levels of violence in the form of witnessing the death of close family members and others in massacres, as well as other violent acts. More than two-thirds of the sample actually saw someone being injured or killed, and 78% experienced death in their immediate family, of which more than one-third of these children witnessed the death of their own family members. A shortened form of the Impact of Event Scale used in a group of 1830 of these children documented high levels of intrusion and avoidance. While children living in shelters were exposed to more traumas, they evidenced less posttraumatic reactions. Analyses showed that reactions were associated with loss, violence exposure, and, most importantly, feeling their life was in danger.

Jon Skarstein et al, 2000 the purpose of the study was to use the emotional functioning (EF) dimension of the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ C33) and the Hospital Anxiety and Depression Scale (HADS) to evaluate anxiety and depression. The researchers wanted to compare cancer patients' responses to EF with those to HADS, as well as the impact of anxiety and depression on the quality of life (QL) dimensions of the EORTC QLQ C33. A total of 568 cancer patients completed both the EORTC QLQ C33 and HADS at the same occasion. The association between the patients' EF

scorings and their HADS scores was analyzed by multiple linear regression. Gender and age were included as covariates. The results found that there is statistically significant negative relations were found between EF and HADS-A (anxiety), HADS-D (depression) and HADS-T (total score), respectively, with the highest correlation coefficient for HADS-A. Older patients and males reported less emotional distress assessed by the EF scale than younger ones and females with comparable HADS-T or HADS-D scores. Both HADS-A and HADS-D were significantly related to other QL dimensions, and depression was a stronger predictor for reduced QL than anxiety. The EF dimension of EORTC QLQ C33 predominantly assesses anxiety, whereas depression is rated to a lesser degree. Combined with significant age and gender relations, this implies a risk of underdiagnosed depression, if the EORTC QLQ C33 is used as the only instrument to screen for psychological distress in cancer patients. As depression has a stronger impact on global QL of cancer patients than anxiety, the use of an additional instrument is recommended for assessment of depression.

Summary of previous studies:

By looking in the literature review we found many studies conducted among cancer patients revealing mental health problems and quality of life among these groups. Eljedi and Nofal, 2014 used Quality of Life – Short Version Questionnaire in 107 female breast cancer in Gaza Strip. Where, Lutgendorf et al, 2013 used QOL in 123 women with invasive epithelial ovarian cancer who were followed prospectively and longitudinally for one year.

Qouta et al 2008, used the World Health Organization (WHO) quality of life scale in 244 head of family, and Kreitler et al, 2007 used quality of life (QOL) in 60 cancer patients.

However, Zachariae et al, 2011 used Impact of Events Scale - Revised (IES-R-BC)), the most traumatic non-cancer event (MTNCE), MTNCE-related post-traumatic stress symptoms (IES-R-MTNCE) in 489 breast cancer women aged 18-68 years. In addition, Pedersen et al, 2011 used BC-related post-traumatic stress symptoms (Impact of Events scale-Revised (IES-RBC)), Centrality of Event (CE-BC), general religiosity and religious coping measured by the Brief Religious Coping Scale (Brief RCOPE) in 489 breast cancer women.

When looking at the anxiety and depression studies we found Karabulutlu et al, 2011 used the Hospital Anxiety and Depression Scale (HAD), Strategies for Coping with Stress Scale in 96 cancer patients. Where Al-Jadili, 2009 used state –trait anxiety inventory by Spielberger 1970; PTSD scale by Davidson 1987; and the WAYS of coping scale by Folkman 1986 in 358 patients (114 males and 244 females) with different types of cancer.

While Mansour et al, 2009 used child PTSD scale (CPTSD); children depression inventory scale CDI; and Revised manifest anxiety scale RCMAS in 50 children, 92% of them had leukemia compared to control group 52 children aged between 6-12 years.

And Delgado et al, 2009 used the Edmonton Symptom Assessment System (ESAS) and anxiety and depression using the respective subscales of the Hospital Anxiety and Depression Scale (HADS-A & HADS-D) in 216 patients. While, Singh and Verma, 2007 Personality Assessment Inventory (PAI) in 140 breast cancer female patients aged 20-65.

Jon Skarstein et al, 2000 used the emotional functioning (EF) dimension of the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ C33) and the Hospital Anxiety and Depression Scale (HADS) to evaluate anxiety and depression in 568 cancer patients. Carrol et al, 1993 used the Hospital Anxiety and Depression Scale (HADS) in 930 cancer patients.

Further, there is many studies investigated the effects of the siege from which, Thabet et al, 2009 used Gaza siege checklist for children in 164 children between 8-18 years old. And Lubbad and Thabet, 2009 used siege checklist by GCMHP; Taylor Manifest Scale; and Beck depression scale in 392 (183 male and 209 female) student from four universities. Furthermore, Fadel Abu Hein 2008, used siege checklist by GCMHP in 2300 family from them 2286 children.

CHAPTER THREE

METHODOLOGY

Chapter Three: Methodology

3.1 Introduction

This chapter tries to put on the hand the required data and information that needed for achieving the aim and objectives of the study. However, its clarifying the study design, population, sampling procedures, instruments of the study and the methodological approach including ethical consideration and the methods of data collection.

3.2 Study design

The researcher used a descriptive –analytical design since it attempts to assess the level of stressors that generated by the war and also describe the mental health levels among the patients with cancer. Furthermore, it correlates the dependent variable of stressors, war trauma and mental health with some selected independent variables such as age, sex and educational level.

3.3 Population and sampling procedure

The population of the study included all patients with cancer who registered at hospitals records and make follow up at hospitals and out patients clinics through the year 2015. However, they identified according to MOH records and accounts 3683 case (Health Management information system, 2015). The following table represent the total number of cancer patients.

Table (3-1): Population of cancer patients (new cases)

No. of cancer cases according to Health Management Information System Unit for three years 2013					
		Gender		**Age**	
Year	No. cases	Male	Female	Adult	Children
2011	1038	466	572	989	49
2012	1231	507	724	1181	50
2013	1414	629	775	1355	59
Total	**3683**	**1602**	**2071**	3525	158

Source: MOH, Gaza Strip, Health Information System Unit, 2015

3.4 Study Setting

The study is conducted in the Gaza Strip governorates by dividing the patients into two parts southern (at European Gaza Hospital) and northern (at Al shifa Hospital) using simple random sample employing the proportional ratio.

3.5 Study period

The study was carried out in the first semester of the year 2014- 2015 from November 2015 to June 2015 and that included preparing the proposal, writing chapters, developing the questionnaires , data collection , entry and analyses and discussing the results.

3.6 Sampling procedure

3.6.1 Sample calculations

According to Health Management Information System Unit the cancer patients account for 3683 case for the 2011, 2012, and 2014. But the accurate number of cancer patients was reassured and calculated again to take the updated census for these group.

For determining the study sample the researcher used Krejcie and Morgan, 1970 (Krejcie & Morgan, 1970) formula for determining the sample size as follow:

$$s = \frac{x^2 \, \mathrm{NP} \, (1 - \mathrm{P})}{\mathrm{d}^2 (N - 1) + x^2 P (1 - P)}$$

S = required sample size.

x^2 = the table value of chi-square for 1degree of freedom at the desired confidence level (3.841)

N = the population size.

P= the population proportion (assumed to be 0.50since this will provide the maximum sample size).

d = the degree of accuracy expressed as a proportion (0.05). so we found that:

$$s = \frac{3.481 \quad * 3683 * 0.5 \, (1 - 0.5)}{0.05^2 (3683 - 1) + 3.481 \quad * 0.5 (1 - 0.5)}$$

The required sample size was **380** case according to the proportional ratio between males and females. The sample size will be randomly selected depending on the proportional ratio.

3.6.2 Sampling process

The researcher used proportional ratio between the target group considering male and female. Furthermore, the researcher employed the simple random sample design through data collection and patients interview.

3.7 Eligibility Criteria

3.7.1 Inclusion: Cancer patients who registered at the hospital directorate and attending the governmental hospitals and out patients clinics.

3.7.2 Exclusion: Private cases

3.8 Research tools and requirements

1. **Gaza Scale for Socio-demographic status**

   A brief socio-demographic questionnaire developed containing the magnificent data about the patients with cancer including sex, age, income, working status, and other variables. While confirming the disease history of occurrence, type of drug taken (medical or chemotherapy), and the diagnosis.

2. **Gaza Stressful Situations Checklist: (Thabet, 2009, 2013)**

   Stressful situations experiences were collected by using Stressful Situation due to siege Checklist, this was developed before on 2009 (Thabet, et al, 2009) and was modified recently and items were reformed for university students, describing the most common stressful experienced during the last 7 years of closure and seize of Gaza Strip. This checklist consisted of 19 items with answers Yes (1) and no (0). The current scale was modified for Cancer patients. The scoring of the scale is considered by summing all the

answers. In this study, the split half reliability of the scale was high (r = .70). The internal consistency of the scale was calculated using Chronbach's alpha, and was high (α = .78) .

3. **Beck Depression Inventory Short form 13 item, translated into Arabic by Thabet 2007.**

The Beck Depression Inventory (BDI) is one of the most widely used instruments to assess depression. The main aim of Beck Depression Inventory is to measure depression symptoms and severity in persons age 13 and older. This inventory was validating in Palestine culture by Thabet 2007 (Thabet et al, 2007). The Beck Depression Inventory (BDI) has gone through multiple revisions, include BDI-I (1), BDI-IA (2), BDI-II (3), and BDI for Primary Care (BDI-PC), now known as BDI Fast Screen for Medical Patients (BDI-FS) (4) (Smarr, 2003) and the 13-item short form is more recent BDI-11 by Beck, Steer & Brown, 1996 which was used in this study. The original form of this scale contains 21 items and aims to assess, depression and its severity. The BDI takes approximately 10 minutes to complete, although clients require a fifth – sixth grade reading level to adequately understand the questions(Groth-Marnat, 2009). Internal consistency for the BDI ranges from .73 to .92 with a mean of .86. (A. T. Beck, Steer, & Carbin, 1988). Similar reliabilities have been found for the 13-item short form (Groth-Marnat, 2009). The severity of depression is classified on the basis of the total score; in a normal community sample, a BDI score <4 suggests no or minimal depression, 5 to 7 represents mild to moderate depression, 8 to 15is moderate to severe, and <= 16 indicates a severe level of depression.

It is a universal scale; its validity and reliability are already tested. The BDI demonstrates high internal consistency, with alpha coefficients of .86 and .80 for psychiatric and non-psychiatric populations respectively(A. T. Beck et al., 1988). In this study Alpha Chronbache was .86 and split half was .80.

4. **Hamilton Anxiety Scale** (Hamilton, 1959).

The HAM-A was one of the first rating scales developed to measure the severity of anxiety symptoms, and is still widely used today in both clinical and research settings.

The scale consists of 14 items, each defined by a series of symptoms, and measures both psychic anxiety (mental agitation and psychological distress) and somatic anxiety (physical complaints related to anxiety). Although the HAM-A remains widely used as an outcome measure in clinical trials, it has been criticized for its sometimes poor ability to discriminate between anxiolytic and antidepressant effects, and somatic anxiety versus somatic side effects. The HAM-A does not provide any standardized probe questions.

The items are rated on a five-point scale and summed to provide a score ranging from 0 to 56. A score of 17 or less represents mild anxiety, a score between 18 to 24 mild to moderate anxiety, and a score of 25 and above moderate to severe anxiety. The cut-off scores have not been validated with older adults and there are no published norms for older adults (Kogan, Edelstein, & McKee, 2000).

High inter-rater reliability has been shown with community samples and with older adults diagnosed with generalized anxiety disorder (Alpha 0.81–0.95; Lenze et al., 2009; Stanley et al., 2009; Wetherell, Gatz, &Craske, 2003). The HARS showed limited concurrent validity with the STAI-T (Alpha 0.23; Diefenbach et al., 2001) and the BAI (Alpha 0.47; Morin et al., 1999). The scale has been shown to differentiate older adults with generalized anxiety disorder from those with no anxiety disorders (Beck, Stanley, & Zebb, 1996; Edelstein et al., 2008).

This was translated to Arabic by Abed Aziz Thabet and was adapted to the Palestinian society, (Thabet, et al, 2009). For this study Alpha Chronbache was .88 and split half was .82.

3.9 Data collection

The data was done by the researcher and a group of 4 data collectors who had been trained for 4 hours in data collection. The data were collected from two main hospitals (A shifa Hospital and European Gaza Hospital). The data collectors group starts at 8 O'clock and finish at 12 O'clock every day during data collection procedure. The patients were interviewed at out-patients clinics through their medical follow up and in the oncology department inside the hospital. Considering the cancer patients during follow up program, they provided them with questionnaires that prepared for the data collection.

3.10 data entry and analysis

The researcher used Statistical Package of Social Science (IBM SPSS statistics) program V. 20 for data entry and analysis. Frequency tables that show sample characteristics and plot differences between various Gaza hospitals and out patients clinics and clients characteristics variables will be done. Moreover, cross tabulation for main findings and advanced statistical tests such as Chi square test to compare categorical variables, and T test or One way ANOVA test to compare means of numeric variables will be done when required to analyze questionnaire data.

3.11 Anticipated Study Limitations

The data collection based on self-report scales, therefore, where some potential reporting bias which may have occurred because of respondents' interpretation of the questions or desire to report their emotions in a certain way or simply because of inaccuracies of responses. Furthermore, it found to be difficult to follow up the cancer patients during their transfer from hospital to another or to another clinic.

3.12 Study Boundaries

1. **Place boundary:** Geographically it will be applied on Gaza strip (basically Patients with cancer) .
2. **Time boundary:** the study will be carried on the semester 2014/2015.
3. **Human boundary:** All cancer patients who receive medical treatment and have files on Cancer Clinics.

CHAPTER FOUR

RESULTS

4. Results

In this chapter the researcher will view the results in three models; the first is the socio-demographic characteristics of the study sample of cancer patients. The second is about stressors due to siege, prevalence of depression and anxiety among patients. The third will about the relation between the siege, anxiety, and depression and other important socioeconomic variables. The researcher usedStatistical Package of Social Science (SPSS) -version 20- program for data entry and analysis. Frequencies, percentages, means and standard deviation and chi square are used to show sample characteristics.

4.1. Socio- demographic characteristics of the study sample

The total numbers of sample selected for the current study was 380 cancer patients from total of 400 with response rate of 95%. In this section will show the demographic results of the study sample, which will describe the study sample according to gender, age, marital status, place of residence, and type of residence,

The total number of sample selected for the current study were 380 cancer patients, 128 (33.7%) of the sample were males, and 252 (66.3%) were females.

The results show that age range from 18-85 years, mean of age of the study sample was (52.7 years) (SD=14.77 years). As shown, 6.1 % of the sample age was less than 24 years, 6.8% from age 25 to 34 years, 14.2% from 35 to 44 years, 20.8% from age 45 to 54 years, and 52.1% above 55 years.

According to marital status, 10.5% were single, 85% were married, 2.9% were divorced and 1.6% were widowed

Regard place of residence, the study showed that 19.7% live in north Gaza, 40% live in Gaza area, 18.7% live in middle area, 12.6% live in Khan Younis, and 8.9% live in Rafah area.

The results showed that; 267 of the cancer patients live in a city (70.3%), 101 live in a camp (26.6%) and 12 live in a village (3.2%).

The results showed that; 150 of the cancer patients had family size 4 persons and less than (39.5%), 134 were 5–7 persons (35.3%) and 96 of the sample were have 8 and above of family size (25.3%).

According to family monthly income, 321 had family income less than 1200 NIS(84.5%); 10%had family income ranged between 1201-2500 NIS; 2.9% had family income ranged between 2501-3000 NIS; 2.6% had income 3001 NIS and more.

The results showed that; 48 of the cancer patients were not educated (12.5%), 48 were educated to elementary school (12.6%), 78 were to preparatory level (20.5%), 122 father of sample were to secondary education (32.1%), 33 were educated to diploma level (8.7%), 50 were educated to the university level (13.2%), and 1 was educated to the post graduate level (0.3%).

The results showed that; 334 were unemployed (87.9%), 17 were simple worker (4.5 %), 5 were skilled worker (1.3%), 20 were employee and working (30.8%), 3 were civil employee not at work and getting salary (0.8%), and 0.3% were merchants.

Table (4.1): Distribution of the sample according to gender (N = 380)

Variable	N0	%	Variable	N0	%
Gender	**No**	**%**	**Family size**	**No**	**%**
Male	128	33.7	Four and less children	150	39.5
Female	252	66.3	Five to seven siblings	134	35.3
Total	380	100	Eight and more siblings	96	25.3
Age	**No**	**%**	Total	380	100
Less than 24 y	23	6.1	**Family income**	**No**	**%**
From 25 to 34	26	6.8	Less than 1200 NIS	321	84.5
From 35 to 44	54	14.2	1201 - 2500 NIS	38	10.0
From 45-54	79	20.8	2501 - 3000 NIS	11	2.9
55 and above	198	52.1	3001 NIS and more	10	2.6
Total	380	100	Total	380	100
Marital status	**No**	**%**	**Paternal education**		
Single	40	10.5	Not educated	48	12.6
Married	323	85.0	Elementary	48	12.6
Divorce	11	2.9	Preparatory	78	20.5
Widowed	6	1.6	Secondary	122	32.1
Total	380	100	Diploma	33	8.7
Place of residence	**No**	**%**	University	50	13.2
North Gaza	75	19.7	Post graduate	1	.3
Gaza	152	40.0	Total	380	100
Middle area	71	18.7	**Patients' job**		
Khan Younis	48	12.6	Unemployed	334	87.9
Rafah	34	8.9	Simple worker	17	4.5
Total	380	100	Skilled worker	5	1.3
Type of residence	**No**	**%**	Civil employee and working	20	5.3
City	267	70.3	Civil employee not at work and getting salary	3	.8
Camp	101	26.6	Merchant	1	.3
Village	12	3.2	Total	380	100
Total	380	100			

4.2 Medical history

The commonly reported cancer types are; breast cancer (38.2%), lymphoma (13.7%), leukemia (11.3%), md colon cancer (8.4%). While the least common are: Colon cancer (1.3%), Bone marrow cancer (1.1%), and Chest Cancer (1.1%).

Table (4.2): distribution of medical history (N380)

Type of cancer	No	%
Breast Cancer	145	38.2
Lymphoma	52	13.7
Leukemia	43	11.3
Colon cancer	32	8.4
Cancer liver and spleen	26	6.8
Bladder cancer	26	6.8
Metastasis	8	2.1
Stomach cancer	7	1.8
Uterus cancer	6	1.6
Cancer brain	6	1.6
Spinal cord cancer	6	1.6
Intestinal cancer	5	1.3
Mouth and throat cancer	5	1.3
Colon cancer	5	1.3
Bone marrow cancer	4	1.1
Chest Cancer	4	1.1

4.3 Type of stressors due to siege on Gaza Strip

According to Table (4.13), the most common reported stressors due to siege were :353 of participants (92.9%) said prices are sharply increased due to closure, 343 said they feel that they are in big prison (90.3%), their work affected so much due to cut-off of electricity and shortage of gas (85.5%).

Table (4.3) Types and frequency of stressors due to siege (N = 380)

	Yes		No.	
Items	**%**	**No**	**%**	**No**
1. Prices are sharply increased due to closure	353	92.9	27	7.1
2. I feel I am in a big prison	343	90.3	37	9.7
6. My work affected so much due to cut-off of electricity and shortage of gas	325	85.5	55	14.5
4. Social visits are less than before	302	79.5	78	20.5
5. I cannot finish some construction and repair work in my house due to shortage of cement and building materials	287	75.5	93	24.5
8. I sold some of my furniture and my wife's gold.	264	69.5	116	30.5
17. I cannot get medicine	228	60	152	40
18. I cannot go outside the Gaza Strip for treatment when there is no treatment in Gaza	174	45.8	206	54.2
15. I went to Zaka organizations and other organizations to get the food	168	44.2	212	55.8
10. I was not able to get specific medicine for me or for one of the family member	157	41.3	223	58.7
13. I had suffering of not able to receive proper medical care due to shortage of medicine	154	40.5	226	59.5
11.I Cannot travel for treatment and work	117	30.8	263	69.2
12. I stopped completely working due to siege	104	27.4	276	72.6
16. One of the family member died due to prevention of traveling for treatment	103	27.1	277	72.9
3. I stopped sending my children to schools and send them to work to help the family	96	25.3	284	74.7
9. I thought of immigration	93	24.5	287	75.5
7. My monthly income decreased and can't send my children for schools	83	21.8	297	78.2
19. I went to human rights organizations and other organizations to get the help for travel outside Gaza for treatment	58	15.3	322	84.7
14. I was prevented from visiting one of the family members in Israelis jails	19	5	361	95

4.3.1 Differences in stressors due to siege and other socioeconomic variables:

In order to find differences in types and severity of stressful situations due to siege and other sociodemographic variables such as, a t- independent test was conducted. Also, One Way ANOVA was done for groups more than two.

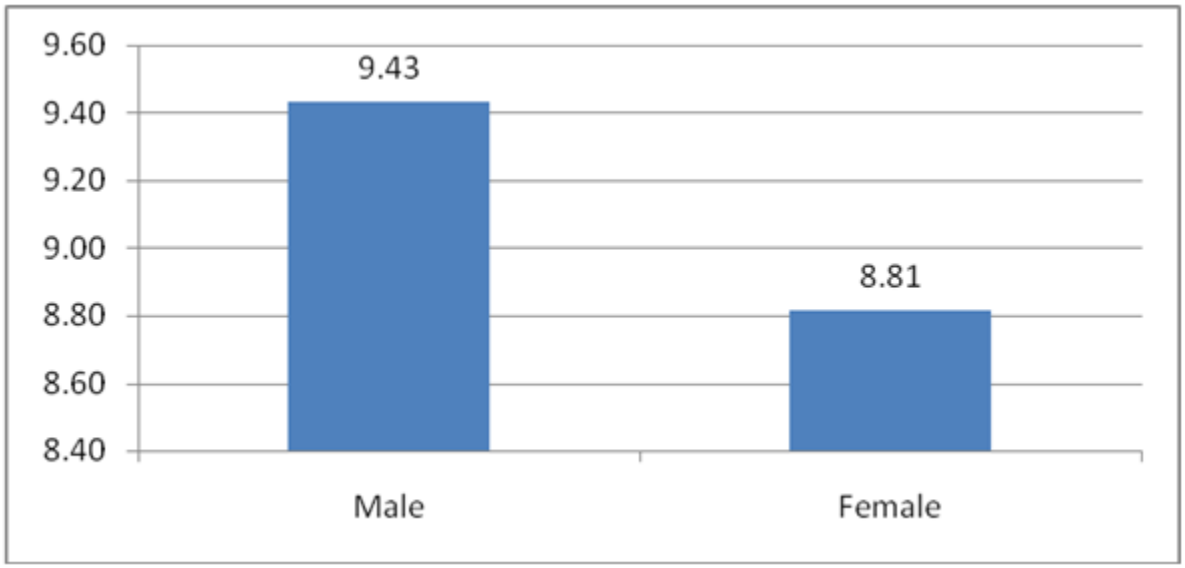
4.3.1.1 Stressors due to siege and gender

In order to test the sex difference between the cancer patients and stressors due to siege we performed t-independent test. As shown in following table; the result found significant differences between stressors due to siege according to sex toward males of the cancer patients (males| Mean 9.43; SD 2.49) and (females| Mean 8.81, SD 2.54).

Table 4.4 Independent t test of stressors due to siege and gender

Stressors due to siege		N	Mean	Std. Deviation	Std. Error Mean	t	p
Sex	Male	128	9.43	2.49	.22036	2.25	0.02
	Female	252	8.81	2.54	.15975		

Figure (4.1) Mean of stressful situations due to siege and sex



4.3.1.2 Stressors due to siege and place of residency

One-Way ANOVA analysis was used to study the differences between stressors due to siege according to place of residence "North Gaza, Gaza, Middle area, Khan Younis, and Rafah". As shown in the following table; the results showed that there were no significant differences between the total means of stressors due to siege according to the place of residence.

Table (4.5) One Way ANOVA Test for total siege and place of residency

Total siege	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	17.752	4	4.438	0.688	0.6
Within Groups	2418.08	375	6.448		
Total	2435.83	379			

4.3.1.3 Stressors due to siege and type of residency

One-Way ANOVA analysis was used to study the differences between stressors due to siege according to the type of residence "City, Camp, Village". As shown in the following table; the results showed that there were no significant differences between the total means of stressors due to siege according to the type of residence.

Table (4.6) One Way ANOVA Test for total siege and type of residency

Total siege	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	11.03	2	5.515	0.857	0.425
Within Groups	2424.8	377	6.432		
Total	2435.83	379			

4.3.1.4 Stressors due to siege and number of children

One-Way ANOVA analysis was used to study the differences between stressors due to siege according to number of children "4 and less, 5-7 children, 8 and more children". The number of children variable was entered as dependent variable and means of stressors due to siege was entered as independent variable. As shown in the following table; the results showed that there

were significant differences between the total means of stressors due to siege according to the number of children (F 3.745, p 0.025) in favor of those who have 5-7 children.

Table (4.7) One Way ANOVA Test for total siege number of children

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	47.454	2	23.727	3.745	.025
Within Groups	2388.378	377	6.335		
Total	2435.832	379			

Post –hoc analysis according to Tukey's statistical test was done and indicated; the total means of stressors due to siege according to number of children "4 and less, 5-7 children, 8 and more children" as shown in the table, there were positive correlation between the stressors due to siege and number of children "4 and less, 5-7 children, 8 and more children" toward cancer patients who have 5-7 children. In other words if the cancer patients have 5-7 children in the family, this will lead to increase in the means of the stressors.

Table (4.8) Means and SD of siege stressors and number of children

Number of children	N	Mean	Std. Deviation
4 and less	150	8.59	2.33
5-7 children	134	9.35	2.69
8 and more	96	9.24	2.56
Total	380	9.02	2.54

4.3.1.5 Stressors due to siege and family income

One-Way ANOVA analysis was used to study the differences between stressors due to siege according to family income "Less than 1200NIS, 1201-2500NIS, 2501-3000NIS, above 3001NIS". As shown in the following table; the results showed that there were significant

differences between the total means of stressors due to siege according to family income (F= 7.96, p = 0.001) towards those who have family income less than 1200NIS.

Table (4.9) Stressors due to siege and family monthly income

Total siege	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	145.463	3	48.488	7.96	0.001
Within Groups	2290.37	376	6.091		
Total	2435.83	379			

Post –hoc analysis according to Tukey's statistical test was done and indicated; the total means of stressors due to siege according to family income "Less than 1200NIS, 1201-2500NIS, 2501-3000NIS, above 3001NIS" as shown in the table, there were negative correlation between the stressors due to siege and family income toward cancer patients who have family income less than 1200NIS. It means that the decrease in family income, lead to increase in the means of the stressors due to siege.

Table (4.10) Means and SD of siege stressors and family income

Family monthly income	N	Mean	Std. Deviation
Less than 1200 NIS	321	9.23	2.46
1201 - 2500 NIS	38	8.63	2.31
2501 - 3000 NIS	11	6.55	2.77
3000 NIS and more	10	6.60	3.06
Total	380	9.02	2.54

4.4 Type and severity of traumatic events:

4.4.1 Types of traumatic events due to 51 days of war:

The study showed that Palestinian patients in the Gaza Strip had experienced from 2-24 traumatic events with mean of 10 traumatic events (SD = 4.70).

The most common traumatic experiences reported by patients were: hearing shelling of the area by artillery (100%), hearing the loud voice of drones (99.9%), and watching mutilated bodies in TV (97.6 %).

Table(4.11): Types of traumatic events due to 51 days war on Gaza in patients (N= 380)

Traumatic events items	Yes		No	
	No.	%	No.	%
Hearing shelling of the area by artillery	380	100.0	0	0
Watching mutilated bodies in TV	371	97.6	9	2.4
Hearing the loud voice of Drones	379	99.7	1	.3
Hearing killing of a friend	265	69.7	115	30.3
Inhalation of bad smells due to bombardment	335	88.2	45	11.8
Witnessing demolition of big buildings	148	38.9	232	61.1
Forced to leave you home with family members due to shelling	239	62.9	141	37.1
Witnessing firing by tanks and heavy artillery at neighbours homes	244	64.2	136	35.8
Threaten by telephone to leave the home for bombardment of home	165	43.4	215	56.6
Receiving pamphlets from Airplane to leave your home at the border and to move to the city centers	168	44.2	212	55.8
Hearing killing of a close relative	173	45.5	207	54.5
Deprivation from water or electricity during detention at home	180	47.4	200	52.6
Witnessing assassination of people by rockets	59	15.5	321	84.5
Threaten by shooting	73	19.2	307	80.8
Witnessing shooting of a friend	103	27.1	277	72.9
Destroying of your personal belongings during incursion	98	25.8	282	74.2
Witnessing shooting of a close relative	80	21.1	300	78.9
Witnessing killing of a friend	64	16.8	316	83.2

Witnessing firing by tanks and heavy artillery at own home	50	13.2	330	86.8
Witnessing killing of a close relative	57	15.0	323	85.0
Threatened with death by being used as human shield by the army to move from one home to home	6	1.6	374	98.4
Witnessing arrest of a friend	10	2.6	370	97.4
Threaten of killing of your closed relative in front of you	27	7.1	353	92.9
Shot by bullets ،rocket, or bombs	10	2.6	370	97.4
Personal threat if killing by the army	15	3.9	365	96.1
Witnessing arrest of a close relative by the army	8	2.1	372	97.9
Physical injury due to bombardment of your home and loss of limbs	3	.8	377	99.2
Being arrested during the land incursion	3	.8	377	99.2

4.4.2 Severity of traumatic events due to 51 days war on Gaza

In order to find the severity of the traumatic experiences, total traumatic events were recorded in to mild trauma (0-5 events), moderate trauma (6-10 events) and severe trauma (above 11 events). The results showed that 9.5% reported mild traumatic events, 52.6% reported moderate traumatic events, and 37.9% reported severe traumatic events.

Table(4.12): Level of traumatic events due to 51 days war on Gaza

Traumatic events	No.	%
Mild traumatic events	36	9.5
Moderate traumatic events	200	52.6
Severe traumatic events	144	37.9
Total	380	100.0

4.4.3 Traumatic events and sex:

In order to find differences in types and severity of traumatic event and chi-Square test was conducted. Males reported severe traumatic events more than females (X^2 = 5.8, df =1, p = 0.05).

Table (4.13): Level of traumatic events due to 51 days war on Gaza according to sex

	Male		Female		x^2	p
Mild traumatic events	12	9.3%	24	9.5%	5.8	0.05
Moderate traumatic events	57	44.5%	143	56.7%		
Severe traumatic events	59	46.2%	85	33.8%		

4.5 Frequency of depression

The study showed that the most common depression symptoms were:discouraged about the future (52.9%) and feel sadness (46.6%), while the least common depression symptom was thoughts of killing self (13.7%).

Table (4.14): Percentage of depression symptoms according to Beck Depression Scale

Symptoms	Non	Little	Much	Very much
Feel sadness	11.1	8.7	30.3	46.6
Discouraged about the future	6.6	6.6	25.5	52.9
Failure	49.5	11.3	20.8	15
Satisfied out of things as used to	11.3	7.6	24.7	44.5
Guilty	35.3	15	26.1	17.4
Disappointed in self	11.6	9.2	35.8	35.5
Thoughts of killing self	53.9	9.2	19.7	13.7
Lost interest in other people	21.1	10.8	25	31.8
Making decisions	18.4	9.5	21.1	36.1
Feeling worse than used to	43.2	11.3	17.4	21.1
Work as usual	20	12.9	29.5	28.9
Get more tired than usual	21.1	11.6	19.2	36.6
My appetite is no worse than usual	22.1	11.3	25.3	29.7

4.5.1 Prevalence and level of depression in relation to gender

As shown in table, 4.5% of males had no depression, 6.8% had mild depression, 15.8% had moderate depression, and 6.6% had severe depression, while 2.9% of females had no depression, 8.2%had mild depression, 37.6% had moderate depression, and 17.60% had severe depression. There were significant differences between depression and gender among cancer patients

(χ2= 10.08, df= 3; p= 0.001).

Table (4.15): Prevalence and level of depression in relation to gender

Level of depression		No depression	Mild depression	Moderate depression	Severe Depression
Male	No	17	26	60	25
	%	13.3	20.3	46.9	19.5
Female	No	11	31	143	26.6
	%	4.4	12.3	56.7	17.60

4.5.2 Differences in depression and other socioeconomic variables

4.5.2.1 Depression and Place of residence

One-Way ANOVA analysis was used to study the differences between the total means of depression according to place of residence "North Gaza, Gaza, Middle area, Khan Younis, and Rafah". As shown in the following table; the results showed that there were significant differences between the total means of depression according to the place of residence of the cancer patients (F= 2.72, p = 0.02) towards those who live in Khanyounis.

Table (4.16): One Way ANOVA of depression and place of residence

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	302.187	4	75.547	2.724	0.02
Within Groups	10398.7	375	27.73		
Total	10700.9	379			

Post –hoc analysis according to Tukey's statistical test was done and indicated; the total means of depression according to place of residence "North Gaza, Gaza, Middle area, Khan Younis, and Rafah" as shown in the table, there were positive correlation between the total means of depression and place of residence toward cancer patients who live in Khanyounis, and North Gaza respectively. This means that the cancer patients from Khanyounis have means of depression higher than the other cities. Followed by North Gaza and middle area. In other words, cancer patients from Khanyounis were more depressed than others.

Table (4.17):Mean and SD of depression and place of residence

	N	Mean	Std. Deviation
North Gaza	75	12.52	5.20
Gaza	152	11.12	5.63
Middle zone	71	11.90	4.81
Khan Younis	48	13.71	5.19
Rafah	34	11.06	4.67
Total	380	11.86	5.31

4.5.2.2 Depression and type of residence

One-Way ANOVA analysis was used to study the differences between the total depression according to the type of residence "City, Camp, Village". As shown in the following table; the results showed that there were no significant differences between the total means of depression according to the type of residence of the cancer patients (F= 1.96, p = 0.14).

Table (4.18): One Way ANOVA test of depression and type of residence

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	110.574	2	55.287	1.96	0.14
Within Groups	10590.3	377	28.091		
Total	10700.9	379			

4.5.2.3 Depression and number of children

One-Way ANOVA analysis was used to study the differences between the total depression according to number of children "4 children and less, 5-7 children, more than 8 children". As shown in the following table; the results showed that there were no significant differences between the total means of depression according to the number of children of the cancer patients (F= 0.28, p = 0.75).

Table (4.19): One Way ANOVA test of anxiety and number of children

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16.241	2	8.120	.28	.75
Within Groups	10684.644	377	28.341		
Total	10700.884	379			

4.5.2.4 Depression and family income

One-Way ANOVA analysis was used to study the differences between the total means of depression according to family income "less than 1200NIS, 1201-2500NIS, 2501-3000NIS, above 3001NIS". As shown in the following table; the results showed that there were significant differences between the total means of depression according to the family income (F= 4.196, p = 0.006) in favor of those who have less than 1200NIS.

Table (4.20): One Way ANOVA test of depression and family income

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	346.62	3	115.54	4.196	0.006
Within Groups	10354.3	376	27.538		
Total	10700.9	379			

Post –hoc analysis according to Tukey's statistical test was done and indicated; the total means of depression according to family income "Less than 1200NIS, 1201-2500NIS, 2501-3000NIS, above 3001NIS" as shown in the table, there were negative correlation between the means of depression and family income toward cancer patients who have family income less than 1200NIS. It means that the decrease in family income, lead to increase in the means of depression among cancer patients. In other words, the low income families were more prone to depression than other families who have higher income.

Table (4.21)Mean and SD of depression and family monthly income

Family monthly income	N	Mean	Std. Deviation
Less than 1200 NIS	321	12.21	5.08
1201 - 2500 NIS	38	10.76	6.57
2501 - 3000 NIS	11	7.55	5.66
3000 NIS and more	10	9.50	4.50
Total	380	11.86	5.31

4.6 Prevalence of anxiety symptoms according to Hamilton anxiety scale

The study showed that the commonly reported anxiety symptoms among cancer patients were; being tense and restless (61.3%), had insomnia (56.3%), had cardiovascular symptoms (51.1%), and worried (50%).

Table (4.22): Anxiety symptoms among patients according to Hamilton anxiety scale

Anxiety symptoms	Not Present Mild	Moderate	Severe/ Disabling
1. Anxious Mood and Worries	19.7	30.3	50.0
2. Tension and Restless	13.2	25.5	61.3
3. Fears (Fear of the dark)	60.8	20.8	18.4
4. Insomnia	18.9	24.7	56.3
5. Intellectual (Poor concentration or memory impairment)	50.3	26.1	23.7
6. Depressed Mood	20.8	35.8	43.4
7. Muscular Somatic Complaints:	63.2	19.7	17.1
8. Sensory Somatic Complaints:	31.8	25.0	43.2
9. Cardiovascular Symptoms (Palpitations)	27.9	21.1	51.1
10. Respiratory Symptoms Choking sensation	54.5	17.4	28.2
11. Gastrointestinal symptoms Nausea or Vomiting	32.9	29.5	37.6
12. Genitourinary symptoms Urinary frequency or urgency	32.6	19.2	48.2
13. Autonomic Symptoms Dry MouthFlushing	33.4	25.3	41.3
14. Behavior at Interview (fidgets and tremors)	32.6	22.9	44.5

4.6.1 Prevalence of anxiety among Cancer Patients

The results showed that 10.8% of males had no anxiety, 8.2% had mild to moderate, and 14.7% had moderate to severe anxiety. For females, 8.9%had no anxiety and 13.2% had mild to moderate anxiety, and 44.2% of females had moderate to severe anxiety. Chi Square test was conducted showed statistically significant differences in level of anxiety toward females ($\chi 2$ = 23.10, df = 1, p = 0.001).

Table (4.23): Prevalence of anxiety among cancer patients

Category		No anxiety	Mild to moderate	Moderate to severe	Total
Male	No.	41	31	56	128
	%	32	24.2	34.8	100
Female	No	34	50	168	252
	%	13.5	19.8	66.7	100
Total	No.	75	81	224	380
	%	19.7	21.3	58.9	100

4.6.2 Differences in anxiety and other socioeconomic

In order to find differences in types and anxiety and other sociodemographic variables such as gender a T independent test was conducted. Also, One Way ANOVA was done for groups more than two.

4.6.2.1 Anxiety in relation to sex

In order to test the sex difference between the cancer patients and means of anxiety we performed t-independent test. As shown in following table; the result found significant differences between the means of anxiety according to sex toward females of the cancer patients (males| Mean 22.71; SD 9.61) and(female| Mean 28.40, SD 9.37).

Table (4.24): T independent test for differences in anxiety in relation to sex

Anxiety	**Gender**	**N**	**Mean**	**Std. Deviation**	**t**	**P**
	Male	128	22.71	9.61	-5.54	0.001
	Female	252	28.40	9.37		

4.6.2.2 Anxiety and place of residence

One-Way ANOVA analysis was used to study the differences between the total means of anxiety according to place of residence “North Gaza, Gaza, Middle area, Khan Younis, and Rafah”. As shown in the following table; the results showed that there were significant differences between the total means of anxiety according to the place of residence of the cancer patients (F= 2.724, p = 0.029) in favor of those who live in Khanyounis.

Table (4.25): One Way ANOVA test of anxiety and place of residence

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	302.187	4	75.547	2.724	.029
Within Groups	10398.697	375	27.730		
Total	10700.884	379			

Post –hoc analysis according to Tukey's statistical test was done and indicated; the total means of anxiety according to place of residence "North Gaza, Gaza, Middle area, Khan Younis, and Rafah" as shown in the table, there were positive correlation between the total means of anxiety and place of residence toward cancer patients who live in Khanyounis, and North Gaza respectively. This means that the cancer patients from Khanyounis have means of anxiety higher than the other cities. Followed by North Gaza and middle area. In other words, cancer patients from Khanyounis were more anxious than others.

Table (4.26): Mean and SD of anxiety and place of residence

	N	Mean	Std. Deviation
North Gaza	75	12.52	5.20
Gaza	152	11.12	5.63
Middle zone	71	11.90	4.81
Khan Younis	48	13.71	5.19
Rafah	34	11.06	4.67
Total	380	11.86	5.31

4.6.2.3 Anxiety and type of residence

One-Way ANOVA analysis was used to study the differences between anxiety according to the type of residence "City, Camp, Village". As shown in the following table; the results showed that there were no significant differences between the total means of anxiety according to the type of residence.

Table (4.27): One Way ANOVA test of anxiety and type of residence

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	86.580	2	43.290	.448	.639
Within Groups	36406.291	377	96.568		
Total	36492.871	379			

4.6.2.4 Anxiety and number of children

One-Way ANOVA analysis was used to study the differences between the total means of anxiety according to number of children "4 and less, 5-7 children, 8 and more children". As shown in the following table; the results showed that there were no significant differences between the total means of anxiety according to the number of children (F 2.140, p = .119).

Table (4.28): One Way ANOVA test of anxiety and number of children

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	409.636	2	204.818	2.140	.119
Within Groups	36083.235	377	95.711		
Total	36492.871	379			

4.6.2.5 Anxiety and family income

One-Way ANOVA analysis was used to study the differences between the total means of anxiety according to family income "Less than 1200NIS, 1201-2500NIS, 2501-3000 NIS, above 3001NIS". As shown in the following table; the results showed that there were significant differences between the total means of anxiety according to family income (F= 5.067, p = 0.002) towards those who have family income less than 1200NIS.

Table (4.29): One Way ANOVA test of anxiety and family income

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1418.01	3	472.669	5.067	0.002
Within Groups	35074.9	376	93.284		
Total	36492.9	379			

Post –hoc analysis according to Tukey's statistical test was done and indicated that; the total means of anxiety according to family income "Less than 1200NIS, 1201-2500NIS, 2501-3000NIS, above 3001NIS" as shown in the table, there were negative correlation between the means of anxiety and family income toward cancer patients who have family income less than 1200NIS. It means that the decrease in family income, lead to increase in the means of anxiety. Low income patients were more anxious than other high patients with higher family income.

Table (4.30): Mean and SD of anxiety and family monthly income

	N	Mean	Std. Deviation
Less than 1200 NIS	321	27.24	9.48
1201 - 2500 NIS	38	22.66	10.55
2501 - 3000 NIS	11	18.73	10.69
3000 NIS and more	10	25.2	10.84
Total	380	26.48	9.81

4.7 Relationship between stressors due to the siege, depression and anxiety

Pearson correlation test showed that there were statistically significant positive relationship between total stressors due to siege and depression symptoms ($r = 0.32$, $p < 0.01$) and anxiety ($r = 0.14$, $p < 0.01$). Where there were no significant relationship between the traumatic events and siege stressors, depression, and anxiety.

Table (4.31): Pearson correlation Coefficient between stressors due to siege, traumatic events, depression and anxiety

	Total trauma	Stressors due to siege	Depression	Anxiety
Total trauma	1	.085	-.054-	-.079-
Stressors due to siege	.085	1	.276**	.147**
Depression	-.054-	.276**	1	.546**
Anxiety	-.079-	.147**	.546**	1

CHAPTER FIVE

DISCUSSION AND CONCLUSION

Chapter five discussion and conclusion

This chapter introduced the main results of cancer patients including the results of stressors due to siege, war trauma, depression, and anxiety results. Furthermore, it included the discussion of the achieved results according to previous studies in the same filed. It included the main recommendations and conclusion.

5.1 Main results:

5.1.1 Medical history of cancer patients

- The commonly reported cancer types were; breast cancer (38.2%), lymphoma (13.7%), leukemia (11.3%), md colon cancer (8.4%). While the least common were: Colon cancer (1.3%), Bone marrow cancer (1.1%), and Chest Cancer (1.1%).

5.1.2 Stressors due siege of Gaza

- The most common reported stressors due to siege were : 92.9% said prices are sharply increased due to closure, 90.3% said they feel that they are in big prison , 85.5% their work affected so much due to cut-off of electricity and shortage of gas. Male were significantly reported stressors more than females.
- The results showed that there were no significant differences between the total means of stressors due to siege according to the place of residence and type of residence.
- The study results showed that there were significant differences between the total means of stressors due to siege according to the number of children and family income in favor of cancer patients with 5-7 children and family income less than 1200NIS respectively.

5.1.3 Traumatic events due to 51 days war:

- The most common traumatic experiences reported by patients were: hearing shelling of the area by artillery (100%), hearing the loud voice of drones (99.9%), and watching mutilated bodies in TV (97.6 %).
- The results showed that 9.5% reported mild traumatic events, 52.6% reported moderate traumatic events, and 37.9% reported severe traumatic events. Males reported severe traumatic events more than females.
- The results showed that no differences in mean traumatic according to place of residence, number of siblings, and monthly income.

5.1.4 Depression:

- The study showed that the most common depression symptoms were: discouraged about the future (52.9%) and feel sadness (46.6%), while the least common depression symptom was thoughts of killing self (13.7%). The study showed that 4.5% of males had no depression, 6.8% had mild depression, 15.8% had moderate depression, and 6.6% had severe depression, while 2.9% of females had no depression, 8.2% had mild depression, 37.6% had moderate depression, and 17.60% had severe depression. There were significant differences between the means of depression and gender among cancer patients in favor of females.
- The results showed that there were significant differences between the total means of depression according to the place of residence, and family income towards those who live in Khanyounis and have less than 1200NIS.
- The results showed that there were no significant differences between the total means of depression according to the type of residence and number of children.

5.1.5 Anxiety:

- The study showed that the commonly reported anxiety symptoms among cancer patients were; being tense and restless (61.3%), had insomnia (56.3%), had cardiovascular symptoms (51.1%), and worried (50%). The results showed that 10.8% of males had no anxiety, 8.2% had mild to moderate, and 14.7% had moderate to severe anxiety. For females, 8.9%had no anxiety and 13.2% had mild to moderate anxiety, and 44.2% of females had moderate to severe anxiety. The results showed that there were significant statistical differences in level of anxiety toward females.
- The results showed that there were significant differences between the total means of anxiety according to the place of residence and family income in favor of those who live in Khanyounis and family income less than 1200NIS.
- The results showed that there were no significant differences between the total means of anxiety according to the type of residence, number of children.

5.2 Discussion

5.2.1 Medical characteristics of cancer patients

The commonly reported cancer types were; breast cancer (38.2%), lymphoma (13.7%), leukemia (11.3%), colon cancer (8.4%). While the least common were: Colon cancer (1.3%), Bone marrow cancer (1.1%), and Chest Cancer (1.1%). The researcher sees these results as a reflection of Israel war that used banned weapons during its wars on Gaza. The banned weapons disseminated between Gaza population and increased the cancer cases dramatically, so we noticed the increase in the number of cancer patients that reported by MOH annex (1).

According to the reports of the MOH in West Bank, Breast cancer ranked first, with (401) reported cases, (18.3%) from all reported cases. Breast cancer is the highest among females and focus in the age group between 20 -59. Where Colon cancer ranked second, with (236) reported cases and (10.8%) from all reported cancers. Colon cancer is the second type of cancer in males with (124) cases (11.7%) and the second one among females with (112) cases (9.9%). Lung cancer was in third place according to reported figures, with (222) reported cases (10.1%), of the all reported cases. Lung cancer was in the first place among males. Leukemia's (6.2%), Brain (5.3%), Bladder (4.1%), Rectum(3.2%), Liver (3.1%), Prostate (3.0%), Stomach (3.0)(MOH, 2014).

But the reports that done by Health Information System Unit in Gaza Strip showed that, breast cancer ranked first, with 278 reported cases (19.7%), and considered the highest among females. Where colo-rectal cancer ranked the second, with 116 reported cases and (11.9%) from all reported cases. Colo-rectal cancer ranked the first in males with 91 cases 14.2% and the third among female with 77 cases 9.9%. lymphoma was the third according to the reported cases with 116 cases 8.2% from all reported cases, where lymphoma considered the second among males

with 62 cases 12.2%. Thyroid 7.1%, leukemia 6.2%, brain 5.1%, lung 4.5%, prostate 4.1%, urinary bladder 3.6%, uterine 3.4%, and other 26.2% (HISU, 2015).

5.2.2 Stressors due to siege

The most common reported stressors due to siege were : 92.9% said prices are sharply increased due to closure, 90.3% said they feel that they are in big prison , 85.5% their work affected so much due to cut-off of electricity and shortage of gas. The researcher hypothesized that for dangerous effects of siege that destroyed everything in Gaza strip including but not limited to political, social, cultural, and economic aspects. The expandable siege that sieged everything put Gaza under collective punishment against every Palestinian. Where Thabet and Thabet (2014) found that the most common stressful situations due to blockade identified during the study are: General feeling of living in a big prison; The inability to finish construction and repair work in people's homes due to a chronic shortage in cement and building materials; The sharp increase in prices in commodities in recent years; The inability to upkeep social and family relationships, including social and religious visits to the West Bank/East Jerusalem; The negative impacts on daily life and work due to repeated cut-off of electricity and shortage of gas and fuel. However, The results of the current study appeared to be consistent with the study of Thabet et al (2009) that found the most common items of siege checklist; learning problems due to shortage of electricity and teachers unable to come schools 82.6%; I feel I'm in a big prison 79.3%; I was not able to go to school due to shortage of fuel and absence of transportation 75%; I can't find some of the necessary things for study such as books and stationary 68.5%. also, the study of Lubbad and Thabet (2009) found the most common siege items; we can't finish some construction and repair work in my house due to shortage of cement and building material 97.4%; one of the family member died due to prevention of travelling for treatment 86.2%; we cannot find some of

the necessary things for children 86.2%; I feel I am in a big prison 78.3%; shortage of fuel, papers, medicine, row material 77.3%; social visit less than before 75.3%.

While Qouta (2008) found that the Israeli siege pushed around 84% of Palestinian families to change the patterns of their lives; 93% of them gave up their daily living requirements; 95% said they live in big prison; 47% of patients in Gaza are not able to get the medicine they needed; 38% not receiving medical services; reduction in social visits 79%; 95% of the citizens could not find the objects and goods that they were looking for; while the prices rose 99% as the income of citizens were reduced with 68%; 45% of whom were fired from their jobs; moreover, 77% of the workers were suspended of their jobs in the construction sector.

However, Hadar (2008) says that, the siege situation is only the most extreme case in which Israeli policies aim to enclose large Palestinian populations and separate them from the rest of the world. Where GCMHP (2008) found that deprivation, poverty, feelings of anger, frustration, hopelessness, feelings of powerlessness and despair characterize the situation for the people in Gaza today as a result of the continuous siege and escalating violence.

Allodi (2008) said that, the continued siege resulting in destruction of the basic material infrastructure and the severe obstruction of the flow of supplies essential to maintain life, health, and the institutions of social support and control. Consequently, a threat to health and the health care determinants of catastrophic proportions.

Ashour (2008) found that, the Israeli recurrent military operations in the Gaza Strip are also associated with disrupting the performance of health care services facilities, changing the pattern of morbidity, and increasing the burden of psychological and psychosocial disorders. Where First (2008) declared that, a state of siege constitutes an attack on the possibility of ordinary life, and so is also an attack on children's psychosocial and cognitive development.

The result found significant differences between stressors due to siege according to sex toward males of the cancer patients. The researcher attributed these results for dominant gender "males", since they work, move, travel, buy, and share the society more than females. This reflected on their behavior and mental health more than female. The males have more participation in the community and the Palestinian families dependent on males. This let them experience the stressors of siege more than females. The results of the current study consistent with the results of Lubbad and Thabet (2009) that found significant differences between stressors due to siege according to sex toward males of the study sample. The results showed that there were no significant differences between the total means of stressors due to siege according to the place of residence and type of residence.

The researcher sees these results as natural consequence since all Gazan's people live in the same geographical area and all the area sieged by the Israel occupation. The Gaza strip has six ports and all of them were blocked. However, the population in Gaza strip experience and share the same problems .

The results of the current study appear to be inconsistent with the results of Lubbad and Thabet (2009) that found significant differences between the means of stressors due to siege and type of residence in favor of those who living in villages.

The results showed that there were significant differences between the total means of stressors due to siege according to the number of children in favor of those who have 5-7 children.

The researcher sees these results as a consequences of the siege and stressors of the siege, where the families unable to achieve the minimum requirement of their children. They were surviving with minimal requirement, and they have deficit to meet their needs. The families with 5-7 children have multiple needs to satisfy their children requirements, they in need for school

stationary, clothes, toys, and other required goods. The results were inconsistent with the results of Lubbad and Thabet (2009) that found no significant differences between the siege and family size among the study sample. The results showed that there were significant differences between the total means of stressors due to siege according to family income towards those who have family income less than 1200NIS.

The researcher hypothesize that because low income families unable to achieve the minimum requirement that needed for their life, but high income families were able to achieve their needs. Where both of them have suffering from the rise of prizes due to siege.

The results of current study seem to be consistent with the results of Lubbad and Thabet (2009) that found significant differences between the means of stressors of siege and family income toward low family income families.

5.2.3 Traumatic events due to 51 days of war in cancer patients

The most common traumatic experiences reported by cancer patients were: hearing shelling of the area by artillery (100%), hearing the loud voice of drones (99.9%), and watching mutilated bodies in TV (97.6 %). The researcher attribute these results for overwhelming situations of the war among the Palestinians residing in Gaza Strip. The war destroyed the basic infrastructure in Gaza, killing over 2500 martyrs, and unlimited numbers of injured persons. Everyone in Gaza strip watched and heard about martyrs, injured, and displaced. Almost all the Palestinians hearing shelling by artillery, air strikes, missiles, bombing and more over of war actions. Furthermore, in spite of direct exposure to war situations, even if not all the Palestinian watched the t traumatic events through TV programs, most of them do. Where Thabet and Thabet (2014) found that traumatic experiences due to the November 2012 eight day military escalation was identified as another risk factor affecting the mental health of people in the Gaza Strip. There

were eight main traumatic events reported by parents. The most common traumatic experiences reported were; 1) hearing shelling of the nearby area by artillery; 2) hearing the sonic sounds of fighter jets; 3) hearing loud noises of drones; 4) watching mutilated bodies on television.

The results of the current study seem to be consistent with the results of Thabet et al (2013) who found the most common reported traumatic events were: 95.7% said they hear of shelling and bombardment of the their area, 94.7% reported watching mutilated bodies in TV, 92.8 % reported seeing the bombardment effects on ground, 71.7% said they had lack of water, food and electricity during the war, and 72.2% said they moved to save place during the war. Each person reported 13.80 traumatic events. The results consisted with Thabet results (2008) that found pre-school children were exposed to a wide range of traumatic events, and exposure to day raids and shelling of the children's houses by tanks were significantly associated with total behavioural and emotional problems.

The results showed that 9.5% reported mild traumatic events, 52.6% reported moderate traumatic events, and 37.9% reported severe traumatic events. The researcher attribute these results for the consequences of war that affected everyone in Gaza Strip which let the population suffering from different types of mental problems. The extensive effects of war didn't differentiate between the targeted population, all who exposed to war experience the same effects and consequences.

The results showed that 9.3% males and 9.5% females have mild traumatic events; 44.5% male and 56.7% females have moderate traumatic events; 46.2% males and 33.8% females have severe traumatic events. Males reported severe traumatic events more than females. The researcher attribute these results for continuous war attacks on the Palestinian in Gaza Strip on short-term basis that affected everyone. Every Palestinian participated in the war by watching, hearing, or loses homes, possessions, and\or losing close relative or loved one. The males were

exposed to war traumatic events more than females due to their dominance on the Palestinian families and also they have work in different sections hospitals, emergency and\or due to their armed groups that work in different places. The results seem to be consistent with the results of Al –arjani and Thabet (2008) that found 33% of males and 48.6% females reported mild traumatic events, 38.4% of males and 34.8% females reported moderate traumatic events, 28.6% of males and 16.6% of females reported severe traumatic events (28.6%). The preceded study of Thabet and Thabet (2014) clearly showed that overall males found these experiences significantly more traumatic than females did. People living in cities reported a higher number of traumatic experiences than people living in villages or refugee camps. Simple workers and less educated mothers were more traumatized by these events than people with better jobs and higher education. Furthermore, it was consisted with the study of Thabet and Vostanis (2000) and Eslieh (2000) that found the boys significantly more than girls had witnessed breaking limbs of close friend, and demolition of their house.

The results showed that no differences in mean traumatic according to place of residence, number of siblings, and monthly income. The researcher attribute these results for the same experience or situations that experienced by different groups, they were exposed to war trauma in Gaza Strip under the same situations and also because the narrowed area that geographically localized and considered one area or war-torn areas.

5.2.4 Depression in cancer patients

The study showed that the most common depression symptoms were: discouraged about the future (52.9%) and feel sadness (46.6%), while the least common depression symptom was thoughts of killing self (13.7%).

The researcher attributed these results to direct consequences of siege effects, that effected the mental health of the cancer patients. The siege have major negative consequences in all life aspects including psychological, social, physical, as well as economic and general life aspects. Where, Thabet and Thabet (2014) in their study found that most of the study sample reported symptoms of depression included general sad feelings and feeling weak in parts of the body.

While Moubayed et al (2015) in their study found significant pre-treatment predictors of depression were identified on multivariate analysis as smoking at diagnosis, .>14 alcoholic drinks per week, T3 or T4 status, and >3 medications (P<.001); two or more of these factors yielded an 82.3% sensitivity in detecting significant depressive symptoms (defined as a HADS cutoff score of 5).

The results consistent with the results of Lubbad and Thabet (2009) that found, the most reported depression symptoms were; tiredness or fatigue 64.5%; sadness 62.5%; guilty feeling 59.2%. where the lowest depression symptoms were; past failure 8.7%; and self-dislike 11.5%.

The results appear to be consistent with Qouta (2008) that found, the increase in the siege status leads to more psychological suffering like being existed, anxiety, depression, hostility and sensitivity.

But, Gogne et al (2011) found a significant correlation was observed between response to neoadjuvant chemotherapy and depression levels in breast cancer patients.

Karabulutlu et al, (2011) in his study revealed that, depression determined in 81.3% of the cancer patients. A positive, statistically significant relationship was found between the avoidance strategy, and depression levels of the cancer patients. Where Jon Skarstein et al, 2000 found that, depression has a stronger impact on global QL of cancer patients than anxiety.

Also, consistent with the results of GCMHP (2008) that revealed that the siege affects general health as well as mental health and the reactions for frustrations and pressure contribute to low self-esteem, feeling of worthlessness, loss of hope, anxiety and feeling of anger, panic, fear, nervousness, depressed mood.

While Chen (2004) found that the most prevalent symptom in the total sample was insomnia (occurrence rate =67%). Insomnia, pain, anorexia, fatigue, and wound or pressure sore occurred significantly more often in depressed patients, with no difference in occurrence rates of nausea/vomiting and dyspnoea.

The study results revealed that 4.5% of males had no depression, 6.8% had mild depression, 15.8% had moderate depression, and 6.6% had severe depression, while 2.9% of females had no depression, 8.2% had mild depression, 37.6% had moderate depression, and 17.60% had severe depression. The researcher hypothesize that for continued siege the imposed by the Israel government on Gaza strip for long time period and reflected on the mental health of the cancer patients. The siege effects come as secondary factors that affect the cancer patients where the primary factor for these groups was the cancer itself that suffering from. The siege considered accumulative factor that affect them that including the cancer and its treatment in addition to siege where no medication or transfer.

However, Ellis et al (2015) found that the prevalence of significant depression 3.5%. This was higher in younger, female and unmarried patients. Procedure-related worry and pain were generally low. Where, Smith et al (2003) found on the Hospital Anxiety and Depression Scale (HADS)], 15 (22%) were depressed (HADS depression score]/11) among the cancer patients.

The results appear to be consistent with the results of Lubbad and Thabet (2009) found that 59.7% have no depression; 37.2% have moderate depression; 3.1% have severe depression. However, Thabet and Thabet (2014) and GCMHP (2007, 2008) reported that , the situation does gravely impact the mental health of the population and the psychological pain the people experience is being manifested in the high levels of domestic, tribal and community violence.

There were significant differences between means of depression and gender among cancer patients in favor of females. The researcher attribute these results to the majority of females who experience cancer and especially breast cancer, breast cancer manifested among females between 20- 59 years old. According to MOH breast cancer is the highest among females and focus in the age group between 20 -59 (MOH, 2014). Furthermore, in Gaza Strip, Health Information System Unit reported that, breast cancer ranked first, with 278 reported cases (19.7%), and considered the highest among females (HISU, 2015). These ratios for breast cancer, but there are other types of cancer that affect females. This give privilege to female cancer patients to experience wide range of siege stressors more than males that affected them because of limited medication, difficulty in transfer and more problems related and lead to depressive symptoms among females. In addition , the current study results were consistent with the study of Ellis et al (2015) found that the prevalence of was female and unmarried patients. Also, The results seem to be inconsistent with the results of Lubbad and Thabet (2009), that indicated significant differences between the means of depression according to sex in favor of males.

The results showed that there were significant differences between the total means of depression according to the place of residence towards those who live in Khanyounis. The researcher hypothesized that related to crowded area of Khanyounis and this city exposed to extensive traumatic events due to tanks intrusion and missiles during Israel attacks. Khanyounis habitants after destruction generated wide range of mental health problems.

The results showed that there were no significant differences between the total means of depression according to the type of residence. The researcher hypothesized that for geographical area since the narrow area of Gaza doesn't matter where you live, you will be in the target. The geographical area will disappear the differences between the groups.

The results showed that there were no significant differences between the total means of depression according to the number of children. The researcher proposed that depression have the same effects on the groups regardless the number of children or family size. So, these groups doesn't differ in their response to depression due to different stressors.

The results showed that there were significant differences between the total means of depression according to the family income in favor of those who have less than 1200NIS. The researcher sees these differences as a consequences of siege that affected cancer patients and reflected on their mental health "depression". In which the cancer patients with low family income find it difficult to achieve their needs easily, and so it will increase their depressive mood, and become more nervous and tension. The results seem to be consistent with the results of Lubbad and Thabet (2009) revealed significant differences between the means of depression and family income toward low income families. But, Gogne et al (2011) found that depression was found

to be higher in literate (25, 54.3%) and employed (14, 53.8%) patients. However, these data were not found to be statistically significant.

5.2.5 Anxiety in cancer patients

The study showed that the commonly reported anxiety symptoms among cancer patients were; being tense and restless (61.3%), had insomnia (56.3%), had cardiovascular symptoms (51.1%), and worried (50%). The researcher attributed these results for the siege that affect the life of the general population and cancer patients specifically. The effect of siege stack everyone young or adult, patients or healthy. The exposure to siege reflected on the daily living of the Gaza population. Where, Thabet and Thabet (2014) found that Palestinian parents reported anxiety symptoms such as nervousness or trembling, feeling tense or locked up. Mothers showed similar signs of anxiety and somatization symptoms as fathers did, but at a lesser degree. The study results appear to be consistent with results of Abu Hein (2008) found that 92% of the Palestinian children suffer from feeling of insecurity and feel of anxiety and tension due to continuous siege. The results different with results of Lubbad and Thabet (2009) revealed the most common reported anxiety symptoms were; I would like to be happy like others 92.1%; I lost my sleep because of anxiety 86.7%; while the lowest items were; I feel no redness face at all 22.2%; I feel quietness all times 26.3%. However, Al-Jadili (2009) revealed that state anxiety was at the highest rank 60.8%, followed by trait anxiety 54.6% among the cancer patients. Where, Karabulutlu et al, 2011 in his study revealed that, Anxiety was determined in 61.5% of the cancer patients. A positive, statistically significant relationship was found between the avoidance strategy, and anxiety levels of the cancer patients.

While, Smith et al (2003) found that that Seventeen (25%) of patients were anxious [anxiety score]/11 on the Hospital Anxiety and Depression Scale (HADS)].

The results showed that 10.8% of males had no anxiety, 8.2% had mild to moderate, and 14.7% had moderate to severe anxiety. For females, 8.9%had no anxiety and 13.2% had mild to moderate anxiety, and 44.2% of females had moderate to severe anxiety. The researcher attributed these results to the siege that sieged the life of Palestinians everywhere in Gaza Strip. The effects of the siege contributed to psychological problems as well as anxiety. However, Lubbad and Thabet (2009) in their study "the impact of the siege on the mental health of university students" reported that, 2% have no anxiety; 39.8% have mild anxiety; 42.3% have moderate anxiety; 15.8% have severe anxiety. Where, Ellis et al (2015) found the prevalence of significant anxiety was 15%. This was higher in younger, female and unmarried patients that appear to be consistent with our results.

The results showed that there were significant statistical differences in level of anxiety toward females. The researcher attributed that for emotional feeling of females, since they were more emotional than males and they were more sensitive for the disease itself and for mental health problems they encounter due to siege and life stressors. The results seem to be inconsistent with results of Lubbad and Thabet (2009) that found no significant differences between the means of anxiety according to sex.

The results showed that there were significant differences between the total means of anxiety according to the place of residence in favor of those who live in Khanyounis. The researcher proposed that Khanyonis dwellers have been exposed to different types of stressors that generated by war and intrusions during the wars, also they exposed to destruction for houses. These effects accumulated by the effects of the siege and the cancer.

The results showed that there were no significant differences between the total means of anxiety according to the number of children. The researcher hypothesized that all cancer patients experience and share the same situations regarding the disease and its consequences. The effects of family size and children disappear between the stressors that generated among the cancer patients. The results seem to be consistent with results of Lubbad and Thabet (2009) that found no significant differences between the means of anxiety according to number of children.

The results showed that there were significant differences between the total means of anxiety according to family income towards those who have family income less than 1200NIS. The researcher hypothesized that the family income considered the core of life for everyone. This made it essential variable and must be considered when we talking about mental health problems. The low income families strive for achieving their needs in presence of high prizes and absent of goods due to siege. The high class may find their needs and requirements despite of expensive prizes, but the low income families are not able to do so. Where, Thabet and Thabet (2014) found that general psychological symptoms, somatization, depression, and anxiety were significantly higher in families with monthly incomes below $300 /month.

The results seem to be consistent with the results of Lubbad and Thabet (2009) that found significant difference between the means of anxiety and family income towards those with low income families.

5.3 Conclusion:

To live under siege and go ahead in your daily living considered impossible for everyone in Gaza Strip. The siege considered the most extreme case in which the Palestinian people in Gaza were totally isolated and separated from the world. The siege contributed to several problems including; psychological, economic, social, and physical problems. As a result, the individuals were living in critical and overwhelming situations and become nervous, anxious, depressed,

fearful in addition to vague future due to continued siege. Furthermore, the continued siege resulted in destruction in the basic life material and complicated the entry of essential supplies and equipment to maintain life that made threat to health.

Unfortunately, war trauma and traumatic events including siege stressors considered the major stressors for the Palestinian people in Gaza strip, the Palestinian people experienced several combats and wars and suffer from different type of symptoms like; life threat; being bombed, shot at, threatened, or displaced; being confined to one's home; losing a loved one or family member; suffering from financial hardships; and having restricted access to resources such as food, water, and other supplies. However, war is a common and relatively powerful source of enduring psychological disturbance. Furthermore, war involves a very wide range of violent and traumatic experiences, including immediate threat of death and disfigurement, physical injury, witnessing injury and death of others.

The siege and war trauma contributed to various problems including; physical, social, psychological, economic problems. The stressors that generated by the siege and war affect the Palestinian people psychological health and generated mental health problems including but not limited to anxiety, depression, stress, fear, and nervousness. The devastating and extreme exposure to these stressors will develop long term mental health problems.

The results revealed that the majority of the study sample suffering from anxiety and depression due to siege and war trauma. These results considered critical indicators that must be taken into consideration by the policy –makers, researchers and clinicians.

5.4 Recommendations:

Policy –makers:

- Establish psychological support department specialized for cancer patients at the treating Centre and should be consult with specialized psychiatrist.
- Confirm periodical appointment and follow up for the cancer patients seeking their mental health and provide frequent psychological support.
- Provide the cancer patients with a list of recognized psychological centers and professional counselors.
- Establishing psychotherapy group for cancer patients.
- Training for cancer patients in early detection of mental health and coping.

Local organizations and clinicians:

- Should define the treatment procedures for anxiety and depression for the cancer patients.
- Make frequent follow up for the cancer patients regardless exposure to external stressors due to siege or wars.
- Provide special treatment and psychological support for the cancer patients.
- Define the suitable treatment protocols for those suffering from anxiety and depression.

International organizations:

- Call the international organization to stop the Israel violations and eliminate the siege immediately.
- Made appeal for the court of justice to stop the Israel wars and siege.

- Call the international community to stand with Palestinian people in front of the Israel forces.
- WHO and UNICEF should take action to protect Palestinian people and promote their mental health.

5.5 Suggested research studies:

The researcher noticed that there were unlimited studies considering anxiety and depression among different groups in Gaza strip. These studies were varying in their results and different from study to another for the same group. So, we need more precise and accurate studies that include large group and under the supervision of MOH with cooperation with the psychiatric hospitals with professional researchers.

- To find the prevalence of depression and anxiety in larger group supported by MOH.
- The effective psychological program for treating anxiety and depression among Palestinian.
- Experiencing the treatment modalities of psychological support programs among different groups with anxiety and depression.

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Annex (1)
Distribution of cancer cases

Distribution of cancer new cases

year	No	incidence
2011	1038	64.2
2012	1231	73.6
2013	1414	81.7
Total	3683	

Distribution of cancer new cases according to sex

	Male		female		Total	
Year	No.	Incidence	No.	Incidence	No.	Incidence
2011	466	5.68	572	7.19	1038	64.2
2012	507	5.97	724	8.79	1231	73.6
2013	629	7.15	775	9.10	1414	81.7

Distribution of cancer new cases according to age group

	Adult		Children under 12		Total	
Year	No.	Incidence	No.	Incidence	No.	Incidence
2011	989	11.15	49	0.67	1038	64.2
2012	1181	12.51	50	0.69	1231	73.6
2013	1355	13.81	59	0.79	1414	81.7

Distribution of cancer cases in Gaza Strip

2011			2012			2013		
Type	**No.**	**%**	**Type**	**No.**	**%**	**Type**	**No.**	**%**
Breast Ca.	193	18.6	Breast Ca.	261	21.2	Breast Ca.	287	19.7
Lung	88	8.5	Colorectal	126	10.2	Colorectal	168	11.9
Leukemia	79	7.6	Lymphoma	99	8	Lymphoma	116	8.2
Colorectal	78	7.5	Leukemia	76	6.2	Thyroid	1oo	7.1
Brain	58	5.6	Lung	68	5.5	Leukemia	88	6.2
Lymphoma	50	4.8	Brain	64	5.2	Brain	72	5.1
Urin. Blad.	36	3.5	Bone	50	4.1	Lung	64	4.5
Stomach	36	3.5	Prostate	50	4.1	Prostate	58	4.1
Prostate	33	3.2	Thyroid	50	4.1	Urin. Blad.	51	3.6
Unknown	32	3.1	Uterus	48	3.9	Uterine	48	3.4
Other	355	34.2	Other	339	27.5	Other	371	26.2
	1038			1231			1414	

Distribution of cancer cases among male in Gaza Strip

2011			2012			2013		
Type	**No.**	**%**	**Type**	**No.**	**%**	**Type**	**No.**	**%**
Lung	62	13.3	Colorectal	68	13.4	Colon ca.	91	14.2
Colorectal	48	10.3	Lymphoma	62	12.2	Lymphoma	66	10.3
Leukemia	45	9.7	Prostate	50	9.9	Prostate	57	8.9
Brain	37	7.9	lung	49	9.7	Lung	54	8.5
Prostate	30	6.4	Leukemia	43	8.5	Leukemia	45	7
Urinary blad.	29	6.2	Urin. blad.	32	6.3	Urin.blad.	44	6.9
Lymphoma	27	5.8	Brain	30	5.9	Brain	41	6.4
Liver	20	4.3	Bone	28	5.5	Stomach	28	4.4
Stomach	17	3.6	Stomach	20	3.9	Thyroid	22	3.4
Skin	16	3.4	Skin	15	3.0	Skin	20	3.1
Other	135	29	Other	110	21.7	Other	171	26.8
	466			507			639	

Distribution of cancer cases among female in Gaza Strip

2011			**2012**			**2013**		
Type	**No.**	**%**	**Type**	**No.**	**%**	**Type**	**No.**	**%**
Breast Ca	62	10.8	Breast Ca	255	35.2	Breast	265	34.2
Colorectal	56	9.8	Colorectal	58	8	Thyroid	78	10.1
Leukemia	34	5.9	Uterus	47	6.5	Colorectal	77	9.9
Lung	26	4.5	Thyroid	42	5.8	Lymphoma	50	6.4
Ovary	24	4.2	Lymphoma	37	5.1	Uterine	47	6.1
Lymphoma	24	4.2	Brain	33	4.6	Leukemia	43	5.6
Uterus	22	3.8	Leukemia	33	4.6	Brain	31	4
Brain	21	3.7	Thyroid??	29	4	Overian	23	3
Stomach	17	3	skin	24	3.3	Stomach	13	1.7
Kidney	13	2.3	Bone	22	3	Skin	12	1.6
Other	273	47.7	Other	144	19.9	Other	136	17.6
	572			724			775	

Source : Health Information System Unit, MOH Gaza Strip, 2015

Annex (2):

Diagnostic Criteria of Generalized Anxiety Disorder

A. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).
B. The individual finds it difficult to control the worry.
C. The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms having been present for more days than not for the past 6 months); Note: Only one item is required in children.
    1. Restlessness or feeling keyed up or on edge.
    2. Being easily fatigued.
    3. Difficulty concentrating or mind going blank.
    4. Irritability.
    5. Muscle tension.
    6. Sleep disturbance (difficulty falling or staying asleep, or restless, unsatisfying sleep).
D. The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
E. The disturbance is not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication) or another medical condition (e.g., hyperthyroidism).
F. The disturbance is not better explained by another mental disorder (e.g., anxiety or worry about having panic attacks in panic disorder, negative evaluation in social anxiety disorder [social phobia], contamination or other obsessions in obsessive-compulsive disorder, separation from attachment figures in separation anxiety disorder, reminders of traumatic events in posttraumatic stress disorder, gaining weight in anorexia nervosa, physical complaints in somatic symptom disorder, perceived appearance flaws in body dysmorphic disorder, having a serious illness in illness anxiety disorder, or the content of delusional beliefs in schizophrenia or delusional disorder). (American Psychiatric Association, 2013)

Annex (3):

Diagnostic Criteria of Major Depressive Disorder

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

Note: Do not include symptoms that are clearly 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, 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). 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.)
3. Insomnia or hypersomnia nearly every day.
4. Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down).
5. Fatigue or loss of energy nearly every day.
6. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick).
7. Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others).
8. 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 to another medical condition.

Note: Criteria A-C represent a major depressive episode.

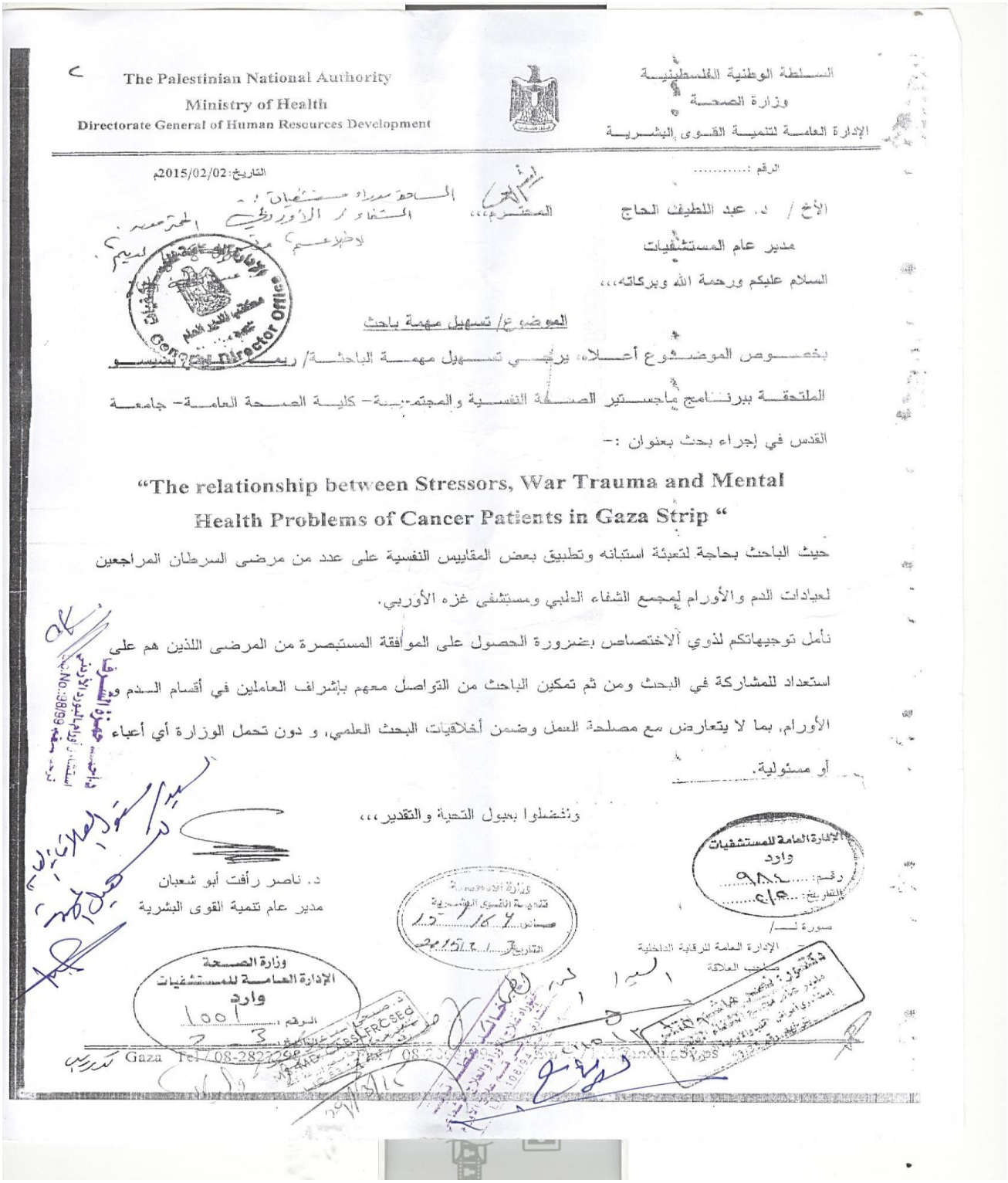
Note: Responses to a significant loss (e.g., bereavement, financial ruin, losses from a natural disaster, a serious medical illness or disability) may include the feelings of intense sadness, rumination about the loss, insomnia, poor appetite, and weight loss noted in Criterion A, which may resemble a depressive episode. Although such symptoms may be understandable or considered appropriate to the loss, the presence of a major depressive episode in addition to the normal response to a significant loss should also be carefully considered. This decision inevitably requires the exercise of clinical judgment based on the individual's history and the cultural norms for the expression of distress in the context of loss.

D. The occurrence of the major depressive episode is not better explained by schizoaffective disorder, schizophrenia, schizophreniform disorder, delusional disorder, or other specified and unspecified schizophrenia spectrum and other psychotic disorders.

E. There has never been a manic episode or a hypomanie episode.

Note: This exclusion does not apply if all of the manic-like or hypomanic-like episodes are substance-induced or are attributable to the physiological effects of another medical condition. (American Psychiatric Association, 2013)

Annex (4)



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

السلطة الوطنية الفلسطينية
وزارة الصحة
الإدارة العامة لتنمية القوى البشرية

الرقم: .....
التاريخ: 2015/02/02م

الأخ / د. عبد اللطيف الحاج
مدير عام المستشفيات

المحترم،،،

السلام عليكم ورحمة الله وبركاته،،،

الموضوع/ تسهيل مهمة باحث

بخصوص الموضوع أعلاه، يرجى تسهيل مهمة الباحثة/ ريم [illegible] الملتحقة ببرنامج ماجستير الصحة النفسية والمجتمعية- كلية الصحة العامة- جامعة القدس في إجراء بحث بعنوان :-

"The relationship between Stressors, War Trauma and Mental Health Problems of Cancer Patients in Gaza Strip "

حيث الباحث بحاجة لتعبئة استبانه وتطبيق بعض المقاييس النفسية على عدد من مرضى السرطان المراجعين لعيادات الدم والأورام لمجمع الشفاء الطبي ومستشفى غزه الأوربي.

نأمل توجيهاتكم لذوي الاختصاص بضرورة الحصول على الموافقة المستبصرة من المرضى اللذين هم على استعداد للمشاركة في البحث ومن ثم تمكين الباحث من التواصل معهم بإشراف العاملين في أقسام السدم و الأورام، بما لا يتعارض مع مصلحة العمل وضمن أخلاقيات البحث العلمي، و دون تحمل الوزارة أي أعباء أو مسئولية.

وتفضلوا بقبول التحية والتقدير،،،

د. ناصر رأفت أبو شعبان
مدير عام تنمية القوى البشرية

الإدارة العامة للمستشفيات
وارد
رقم: ٩٨٥
التاريخ: ٥/٢

صورة /
- الإدارة العامة للرقابة الداخلية
صاحب العلاقة

وزارة الصحة
الإدارة العامة للمستشفيات
وارد
الرقم: ١٥٥

Gaza Tel: 08-2827298

Annex(5)

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

السلطة الوطنية الفلسطينية
وزارة الصحة
الإدارة العامة لتنمية القوى البشرية

التاريخ:2015/04/15م

الرقم:.....

الأخ / د. منير البرش المحترم،،،

مدير عام الوحدات الإدارية التخصصية

174
2015/4/15

السلام عليكم ورحمة الله وبركاته،،،

الموضوع/ تسهيل مهمة باحث

بخصوص الموضوع أعلاه، يرجى تسهيل مهمة الباحثة/ ريما عوني يسيس الملتحقة ببرنامج ماجستير الصحة النفسية والمجتمعية- كلية الصحة العامة- جامعة القدس في إجراء بحث بعنوان :-

"The relationship between Stressors, War Trauma and Mental Health Problems of Cancer Patients in Gaza Strip "

حيث الباحث بحاجة للإحصائيات الخاصة بأمراض الدم والأورام في قطاع غزه، وذلك بما لا يتعارض مع مصلحة العمل وضمن أخلاقيات البحث العلمي، و دون تحمل الوزارة أي أعباء أو مسئولية.

وتفضلوا بقبول التحية والتقدير،،،

د. ناصر رأفت أبو شعبان
مدير عام تنمية القوى البشرية

وزارة الصحة الفلسطينية
مركز المعلومات الصحية الفلسطيني
الرقم: 191
التاريخ 2015/4/15

وزارة الصحة
تنمية القوى البشرية
الرقم: 15
التاريخ 15/4/2015

صورة لـ/
- الإدارة العامة للرقابة الداخلية.
- صاحب/ـة العلاقة.

Gaza Tel / 08-2827298 Fax / 08-2868109 Email / hrd@moh.gov.ps

المجلس الفلسطيني للبحث الصحي
Palestinian Health Research Council

تعزيز النظام الصحي الفلسطيني من خلال مأسسة استخدام المعلومات البحثية في صنع القرار

Developing the Palestinian health system through institutionalizing the use of information in decision making

Helsinki Committee
For Ethical Approval

Date: 06\04\2015 **Number:** PHRC/HC/22/15

Name: Reema Awni Beseiso الاسم:

We would like to inform you that the committee had discussed the proposal of your study about: نفيدكم علماً بأن اللجنة قد ناقشت مقترح دراستكم حول:-

The Relationship between Stressors, War Trauma and Anxiety and Depression in Patients with Cancer in Gaza Strip

The committee has decided to approve the above mentioned research. Approval number PHRC/HC/22/15 in its meeting on 06/04/2015 و قد قررت الموافقة على البحث المذكور عاليه بالرقم والتاريخ المذكوران عاليه

Signature

Member **Chairman** **Member**

Genral Conditions:-

34. Valid for 2 years from the date of approval.
35. It is necessary to notify the committee of any change in the approved study protocol.
36. The committee appreciates receiving a copy of your final research when completed.

Specific Conditions:-

The subject was approved following the World Medical Association Declaration of Helsinki-Ethical principles for medical research involving human subjects, adopted by the 18th World Medical Association General Assembly, Helsinki, Finland, June 1964 and amended by the 59th WMA General Assembly, Seoul, Korea, October 2008.

E-Mail:pal.phrc@gmail.com

Gaza - Palestine غزة - فلسطين
شارع النصر - مفترق العيون

ملحق رقم (5)

مقياس غزة للحالة الاجتماعية الاقتصادية

عزيزي / عزيزتي أمامك مجموعة من الأسئلة عن الحياة الاجتماعية والاقتصادية للعائلة نرجو أن تضع/ي صح في الخانة التي تنطبق على إجابتك وشكرا

الاسم: _____ عمر معبأ الاستبيان ____ الجنس ❐ذكر❐ انثي
العنوان .....
نوع السكن ❐ ملك ❐ إيجار ❐ معسكر ❐ مع العائلة
السكن: ❐ مدينة ❐ قرية ❐ معسكر عدد غرف المنزل .....
عدد االفراد العائلة في المنزل _____
عدد الأولاد : -------- ❐ 4 وأقل ❐ من 5-7 ❐ 8 وأكثر
دخل الأسرة الشهري: ❐ أقل من 300 دولار ❐ من 301-750 دولار❐ أكثر من 751-1000 دولار ❐ أكثر من 1001 دولار
تعليم :❐ لم يتعلم ❐ ابتدائي ❐ إعدادي ❐ ثانوي❐ دبلوم ❐ جامعي ❐ دراسات عليا
عمل :❐ لا يعمل ❐ مدة ترك العمل _____ عامل عادي ❐ عامل صنايعي ❐ موظف يعمل و يتقاضي مرتب ❐ موظف يتقاضى مرتب و لا يعمل ❐ تاجر ❐ صياد ❐ مزارع ❐ أخرى _____

- بداية تاريخ المرض _____
- نوعية الدواء الذي يتم تناوله ❐ عن طريق الفم ❐ علاج كيميائي بالوريد
- التشخيص للمرض _____

ملحق رقم (6)

مقياس تأثير الحصار و الاغلاق و تحديد حربة الحركة على العائلة الفلسطينية في قطاع غزة

عزيزي/ تي

فيما يلي مجموعة من الأسئلة التي تتعلق بتأثير الاغلاق و الحصار المفروض على قطاع غزة على الأسرة الفلسطينية . برجاء وضع علامة(√) في الخانة المناسبة لك.

الرقم	البند	نعم	لا
.1	ارتفاع الأسعار و عدم القدرة على شراء من نحتاجه		
.2	الشعور بأنني أعيش في سجن		
.3	أخرجت أولادي من المدارس و أرسلتهم للعمل في ورش، والأسواق، و الشوارع للمساعدة في توفير المال اللازم لنا		
.4	عدم القدرة على زيارة الأصدقاء، والأقارب نتيجة لعدم توفر النقود بسبب الانقطاع عن العمل بسبب الحصار		
.5	عدم القدرة على أكمال البناء في البيت نتيجة لقلة النقود		
.6	لقد تأثر عملي نتيجة لانقطاع الكهرباء وقلة الوقود نتيجة للأغلاق.		
.7	عدم القدرة على إرسال الأولاد للمدارس بسبب تدني الدخل لعدم وجود العمل.		
.8	بدأت في بيع أثاث منزلي، و ذهب زوجتي للمصروف على العيلة لقلة النقود		
.9	التفكير في البحث عن بلد آخر و الهجرة من غزة.		
.10	القدرة على الحصول على الرعاية الطبية في خارج غزة نتيجة لصعوبة الحركة على المعابر .		
.11	القدرة على السفر للخارج للعلاج أو الالتحاق بالعمل		
12	فقداني لعملي نتيجة للحصار البحري وعدم قدرتي علي الوصول لارضي لزراعتها		
.13	القدرة على الحصول على الرعاية الطبية في المستشفى أو المستوصف لك أو لأحد أفراد الأسرة نتيجة لعدم توفر التأمين الصحي لعدم مقدرتك على دفع الاقساط الشهرية .		
.14	منعت من زيارة احد أفراد الأسرة في السجون الاسرائيلية نتيجة للاغلاق		
.15	توجهت للجمعيات و المؤسسات، ولجان الزكاة التي تعطي كوبونات، أو أي مصادر أخرى للحصول على طعام لي و لأسرتي.		
.16	أحد أفراد عائلتي توفي نتيجة لعدم القدرة علي السفر للعلاج نتيجة للاغلاق و تحديد الحركة		
17	عدم القدرة على الحصول على الدواء		
.18	القدرة على التحويل للعلاج خارج غزة في حال عدم توفير الدواء		
19	توجهت لمؤسسات حقوق الإنسان للحصول على تصريح للسفر للعلاج خارج غزة في حالة تم الرفض كتحويلك للعلاج .		

ملحق رقم (7)
مقياس هاملتون لتقدير مدى القلق

يقيس هذا المقياس مدى شدة الأعراض النفسية والجسمية للقلق فيضع الفاحص درجة الاستجابة للمريض وفقا لخمسة مستويات هي : صفر== لا توجد 1 == أعراض طفيفة 2 == أعراض متوسطة 3 == أعراض شديدة 4 = اعراض شديدة جدا

اسم :.....رقم الملف..... التاريخ .....

	الفقرة	لا توجد أعراض	اعراض طفيفة	اعراض متوسطة	أعراض شديدة	شديدة جدا
1- عسر المزاج	التوجس والشك توقع الأسوأ أو الأشياء الخيفة ،سهولة الاستثارة					
2-التوتر	مشاعر عدم الارتياح،سهولة الاجهاد، الفزع ، سهولة البكاء،الارتجاف، لا يستقر على حال،لا يستطيع أن يترك نفسه على سجيتها.					
3-الخوف	من الظلام والغرباء والوحدة والحيونات وزحمة المرور والحشود					
4-الأرق	صعوبة الاستسلام للنوم ، النوم المتقطع ، نوم غير مشبع والاحساس بالتعب عند الاستيقاظأحلام وكوابيس ومخاوف ليلية .					
5- الذاكرة	صعوبة التذكر وضعف الذاكرة					
6-المزاج الاكتئابي	اللامبالاة ، لا يستمتع بالهوايات ، الحزن ، الاستيقاظ البكر ، انتقال الانفعالات من النقيض الى النقيض في اليوم الواحد					
7-السلوك خلال المقابلة	تململ ،لا يستقر في مكانه ، اهتزاز الايدي ، تقطيب الحاجبين، وجه مشدود					
8- المشاعر الجسمية (الحسية)	طنين في الأذن، زغللة البصر، نوبات من السخونة والبرودة، احساس بالضعف					
9-المشاعر الجسمية (العضلية)	الام ، أوجاع ، التواء العضلات أو تتيبسها ، انتفاخ العضلات ، صرير الأسنان، حشرجة الصوت					
10-أعراض القلب والأوعية الدموية	اختلال ضربات القلب ، الام الصدر،خفقان القلب ، انتفاض العروق ، مشاعر الدوار					
11-أعراض نفسية	ضيق الصدر او اختناقه، مشاعر بالاختناق ، التنهد ، عسر التنفس					
12-الأعراض المعوية المعدية	صعوبة البلع،ارياح،الام في البطن، حرقان المعدة ،لين البراز،الشعور بامتلاء المعدة ، الغثيان ، القيئ ، نقص الوزن ،الامساك،أصوات البطن والامعاء					
13-أعراض المسالك البولية والتناسلية	زيادة عدد مرات التبول، ضغط البول في المثانة انقطاع العادة الشهرية، البرودة الجنسية ، سرعة القذف ، فقدان الرغبة الجنسية ، العنة					
14-أعراض خاصة بالجهاز العصبي المستقبل	جفاف الفم ،احمرار الوجه ، شحوب اللون، العرق،الدوار ، صداع التوتر، وقوف الشعر					

ملحق رقم (8)
اختبار بك القصير ترجمة أ.د عبد العزيز ثابت

تعليمات :
يتضمن هذا الاختيار 13 مجموعة من العبارات الرجاء أن تقرأ كل مجموعة من العبارات بعناية ، ثم تختار عبارة واحدة والتي تصف بطريقة أفضل الطريقة التي تشعر بها خلال الأسبوعين الأخيرين بما في ذلك اليوم. ضع دائرة حول الرقم جوار العبارة التي اخترتها . ولو بدا لك أكثر من عبارة في مجموعة العبارات تنطبق عليك بطريقة متساوية ، ضع دائرة حول أعلي رقم في هذه المجموعة وتأكد أنك لا تختار أكثر من عبارة في اى مجموعة.

البند		
1- الحزن	0	لا أشعر بالحزن
	1	أشعر بالحزن أغلب الوقت
	2	أنا حزين طول الوقت
	3	أنا حزين أو غير سعيد لدرجة لا أستطيع تحملها.
2- التشاؤم	0	لم تفتر همتى فيما يتعلق بمستقبلي.
	1	أشعر بفتور الهمة فيما يتعلق بمستقبلي بطريقة أكبر مما اعتدت.
	2	لاأتوقع أن تسير الأمور بشكل جيد بالنسبة لي.
	3	أشعر بأن لي في المستقبل وانه سوف يزداد سوءا.
3- الفشل السابق	0	لا أشعر بأننى شخص فاشل
	1	لقد فشلت أكثر مما ينبغى.
	2	كلما نظرت إلي الوراء ارى الكثير من الفشل
	3	أشعر بأنى شخص فاشل تماما
4- فقدان الاستمتاع	0	أستمتع بالأشياء قدر استمتاعى بها من قبل.
	1	لا أستمتع بأشياء بنفس القدر الذى اعتدت عليه
	2	أحصل علي قدر قليل جدا من الاستمتاع من الأشياء التى اعتدت أن أستمتع بها.
	3	لا أستطيع الحصول علي أى استمتاع من الأشياء التى اعتدت الاستمتاع بها.
5- مشاعر الإثم (تأبين الضمير)	0	لا أشعر بالإثم (تأنيب الضمير)
	1	أشعر بالأثم (تأنيب الضمير) عن العديد من الأشياء التى قمت بها أو أشياء كان يجب أن أقوم بها.
	2	أشعر بالأثم (تأنيب الضمير) أغلب الوقت.
	3	أشعر بالأثم (تأنيب الضمير) طول الوقت .
6- عدم حب الذات	0	شعورى نحو نفسي كما هو .
	1	فقدت الثقة في نفسي.
	2	خاب رجائي في نفسي.
	3	لا أحب نفسي.
7- الأفكار أو الرغبات الانتحارية	0	ليس لدى أي أفكار انتحارية.
	1	لدى أفكار للانتحار ولكن لا يمكنني تنفيذها.
	2	أريد أن انتحر.
	3	قد انتحر لو سنحت لي الفرصة.
8- فقدان الاهتمام		لم أفقد الاهتمام بالآخرين أو بالأنشطة .
		أهتم بالآخرين أو بالأمور أقل من قبل.
		فقدت أغلب اهتمامي بالآخرين والأمور الأخرى.
		من الصعب أن أهتم بأي شيء.
9- اتخاذ القرارات	0	اتخذ القرارات بنفس كفاءتي المعتادة.
	1	أجد صعوبة أكثر من المعتاد في اتخاذ القرارات.
	2	لدى صعوبة أكثر بكثير مما اعتدت في اتخاذ القرارات.

	3	لدى مشكلة اتخاذ أي قرارات.
10- الشكل العام	0	لا اشعر بأنني أبدو أسوء مما تعودت عليه
	1	.أقلق دائما من أن أبدو مسنا في العمر و غير جذاب
	2	.أشعر بأن هناك تغيرات دائمة في شكلي تظهرني بشكل غير جذاب
	3	أؤمن بأنني أبدو قبيحا/ة
11- العمل اليومي	0	استطيع العمل كما تعودت
	1	يحتاج مني البدء في فعل الأشياء اليومية لجهد أكثر من المعتاد
	2	أضغط على نفسي بشدة لفعل أي شيء عادي
	3	لا أستطيع أن أعمل أي شيء كالمعتاد
12- فقدان الطاقة	0	لا أشعر بالتعب أكثر من المعتاد.
	1	احتاج لمجهود إضافي للبدء في عمل أي شيء
	2	احتاج للضغط على نفسي بشدة لانجاز أي شيئ.
	3	لا استطيع أن أعمل أي شيء.
13- تغيرات في الشهية	0	شهيتي للطعام ليست أسوء من الأول
	1	شهيتي للطعام ليست جيدة مثل الأول
	2	شهيتي للطعام الآن أسوء من الأول
	3	ليس لدي شهية للطعام

ملحق(9)

مقياس الخبرات الصادمة الناتجة عن حرب 51 يوم على غزة

عزيزي/تي بعد التحية مرفق بانواع الخبرات الصادمة التي تعرضت لها خلال الحرب الاخيرة علي غزة في صيف 2014 برجاء الاجابة علي الاسئلة التالية

	الفقرة	نعم	لا
1	سماعك لأصوات القصف على المناطق المختلفة من قطاع غزة		
2	مشاهدة صور الجرحى و الأشلاء والشهداء في التلفزيون		
3	سماعك لصوت الزنانة باستمرار		
4	سماعك لاستشهاد صديق أو جار لك أثناء الحرب		
5	تعرضك لاستنشاق غازات كريهة ناتجة عن القصف		
6	مشاهدة الأبراج السكنية العالية و هي تقصف أمام عينك و تسوى بالأرض		
7	تعرضك لترك المنزل مع عائلتك وأقاربك و النزوح لمناطق أخرى		
8	مشاهدة بيت جيرانكم و هو يهدم ، و يدمر من القصف أو الجرافات		
9	تعرضك للتهديد بالتليفون لترك المنزل بغرض قصفه		
10	تعرضك أو أحد أفراد أسرتك للتهديد بترك البيت في المناطق الحدودية و التوجه لوسط المدينة عن طريق منشورات من الطائرات		
11	سماعك لاستشهاد أب أو أخ أو أخت أو قريب لك أثناء الحرب		
12	تعرضك للاحتجاز في البيت و للحرمان من الماء و الأكل و الكهرباء		
13	مشاهدة عمليات الاغتيالات من قبل الجيش لأشخاص في الشارع		
14	تعرضك لإطلاق النار بقصد التخويف		
15	مشاهدة إصابة صديق لك أمامك بالشظايا أو الرصاص		
16	تعرض إغراضك الشخصية في المنزل للتدمير و التكسير والنهب من الجيش		
17	مشاهدة إصابة أب أو أخ أو أخت أو قريب لك أمامك بالشظايا أو الرصاص		
18	مشاهدة استشهاد صديق لك أمامك		
19	مشاهدة بيتكم و هو يهدم ، و يدمر من القصف أو الجرافات		
20	مشاهدة استشهاد أب أو أخ أو أخت أو قريب لك أمامك		
21	تعرضك للخطر الشديد باستخدامك كدرع بشري للقبض على جار لكم		
22	مشاهدة صديق وهو يعتقل أمامك من قبل الجيش		
23	تهديدك للتهديد بقتل أحد أفراد الأسرة أمام عينيك		

	الفقرة	نعم	لا
24	تعرضك للإصابة بشظية قنبلة أو صاروخ أو الرصاص أثناء الحرب		
25	تهديدك للتهديد شخصياً بالقتل		
26	مشاهدة أب/أخ/أخت/ أم/قريب لك وهو يعتقل أمامك		
27	تعرضك للإصابة الجسدية نتيجة للحرب و فقدانك أحد أطرافك		
28	تعرضك للاعتقال من الجيش أثناء الاجتياح		

الملخص بالعربية:

عنوان الرسالة: العلاقة ما بين الضغوطات، صدمة الحرب، القلق، و الاكتئاب لمرضى السرطان في قطاع غزة

اعداد الباحثة: ريما عوني بسيسو

اشراف الدكتور: عبد العزيز موسى ثابت

هدفت الدراسة الى الكشف عن العلاقة بين ضغوطات الحصار، صدمة الحرب، القلق والاكتئاب بين مرضى السرطان في قطاع غزة. اشتملت عينة الدراسة على 380 مريض بواقع 128 من الذكور، و 252 من الاناث. استخدم الباحث المنهج الوصفي التحليلي لوصف متغيرات الدراسة مستخدما المقاييس الاتية؛ مقياس غزة للحالة الاجتماعية والاقتصادية؛ قائمة غزة للضغوط الناتجة من الحصار (ثابت، 2009، 2013)؛ مقياس بك المختصر للاكتئاب (13 عبارة) (ترجمة ثابت، 2007)؛ مقياس هاميلتون للقلق (هاميلتون، 1959).

اظهرت نتائج الدراسة بان اكثر امراض السرطان شيوعا بين عينة الدراسة هي؛ سرطان الثدي 38.2%؛ ليمفوما (الغدد اللمفاوية) 13.7%؛ امراض الدم (11.3%)؛ سرطان القولون 8.4%؛ بينما اقلها شيوعا كانت امراض النخاع الشوكي 1.1%؛ وسرطان الصدر 1.1%.

اظهرت نتائج الدراسة بان اكثر الضغوطات شيوعا بين افراد العينة هي؛ 92.9% قالوا بان الاسعار ارتفعت نتيجة الحصار؛ 90.3% قالوا بانهم يشعرون بانهم في سجن كبير؛ 85.5% تأثرت اعمالهم نتيجة قطع الكهرباء ونقص الوقود. كما اظهرت النتائج فروق ذات دلالة احصائية بين متوسطات الحصار تبعا لمتغير "النوع" ولصالح الذكور من افراد العينة. اظهرت النتائج فروق ذات دلالة احصائية بين متوسطات الحصار تبعا لمتغير "عدد الاطفال" لصالح الاسر التي يوجد بها 5-7 اطفال من افراد العينة. كما اظهرت النتائج فروق ذات دلالة احصائية بين متوسطات الحصار تبعا لمتغير "دخل الاسرة" ولصالح الاسر ذات دخل اقل من 1200شيكل من افراد العينة.

اظهرت نتائج الدراسة بان اكثر الخبرات الصادمة شيوعا بين مرضى السرطان كانت: سماع قصف مدفعي في المنطقة 100%؛ سماع الاصوات المرتفعة للطائرات بدون الطيار 99.9%؛ مشاهدة الاجساد والجثث الممزقة في التلفاز 97.6%. كما اظهرت النتائج بان 9.3% من الذكور و 9.5% من الاناث لديهم صدمة حرب بسيطة؛ 44.5% من الذكور و 56.7% من الاناث لديهم صدمة حرب متوسطة؛ 46.2% من الذكور و 33.8% من الاناث لديهم خبرات صادمة شديدة. كما اظهرت

النتائج بان الذكور لديهم خبرات صادمة شديدة اكثر من الاناث. بينما اظهرت النتائج عدم وجود فروق ذات دلالة احصائية بين متوسطات مقياس الخبرات الصادمة وكلا من مكان السكن، حجم الاسرة، ودخل الاسرة.

اظهرت نتائج الدراسة بان اكثر اعراض الاكتئاب شيوعاً هي: محبط من المستقبل 52.9%؛ الشعور بالحزن 46.6%، بينما اقلها شيوعاً كانت: افكار الانتحار 13.7%. بينما كانت نسبة انتشار الاكتئاب بين افراد العينة كالاتي: 4.5% من الذكور و 2.9% من الاناث لا يوجد عندهم اكتئاب؛ 6.8% من الذكور و 8.2% من الاناث لديهم اكتئاب بسيط؛ 15.8% من الذكور و 37.6% من الاناث لديهم اكتئاب متوسط؛ 6.6% من الذكور و 17.6% من الاناث لديهم اكتئاب شديد. كما اظهرت النتائج فروق ذات دلالة احصائية بين متوسطات الاكتئاب تبعا لمتغير "النوع" ولصالح الاناث من افراد العينة. و اظهرت النتائج فروق ذات دلالة احصائية بين متوسطات الاكتئاب تبعا لمتغير "مكان السكن" لصالح الذين يسكنون في خانيونس من افراد العينة. كما اظهرت النتائج فروق ذات دلالة احصائية بين متوسطات الاكتئاب تبعا لمتغير "دخل الاسرة" لصالح ذوي الدخل المنخفض اقل من 1200 شيكل من افراد العينة.

اظهرت نتائج الدراسة بان اكثر اعرض القلق شيوعا بين مرضى السرطان هي: متوتر وغير مرتاح 61.3%؛ لديه ارق 56.35؛ لديه اعرض القلب والاوعية الدموية 52.1%؛ قلق 50%. بينما كانت اكثر اعراض القلق انتشارا بين افراد العينة هي: 10.8% من الذكور و 8.9% من الاناث ليس لديهم قلق؛ 8.2% من الذكور و 13.2% من الاناث لديهم قلق بسيط؛ 14.7% من الذكور و 44.2% من الاناث لديهم قلق من متوسط لشديد. كما اظهرت النتائج فروق ذات دلالة احصائية بين متوسطات القلق تبعا لمتغير "النوع" ولصالح الاناث من افراد العينة. كما اظهرت النتائج فروق ذات دلالة احصائية بين متوسطات القلق تبعا لمتغير "مكان السكن" لصالح الافراد الذين يسكنون في خانيونس من افراد العينة. كما اظهرت النتائج فروق ذات دلالة احصائية بين متوسطات القلق تبعا لمتغير "دخل الاسرة" ولصالح الافراد ذوي دخل اقل من 1200 شيكل من افراد العينة.