

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



**The prevalence of depression among
health sciences students at Al- Quds University**

Master Program in Community Mental Health

MPH Thesis

Issa Raja Mohammad Abo Eram

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**The prevalence of depression among
health sciences students at Al- Quds University**

Prepared by :

Issa Raja Abo Eram

BSc.: Medical Technology, Al- Quds University- Palestine

Supervisor: Dr. Najah Al- Khatib

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School of Public Health



Thesis Approval

The Prevalence of Depression among Health Sciences Students at Al- Quds University

Prepared by : Issa Raja Mohammad Abo Eram

Registration No. : 21411186

Supervised by : Dr. Najah Al- Khatib

Master thesis submitted and accepted. Date : 16/12/2017

The names and signatures of examining committee members were as follow:

- 1- Head of Committee :Dr. Najah Al- Khatib
- 2- Internal Examiner : Dr. Salam Al- Khatib
- 3- External Examiner : Dr. Iyad Al- Azzeh

Signature *Dr. Najah Al-Khatib*

Signature *Salam*

Signature *Iyad*

Jerusalem- Palestine

1438/ 2017

Dedication

To my wife wafa'.

To my mother.

To my two daughters Islam (suma) and Yaffa.

To my sons, Raja, Bassam and Mahmud.

To my friends.

To my teachers.

Issa Raja Mohammad Abu-Eram

16/12/2017

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 study (or any part of the same) has not been submitted for a higher degree to any other university or institution .

Signed :

A handwritten signature in blue ink, appearing to read 'Issa', with a large, stylized flourish above the name.

Issa Raja Mohammad Abu Eram

Date : **December, 2017**

Date : December, 2017

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Issa Raja Mohammad Abu Eram

Date : December, 2017

Abstract

Introduction.

Health sciences education is known as a stressful and high challenging environment that affect physical and psychological student's well-being. Students represent a highly educated population under significant pressures. These pressures are common and associated with depression.

The aim of the study was to assess the prevalence of depression among health sciences students at Al- Quds University.

In order to achieve the study aim, a cross sectional study was conducted. The target population of the present study was (3390). Beck Depression Inventory (BDI- \square , 1969) self-reported questionnaire was utilized . The sample consisted of (357) students at Al-Quds University in West Bank who were selected conveniently from the health sciences students. The completed questionnaires were entered and analyzed using (SPSS) software version 21 by using descriptive analysis and parametric tests such as frequency, percentage, T-test, and ANOVA.

The finding of the study showed that , 47.9% had minimal symptoms of depression and 40.3% of students were may clinically depressed. According to BDI score ≥ 17 which is the cutoff point for diagnosis 23.2% of the participants had moderate depressive symptoms, 19.7% had mild symptoms and 9.2% had severe depressive symptoms.

Further, the study results showed that there were no significant difference in depression in regard to number of siblings, family income, parental marital status, the presence of medical illness and the student's medical and paramedical specialty. Whereas, the findings revealed that there were significant differences in depression in regard to gender, age, region of living, place of residence, religiosity level, study year, present of psychological problems and death thoughts. Female participants had more depressive symptoms than males with p-value (0.001) ; the participants whose age was 22 and older had the highest prevalence of depression than other ages with p-value (0.024). Participants from the south and the middle regions of the West Bank had more depressive symptoms with p-value (0.007) than the participants from the north regions. The participants from rural areas had more depressive symptoms with p-value (0.02) than the

participants from urban areas of the West Bank. Moreover, the fifth year and above group of participants had the highest prevalence of depression with p-value (0.027) than other groups. The depression rate among nursing, midwifery and physiotherapy students had was (50%) and it was a higher than their peers.

There was also a significant difference in the prevalence of depression in relation to death thoughts with p-value (0.0001) and psychological status with p-value (0.0001) of the participants. Finally, the findings showed a statistically significant difference in prevalence of depression in regard to religiosity level. The committed religious participants had more depression with p-value (0.029) than somehow religious participants.

In the stepwise regression analysis, variables that were significantly associated with the prevalence of depression were included in the model. The model includes gender, age, the region of living, place of residence, year of study, religiosity level, death thoughts and psychological state. The predictors were death thoughts, psychological state, and region of living.

Conclusion : Based on the findings, depression among health sciences students is a serious issue. Results from this study indicate that 32% of the participants had moderate and severe depressive symptoms. Moreover, 24% of the participants have suicidal thoughts and wishes and 6.7% among them think that death is the solution to solve their problems. That means, those students want to end their pain by suicidal way. Thus depressive students need psychotherapy intervention and help. Whereas students with suicidal ideation need to solve their problems as soon as possible. the study recommends to develop awareness to recognize the psychological problems of students at Al-Quds University.

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Abbreviation

AQU	Al- Quds University
DASS	Depression Anxiety Stress Scale
MBI	Maslach Burnout Inventory
HADS-D	Hospital Anxiety and Depression Scale-D
BDI	Beck Depression Inventory
HESI	Higher Education Stress Inventory
MDI	Major Depression Inventory
MSSQ	Medical Student Stressor Questionnaire.
AKUADS	Aga Khan University Anxiety and Depression Scale
WAIS	Wechsler Adult Intelligence Scale
WHO	World Health Organization
SPSS	Statistical Package For Social Science
PEPI	computer programs for epidemiologists
DSM- IV	Diagnostic and Statistical Manual of Mental Disorders Forth Edition
DSM- V	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition
NIS	New Israeli Sheqel
US	United State of America
HPA	Hypothalamic, Pituitary Adrenal Hormone
MRI	Magnetic Resonance Imaging
5HTT	Sodium Depression Serotonin Transporter Gene

Chapter One

Introduction of the study

Research problem

Justification of the study

The aim of the study

Specific objective

Research question

Feasibility of the study

Research limitation

Study variables

Definition of terms

Introduction

1.1 Introduction.

College education can be one of the most exciting and challenging times in an individual's life, opening the door to pursue new knowledge, prepare for a future career and experience life in a new way. University students are a young population who faced many problems such as, separation from their families, new environment and adaptation to educational standards, the pressure of academics with the obligation to succeed, uncertain future and difficulties integrating into the education system that can cause high level of depression and stress (Ross et al., 2006).

Mental health problems among university students represent an important and growing public health concern for health promotion programs. According to a study conducted by Amr et al. (2013), which aimed to estimate the mental health problems among undergraduate students in Saudi Arabia, the study found that the prevalence of depression was 54%, stress symptoms were 40% and generalized anxiety disorder was 14%, while panic symptoms were 4%. Depression, anxiety and panic disorder were significantly higher among females students.

Health professions education is highly demanding and costly. It can be a stressful experience for some students and may affect negatively emotional well-being and academic performance of the students (Sabih et al., 2013). Obviously, any students would be highly distressed when they obtained poor marks in examinations and having difficulty in understanding the contents of the subjects. Othman et al. (2013) found that the academic requirement is the major stressor for health sciences students. The highest mean degree of stress was getting poor marks which represents a severe stress level, followed by a large amount of content to be learned and heavy workloads (Othman et al.,2013).

As a reaction to the previous stress, some students get depressed, where they cannot get themselves together. They may cry alone, skip classes, or isolate themselves without recognizing that they are depressed (Preston,2013). Previous studies reported that,

depression among medical and paramedical university students was noted around the world and the prevalence seems to be increasing (Eller et al., 2006).

Health sciences students are homogenous group and subjected to different kinds of stress, they face difficult university subjects in different language which may affect their learning ability and placing them at a greater risk for stress, depression, anxiety, burnout, substance abuse and suicidal behavior. Stress is usually a precursor for anxiety and anxiety is a precursor to depression (Sharma et al., 2013). Considerable research found that stress and psychological morbidity such as, depression and anxiety are common among medicine, dentistry, pharmacy, nursing and medical laboratories students (Ibrahim et al.,2014; Abo-Alshamat, 2016 ;Aghakani et al.,2010; Sharma et al.,2013).

Many previous studies suggest that there is a high level of stress and depression among health sciences students compared to other undergraduate peers. Teo and Say (2012) found that the prevalence of depression was the highest among health sciences students with a rate of (30%), followed by general sciences and engineering students with a rate of (18.4%), and the lowest were among art and social sciences with a rate of (15.4%). Rezayat and Nayeri (2014) showed that 55.6% of nursing students in Tehran University indicated low levels of assertiveness and 38.7% of students had moderate to severe depression and they needed psychological intervention and help.

The prevalence of depression among health sciences students ranged between 8% to15% in the USA (Goelbert et al., 2009; Givens and Shea, 2005). In Brazil, a recent study revealed that 38% of health sciences students had depression (Baldassin et al., 2008). Researchers in Nepal estimated that the prevalence of depression was 21% (Sreeramareddy et al., 2007). In the Middle East, the prevalence of depression among students seems to be much higher than western countries with estimates from 45% to 67% (Inam, 2007; Ibrahim et al., 2013; Al-Faris et al., 2016).

According to the American Holistic Nursing Association (2012), nursing students experience higher levels of stress and depression than medical and pharmacy students. The source of stress among nursing students including study issues, the emotional demands of nursing, the use of technical equipment, interpersonal interaction and lack of time for family and personal pursuits.

Studies of such nature are useful to take appropriate steps like counseling for the depressed health sciences students. Hence, this study was undertaken to find out the prevalence of depression among health sciences students at Al-Quds University.

1.2 Problem statement.

The World Health Organization emphasizes that there is “no health without mental health” WHO (2010). The global burden of mental disorders has increased significantly in recent years (Prince et al., 2007). However, Corey et al. (2009) estimated that one in five adolescents aged 10-24 years will experience a mental problem each year and health of young people has been largely neglected in global public health because this group is perceived to be healthy.

University students are young people and they are facing many common mental health problems such as depression, anxiety, eating disorder, self-harm and obsessive compulsive disorder (Farrer et al., 2010).

Depression among university students is extremely prevalent and a widespread problem across many countries around the world (Abedini et al., 2007). University students are a special group of people that are enduring a critical transitory period in which they are going from adolescence to adulthood and can be one of the most stressful times in a person’s life. Trying to fit in, maintain good grades, plan for the future, and be away from home often causes anxiety and stress for a lot of students (Buchanan, 2011).

To the best of the investigations knowledge, there are no published studies that examined depression levels among health sciences students in Palestine. This study is investigating and measuring the degree of depression and search for predictors of depression among health science students. The results of this study could help in providing a basis for future depression related health promotion programs for health science students in Palestine. Also, there is no special system or program to support highly depressed students at Palestinian universities.

1.3 Justification of the study.

According to the Palestinian Central Bureau of Statistics (2014), the percentage of youth represents 30% of the total population in Palestine: 38.1% of them are adolescents aged (15-19) years and 62% are youth aged (20-29) years. Furthermore, a United Nations report (2009) showed that more than 80% of young the Palestinians are depressed. The report based on interviews with 1,200 Palestinians over the age of 17 from the West Bank and Gaza found that 39% were “extremely” depressed and 42% were depressed. Depression was more marked in the Gaza Strip, where 55% said they were “extremely” depressed. The report concludes that young Palestinian people are exceptionally vulnerable due to political conflict, they are more likely to be injured, arrested or encounter harmful situations.

According to a 2013 American Psychological Association survey, about one-third of college students have experienced depression, that can occur at the same time of other health problems, such as anxiety, an eating disorder, or substance abuse. Suicidal due to depression is one of the major causes of adolescent mortality in developed countries, especially in youth and college students (Mustaffa et al., 2014; Tan et al. 2013) .

Eskin et al. (2016) study to investigate the prevalence of suicidal behavior and psychological distress in university students across 12 nations. The results of the study showed that 29% of the participants having suicidal ideation and 7% reported attempting suicide. The odds of suicide attempt were high in Jordan, Palestine, Saudi Arabia, and Turkey. Psychological distress and suicidality are common in university students and depending on the socio-cultural context.

This study was selected because there is lack of studies that assessed the prevalence of depression among health sciences students in Palestine, and may help policy makers and managers in the Palestinian universities and at Al-Quds University in particular planning the services and interventions for this group.

1.4 The aim of the study.

The aim of the study was to assess the prevalence of depression among health sciences students at Al- Quds University.

1.5 Specific objectives of the study.

- 1- To assess the prevalence of depression among Al- Quds University health sciences students.
- 2- To assess the relationship between the prevalence of depression and selected demographic variables such as (gender, age, economic status, parent marital state, place of residence, region of living, number of sibling, religion, and religiosity level) among Al-Quds University health sciences students.
- 3- To examine the relationship between the prevalence of depression and non demographic variables (specialty, year of study, medical illness, psychological problems and death thoughts) among Al- Quds University health sciences students.

1.6 Research questions.

- 1- What is the prevalence of depression among health sciences students at Al- Quds University?
- 2- Is there a relationship between prevalence of depression and selected demographic variables (gender, age, economic status, parent marital state, place of residence, region of living, number of sibling, religion, and religiosity level) among Al- Quds health sciences students?
- 3- Is there a relationship between the prevalence of depression and non demographic variables (specialty, year of study, medical illness, psychological problems and death thoughts) among Al- Quds University health sciences students?

1.7 Feasibility of the study.

This study was completed as a requirement for a Master's degree in community mental health at Al-Quds University. The study was self-funded and was conducted in health sciences faculties of Al-Quds University. The health sciences faculties were highly cooperated with the researcher. Ethically, ethical approval was obtained from Al-Quds University prior commenced of this study and there was no potential harm for participants, the anonymity and autonomy of participants in the study were ensured and their consent were taken before participation.

1.8 Study variables.

1.8.1 Dependent variable. Depression

1.8.2 Independent variables.

In the current study, independent variables included socio-demographic data such as (gender, age, economic status, parent marital state, place of residence, region of living, number of sibling, religion, and religiosity level) and non demographic variables such as (specialty, year of study, medical illness, psychological problems and death thoughts).

1.9 Definition of terms.

1.9.1 Depression

Conceptual definition of depression: According to (DSM-V), depression is more than just sadness. It is a psychiatric condition in which the individual experience a lack of interest and pleasure in daily activities, significant weight loss or gain, insomnia or excessive sleeping, lack of energy, inability to concentrate, feelings of worthlessness or excessive guilt and recurrent thoughts of death or suicide (Seligman,1973; Kessler et al, 2005).

Operation definition: The total score that the participant has on Beck Depression Inventory (BDI).

1.9.2 Health sciences students:

Conceptual definition: Refer to the persons who are studying multidisciplinary fields that related to human health which combines bio-medical, bio-chemical, psycho-social, medical instrumental and organizational aspects (Sandra,2008).

Operational definition: All students who studies at health building school in Abu-Dies campus, the building include nine colleges which are (Medicine, Dentistry, Medical Laboratory Technology, Nursing , Midwifery, Pharmacology, Radiology, Public health nutrition and Physiotherapy)

1.9.3 Health sciences:

Conceptual definition: is an applied science that refers to the body of knowledge of human and animal health , there are numerous disciplines of sciences including anatomy, physiology, neurophysiology, microbiology, epidemiology, immunology and many others (Sandra,2008).

Operational definition: It is subjects that provide students medical knowledge, skills and personal developmental programs that prepare professional health workers.

1.9.4 Al-Quds University:

Al-Quds University was founded two decades ago as the only Palestinian University in Jerusalem, and upon the vision that only an educated and enlightened citizenry can safeguard the future of our nation. (www.Alqudes.edu).

It becomes one of the top universities in Palestine, 15 faculties, 29 institutes and centers were created, among them the first Medical School in Palestine, the first research center for nanotechnology, the institute of Jerusalem studies that offers a unique MA on the ancient city and Bard college for Arts and Sciences (www.Alqudes.edu).

AQU is a wide reaching institute with members from all over the West Bank and occupied Palestine, with fifteen academic faculties, including arts, medicine, dentistry, pharmacy, nursing, law, Qur'an and Islamic studies and engineering.

Chapter two

literature review

Introduction

Depression Signs and Symptoms

Causes of Depression

Theories of Depression

Depression Among University Students

Health sciences students

Previous studies

Conceptual framework

Chapter two

Literature review

2.1 Introduction.

Depression is a mood disorder which prevents individuals from leading a normal life, at work, socially or within their family. Seligman (1974) referred to depression as the ‘common cold’ of psychiatry because of its frequency of diagnosis. It is usually quite easy to see when someone is depressed.

According to Archives of General Psychiatry (2010), approximately 15 million people in the United States suffer from depression, and college students are among them. In addition, depression is a mood disturbance that affects how people feel, think, and behave, and it can impact college student’s, work, and relationships (Kessler et al., 2005). WHO(2017) emphasized that 300 million people had depression worldwide.

2.2 Depression signs and symptoms.

Depression is a common mental disorder, characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness, and poor concentration (DSM- V,2013).

Depression can be long-lasting or recurrent, substantially impairing an individual’s ability to function at work or school or cope with daily life. At its most severe state, depression can lead to suicide. When mild, people can be treated without medicines, moderate depression may need medication and professional psychotherapy but when depression is sever should be treated with medication and other treatment (Kessler et al., 2005).

Depression is a disorder that can be reliably diagnosed and treated by non-specialists as part of primary health care. Specialist care is needed for a small proportion of individuals with complicated depression or those who do not respond to first-line treatments (WHO, 2012).

People experience depression in different ways, but there are some general symptoms that characterize depression. “ Emotional symptoms include prolonged sadness, crying

spells, irritability, social withdrawal, and feelings of guilt, hopelessness, or worthlessness. Physical symptoms can include fatigue, lack of energy, tepidity, changes in sleep or appetite, restlessness, or decreased sex drive” (Miller et al.,2016).

A person who suffers from a major depressive disorder must either have a depressed mood or a loss of interest or pleasure in daily activities consistently for at least a 2 week period (DSM-5).This mood must represent a change from the person’s normal mood. Social, occupational, educational or other important functioning must also be negatively impaired by the change in mood. For instance, a person who has missed work or school because of this depression, has stopped attending classes or usual social engagements (Persons et al., 2011).

“A depressed mood caused by substances (such as drugs, alcohol, or medications) is not considered a major depressive disorder, nor is one which is caused by a general medical condition. Major depressive disorder generally cannot be diagnosed if a person has a history of manic, hypomanic, or mixed episodes (bipolar disorder) or if the depressed mood is better accounted for by schizoaffective disorder and is not superimposed on schizophrenia, a delusion or psychotic disorder” (DSM-IV-TR, 2000, p:347).

Clinical depression is characterized by the presence of 5 or more of these depressive symptoms according to DSM- V (2013):-

1. Depressed mood most of the day, nearly every day, as indicated by either subjective report (feeling sad, “down in the dumps”, or empty) or observation made by others (appears tearful or about to cry). (In children and adolescents, this may present as an irritable or cranky, rather than sad mood).
2. Markedly diminished interest or pleasure in all, or almost all, activities every day, such as no interest in hobbies, sports, or other things the person used to enjoy doing, could be also observed in people who has depression.
3. Significant weight loss when not dieting or weight gain (a change of more than 5 percent of body weight in a month), decrease or increase in appetite nearly every day.
4. Insomnia (inability to sleep or difficulty staying asleep) or hypersomnia (sleeping too much) nearly every day.

5. Psychomotor agitation (restlessness, inability to sit still, pulling at clothes) or retardation (slowed speech, movements, quiet talking) nearly every day.
6. Fatigue, or loss of energy nearly every day (even the smallest tasks, like dressing or washing, seem difficult to do and take longer than usual).
7. Feelings of worthlessness or excessive or inappropriate guilt nearly every day (ruminating over minor past failings).
8. Diminished ability to think or concentrate, or indecisiveness, (easily distracted, complains of memory difficulties) nearly every day.
9. Recurrent thoughts of death, recurrent suicidal ideas without a specific plan, or a suicide attempt or a specific plan for committing suicide.

In keeping with updates to the major depressive disorder criteria in (DSM-V), a person can suffer from a major depressive episode during a period of bereavement. This is a significant change from the previous (DSM-IV) criteria, which did not give the diagnosis of major depression if the person was grieving. In grief the personal thoughts associated with thoughts and memories of the deceased, the pain of grief accompanied by positive emotion or humor, the self esteem is generally protected and the thoughts of death are focused and joined to deceased. While in major depression the personal thoughts are more persisted and not linked to specific thoughts or preoccupations, the self esteem is low or down and the death thoughts are focused on ending personal life because they unable to cope with the pain of depression (DSM-V, PP: 161),

In addition, depending on the number and severity of depression symptoms, a depressive episode may be specified as mild, moderate, or severe. The mild depressive episode will have some difficulty and minor functional impairment of the five symptoms that required to make the diagnosis. Moderate depression, the symptoms or functional impairment are between mild and severe. Severe depression, people with this type of depression have symptoms that are marked and distressing such as somatic symptoms, loss of self-esteem, suicidal thoughts and acts (DSM. IV; Michael et al., 2013; Tyrrell and Elliott, 2013)

2.3. Causes of Depression.

There are different beliefs about what “causes” depression. There are several reasons and factors for depression, including: biological and genetics factors, psychological factors, social and spiritual factors. For some people, unresolved feelings from past experiences such as trauma, abuse, loss, or family dynamics can contribute to depression. Another cause is imbalance of the chemical messengers in the brain such as neurotransmitters reduction (Kessler et al., 2003). The following are the possible causes of depression:-

2.3.1 Biological causes.

Scientific studies have found that patients suffering from depression show altered biochemical processes in the brain and changes in the endocrine system (Moller et al., 1995).

Depression is associated with a reduction in the neurotransmitters (Norepinephrine and Serotonin). Serotonin regulates sleep, mood, appetite, and inhibits pain. Norepinephrine is associated with motivation and reward. Dopamine regulates motoric control and is also associated with motivation and controls how persons perceive reality (Nutt, 2008).

Other theories suggest that depression could be partly caused by a maladaptation to chronic stress, which manifests in changes in the endocrine system (Dickerson and Kemeny, 2004). Individuals with a current depression are found to exhibit an overreaction of the hypothalamic-pituitary-adrenal (HPA) function which results in higher Cortisol levels in the body.

Still other studies found differences in the brain structures between depressed patients and non-depressed persons. MRI scans showed a decrease in the mass of the Hippocampus volume and other regions in the brain such as the frontal cortex, and Thalamus (Sexton et al., 2013).

2.3.2 Genetic causes.

Based on the genetics of depression, according to which about 30-40% of the variance in adult depression can be attributed to genetic influences (Sullivan et al., 2000). Gene-environment interaction “nature versus nurture” occurs when the response to the social environment or to critical life events is influenced by genetic factors.

Many studies, especially twin studies, were able to show that the likelihood of developing a depressive disorder following critical life events or chronic stressors was predicted by genetic factors (Lau and Eley, 2010).

A study that investigated the interaction between stressful life events and a specific genetic polymorphism in the serotonin transporter gene (5HTT), showed that a depressive reaction to high stressors was significantly stronger among individuals with higher levels in the (5HTT) gene (Olsson et al., 2010).

2.3.3 Depression and psychological factors.

Psychological factors are those conditions that affect the mind or emotions. They affect the function of awareness, feeling, motivation, thoughts, attitudes, and other cognitive or affective characteristics of an individual that influence his or her behavior (Dryden, 2013). These factors include personality types, low self-esteem, a tendency to be self-critical, feeling helpless due to negative situations or having social relationship problems, traumatic events and childhood trauma.

A certain personality types are prone to depressive moods than others; the anxious worrying personality, irritable, self-critical and rejection sensitive personality style, self-focused, perfectionist, the socially avoidant and the personally reserved personality style. Persons with these personality traits tend to have a low self-esteem and a pessimistic attitude (Blackdog, 2012). People who have low self esteem are less agreeable, less conscientious and less open, compared to people with high self esteem. Therefore, the relationship between depression and low self-esteem appears to be reciprocal and depression prevalence rate is highly noted among low self esteem person's across lifetime(Kessler et al., 2005; Schoevers, 2008)

Self criticism which Involves how an individual evaluates his or her self. It is studied and discussed as a negative personality trait in which a person has a disrupted self identity.(Dinger et al, 2014;Tyrrell and Elliott, 2013). The opposite of self-criticism would be someone who is coherent and comprehensive. Self-criticism is often associated with major depressive disorder; some theory defines self-criticism as a mark of a certain type of depression; introjective depression (Blatt, 2008).

Social relationships may influence mental health outcomes through multiple mechanisms that include the influence of health related behaviors such as engagement in social activities, interchange of social support, and access to natural resources. On an empirical level, social isolation and negative social interactions are associated with depression and suicide (Chou et al.,2011; Holma et al.,2010)

Traumatic events defines as one in which “ the person experienced, witnessed, or was confronted with an event that involved actual or threatened death or serious injury, or a threat to the integrity of self or others” (DSM-~~VI~~TR ,2000, p :468). Post Traumatic Stress Disorder (PTSD) is an anxiety disorder involving re-experiencing the trauma through vivid flashbacks and nightmares, avoidance of places, people, and activities that are reminders of the trauma, psychological disassociation and increased arousal such as difficulty sleeping and concentrating, feeling jumpy, and being easily irritated and angered. PTSD have demonstrated that it is highly likely to be accompanied by depression and long-term complications of PTSD often lead to depression (North et al.,1999; Raab et al.,2012; Kessler et al., 2005)

Traumatic childhood experiences such as physical abuse, negligence by caregivers, rape or death of a loved one are past and long-standing stresses that can increase chances of a person to develop depression (Perry,2004). Physical and sexual abuse are evident in both low and high economic status and especially among adolescents. When abused children cannot run away from their suffering physically, they will try to do it psychologically through depression, withdrawal and developmental psychiatry (Powers and Welsh,1999).

In addition, trauma in early life has been examined in a series studies. The study of Brown et al (2000) reported that 9% of depressive students were being exposed to childhood sexual abuse. McCauley et al (1997) also found that childhood physical or sexual abuse was predictive of a variety of adult afflictions, including depression. Kessler et al (1996), concluded that adverse childhood events were associated with early-onset depression.

2.3.4 Social causes of depression.

The socioeconomic status signifies a person’s status within society relative to others regarding the distribution of resources such as education, employment, occupation and income. Education is the key determinant for a person’s socioeconomic status and their placement in the social stratification system. Some studies that claim higher education

increases the chances to get a job, and associated with higher job quality and higher income. Also, education has a very strong association with better physical and mental health outcomes (Ross et al, 2006; Tyrrell and Elliott, 2013).

Being employed is also associated with better mental health outcomes. Several studies have shown that full-time employment is connected to higher psychological well-being compared to part-time employment; (Reynolds and Ross,1998).

Marriage is another factor that influences one's mental health (William et al, 2012). Married persons report less psychological distress compared to non married persons (Kessler and Essex, 1982; Marcussin et al 2005). Among the non-married, divorced/separated persons report the highest numbers of depressive symptoms. The death of one's spouse is one of the most threatening events in life. Older widowed persons report less well-being and more symptoms of depression than do their married counterparts (Lee et al, 1998).

2.3.5 Individual factors of depression

Gender plays a significant role in mental illness causality. Women are more likely to suffer from depression than men due to cultural background rules. This could be due to biological reasons, but there are also social patterns that add to the explanation why women report more psychological distress than men (Malter et al, 2013).

According to Ross et al (2006), the gendered response views when women react to stress differently than men, women react to stressors in their lives with anxieties and depression. Whereas men are more likely to react with anger or agitation.

The relationship between age and depression is not linear. Instead, it seems to be U-shaped, with higher levels of depression at the beginning of adulthood, a steep decline with the lowest level in midlife, and an increase in later life (Clarke et al, 2009).

According to Ross (2010) age can be regarded in terms of maturity. This process of psychological maturity inclines a decrease in depressive symptoms with age. On the other hand, the levels of depression increase with age since important cognitive and physiological functions become worse with age.

Age as a stage emphasizes the fact, that aging implies a sequence of role entries and roles exits, which are all associated with changes in freedom, prerogatives, privileges, options,

opportunities, scope, and resources, which in turn impact psychological well-being (Clarke et al, 2009).

2.4 Psychological Theories of depression.

Psychological theories provide evidence-based explanations for why people think, behave and feel the way they do. Personality factors, history and early experiences; and interpersonal relationships are seen as important factors in causing depression.

2.4.1 Behaviorist Theory.

Behaviorism emphasizes the importance of the environment in shaping behavior. The focus is on observable behavior and the conditions through which individuals learn behavior, namely classical conditioning, operant conditioning and social learning theory. Therefore, depression is the result of a person's interaction with their environment. According to classical conditioning proposes, depression is learned through associating certain stimuli with negative emotional states. Social learning theory states behavior is learned through observation, imitation and reinforcement (Ferster,1973).

Operant conditioning conceptualization assumes that depression is caused by the removal of positive reinforcement from the environment due to certain events, such as losing jobs, induce depression because they reduce positive reinforcement (Abreu and Santos,2008).

Depressed people usually become much less socially active. For example, when a loved one is lost, an important source of positive reinforcement has lost as well. This leads to inactivity, maladaptive behavior weeping, complaining and talking of suicide (Lewinsohn, 1974). Also if the person lacks social skills or has a very rigid personality structure they may find it difficult to make the adjustments needed to look for new and alternative sources of reinforcement. So they get locked into a negative downward spiral (Seligman, 1974).

2.4.2 Psychodynamic Theory.

Depression according to psychodynamic theory (Freud, 1917 ; Kleine, 1934) was understood in terms of:

- 1- Inwardly directed anger.

- 2- Introjection of love object loss.
- 3- Severe super- ego demands.
- 4- Excessive narcissistic, oral and/or anal personality need.
- 5- Loss of self-esteem.
- 6- Deprivation in the mother child relationship during the first year.

Freud (1917) argued that “some cases of depression could be linked to loss or rejection by a parent. Depression is like grief, in that it often occurs as a reaction to the loss of an important relationship”(P:245)

Freud called this the introjection hostility theory of depression. When a loss happens in adulthood the person is likely to regress “defense mechanism” or return to an early childhood stage “the oral stage” of psychosexual development. “If the child is not able to come through the feelings of desertion and rejection as a child, then regression to this stage as an adult means that the adult is not able to deal appropriately with grief and loss. Since, the outcome is depression and depressed people blame themselves; when faced with difficulties” (McLeod, 2009, p:160). “Depressed people regard themselves as worthless and repressed anger towards the lost person is directed inwards towards the self. The inner directed anger reduces the individual’s self-esteem, and makes him/her vulnerable to experiencing depression in the future” (Busch et al, 2004, p: 30).

Another explanation “ is the feelings of inadequacy which result from failure to meet the standards and expectations of parents in the first five years of life” (Guntrip, 2000, p: 39). “If the child has overbearing, critical and authoritarian parents, it is likely that whatever the child does it will never be enough to please the parent. In adulthood, this may cause depression because such a person will always be setting themselves standards they cannot achieve. Failure then leads to depression and lack of motivation to even try anymore” (McLeod, 2009, p: 156) .

Later, Freud modified his theory stating that the tendency to internalize loss objects is normal and that depression is simply due to an excessively severe super-ego. Thus, “the depressive phase occurs when the individuals super-ego or conscience is dominant” (Goldman, 1995).

2.4.3 Cognitive Approach.

This approach focuses on people's beliefs rather than their behavior. "Depression results from systematic negative bias Negative thought in thinking processes" (Brewin, 2006, p:210). Emotional and behavioral symptoms result from cognitive abnormality. This means that depressed patients think differently than clinically normal people. The cognitive approach also assumes that changes in thinking precede the onset of depressed mood (Allen and Badcock,2003).

2.4.3.1 Beck's Theory.

One major cognitive theorist is Aaron Beck. He studied people suffering from depression and found that they appraised events in a negative way. Beck (1967) identified three mechanisms that are responsible for depression disorder:

- 1- "The cognitive triad of negative automatic thinking".
- 2- "Negative self schemas".
- 3- "Errors in Logic faulty information processing".

The cognitive triad are three forms of negative thinking that are typical of individuals with depression, negative thoughts about the self, the world and the future. These thoughts tended to be automatic in depressed people as they occurred spontaneously. For example, depressed individuals tend to view themselves as helpless, worthless and inadequate. They interpret events in the world in a unrealistically negative and defeatist way, and they see the world as posing obstacles that can't be handled. Finally, they see the future as totally hopeless because their worthlessness will prevent their situation improving (Brewin, 2006).

As these three components interact, they interfere with normal cognitive processing, leading to impairments in perception, memory and problem solving with the person becoming obsessed with negative thoughts. (Figure 2.1).

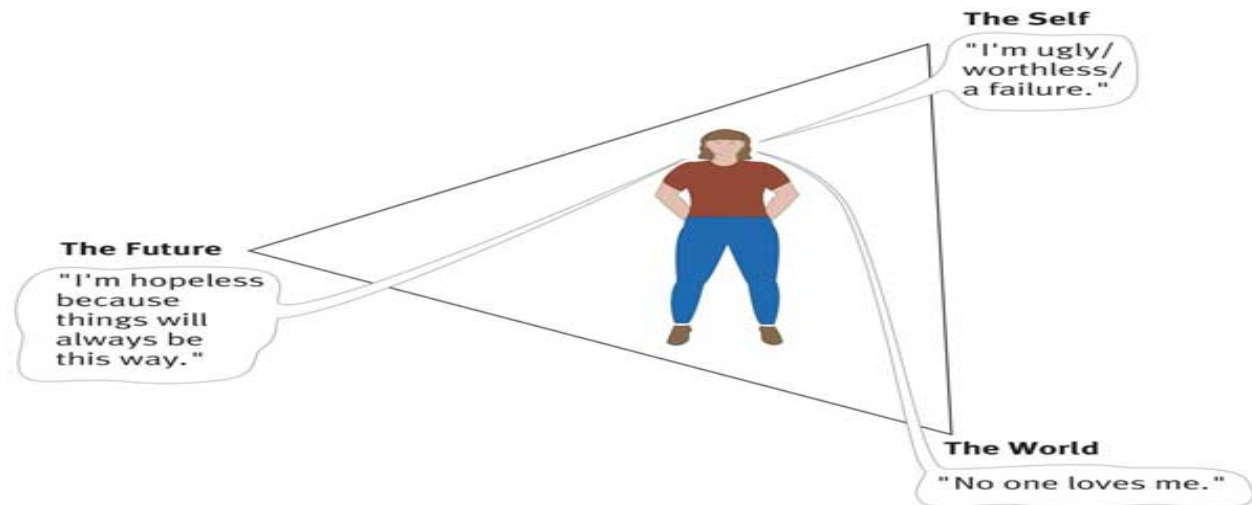


Figure: (2.1) Shows Beck three components interact (www.psychotron.org.uk).

Beck believed that depression prone individuals develop a negative self-schema. They possess a set of beliefs and expectations about themselves that are essentially negative and pessimistic (Persons et al., 2011). According to Bennett et al (2004, p:214), Beck claimed that “negative schemas may be acquired in childhood as a result of a traumatic event. Experiences that might contribute to negative schemas include”:

- 1- “Death of a parent or sibling”.
- 2- “Parental rejection, criticism, overprotection, and neglect or abuse”.
- 3- “Bullying at school or exclusion from peer group”.

However,“ a negative self-schema predisposes the individual to depression, and therefore someone who has acquired a cognitive triad will not necessarily develop depression. Some kind of stressful life event is required to activate this negative schema later in life. Once the negative schema is activated a number of illogical thoughts or cognitive biases seem to dominate thinking ”(Bennett et al., 2004, p: 212).

Beck identified a number of systematic negative bias' in information processing known as “logical errors or faulty thinking. These illogical thought patterns are self-defeating, and can cause great anxiety or depression for the individual”. These thoughts or this way of thinking becomes automatic. When a person’s stream of automatic thoughts is very negative, the person becomes depressed (Brewin, 2006, p:766).

2.4.3.2 Albert Ellis' cognitive theory of depression.

Albert Ellis pointed out that depressed people's irrational beliefs tend to take the form of absolute statements. Ellis describes three main irrational beliefs typical of depressive thinking (Ellis,2000):

- 1- "I must be completely competent in everything I do, or I am worthless"
- 2- "Others must treat me considerately, or they are absolutely terrible"
- 3- "The world should always give me happiness, or I will die"

Ellis believes that “people forcefully hold on to this illogical way of thinking, depressed people make unqualified demands on others and convince themselves that they have overwhelming needs” (Bernard, 2004, P : 248). According to Vernon (2006), Ellis noted the presence of information processing biases in depressed people's cognitions. Like Beck, “he noted that depressed people tend to ignore positive information, pay exaggerated attention to negative information, and to engage in overgeneralization, which occurs when people assume that because some local and isolated event has turned out badly ”(Vernon,2006, P: 340).

2.4.3.3 Bandura's social cognitive theory of depression.

Albert Bandura's Social Cognitive learning theory suggested that “people are shaped by the interactions between their behaviors, thoughts, and environmental events. Each piece in the puzzle can and does affect the shape of the other pieces” (Mcleod,2016, P: 75). Human behavior ends up being largely a product of learning, which may occur vicariously (by way of observation), as well as through direct experience (Davis,2008).

Bandura pointed out that depressed people's self-concepts are different from non-depressed people's self-concepts. “Depressed people tend to hold themselves responsible only for the bad things in their lives and are full of self-recrimination and self-blame” (Bandura,1996, P: 553).

In contrast, successes tend to get viewed as having been caused by external factors outside of the depressed person's control. In addition, depressed people tend to have low levels of self-efficacy. Because depressed people also have a flawed judgmental process, they tend to set their personal goals too high, and then fall short of reaching them.

Repeated failure further reduces feelings of self-efficacy and leads to depression (McLeod, 2016; Corey, 2009).

When people believe that they can affect and alter their situations, they may be said to have an internal locus of control, and a relatively high sense of self-efficacy. When individuals feel that they are mostly at the mercy of the environment and cannot alter their situation, they have an external locus of control and a relatively low sense of self-efficacy. To extend the above explanation, “depressed people tend to have an external locus of control and a low sense of self-esteem”(Corey, 2009 , P: 214 ; Davis, 2008).

2.5 Depression among university students.

University time is a special period of life that students grow from adolescence to adulthood and they make many important life decisions. During this stage, university students face enormous pressure such as economic stress, academic demands and interpersonal relationships (Steptoe et al., 2007).

According to a study that was conducted by the Center for Collegiate Mental Health at Penn State University, anxiety is now the most common mental health problem for students in college, based on a study of more than 100,000 students. The study found that more than 55% of students surveyed had anxiety disorders. The next most common concern was depressed with a rate of 45%, and stress rate was about 43% (CCMH, 2017).

University students are particularly prone to stress and depression due to college students move away from home for the first time with different cultures, they need to develop totally new social contacts and take responsibility for their own needs. They may have difficulty adjusting to more intense academic expectations and learn how to deal with individuals of differing cultures and beliefs. They being in a new environment with changes in family relations and social life (Grant et al., 2002; Gelban, 2007).

Although most studies of psychiatric morbidity among university students have been conducted in Western countries, there is a paucity of literature available from the Middle East. Depression among Western university students has been observed to range between 14-33%, anxiety between 30-49% ,with risk factors being gender, birth order, history of psychiatric illness, history of relative loss and familial history of chronic diseases (Kessler et al, 2005).

However, a study from United Arab Emirates University, reported that the prevalence of stress and depression was 65% and 60% respectively. While in Saudi Arabia, the prevalence of depression and anxiety among university students was 44% and 60% (Elzubeir et al., 2007).

2.6 Health sciences students.

Health sciences students are known for their brilliant academic backgrounds before they enter university to study health sciences, which allows them to satisfy the requirements and get through the difficult selection process. During their years of university studies, they are subject to high performance requirements, especially when they begin contact with patients at clinical training they are exposed to considerable emotional conflict (Dyrbye et al., 2006).

Eller et al. (2006); Chandavarkar et al. (2007) studies have highlighted the high prevalence of depression, anxiety, suicidal ideation, stress and emotional exhaustion among health sciences students. In general, it is estimated that at some time during their studies, 50% of students suffer from stress and emotional exhaustion and around 30% from depression. Moreover, admission to a health professional studies program can lead to stress, depression and anxiety for some students because students need to deal with complex learning and practice environment (Omigbodum et al., 2006).

A cross sectional descriptive exploratory design was conducted by Chernomas and Shapiro about Stress, depression and anxiety among undergraduate nursing students. Eighty hundred and eighty two participants were invited to participate in the study. The instrument included Depression Anxiety Stress Scale and open end questions. The result of the study showed that the prevalence of depression was 27%, anxiety was 31% and the prevalence of stress was 38%. The higher depression scores were associated with ineffective coping and limited social support (Chernomas and Shapiro, 2013)

Depression and burnout can also occur together. Moderate and severe depression symptoms can cause burnout. A United States study conducted by Dyrbye et al (2008) to investigate burnout and suicidal ideation among U.S medical and paramedical students. The results of the study estimated that approximately 50% of students experience burnout during their study, as measured by depersonalization, emotional

exhaustion, and feelings of professional inadequacy. Burnout among students seems to be associated with increased likelihood of subsequent suicidal ideation. It has been estimated that approximately 14% of students have symptoms of moderate to severe depression, and roughly 5% have suicidal thoughts at some point during the years of study.

Medical and paramedical students with more severe depression also may be less likely to seek treatment, largely from fear that faculty members would view them as being unable to handle their responsibilities. Stress is actually patterned of psychological and physical disturbance that occur when an environment event threatens (Lemon and stone, 2013).

A comparative study was conducted by Taha and Sabra (2012) to estimate the prevalence of perceived stress and the effects of studying on health and lifestyle among health sciences students at the university of Damman in Saudi Arabia. Influence Studying Health Questionnaire was used and random sampling of 456 students were invited to participate in the study. The finding of the study indicates that there was a high prevalence of all forms of stress among health sciences students compared with students from community and arte colleges. The results showed that the prevalence of social stress was (86%), followed by emotional stress with a rate of (81%) and stress due to study problems were (80%). Moreover, mood disturbance, depression and anxiety were the main stresses experienced by students due to excessive workload and great demands of studying, with limited time available for social and recreational activities. Stresses prevalence was higher among the early years of studying and diminished gradually.

According to a brief review study that was conducted by Sabah (2013), freshmen students need to be oriented about learning skills, time management skills and communication skills in order to meet academic requirements. They need to arrange their time effectively for learning and leisure activities, and overcome difficulties in working in a new environment through a foundation workshop at the beginning of the first term ; and to cooperate with the youth union activities. Moreover, stress management technique skills should be provided in high pressure environment like among students.

All of these factors represent significant sources of stress and depression that affect students mental health status, in addition to their own psychological vulnerability, there are other general problems related to their age, gender, sup specialty types and training period time.

2.8 Previous studies.

2.8.1 Western studies.

Akbari et al. (2014): Prevalence of emotional disorders among students of university of medical sciences.

A cross sectional study was conducted to determine the mental health status in all of the students who study in one medical university in Iran. Six hundred and eighty eight students were enrolled and the tool for the study was General Health Questionnaire (GHQ-28) to evaluate the mental health status.

The study results showed that the prevalence of mental disorders was (37.8%). The prevalence was 37.3% among males and 38% among females, without any significant difference between the two groups. There was no significant difference between mental disorders and demographic variables including, marital status, residency and to be native or not. However, there were significant difference between mental disorders and the field of education. Medical students had the highest level of impairment of social function (76.1%). The total prevalence of depression was (23.1%). Students of medicine were the most suffering group (35.1%), followed by nursing (32.9%), operating room (30.4%), midwifery (29.8%), while medical laboratory students had the lowest prevalence of depression (9.5%).

Galan et al.(2013): Burnout, depression and suicidal ideation among dental students at university of Seville in Spain.

A cross sectional study was conducted to investigate the prevalence of depression and to assess the relationship between burnout, depression and suicidal ideation among dental students. Two hundred and twelve dental students were enrolled in second, fourth and fifth years at the school of dentistry of Seville in Spain. Maslach Burnout Inventory MBI questionnaire and patient health questionnaire were used in the study.

The results of the study showed that the burnout prevalence among students was higher in second and fourth years ($p=0.059$) than in fifth year ($p=0.003$). Depression prevalence in the fourth year approached significance ($p=0.051$). The prevalence of suicidal ideation among fourth year was higher than other years. A significant association was observed

between burnout and depression, and between depression and suicidal ideation, while there was no association between burnout and suicidal ideation.

Ten and Say (2012): Prevalence of depression and cognitive distortion among a cohort of Malaysia tertiary students.

A cohort study was conducted by to determine the prevalence of depression, cognitive distortion and their associated factors among 400 students from 40 colleges and universities located at East and West Malaysia. The participants were assessed by Beck Depression Inventory, Automatic Thought Questionnaire and several self-designed questions.

The result of the study showed that the prevalence of depression among tertiary students was (21.3%). The depression prevalence rate was higher among females (26.3%) compared to males (16.3%). Severity of depression had a strong correlation with the level of cognitive distortion. Moreover, substance use was more prevalent among depressed males. According to study fields, the finding of the study indicated that the prevalence of depression among health sciences students were higher than science (29.5%) and engineering students (18.4%), and the lowest was among art and social sciences (15.4%).

Morphy et al. (2009): A comparative study of stress among medical and dental students

A modified questionnaire based on the dental environmental stress survey was conducted to determine if the sources of stress among medical and dental students were due to common factors. The study involved a group of 290 medical and dental students at Philadelphia universities to directly compare perceived stress levels encountered during their education. The survey question responses were grouped into five causal categories: academic performance, faculty relations, patient and clinic of responsibility, personal life issues and professional identity.

The findings show that dental students had greater levels of stress than medical students in three of the five categories. The only category in which medical students demonstrated greater stress levels than dental students was in professional identity. There were no significant differences in stress levels between male and female students.

In addition, in regards to stress-causal factors for both medical and dental students, results showed that stress was highest concerning academic performance. Dental students were least stressed in the area of professional identity, while medical students were least stressed with faculty relations. The highest mean score registered for all thirty-four potential stressors was in the area of examinations and grades.

Abbase et al. (2015):The prevalence of depression and its perceptions among undergraduate pharmacy students in Pakistan.

A quantitative cross sectional study was conducted to assess the prevalence of depression among pharmacy students in Pakistan. A Structural questionnaire was the tool of the study.

The results indicated that the prevalence of depression was (59.49%) and among female students was 67% versus 51% among males. Furthermore, depressed students never visited any dedicated physician because they fear stigmatization. The study authors claimed that the pharmacy education did not help to lower the social stigmatization among undergraduates regarding depression.

Othman et al. (2013):Nature of stress among health students in Malaysia University.

A cross sectional study was conducted to determine the predominant source of stress among health sciences students in governmental universities in Malaysia. The study instrument was a medical student stressor questionnaire. The (MSSQ) was distributed to 248 health science students, they were 66.1% of the faculty of pharmacy and 33.9% from the faculties of medical laboratory and environmental health.

The results of this study found that the highest mean degree of stress was led by “getting poor mark “with a mean degree of stress of 2.96 which was severely stress level, following by a “large amount of content to be learned “(2.95), examinations (2.85), having difficulty understanding the content (2.72), heavy workload (2.39), facing illness or death of the patients (2.33) and the lowest was “ feeling of competence “ (1.46). The study concludes that the academic requirement was the major stressor for the students.

Rosebaum et al. (2016): Radiographic students: Factors contributing to their stress and methods of coping.

A descriptive statistic study was conducted to determine what factors contribute to stress for radiography students enrolled in the radiography program in Tennessee University in United State. Two hundred and thirty eight participants were asked questions about the factors that influence their stress levels, coping strategies and health issues experienced in the past year .

The study result showed that the most common stress factors are examination, overall grades and lack of study time, the stress coping strategies are taking break, spending time with family or friends and taking a vacation. Students experienced anxiety have difficult concentration, irritability and low energy in the past year. The study empathized that females experienced higher stress levels than male students.

Sabih and Baber (2013): Assessment of stress among physiotherapy students at Rupiah Center of Rehabilitation sciences in Pakistan.

A cross sectional study was conducted to assess stress and psychological morbidity in undergraduate physiotherapy students, Two hundred and thirty one students from the first semester to fourth semester were included in the study and the data were collected through a semi-structural formula and student life stress inventory scale.

The study findings revealed that the overall prevalence of stress was 88%, 42% of students were mildly stressed, 40% were moderately stressed and 12% were severely stressed. While 12% of students reported no symptoms of stress. There were significant gender differences in the total score, female students faced more stressors, especially pressure and emotional reaction than males, and fourth semester, students expressed a high level of stress followed by first semester students.

Aghakhani et al. (2010):The prevalence of depression among health sciences students at Shaheed Sadoughi University.

A quantitative and qualitative study was conducted to determine the prevalence of depression and the association of demographic factors with the levels of depression were studied amongst students of medical sciences in Iran. Fifty percent of the total population were selected in the study, (15.7%) in the medical studied program, (46.1%) were studying public health, (22.4%) nursing and midwifery and (15.7%) dentistry by stratified

random sampling method. The study tools were interviews and Beck Depression Inventory.

The results of the study showed that half of the students (50%) were suffering from different grades of depression that 35% was mild, 13.4% moderate and 1.2% of them had severe depression. Moreover, students with the better grades of exam showed lower proportions of depression and there was a significant association between interest rate to selected university course and depression.

Oskouei and Kanhkeshan (2011): A study on depression among paramedical students and the contributing factors.

A cross sectional study was conducted to investigate the prevalence of depression among paramedical students and contribution in Iran. The examined population included the students of paramedical faculty and the sampling was all the available students during the semester. The questionnaire contained demographic question and the Beck Depression Inventory which was filled out by students.

The findings indicated that 20.6% of the students suffered from mild depression, while 9.9% of the students suffered from moderate to severe depression. The depression scores had no significant correlation with living place, marital status, gender, employment status, religious beliefs and financial problems. Although there were factors contributing to depression, including age, number of family members, satisfaction with the relationship between family members, friends, classmates and life events cannot be prevented.

Melissa Halikiopoulou et al. (2011): Suicidality and depressive symptoms among nursing students in Northern Greece.

A descriptive study was conducted to determine the prevalence of depressive symptoms and suicidal ideation among nursing students in Greece. The Beck Depression Inventory II was administered and 142 nursing students of the department of nursing were enrolled in the study.

The results of this study showed that the prevalence of depression among students was 43.9% and the majority had mild to moderate depressive symptoms. The mean scores on the BDI were higher in the first and third year, while the lowest score was observed in the

second year. Eighty eight percent of the participants were never reported thoughts of suicide. The evaluation of suicidal ideation per year of studies indicated that the percentage of students who thought were mainly in the first or in the last years. Moreover, males had higher suicidal thoughts than female students.

Phang et al.(2015): The prevalence of psychological stress among undergraduate students attending health program in a Malaysian University.

A cross sectional study was conducted to determine the prevalence of psychological stress and its associated factors among health sciences students at Putra university in Malaysia. The 12 items of the General Health Questionnaire were used to determine the presence of psychological stress. Three hundred and twenty-four of the participants were included in the study with age ranged from 18 to 27 years with a mean of (21.67).

The study result showed that the prevalence of psychological stress was 49.3%. There was no significant association between psychological stress and social-demographic factors (gender, ethnicity, specialty and year of study).

Quince et al. (2012): The prevalence and persistence of depression among undergraduate medical students at University of Cambridge in United Kingdom.

A longitudinal study was conducted to determine the prevalence and persistence of depression among undergraduate medical students. The study sample was (725) core science students and (364) clinical students at the University of Cambridge in the United Kingdom. The Depression Subscale of the Hospital Anxiety and Depression Scale (HADS-D) were used in the study.

The study results show that there was no difference between men and women in regard to depression and the prevalence of depression ranged between (5.7%) and (10.6%) among core science students and between (2.7%) and (8.2%) among clinic Students. Over the time core science students display no increase in mean HADS-D score.

Among clinical students, only men displayed a small increase. Time coefficient 0.33. The prevalence of depression among all medical students did not increase over the time. Furthermore, there was no difference in depression in regards to students study year.

Safiri et al. (2013): Prevalence of depression and its association factors using Beck Depression Inventory among students of school of health and nutrition.

A cross sectional study was conducted to estimate the prevalence and its related factors among health and nutrition students at Tabriz University of medical sciences. The data collected tool was the short form of the standard Beck Depression Inventory which is used for screening depression, 175 students selected by random sampling from different fields at the school of health and nutrition.

The result of the study showed that 62.7 % of nutrition students had depression and from these 10.9% suffering from severe depression. There was a statistically significant association between marital status and depression. Also, the study result showed that there was no significant difference in depression in regards to gender, birth order, residential status, a death of parents, parental divorce and smoking.

Lupo and Stous (2011): Religiosity, anxiety and depression among Israeli Medical students at Tel Aviv University.

A cross sectional study conducted to assess the association between religiosity and depression and anxiety among Medical students at Tel Aviv University. The sample of the study included (170) participants; (119) medical students were compared with (51) control students in other faculties at the same university. in Israel. The instrument of the study was Beck Depression Inventory and Modified Religiosity inventory scale.

The study finding did not show a significant association between religiosity and depression in the general sample. Religious behavior was not necessarily protective against depression and anxiety in this population of medical students. The prevalence of depression among medical students was (25%). Furthermore, high rates of depression and anxiety were reported by students in the first three years (preclinical years).Whereas, among clinical years, the prevalence of depression and anxiety were decreased.

Dahlin et al. (2005): Stress and depression among medical students at the Karolinska Institute Medical University.

A cross sectional study was conducted to assess the exposure to different stressors and the prevalence of depression among medical students. The study sample was 342 students at the Karolinska Institute Medical University Stockholm. Students were asked to

complete Higher Education Stress Inventory (HESI), the Major Depression Inventory (MDI) and questions on suicidal ideation scale. Matched controls from the general population were used at different levels of education.

The study results showed that the prevalence of depression among students was 12.9%, and among female students was 16% versus 8% among males. Furthermore, 2.7% of students had suicide attempts. The study authors claimed that the prevalence of depression among medical students significantly higher than in the general population.

Costa et al. (2008): Depressive symptoms among medical students in a Brazilian Public University.

A cross sectional study conducted to investigate the depressive symptoms among medical students in a Brazilian public university. The study sample was 84 medical students. Beck Depression Inventory scale and structural questionnaire were used in the study.

The results of the study show the general prevalence of depression among students was (40.5%). Severe depressive symptoms were (4.8%) (95% CI:1.3-11.7) and moderate depression rate was (34.5%) among students (95% CI: 24.5-45.7). The Authors claim that the high prevalence of depression among medical students was associated with related variables such as teaching and learning process and students personality trait.

Tan et al (2013): Prevalence and predictors factor of suicidality among medical students in public university.

An analytical cross sectional study was conducted to determine the prevalence and the predictive factor of suicidality among medical students in a public university in Selangor. The study sample was collected from year one to year five enrolled in the faculty of medicine (n=625) students. A self administered Validated Pretested Instrument was used in the study, which included Beck Hopelessness scale, Generalized Anxiety Disorder Scale, and Miss Suicidality Questionnaire.

The study results showed that the prevalence of suicidality among students was (7.0%). The predictors were past history, depression, breaking off a steady love relationship, and hopelessness. Depression was the second strongest predictor of suicidality and students who had depression were six times higher in suicidality risk than those without depression.

Alivi et al (2010):Depression, Anxiety and their association factors among medical students at Wah Medical College.

A cross sectional study was conducted to assess the prevalence of depression, anxiety and their associated factors among medical students at the Wah Medical College in Pakistan. The study sample was (279) students. The mean age of the students was (18-23) years. The instrument of the study was (BDI) and Beck Anxiety Inventory Scale.

The results of the study show the prevalence of depression among students was (35.1%) according to (BDI). The symptoms of depression were more common in the clinical years (3-6 years) of medical study with a reat of (43%). Depression was found to be significantly associated with age, and gender females had more depression than male students.

Vasegh and Mohammadi (2007):The associations between religiosity and depression among medical students at Roozben University.

A cross sectional study was conducted to assess the associations between religiosity and depression among medical students at the Roozben University in Iran. The study sample was (285) medical students who have spent more than one year. Muslim religiosity questionnaire including religious beliefs, emotions, and behavior subscales and BDI were used in the study.

The study results showed that the prevalence of depression among students was (36%), and there were negative association between depression and religiosity.

Sun and Zoriah (2015): Assessing stress among undergraduate pharmacy students in university of Malaya. Malaysia.

A cross sectional study was conducted to determine the source and predictors of stress among 237 undergraduate pharmacy students at a Malaysian public university. The survey questionnaire consisted of two sections, socio-demographic data and stress profile instrument. The students age ranged from 19-24 years.

The study results showed that pharmacy students perceived levels were significantly higher than the general population. The most frequently reported source of stress has been related to academic matters followed by personal life, environmental factors and

financial issues. There was no significant difference in stress levels from different classes.

Nagraja et al. (2015). Study the prevalence of depression among nursing college students of Kolar Distri University.

A cross sectional study was conducted from three private institution colleges in South India. The study aimed to assess the prevalence of depression and the association between depression and demographic variables. The total population was 7400 students and a stratified random sample of 430 students were assessed using separate questionnaires by investigators.

The study result showed that the prevalence of depression was 47%. However, 30% of depressive students were reported pessimism and loss of pleasure as major symptoms. The other symptoms of suicidal thoughts and past failure were found with a rate of 21% and 24% respectively. The study concludes that the prevalence of depression was highly prevalent among nursing students and the prevalence of depression was significantly more among students with family problems and a family history of depression.

Goebert et al. (2009): Assessment of depressive symptoms among medical students at Hawaii university.

The aim of the study was to assess depressive symptoms among the medical students at Hawaii University. The study sample was (2000) students, and the students were asked to complete the CES-D (self reported instrument designed to measure current depressive symptoms). The study was included (7) universities of medicine in the United State.

The results of the study show there were significant differences in depression in regards to gender with higher rates among women than men; higher rate among blacker than Caucasian (ethnicity). The prevalence of depression was (21%), and (7%) of students indicate that they were currently receiving mental health treatment ; (5.7%) reported they had suicidal ideation. Medical students were more likely to report suicidal ideation compared with their peers (6.6% versus 3.9%).There were also significant differences according to study year. Clinical years were more likely than preclinical years students to report experiencing depression.

Sharma et al. (2015): The prevalence of depression and association factors leading to depression among medical students. in India.

A cross sectional study was conducted to determine the prevalence of depression and associated factors leading to depression among medical students in India. There were 440 students participating in the study with duration of 1 month. The mean age of participants was (19-23) years. The study tool was Theoretical Depressive Experiences Questionnaire.

The finding of the study showed that the prevalence of depression among students was 31%. The proportion of male and female students who had depression ,was almost the same (32% and 30%). The prevalence of depression was the highest among the first year students (41.5%). The study suggests that the level of depression was not dependent on gender of students, but dependent on social, behavioral, and educational factors.

2.8.2 Arabic studies.

Abo-Alshamat (2016): Psychological well-being among medical and dental students in Makkah.

Across sectional study was conducted to assess the prevalence of psychological well being (both positive and negative aspects) and its relation to academic performance among preclinical medical and dental students in Saudi Arabia. It also aimed to identify the groups at high risk for psychological distress, Four hundred and twenty two preclinical medical and dental students were recruited to assess their depression, anxiety, stress, self-efficacy and satisfaction with life levels. Depression Anxiety Stress Scale, General Self Efficacy Scale and life scale were used in the study.

The study results showed that high levels of depression (70%) , anxiety (66%) and stress (71%) were indicated. Moreover, female medical students had higher psychological distress in contrast to dental students, whereas male dental students had higher distress than females. Medical students in the third year were more depressed and stressed in comparing with second year students, while dental students were more depressed in the third year but more stressed in the second year.

The results concluded that depression was the most psychological problem that correlates with academic performance.

Comathi et al. (2013): Causes and coping strategies adopted by undergraduate health professional students in a university in the United Arab Emirates.

Across sectional study was conducted to assess the causes of stress and coping strategies among first and second year medicine, dentistry, pharmacy and physiotherapy students at the Gulf Medical University. The Brief Cope Inventory Questionnaire was used in the study. Two hundred and eighty undergraduate health students were contacted for the survey, 46.7% of students were studying medicine, 22.2% dentistry, 16.5% pharmacy and 14.6% were in the physiotherapy program.

The results of this study found that worries regarding the future (54.2%) and parental expectations (40.1%) were the major stressors. Students used multiple strategies such as religion/praying (75%), planning (71%) and taking action (70%) to cope with stress. There were no significant differences showed in the stressors or coping strategies in regard to students gender.

Ibrahim et al. (2013): Prevalence of anxiety and depression among medical and pharmacy students at Alexandria University.

The aim of the study was to investigate the prevalence of anxiety and depression among medical and pharmacy students in Alexandria University. The total number of the sample was 164 students. The tool of the study was Beck Depression Inventory.

The study results showed that the prevalence of depression among medical students was found to be 57.9% and the prevalence of anxiety was 43.9%. While in faculty of pharmacy the prevalence of depression was found to be 51.1%. Moreover, the prevalence of anxiety and depression among faculty of medicine was higher than that in faculty of pharmacy and the symptoms of depression were more severe among females.

Abdalla and Gabr (2014): Depression, anxiety and stress among first year medical students in an Egyptian public university.

A cross sectional study conducted by Abdalla and Gabr (2014). The aim of the study was to examine depression and anxiety among first year medical student at Menoufiya University. The age range was (17-19) years and the sample included (379) students in Egypt. Arabic version of Depression Anxiety Stress Scale (DASS 21) was used in the study.

The results of the study found that the prevalence of depression among students was (63.3%). Males were found to be more prone to depression than females (53.9% Vs. 46.1%), and students who live in rural areas were more liable and to be depressed than their peers from urban areas (63.5% Vs. 36.5%). The study suggests that feeling lonely, inability to share families in social activities, the presence of physical illness, studying in the English language, the problem of exams and the organization of lectures were the most common predisposing factors for depression. Moreover, biochemistry was the most difficult subject in perspective of most of depressed (35.3%), anxious (36.4%), and distressed (46.1%) students during the study.

Jarwan (2015):The prevalence of depression among medical students at Umm Al-Qua University.

A cross sectional study was conducted to determine the prevalence of depression among first, second and third year medical students and factor associated with it at Umm Al-Qua University in Saudi Arabia. A systemic random sampling technique with proportional allocation was adopted to select (136) students from both genders. Self reported Beck Depression Inventory Scale was used in the study.

The study results showed that the prevalence of depression was (30.9%). Mild symptoms were (18.4%), moderate symptoms were (9.6%), and (3%) of students had severe depression. The prevalence of depression was higher among females than males (34.2% versus 27%). Depression among the third year was higher than the first year.

The study concluded that depression was a significant hidden problem among medical students of Saudi Arabia. The first three academic years had more symptoms of depression than other years.

Ginawi et al. (2014): Do studying medicine increase Depression and Anxiety at Hail University.

A cross sectional study was conducted to determine the prevalence of depression among medical students .The study sample was (92) medical students who spent more than one year in the college of medicine at Hail University in Saudi Arabia. The instrument used for screening for anxiety and depression was the Aga Khan University Anxiety and Depression Scale (AKUADS).

The study results showed that the prevalence of depression among students was (32%). The prevalence of depression in students of 4th year , 3rd year , and 2nd year were (26%), (27%), and (19%) respectively. The prevalence of depression was significantly higher in the 3rd year and 4th year students, as compared to the 1st year students.

Ahmed et al. (2009): The phenomenology of depression and anxiety in medical doctors in three government hospitals, and the students of Dubai Medical College.

Across sectional study was conducted to examine the phenomenology of depression and anxiety among medical doctors in three government hospitals, and university medical students at Dubai Medical College. The sample of the study was (165) students and (93) doctors. The BDI was used in the study to assess depression.

The results of the study found that the prevalence of depression among students was (29%), and there was a significant correlation between depression and anxiety ($r = 0.6$). Crying was the most common depressive symptom that was reported by the participants..

Mansour et al. (2014): Correlates of resilience among university students in Jordan.

A descriptive correlation design was carried out to identify the relationship between resilience, depression and perceived social support. The study sample was 480 students who selected conveniently. Students were invited to participate in the study using self reporting questionnaire including the Beck Depression Inventory to assess depression, Connors and Davidson Resilience Scale for resilience measurement and Multidimensional Scale for social support perception.

The results of this study found that 50% of the university students had moderate to high level of resiliency, 70% had a certain degree of depressive symptoms, and 50% had a high level of perception of social support from family, friends and others. Moreover, the result showed that there was a significant and positive correlation between depression and the number of cups of coffee consumed per day ($r=0.22$, $p<0.001$). There were no significant correlations between depression and students age and gender.

Thawableh and Qaisy (2012): Assessing stress among university students.

A quantitative approach was undertaken to assess the student's stress. The study aimed to assess the stress level experienced by students at Tafila Technical University and the

factors associated with student's stress. Participants were recruited from a population of first, second, third and fourth year study. They were chosen randomly and the study sample consisted of (473) students which forms 11% of the study population.

The results of this study indicate that the stress levels experienced by the student were moderate stress level. And there were a strong association between stress and academic factors. Also, the results showed that female students had higher stress levels than male students. The first year students had more social stress than other years and students from educational science colleges had more stress than students from other university colleges.

The researchers concluded that the university students experienced a moderate social, academic and physical stress levels.

El-Bilsha (2012): The relationship between feeling of anxiety and depression among nursing students at the faculty of nursing.

A longitudinal study was conducted to examine the relationship between anxiety and depression among nursing students. Depression Anxiety Scale (DAS) was used and the study sample consisting of 110 students were drawn from the faculty of nursing at Mansoura University in Egypt.

The finding of the study showed that there was a statistically significant positive correlation between depression and anxiety among nursing students; the strongest correlation was among the fourth year study. The study concluded that the major psychological problem among nursing students was depression and anxiety.

Hamdan et al. (2009): Depression, hostility and substance use among university students in Jordan.

A descriptive correlation study was conducted to examine the relationship between depressive symptoms, hostility and substance use among university students in Jordan. The study sample was (572) students. The mean age of the students was (18-23) years. The instrument of the study was (BDI) and Hostility Substance Questionnaire.

The study result showed that 75% of university students exhibited some degree of depressive symptoms. Tobacco, painkillers, stimulants and alcohol were the most used substance. Depressive symptoms were positively correlated with hostility and tobacco

use. Moreover, males and female students were not different in their depressive symptoms, hostility and frequency of substance use.

Al-Faris et al. (2016): Health professions' students have an alarming prevalence of depressive symptoms and exploration of the associated factors.

A cross-sectional study was conducted to assess the prevalence of depression and associated factors among health sciences students. The stratified proportionate sampling strategy was used to select the study sample during the academic year 2012–2013. The students from four health professions' schools situated within a large, public university located in Riyadh, Saudi Arabia. The tool of the study was Beck Depression Inventory (BDI-II).

The results of the study showed that the overall prevalence rate of depressive symptoms was 47.0%. The highest prevalence of depression was among dentistry students (51%), followed by medicine (46%), and the lowest was among nursing students (44%). Moreover, female students had higher prevalence of depression than males.

2.8.3 Palestinian studies.

Ehgalan and Abu-Nahy (2011):The trend towards religious observance and its relationship to psychological harmony among the students of Al-Azhar University.

A cross sectional study was conducted to investigate the relationship between the trend toward religious observance and the level of psychological harmony among Al-Azhar university students. The study sample was 300 students from all colleges of Al-Azhar University, which was selected in a random stratified way. Self reported scale of religious observance was used in the study.

The study findings showed that there is a positive association between religious commitment and the degree of psychological adjustment. Moreover, the study found that there was no significant correlation between the level of commitment to religious and demographic variables such as, age, gender and specialty for students.

In summary the above mentioned studies showed that there is a high prevalence of depression among health sciences students than the general population or their peers. The rates of depression among students varies in countries around the world. Also, most of

the studies supported that the symptoms of depression through clinical years are higher than preclinical years. Medicine and nursing students had a higher prevalence of depression than other specialties due to patients closeness. However, there is a lack of studies in Palestinian Universities to assess the prevalence of depression among health sciences students.

Lubad (2010). To identify the levels of psychological stress and their causes among community college students in Ramallah City.

A cross sectional study was conducted to identify the levels of psychological stress and their causes among community college students in Ramallah district. The study sample was (238) students.

The study showed that 68% of the students had moderate to severe psychological stress, and among females was more common than males. According to this study (83%) of the students believed that religion has significant effects in coping with daily stressors. The causes that were correlated with psychological stress were academic factors, economic status and political factors.

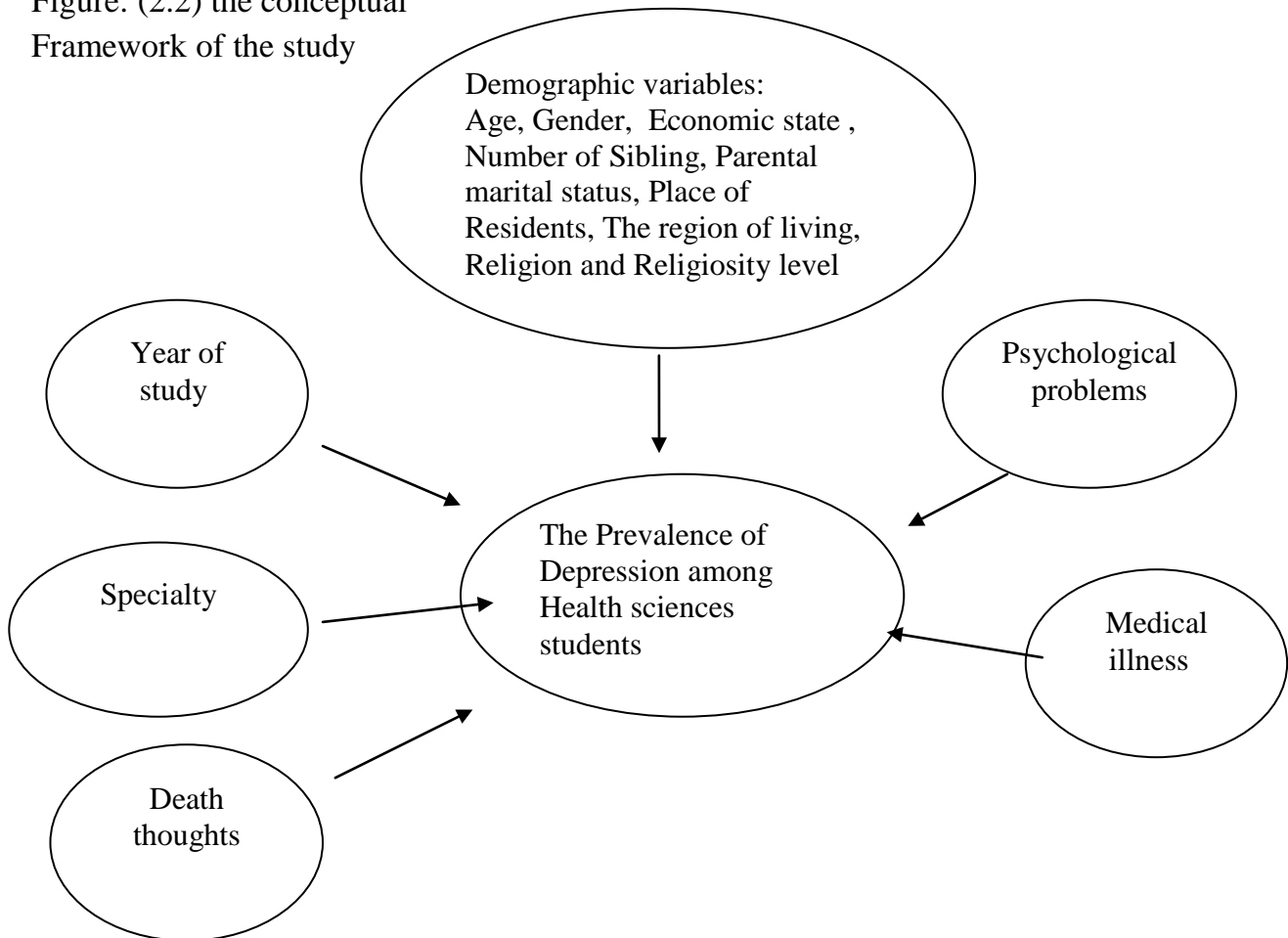
2.9 Conceptual framework.

The framework is a brief of explanation of the theory that was tested in the study (Burns and Grove, 2000). In the present study the conceptual framework examines the variables that affected the prevalence of depression among health sciences students, to map the study questions and methods and the literature review.

Conceptual framework is a tool structured from a set of broad ideas and theories taken from relevant fields of enquiry that help researchers to properly identify the problem they are looking at, guide their inquiry, frame their questions and find suitable literature. Most academic researchers use a conceptual framework at the outset because it helps the researcher to clarify his research question and aims (Smyth, 2004). It can be a visual or written product that is explained either graphically or narrative (Polit et al, 2004; Burns et al, 1999).

Also, conceptual framework has different purposes. It helps researchers to see the variables of the study clearly, it provides researchers with a general framework for data analysis, and it is essential in the preparation of a research proposal using cross sectional design methods. The conceptual framework also summarizes the major dependant and independent variables in the research, and it gives direction to the study (Smyth, 2004).

Figure: (2.2) the conceptual Framework of the study



2.9.1 Conceptual model of the study.

The major concepts of the current framework is depression as a dependent variable and other variables as independent variables such as the socio-demographic data which includes age, gender, economic status, parental marital status, place of residency, region

of living, number of sibling, religion and religiosity level, and non-demographic data which including specialty, year of study, medical illness, psychological problems and death thoughts.

2.9.1.1 Dependent variable (Depression)

In the current study, Beck depression Inventory (BDI) was utilized to assess depression and it included 21 questions (See Appendix C). BDI assesses the depression symptoms as the following: Question 1, the severity of sadness; question 2, pessimism; question 3, past failure; question 4, loss of pleasure; question 5, feeling of guilt; question 6, feeling of punishment; question 7, self-dislike; question 8, self-criticalness; question 9, suicidal thoughts or wishes; question 10, crying; question 11, agitation; question 12, loss of interest; question 13, indecisiveness; question 14, worthlessness; question 15, loss of energy; question 16, change in sleep pattern; question 17, tiredness or fatigue; question 18, change in appetite; question 19, weight loss; question 20, health worried; and question 21, loss of interest in sex (Beck, 1961)

2.9.1.2 Independent Variables

In this study many variables that affect the prevalence of depression among health sciences students was assessed. According to previous studies, it was apparent that the demographic variables have a high effect on the depression rate and severity. In this study, the researcher used a self reported questionnaire that contain such questions that assessed the demographic variables and which of the variables that greatly affect depression.

2.9.1.2.1 Socio-demographic variables

- Gender and Age were assessed by questions number 1 and 2 in the current study, these tow variables were studied by many previous studies such as Alivi et al.(2010), Dahlin et al.(2005) ,Safari et al.,(2013)Sharma et al.(2015) and phang et al.(2015)

- Parental marital status was assessed by asking question; did your parents married or divorced, widow . This section enabled us to quantify the effects of parental marital status on depression and it was studied by Othman et al.(2013) and Safari et al.,(2013)

- Place of residency where did you live? Village , city or camp , it was studied by Akbari et al.,(2014) and safari et al, (2013).

- The degree of religiosity was assessed by gradient scale from (0 to10), to realize it in relation to depression. and it was assessed by Ehgalan and Abu-Nahy (2012), Lupo and Strous (2011), and Vasegh and Mohammadi (2007)

- Number of sibling was studied by Melissa et al. (2011),Oskouei and Kanhkeshan, (2011) and Safari et al.(2013).

-Economic status. In the current study it had 3 categories of the monthly income for a family, and question number (11) assessed this as the following:

Less than 2500 NIS, from 2500 to 5000 NIS, more than 5000 NIS. It was studied by Lubad (2010) ,and Sun and Zoriah (2015) .

2.9.1.2.1 Non demographic variables

- The study year was assessed to determine which year of study has more prevalence of depression, by asking the students a question which year you study? This variable was studied by Akbari et al.(2014) Sharma et al.(2015) , Lupo and Stous (2011) , Ginawi et al.(2014) and Goebert et al.(2003).

- Specialty was also assessed by asking question; what is your study field?. It was studied by many studies such as Akbari et al.(2014),Ten and Say (2012), Akakhani et al. (2010), Galan et al.(2013) safari et al.(2013) and Ibrahim et al.(2014).

- Death and suicidal thought were assessed in the current study to identify the suicidal ideation among students . It was studied by Galan et al.(2013), Eskin et al.(2016), Tan et al.(2013)

- Finally, psychological and medical illness were assessed by adding two questions ; Do you suffer from any psychological problems? did you suffer from medical illness?. And "what illnesses? do you have? ", to deduct the relation between the psychosomatic symptoms, physical symptoms and co morbidity of illness with the prevalence of depression. It was studied by Ten and Say (2012), El-Bilsha (2012) and Nagraja et al.(2015)

Chapter Three

Methodology

Study design

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Study Design

Target Population

Target Sample (Study Sample)

Sampling technique

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Exclusion Criteria

Sample description

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Study Instrument

Validity and Reliability

Data Collection Procedure

Ethical Consideration

Data analysis

Limitation of the study

Methodology

3.1 Introduction.

This chapter will discuss study design, sampling strategy, tool, validity and reliability issues data collection process and data analysis

3.2 Study design.

Quantitative research is a formal, objective, rigorous, and systematic scientific process for gathering information or for investigating quantifiable properties, phenomena and relationships (Polgar and Thomas, 1997). It involves a collection of numerical data where often there is considerable control and analysis of data by using statistical procedures (Burns and Grove, 2004). The objective of quantitative research is to develop and employ mathematical models, theories and hypotheses, and it is used widely in social science such as psychology, social work, sociology, nursing and political science (Polit and Beck, 2004).

In the current study, a cross-sectional methodology was utilized using self-reported questionnaires because it is highly useful for descriptive purposes, and it shows both the determining factors and the outcome at the same time. In addition, it is less expensive and is useful in identifying associations between many factors and variables (Polgar and Thomas, 1997).

On the other hand, the cross-sectional design has many limitations: it does not lend to generalization of the result, it may not enable researchers to make causal inferences, and it is not appropriate for incident estimation especially in the case of long-lasting outcomes (Dimer, 1997).

3.3 Setting.

The sitting of the study is Al-Quds University campus in Abu Deis Town in the West Bank. It is a Palestinian university with campuses in Jerusalem, Abu Deis, and Ramallah. It was found in (1995). Its founding constituent confining colleges included the colleges of Science and Technology, Arts and Religious Studies, and college of Health Professions.

The faculties of health sciences are located at the center of the university at Abu Deis town, which is east of Jerusalem. The health building school in Abu-Dies campus is sharing a building with the college of Dentistry, Medical Laboratory Technology, Physiotherapy, Nursing, Midwifery, Pharmacology, Radiology, Public health nutrition and the school of Medicine.(www.Alquds.edu).

3.4 Target population.

The target population is the group of elements for which the survey investigator wants to make interference by using the sample statistics (Smyth, 2004). The population of the current study was chosen because health sciences students are homogenous group and subjected to different kinds of stress, they face difficult university subjects in different language which may affect their learning ability and placing them at a greater risk for depression.

The target population of the current study is (3395) students of medical and paramedical sciences at Al - Quds university, of all levels or years of study.

As reported in table (3.1).there were about 27.7% of the target population at faculty of medicine, 22.9% dentistry, 12.7% pharmacy, 10.6% nursing, 8.2% medical laboratory, 7.3% physiotherapy, 5% midwifery, 3.9% radiology and public health nutrition was 2.2%.

Table (3.1) The total population according to the Department of Registration between (2016 -2017) Shows the Distribution of population according to colleges

Colleges or Faculties	Students Count	Percentages %
Medicine	942	27.7
Dentistry	753	22.2
Medical Laboratory	280	8.3
Physiotherapy	250	7.4
Midwifery	170	5
Pharmacology	432	12.7
Radiology	132	3.9
Nursing	360	10.6
Public health nutrition	76	2.2
Total	3395	100 %

The percentages were as follows: 27.7 % of the population was medicine students, 22.2% was dentist students, 8.3% was medical laboratory, 7.4% was physiotherapy, 5% was midwifery, 12.7% pharmacology, 3.9% radiology, 10.6% represent the percentage of the total numbers of nursing faculty students, 2.2% was the students of public health nutrition faculty.

3.5 Sample size:

The total population of students who study health sciences was (3395). The study sample was calculated using computer software (PEPI-for-windows) using the following formula and the sample size was found to be 357 students (www.raosoft.com).

$$SS(\text{Standerd Sample Size}) = \frac{Z^2 \times (P) \times (1-P)}{c^2} = \frac{(1.96)^2 \times (0.5) \times (1-0.5)}{(0.05)^2}$$

Formula description:

SS = Standard sample size

Z = Confidence level at 95% (standard value of 1.96)

P = Percentage picking a choice, expressed as decimal (here 0.5)

C= margin of error at 5% (standard value of 0.05)

Then the correction for finite population:

$$\text{Sample size of the study} = \frac{SS}{1+(SS-1/Pop)} = \frac{384.16}{1+\frac{(384.16-1)}{3395}} = 357$$

Where: pop = population (here = 3395).

The number of students to be recruited from each faculty was calculated proportionally to the total number of the students who study health sciences using this formula:

Faculty sample size = (The number of students faculty / Total population of health sciences students) ×(sample size) . (See table 3.2)

Table: (3.2) The numbers and the percentages of sample size for each faculty

The Faculties	Population	Sample Numbers	% from each faculty
Medicine	942	103	10.8 %
Dentistry	753	84	11.2 %
M. Laboratory	280	34	12.1 %
Physiotherapy	250	18	7.2 %
Midwifery	170	17	10 %
Pharmacology	432	41	9.5 %
Radiology	132	13	9.8 %
Nursing	360	37	10.3 %
P. health nutrition	76	10	13.2%
Total	3395	357	

The numbers and percentages were as follows: (102) participants who represent 10.8% of medicine population, (84) participants who represent 11.2% of dentistry population, (34) participants who represent 12.1% of medical laboratory population (41) participants who illustrate 9.5% of pharmacy population, (37) participants who illustrate 10.3% of nursing population, (18) participants who represent 7.2% of physiotherapy population, (17) participants who illustrate 10% of midwifery population, (13) participants who illustrate 9.8% of radiology population and public health nutrition were (10) participants who represent 13.2% of their faculty.

3.6 Sampling technique:

Convenient sample is a form of non-probability sampling in which the individual units are selected by some purposive method in a deliberate and non random fashion to achieve a certain goal. Moreover, it is easier and more convenient where the research take any participant who accept to fill the questionnaire on the day of data collection than other types of sampling such as random sampling. It can examine the participant's beliefs, practices and experiences. However, it is subject to bias of personal selection, subsequent generalization from the findings of this method of sampling may not be valid (Polgar and Thomas, 1997).

The cross sectional method was used to select the participants from the nine paramedical faculties at Al-Quds University. Ratio of sampling is a convenient and objective way of selecting sample cases from a large population, according to a random starting point and fixed interval.

The start point is random and then proceeds with the selection of (k) element from the start point onward. The $K = \text{total population} / \text{sample size}$. It is easy, fast and inexpensive. The limitation of this method of sampling is the systemic bias may exist and the results will not be representative of the population.

3.6 .1 Inclusion criteria.

- All years of medical and paramedical schools students.
- Students who accept to complete (fill) the questionnaire.
- BA. Students only.

3.6.2 Exclusion criteria.

- Students who did not complete all the questions of the questionnaire.
- Students who were not on campus during data collection.
- Master and upgrading program students.

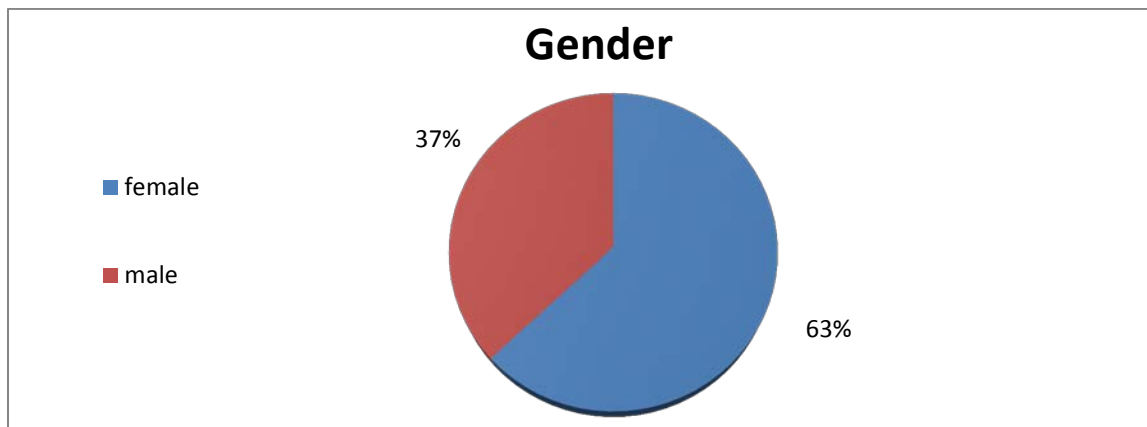
3.7 Sample description.

The sample of the current study includes (357) students and the response rate was 100 %

3.7.1. Distribution of the sample according to demographic variables

3.7.1.1. Distribution of the sample according to gender

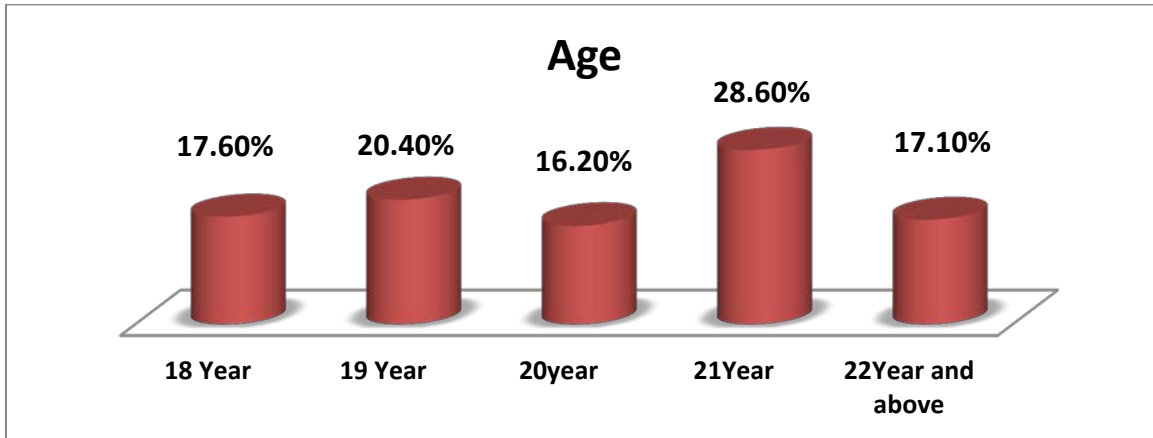
Figure (3.1). Distribution of the sample according to gender.



The baseline data analysis showed that 357 respondents returned the questionnaires, 63 % (n=225) were females, and 37% (n=132) were males .

3.7.1.2. Distribution of the sample according to age

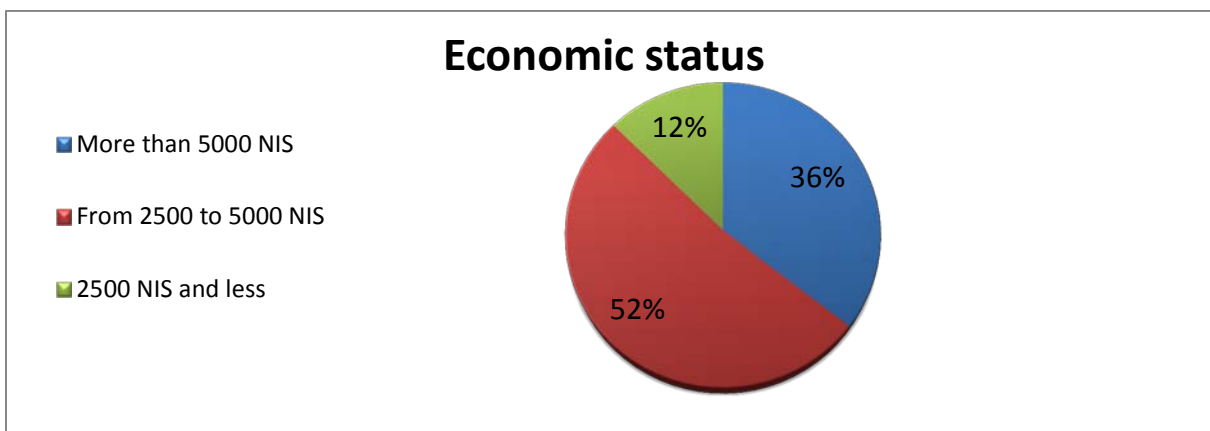
Figure (3.2). Distribution of the sample according to age



The findings showed that 28.6% (n=102) were 21 years old , 20.4% (n=73) were 19 years old ,17.6% (n=63) of the participants were 18 years old, 17.1% (n=61) were 22 years and older and 16.2 % (n=58) were 20 years old.

3.7.1.3. Distribution of the sample according to the economic status

Figure (3.3). Distribution of the sample according to the economic status

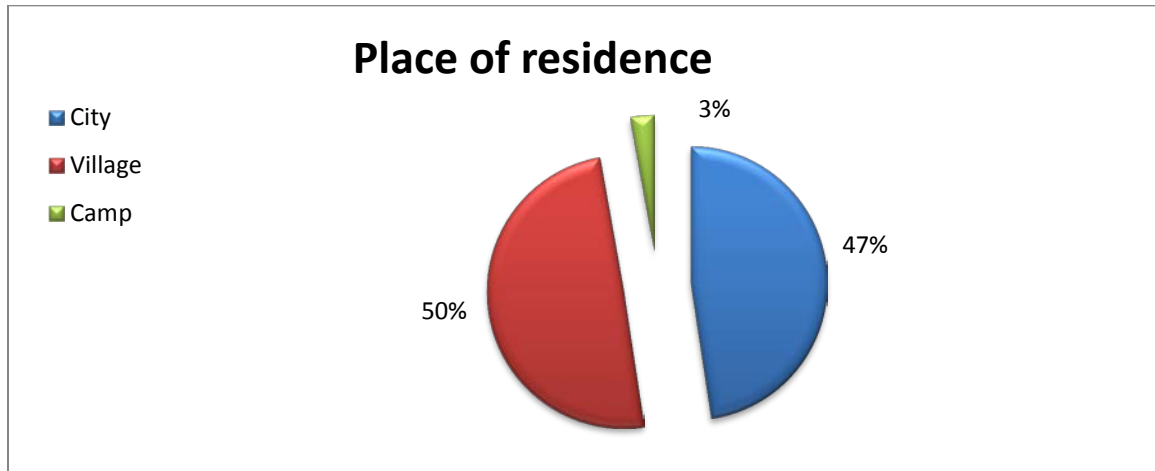


For the economic status the shape above describes that the economic status of the family participants ranged from less than NIS 2500 to more than NIS 5,000.

Fifty two percent of the participants (n=185) had NIS 2500 to NIS 5,000, 36% (n=127) had more than NIS 5,000 and 12% (n=45) had less than NIS 2500.

3.7.1.4. Distribution of the sample according to the place of residence

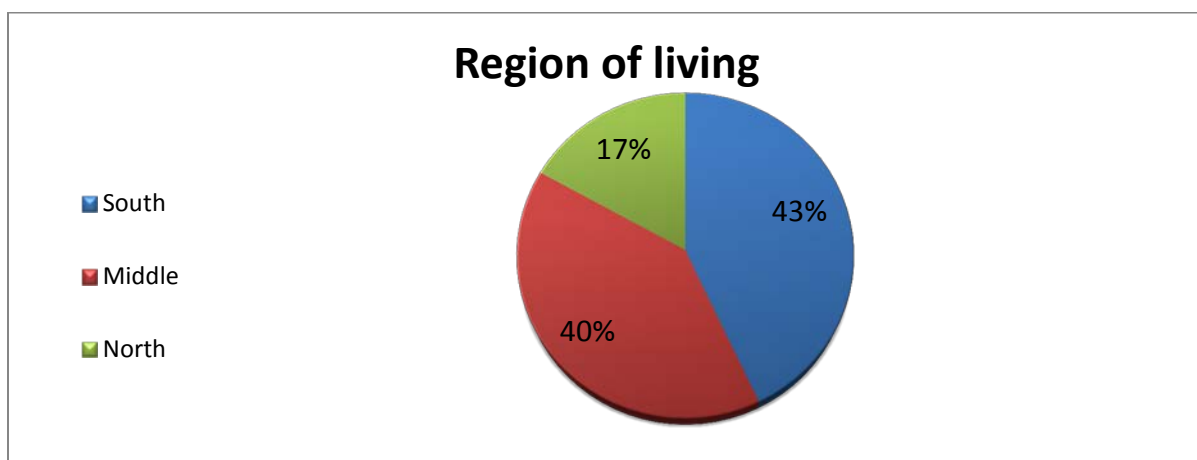
Table (3.4). Distribution of the sample according to the place of residence.



According to place of residence 50% of the sample lives in village, 47% of the sample lives in cities and 3% of the sample live in refugee camps.

7.3.1.5. Distribution of the sample according to region of living

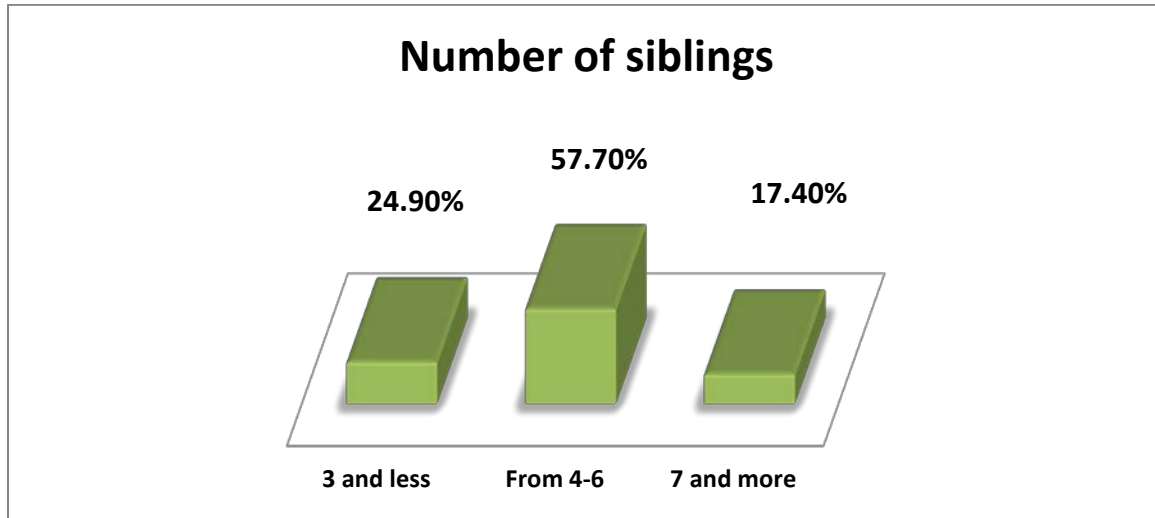
Figure (3.5). Distribution of the sample according to region of living.



There was 43% of the sample lives in the south region of West Bank, and 40% lives in the middle region, whereas 17% of the sample lives in the north region of the West Bank.

3.7.1.6. Distribution of the sample according to number of siblings

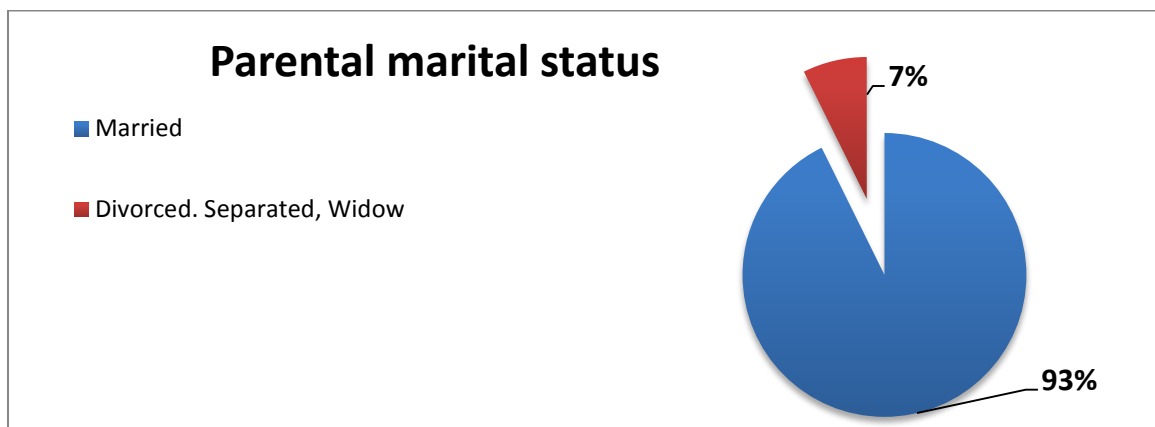
Figure (3.6). Distribution of the sample according to number of siblings



The findings of the study indicate that 57.7% of the sample has 4-6 family siblings, whereas 24.9% of the sample has 3 siblings and less, and 17.4% of the sample has more than 7 siblings, therefore they came from large families.

3.7.1.7. Distribution of the sample according to parental marital status.

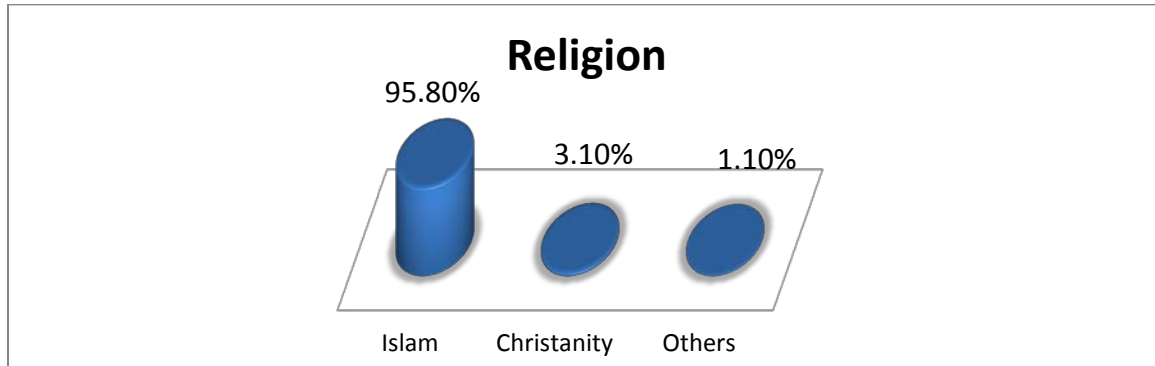
Figure (3.7). Distribution of the sample according to parental marital status.



In relation to parental marital status, 93.1% has married parents, whereas 6.9 % of them has not married parents (divorced, separated, or widow).

3.7.1.8. Distribution of the sample according to religion:

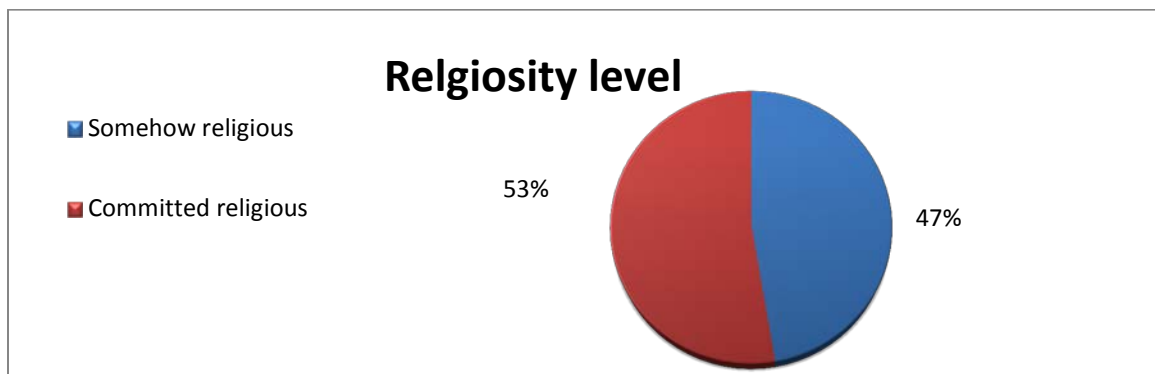
Figure (3.8). Distribution of the sample according to religion.



According to religion type, the majority (96%) of the sample was Muslim, whereas 3.1% were Christian and 1.1% of the sample had other religions.

3.7.1.9. Distribution of the sample according to religiosity level

Figure (3.9). Distribution of the sample according to religiosity level

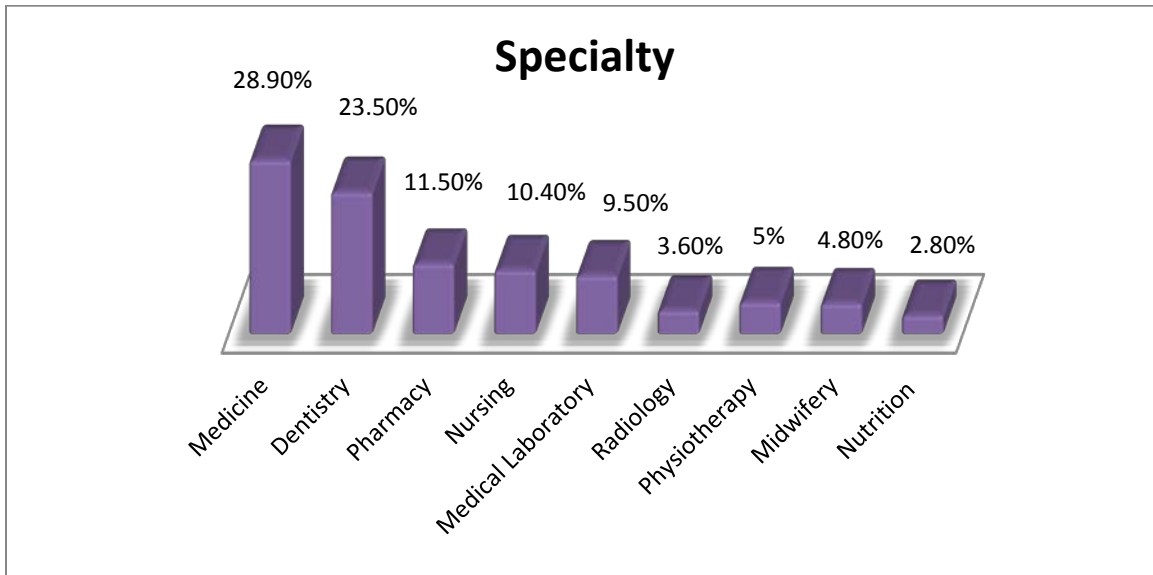


According to the religiosity level, 53% (n=188) of the sample was committed in their religious practices, whereas 47% (n= 169) of the sample was somehow religious

3.8.2.1 Distribution of sample according to non demographic variables

3.8.1. Distribution of the sample according to specialty of the participants

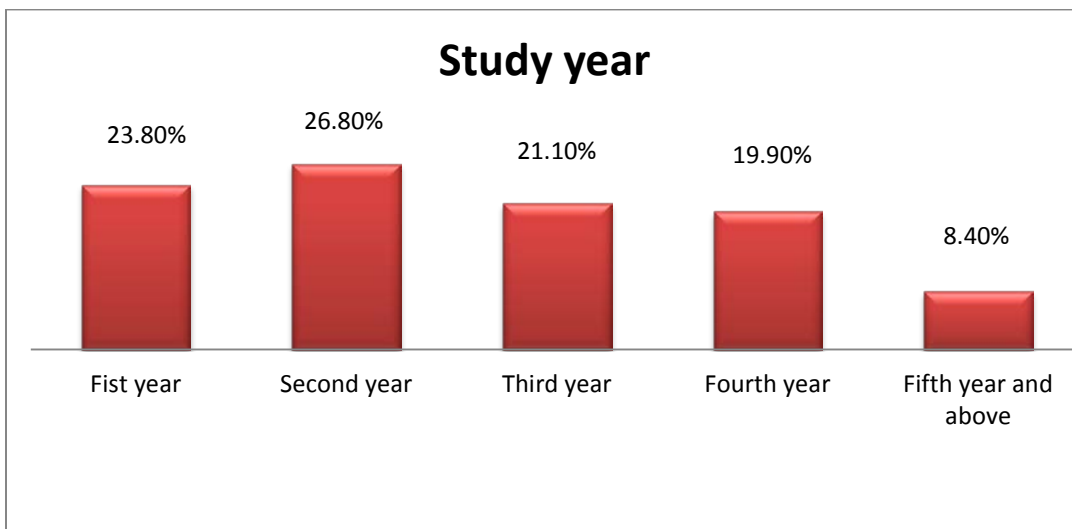
Figure (3.10). Distribution of the sample according to specialty.



In relation to specialty figure (3.9), 28.9% of the sample was medicine students, 23.5% was from dentistry, 11.5% was from pharmacy, 10.4% was from nursing, 9.5% was from medical laboratory, 5% was from physiotherapy, 4.8% was from midwifery, 3.6% was from radiology and public health nutrition was 2.8% of the sample.

3.7.2.2. Distribution of the sample according to the educational level, year of study

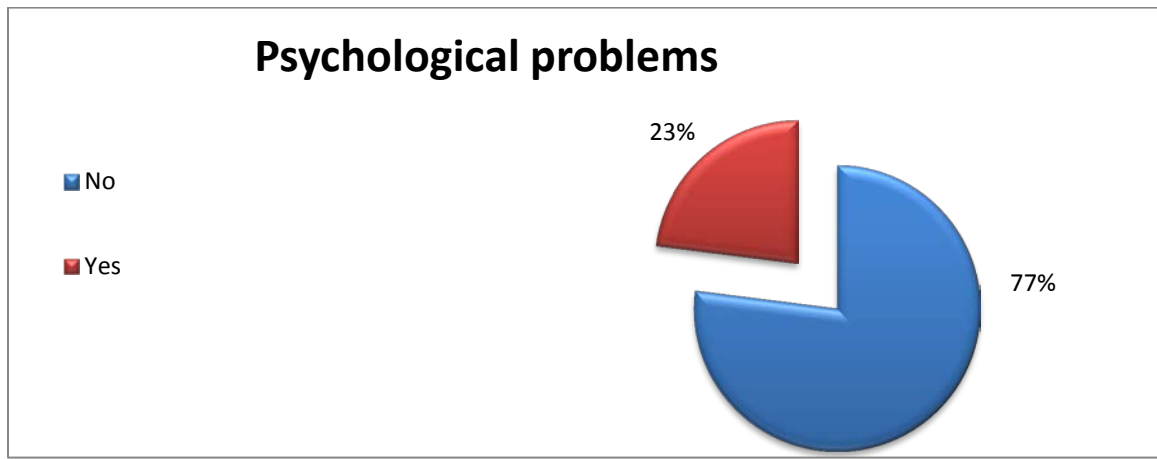
Figure (3.11). Distribution of the sample according to the study year.



As shown in figure (3.11), 23.8% (n= 85) of the sample was first year, 26.8% (n= 96) of the sample were second year, 21.1% (n = 75) was third year, 19.9% (n=71) of the sample was from fourth year, whereas 8.4% (n=30) of the sample was fifth year and above.

3.7.2.3. Distribution of the sample according to the psychological problems

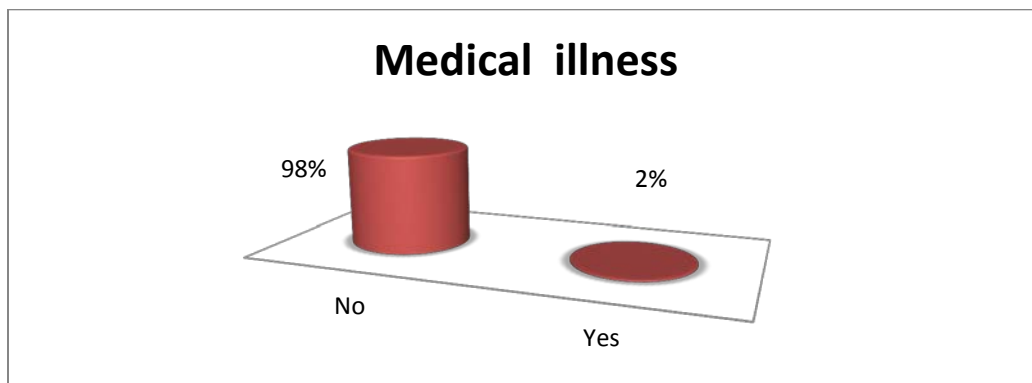
Figure (3.12). Distribution of the sample according to the psychological problems



As reported in figure (3.12), 77% (n= 276) of the sample had no psychological problems, whereas 23% (n= 81) of the sample had psychological problems.

3.7.2.4. Distribution of sample according to the present of medical illness

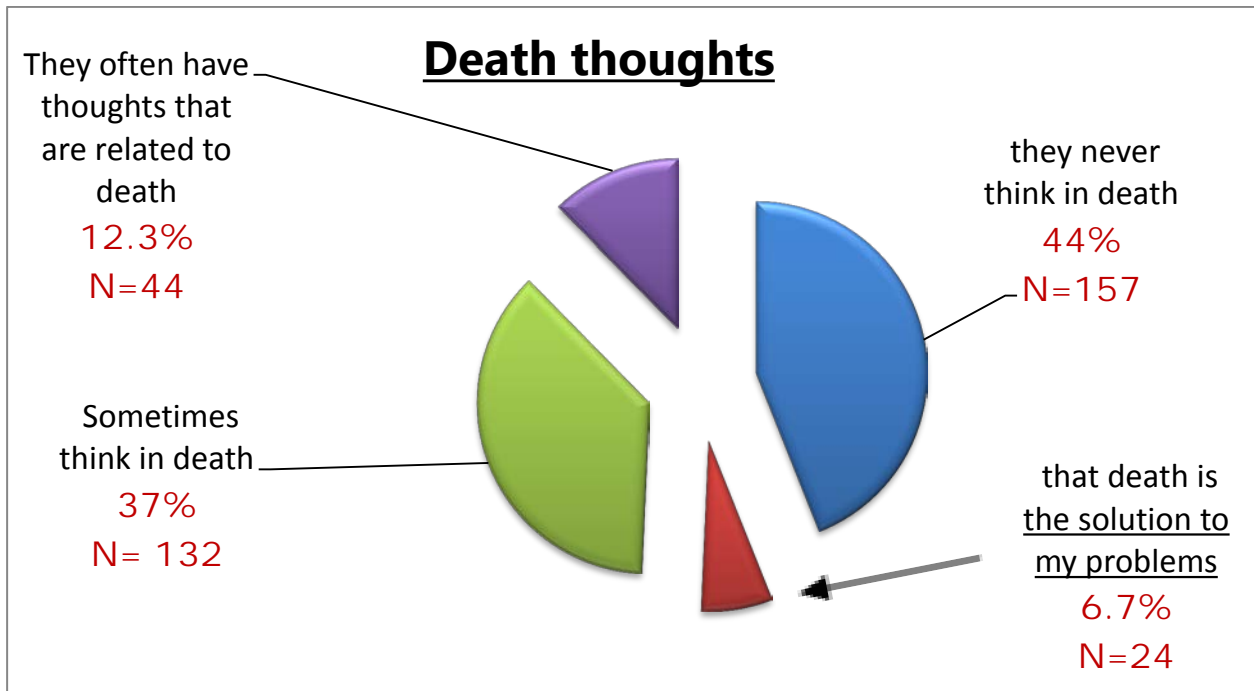
Figure (3.13). Distribution of sample according to the present of medical illness.



As shown in figure (3.13), 98% (n= 350) of the sample has not physical illness, they are healthy in general, whereas 2% (n= 7) of the sample has a physical illness.

3.7.2.5. Distribution of the sample according to the death thoughts

Figure (3.14): Distribution of the sample according to the death thoughts.



According to figure (3.14) , 44% (n=157) of the sample reported that they never think in death; 37% (n= 132) they sometimes think in death; 6.7% (n =24) I think that death is the solution to their problems .This indicate that about 19 % of the sample have death thought or find death as a solution for their life problems.

3.8. Study variable.

This study includes the following variables.

3.8.1 Independent variables.

3.8.1.1 Demographic Variables:

- 1- Age : 1- 18 year old, 2- 19 year, 3- 20 year, 4- 21 year, 5- 22 and older year old.
- 2- Gender.
- 3- Economic status: 1-(NIS 2500 and less), 2-From 2500- 5000, 3- more than NIS 5000).
- 4- Residence: 1- City, 2-Village, 3-camp.
- 5- Region of living: 1- North of the West Bank, 2- Middle of the West Bank, 3- South of the West Bank.
- 6- The religiosity level:1- (somehow religious; 6 grades and below), 2- (committed religious ; more than 7 grades).
- 7- religion: 1- Muslim, 2- Christian, 3- other religion.
- 8- Number of sibling: 1- (3 and less), 2- (4-6), 3- (more than 7).
- 9- Parents marital status: 1- married, 2- Not married (separated, divorced, widow)

3.8.1.2 Non demographic variables:

- 1- Specialty :Medical, (1- Medicine, 2- Dentistry). Paramedical: (1-Pharmacology, 2- Nursing and midwifery, 3-Medical laboratory, 4- Radiology, 5- Physiotherapy , 6- Public health nutrition)
- 2- Year of study: 1- First year, 2- Second year, 3-Third year, 4-Forth third year, 5- Fifth year and above.
- 3- Presence of psychological problems: 1- (Yes), 2- (No).
- 4- Presence of medical illness: 1- (Yes) , 2- (No).
- 5- Students death thoughts: 1- (I never think in death), 2- (I sometimes think in death),(I think that death is the solution to my problems), 4-(I often have thoughts that are related to death).

3.8.2 Dependent variables:

Depression was assessed by using self reported questionnaire which was Beck Depression Inventory (BDI) that was published by Aaron T. Beck in the year (1961).

3.9. Study instrumentation:

Beck Depression Inventory second edition (BDI), is a commonly used instrument for quantifying levels of depression created by participants descriptions of their mood symptoms, insomnia, fatigue, appetite, weight loss, self-accusation. In the first portion of the test, psychological symptoms are assessed whereas, the second portion assesses physical symptoms (Beck et al, 1996).

Beck Depression Inventory (BDI) was utilized to assess depression and it included (21) questions. There is four point scale for each item ranging from 0 to 3 based on the severity of each item, the maximum total score for the tool is (63).

Finally, Beck depression scores were classified into four categories to assess depression level as the following according to developer Aron Beck. The tool of this study is shown in Appendix A.

Table (3.3). Beck depression scores

Range – Depression severity	Scores
Minimal	0-13
Mild	14-19
Moderate	20- 28
Sever	29- 63

The cutoff score of ≥ 17 was used to assess clinical depression in college students (Bostanci et al, 2005) .

3.10 Validity and reliability of the instrument

Reliability refers to the stability or consistency of information that is obtained when a measurement is performed more than once. It also can be defined as the degree to which an instrument yields the same data each time it used under the same conditions and with the same subjects (Polgarr et al, 1997).

BDI has been used for 35 years to identify and assess depressive symptoms, and has been reported to be highly reliable regardless of the population. It has high coefficient alpha

(0.80) ; it is able to differentiate depressed from non-depressed people. For BDI the coefficient alpha (0.92) for outpatient and (0.93) among college students (Teri, 1982).

Validity refers to the adequacy of which the method of measurement is able to measure the issues or phenomena under study (Abramson, 1999). Validity of BDI was to have it conform more closely to the diagnostic criteria for depression specifically assess the symptoms of depression listed in the DSM-IV TR.

3.10.1 Stability and consistency of the tool.

Reliability co efficiency was calculated to the axis of the tool (BDI-II). Results shown in table (3.4).

Table (3.4) : Cronbach's Alpha for BDI- II

Tool	Cronbach's Alpha	Number of items
BDI	0.812	21 item

The results suggest that the degree of internal consistency of the total score of the study "depression among health sciences students at Al-Quds University" has reached (0.812). The high degree which indicates high reliability and internal consistency for the tool.

3.11 Data collection procedure:

The researcher went through few steps in order to collect the needed data for the current study, summarized as:

- 1- A pilot study was conducted by the researcher on ten students of Al-Quds University. This is done to make sure that the instrument is clear for this group in specific and to generalize it to the rest of the sample.
- 2- The data was collected during the second semester of 2017. The researcher used convenience sampling approach.
- 3- The researcher approached the participants from the nine faculties and those who agreed to participate filled the questionnaires.

- 4- All the participants filled the questionnaires by themselves. The researcher was available to answer any question from the participants

3.12 Ethical considerations:

Ethical approval was obtained from the ethical committee of Al-Quds University. Students were provided with the information sheet about the study, including the aim of the study, objectives, procedures, and they were informed that they had the rights to refuse to participate in the study.

Confidentiality and privacy were assured for all the participants and they were informed that all information will be kept strictly confidential. Finally, the main researcher took permission verbally from all the students in order to participate in the study. Data was protected and appropriately stored; all files were stored on the computer and were protected by a password and nobody was allowed to access it except the researcher. No names or codes or any other mechanisms were used to trace responses back to an individual participant.

3.13. Data analysis:

After collecting the data the data were analyzed by using the Statistical Package for Social Sciences (SPSS) version 21. The BDI scale has four answers (0,1,2, 3). The answers were calculated according to cut off value > 17 , to find the prevalence of depression and the association between socio demographic variables and non demographic variables regard to depression. The data analyzed by using these tests:

- 1- Cronbach's Alpha : Measurement to measure the internal consistency of the scale, it is expressed as a number between 0 and 1. Internal consistency describes the extent to which all the items in the scale measure the same concept or construct and hence it is connected to the interrelatedness of the items within the scale.
- 2- Frequency and percentage for invariance (demographic and non demographic data) and to examine the rate of depression among the participants.

- 3- One way analysis of variance used when there were more than 2 groups to compare means.
- 4- T- Test for differences in means the independent sample used was when there were 2 groups.
- 5- Tukey test to examine differences' between groups.

Chapter Four

Results and Findings

Research question one

Research question two

Research question three

Regression statistics

Summary

Chapter Four

Study results

Introduction.

This chapter represents the results of the study according to the questions and the study hypothesis.

4.1 First research question: What is the prevalence of depression among health sciences students at Al- Quds University ?

Results in table (4.1) shows that 47.9% of the participants had minimal or very low level of depression, 23.2% had moderate depression and 19.7% of the participants had mild depression; whereas 9.2% had severe depression, which could need interventions or medication.

Table (4.1): Depression severity range for the participants

Depression severity range	Scores	Frequency	Percentage
Minimal	0 -13	171	47.9 %
Mild	14 -19	70	19.7 %
Moderate	20 – 28	83	23.2 %
Sever	29 – 63	33	9.2 %
Total		357	100.0%

Table (4.2): Depression prevalence results

Depression score	Frequency	Percentages
< 17	213	59.7%
≥ 17	144	40.3%
Total	357	100 %

According to BDI score ≥ 17 which is the cutoff point for depression, 59.7 % (n= 213) of the participants was not depressed, whereas 40.3%, (n=144) of the participants was depressed, as seen in table (4.2).

4.2. Second research question. Is there a relationship between prevalence of depression and demographic variables (gender, age, economic status, parent marital state, place of residence, region of living, number of sibling, religion, and religiosity level) among Al- Quds health sciences students?

In order to answer this question several hypothesis were tested.

4.2.1. Hypothesis one : There is no significant difference at $\alpha \leq 0.05$ level of significant in prevalence of depression among the participants of the study in relation to gender.

To test this hypothesis, independent sample T- test and descriptive statistics were used to find the difference in prevalence of depression among participants in regard to gender, as shown in tables (4.3)and (4.4).

Table (4.3): T- test result for prevalence of depression according to gender.

Gender	Count	Mean	Standard Deviation	Degree of freedom	T-value	Sig.
Male	132	1.3485	0.47831	355	1.620	0.001
Female	225	1.4356	0.49694	283		
Total	357					

Table (4.4) : Descriptive statistics result for prevalence of depression according to gender.

Gender	Count	Depressed count	Non depressed count	Depression %
Male	132	46	86	34.8 %
Female	225	98	127	43.6%

A statistical significant difference was observed between males and females in prevalence of depression with P-value (0.001).T-test revealed that the females had higher means (1.4356) for depression than males (1.3485).

In addition to that, the prevalence of depression among females was 43.6% (n= 98) versus 34.8% (n=46) among males. Therefore the null hypothesis was rejected.

4.2.2 Hypothesis two: There is no significant difference at $\alpha \leq 0.05$ level of significant in prevalence of depression among the participants of the study in relation to age.

ANOVA test and descriptive statistics were used to find the difference in prevalence of depression among students in regard to participants age, as shown in tables (4.5) and (4.6).

Table (4.5). ANOVA test result for prevalence of depression according to age.

Age	Frequency	Frequency%	Mean	Std. Deviation
18 year	63	17.6	1.3492	0.48055
19 year	73	20.4	1.4658	0.50228
20 year	58	16.2	1.4483	0.50166
21 year	102	28.6	1.2941	0.45790
22 year and older	61	17.1	1.5246	0.50354
Total	357			

ANOVA

	Sum of Squares	Mean Square	F	Df	Sig.
Between Groups	2.700	0.675	2.855	4	0.024
Within Groups	83.216	0.236		352	
Total				356	

Table (4.6). Descriptive statistics results for prevalence of depression according to age.

Age	Depressed count	Rates of depression %
18 year	22	34.9
19 year	34	46.6
20 year	26	44.8
21 year	30	29.4
22 year and older	32	52.5
Total	144	

As shown in tables (4.5) and (4.6), ANOVA test showed a statistically significant differences in prevalence of depression among participants in relation to age with P-value (0.024). Tukey test was used to find differences between groups, the results indicate that the participants whose age was 22 and older had the highest mean (1.5246) with a rate of

(52.5%) than other ages. The age group 21 years had the lowest mean (1.2941) with a rate of (29.4%), followed by age group 18 year with a mean of (1.3492) and a rate of (34.9%). Thus the null hypothesis was rejected.

4.2.3 Hypothesis three: There is no significant difference at $\alpha \leq 0.05$ level of significant in prevalence of depression among the participants of the study in relation to parental marital status.

To test this hypothesis, independent sample T- test was used to find the difference in prevalence of depression among participants in regard to parental marital status, as shown on table (4.7).

Table (4.7): T-test result for prevalence of depression according to parental marital status.

Parental marital status	Frequency	Mean	Std. Deviation	T-test	Sig.
Married	331	1.3958	0.48976	1.042	0.279
Divorced, separation or widow	26	1.5000	0.50990		
Total	357				

As shown in table (4.7) t-test revealed no significant difference in prevalence of depression in relation to parental marital status at P. Value (0.279). Thus the null hypothesis was accepted .

4.2.4 Hypothesis four: There is no significant difference at $\alpha \leq 0.05$ level of significant in prevalence of depression among the participants of the study in relation to economic status.

To test this hypothesis, ANOVA was used to find the difference in the prevalence of depression among students in regard to family income, as shown in tables (4.8) .

As shown in table (4.8), ANOVA test revealed no significant difference in prevalence of depression in relation to participants economic status with P. Value (0.931). Thus the null hypothesis was accepted

Table (4.8). ANOVA test result for prevalence of depression according to students economic status.

Income	Frequency	Frequency%	Mean	Std. Dev.
Less than NIS 2500	45	12 %	1.4889	0.50553
Between NIS 2500 to 5000	185	52 %	1.3784	0.48630
More than NIS 5000	127	36%	1.4094	0.49368
Total	357			

ANOVA

ANOVA	Sum of Squares	Mean Square	D.F	F	Sig.
Between Groups	0.449	0.225	2	0.931	0.395
Within Groups	85.467	0.241	354		
Total	85.916		356		

4.2.5 Hypothesis five: There is no significant difference at $\alpha \leq 0.05$ level of significant in prevalence of depression among the participants of the study in relation to place of residence.

Because the number of participants from the refugee camps is low, (9 participants), therefore they were combined with those who live in villages under the category “rural”. Rural means the participants who live in camps (n= 9) and the participants who live in villages (n=178). Whereas urban means those participants who live in cites (n= 170).

To test this hypothesis, independent sample T- test and descriptive statistics were used to find the difference in the prevalence of depression among participants in regard to place of residence, as shown in tables (4.9) and (4.10).

Table (4.9): T-test result for the prevalence of depression according to place of residence.

Place of residence	Frequency	Frequency %	Mean	Std. Dev.	T-test	Sig.
Urban	170	47.6	1.3706	0.48439	1.203	0.02
Rural	187	52.4	1.4332	0.49684		
Total	357					

Table (4.10): Descriptive statistics results for the prevalence of depression according to place of residence.

Place of residence	Depressed count	The rates of depression %
Urban	63	37.1%
Rural	81	43.3%
Total	144	

As shown in table (4.9) and (4.10). there was significant difference in the prevalence of depression in relation to place of residence with P-value (0.02).The participants from rural areas had more depression with a rate of (43.3%), and a mean (1.4332) than the participants from urban areas with a rate of (37.1%), and a mean (1.3706). Thus the null hypothesis was rejected.

4.2.6 Hypothesis six: There is no significant difference at $\alpha \leq 0.05$ level of significant in prevalence of depression among the participants of the study in relation to region of living.

To test this hypothesis, ANOVA test and descriptive statistics were used to find the difference in the prevalence of depression among participants in regard to region of living, as shown in tables (4.11) and (4.12).

Table (4.11): ANOVA test results for the prevalence of depression according to region of living.

Region of living	Frequency	Frequency %	Mean	Std. Deviation
North of the West Bank	60	17%	1.2333	0.42652
Middle of the West Bank	143	40%	1.4056	0.49273
South of the West Bank	154	43 %	1.4675	0.50057
Total	357		1.4034	

ANOVA

	Sum of Squares	Mean Square	D.F	F	Sig.
Between Groups	2.369	1.185	2	5.020	0.007
Within Groups	83.547	0.236	354		
Total	85.916		356		

Table (4.12): Descriptive statistics result for the prevalence of depression according to region of living.

Region of living	Depressed count	The rate of Depression
North of the West Bank	14	23.3%
Middle of the West Bank	58	40.6 %
South of the West Bank	72	46.8 %
Total	144	

The results showed that there was a significant difference at ($\alpha \leq 0.05$) level of significant in the prevalence of depression among participants in regard to region of living with P-value (0.007). Tukey test was used to find differences between groups. The means and the rates of depression showed that the participants from the south and middle regions of the West Bank had higher rates of depression with a means (1.4675, 1.4056) and a rate of (46.8%, 40.6%) respectively. The participants from the north region of the West Bank had the lowest mean scores (0.5817) and a rate of (23.3%). So the hypothesis was rejected. As shown in table (4.11) and (4.12).

4.2.7 Hypothesis seven: There is no significant difference at $\alpha \leq 0.05$ level of significant in prevalence of depression among the participants of the study in relation to number of sibling.

To test this hypothesis, ANOVA test was used to find the difference in the prevalence of depression among participants in regard to number of sibling, as shown in table (4.13).

Table (4.13): ANOVA test result for prevalence of depression according to number of sibling.

Number of Sibling	Frequency	Frequency %	Mean	Std. Deviation
3 sibling and less	89	24.9	1.3933	0.49124
From 4- 6 sibling	206	57.7	1.3883	0.48856
7 sibling and more	62	17.4	1.4677	0.50303
Total	357		1.4034	

ANOVA

	Sum of Squares	Mean Square	D.F	F	Sig.
Between Groups	0.312	0.156	2	0.646	0.525
Within Groups	85.603	0.242	354		
Total	85.916		356		

ANOVA test result showed that there was no significant difference in prevalence of depression in relation to students family sibling with P- value (0.525). So the null hypothesis was accepted. As seen in table (4.13).

4.2.8 Hypothesis eight. There is no significant difference at $\alpha \leq 0.05$ level of significant in prevalence of depression among the participants of the study in relation to religion.

Descriptive statistics was used for the prevalence of depression among participants in regard to religion, as shown in table (4.14).

Table (4.14): Descriptive statistics result for prevalence of depression according to religion.

Religion	Frequency	Mean	Sta. Deviation	The rate of Depression %
Muslim	342	1.403	0.4913	40.4 %
Non Muslim	15	1.400	0.5070	40.0 %
Total	357			

This question was not analyzed statistically because the low numbers of non Muslim participants, therefore they were combined with those who are christens and who follows other religion under the category “non Muslim”.

Table (4.14) showed that the prevalence of depression among Muslim and non Muslim was the same (40%).

4.2.9 Hypothesis nine: There is no significant difference at $\alpha \leq 0.05$ level of significant in prevalence of depression among the participants of the study in relation to religiosity level.

To test this hypothesis, T-test and descriptive statistics were used to find the difference in the prevalence of depression among participants in regard to religiosity level, as shown in tables (4.15) and (4.16).

The findings showed a statistically significant differences in prevalence of depression among participants in relation to religiosity level with P-value (0.029). Results showed that committed religious participants had higher prevalence of depression with a mean (1.4309) and a rate of (43.1%) than somehow religious participants with a mean (1.3728)

and a rate of (37.3%). Therefore the null hypothesis was rejected. As seen in tables (4.15) and (4.16).

Table (4.15): T-test result for prevalence of depression according to religiosity level.

Religiosity level	N	Mean	Std. Deviation	T-value	Sig.
Somehow religious	169	1.3728	0.48498	1.116	0.029
Committed religious	188	1.4309	0.49652		
Total	357				

Table (4.16): Descriptive statistics for prevalence of depression according to religiosity level.

Religiosity level	Depressed count	Rates of depression%
Somehow religious	63	37.3 %
Committed religious	81	43.1 %
Total	144	

4.3 The third research question: Is there a relationship between prevalence of depression and non demographic variables (specialty, year of study, psychological problems, death thoughts and present of physical illness) among Al- Quds health sciences students?

In order to answer this question several hypothesis were tested .

4.3.1 Hypothesis one: There is no significant difference at $\alpha \leq 0.05$ level of significant in prevalence of depression among the participants of the study in relation to specialty.

Medical: means participants who study medicine and dentistry.

Paramedical :means participants who study pharmacy, nursing and midwifery, medical laboratory, radiology, physiotherapy and public heath nutrition.

To test this hypothesis, T-test and descriptive statistics were used to find the difference in prevalence of depression among students in regard to specialty, as shown in tables (4.17) (4.18) and (4.19).

Table (4.17): T-test results for the prevalence of depression according to specialty .

Participants specialty	N	Mean	Std. Dev.	T-test	Sig.
Medical	187	1.3797	0.48661	0.955	0.067
Paramedical	170	1.4294	0.49645		
Total	357				

Table (4.18): Descriptive statistics results for the prevalence of depression according to specialty .

Participants specialty	Depressed count	Rates of depression %
Medical	72	38.5 %
Paramedical	73	42.9 %

ANOVA test showed that there was no significant difference in prevalence of depression among participants in relation to specialty with P-value (0.067). Furthermore, data indicate that paramedical participants had higher prevalence of depression with a mean (1.4294) and a rate of (42.9 %), than medical participants with a mean (1.3797) and a rate of (38.5%). Thus the null hypothesis was accepted. As shown in tables (4.17) and (4.18).

Table (4.19): Descriptive statistics result for prevalence of depression in relation to subspecialty.

Subspecialty	Frequency	Depression count	Rates of Depression
Radiology	13	2	15.38%
P.H. Nutrition	10	2	20.0%
Dentistry	84	30	35.71%
Pharmacy	41	17	41.46%
Medicine	103	41	39.81%
Medical laboratory	34	16	47.06%
Physiotherapy	18	9	50 %
Nursing and midwifery	54	27	50 %
Total	357	144	

The findings showed that the physiotherapy, nursing and midwifery had the highest prevalence of depression with rate of 50%, followed by medical laboratory with a rate of (47.1%), pharmacy with a rate of (41.5%), medicine with a rate of (39.8) and dentistry with a rate of (35.7) .

The participants from public health nutrition and radiology had the lowest prevalence of depression with a rate of (20%) and (15.4%). As shown in table (4.19).

4.3.2 Hypothesis two: There is no significant difference at $\alpha \leq 0.05$ level of significant in prevalence of depression among the participants of the study in relation to study year.

To test this hypothesis, ANOVA test and descriptive statistics were used to find the difference in the prevalence of depression among students in regard to study year, as shown in tables (4.20) and (4.21).

Table (4.20) : ANOVA test result for the prevalence of depression according to study year .

Study year	Frequency	Frequency %	Mean	Std. Deviation
First year study	85	23.8 %	1.3647	0.4842
Second year	96	26.8 %	1.4792	0.5022
Third year	75	21.1 %	1.2800	0.4520
Fourth year	71	19.9 %	1.4950	0.4950
Fifth year and above	30	8.4 %	1.5667	0.5040
Total	357		1.3797	0.4866

ANOVA

	Sum of Squares	Mean Square	D.F	F	Sig.
Between Groups	2.62	0.655	4	2.77	0.027
Within Groups	83.29	0.237	352		
Total	85.91		356		

Table (4.21) : Descriptive statistics results for the prevalence of depression according to study year .

Study year	Depressed count	Rates of depression %
First year study	31	36.5 %
Second year	46	47.9 %
Third year	21	28.0 %
Fourth year	29	40.8 %
Fifth year and above	17	56.7 %
Total	144	

As seen in tables (4.20) and (4.21), ANOVA test showed a statistically significant differences in prevalence of depression among participants in relation to study years with P-value (0.027). Tukey test was used to find differences between groups, the results indicate that fifth year and above group had the highest mean (1.5667) with a rate of (56.7%) than other groups. The second year group had more prevalence of depression with a mean (1.4792) and a rate of (47.9%) than the fourth year group with a mean (1.4950) and a rate of (40.8). The first and the third years groups had the lowest means (1.3647) and (1.2800) with a rates of (36.5%) and (28%). Thus the null hypothesis was rejected.

4.3.3.Hypothesis three: There is no significant difference at $\alpha \leq 0.05$ level of significant in prevalence of depression among the participants of the study in relation to psychological problems.

T- test and descriptive statistics were used to find the difference in the prevalence of depression among participants in regard to psychological problems, as shown in table (4.22) and (4.23).

Table (4.22):T-test result for the prevalence of depression according to psychological problems.

Psychological problems	Frequency	Frequency %	Mean	Std. Dev.	T-value	Sig.
Yes	81	23%	1.0459	0.46481	6.320	0.0001
No	276	77%	0.6237	0.46687		
Total	357					

Table (4.23): Descriptive statistics for the prevalence of depression according to psychological problems.

Psychological problems	Depressed count	Rates of depression%
Yes	56	69.1 %
No	88	31.9 %
Total	144	

As seen in tables (4.22) and (4.23) , 77% of the participants reported that they don't have psychological problems compared to 23% having psychological problems.

The result showed that there was a significant difference at ($\alpha \leq 0.05$) level of significant in the prevalence of depression in relation to present of psychological problems with a mean (1.0459) and a rate of (69.1%) at P-value (0.0001). Thus the null hypothesis is rejected.

4.3.4 Hypothesis four: There is no significant difference at $\alpha \leq 0.05$ level of significant in prevalence of depression among the participants of the study in relation to medical illness.

Descriptive statistics was used to find the difference in the prevalence of depression among students in regard to medical illness, as shown in table (4.24)

The study found that 98% of the sample has not medical illness, whereas 2% of the sample has physical illness, they are healthy in general.

Table (4.24): Descriptive statistics results for the prevalence of depression in relation to medical illness.

Physical illness	Frequency	Mean	Sta. Deviation	The rate of Depression %
Yes	7	1.500	0.5070	52 %
No	350	1.403	0.4913	40.%
Total	357			

This question was not analyzed statistically because of the low numbers of the participants who have medical illness.

Table (4.24) showed that the prevalence of depression among physical illness students was (52%), whereas among healthy students was (40%).

4.3.5 Hypothesis five: There is no significant difference at $\alpha \leq 0.05$ level of significant in prevalence of depression among the participants of the study in relation to death thoughts.

To test this hypothesis, ANOVA test and descriptive statistics were used to find the difference in prevalence of depression among participants in regard to death thoughts, as shown in tables (4.25) and (4.26).

Table (4.25): ANOVA test results for the prevalence of depression according to death thoughts.

Death thought	Frequency	Frequency %	Mean	Std. Dev.
I think that death is the solution for my problems	24	6.7	1.9583	0.20417
I often have thoughts that are related to death	44	12.3	1.7500	0.43802
I don't think about death	157	44	1.3949	0.49039
I sometimes think about death	132	37	1.3561	0.48066
Total	357			

ANOVA

	Sum of Squares	Mean Square	D.F	F	Sig.
Between Groups	11.750	3.917	3	17.958	0.0001
Within Groups	76.989	0.218	353		
Total	88.739		356		

As seen in tables (4.25) and (4.26), ANOVA test showed that there was significant difference in the prevalence of depression among the participants in relation to death thoughts with high level of P-value (0.0001). Tukey test was used to find the differences between groups, the results indicate that the participants whose responses was (I think that death is the solution to my problems) had the highest mean(1.9583) with a rate of (95.8%), followed by (I often have thoughts that are related to death) with a mean of (1.7500) and a rate of (75%). The responses of the other two groups (I sometimes think in death) and (I don't think about death) had the lowest means (1.3561), (1.3949) with the rate of (35.6%) and (26%), thus the null hypothesis was rejected.

Table (4.26): ANOVA test and descriptive statistics results for the prevalence of depression according to death thoughts.

Death thought	Depressed count	The rate of depression %
I think that death is the solution for my problems	23	95.8 %
I often have thoughts that are related to death	33	75 %
I don't think about death	41	26 %
I sometimes think about death	47	35.6 %
Total	144	

Note:

For the participants religion, 97.0% of participants was Muslim and the other were Christen or have other religions. Therefore this variable was not analyzed statistically. In addition, the second variable that was not analyzed statistically was the present of medical illness. There was 98% of the participants not physically ill .So this question was not analyzed .

4.4 Regression statistics.

To find out the most significant factors on the prevalence of depression, stepwise multiple linear regression analysis was carried out. The statistic procedure was used after the non significant coefficients were excluded from the model, and the only significant coefficients were included in the model. The new results were analyzed as follows:

Table(4.27): ANOVA for Multi-linear regression.

Model (1)	Sum of Squares	D.F	Mean Square	F	Sig.
Regression	12.085	10	1.208	7.663	0.001
Residual	73.831	346	0.213		
Total	85.916	356			

The results in table (4.27) show the ANOVA table which test the acceptability of the model from a statistical perspective. The significance of the F statistic is less than 0.05, which mean that the model fits the data in a perfect way. In addition, this model can be

considered as an excellent predictor of the dependent variable (depression) from the independent variables.

Table (4.28): Coefficient of regression model according to T value.

Variable	Un standardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Death thoughts	1.138	0.088	0.731	12.4	0.001
Psychological problems	0.354	0.059	0.302	5.89	0.001
Region of living	0.079	0.034	0.117	2.313	0.021

Results in table (4.28) show all the significant coefficients in the model; all of these variables contribute to the model. In order to determine the relative importance of the significant predictors, the researcher looked at the standardized coefficients (Beta), a predictor with the largest absolute standardized coefficient contributes more to the model. Thus, predictors were arranged according to importance as follows:

- The predictor “death thoughts” contributes more to the model than the other variables because it has a larger absolute standardized coefficient (0.731) ; the coefficients (B) of this predictor are positive, which indicate that there is a direct relationship between this predictor and the dependent variable (depression). A one unit increase in “death thoughts” would yield a 1.138 unit increase in the prevalence of depression scores. It means that the obsessive thoughts of death are part of depression symptoms. They are called morbid thoughts including suicidal ideation that illustrate the severity of participants depression.
- The predictor “present of psychological problems” has the second larger absolute standardized coefficient (0.31); the coefficients (B) of this predictor are positive, and this indicate that there is a direct relationship between this predictor and the dependent variable (depression), that is, a one unit increase in “present of psychological problems” would yield a 0.35 unit increase in the prevalence of depression scores. Depression is a psychological problem and mental illness and depression often exist together, or are comorbid. The comorbidity between depression and other mental disorders can increase the severity of both.

- The predictor “region of living “ has the third absolute standardized coefficient (0.117) ; the coefficients of this predictor are positive , and this indicates that there is a direct relationship between this predictor and dependent variable (depression), that is, a one unit increase in participants “region of living“ would yield a 0.079 unit increase in the prevalence of depression scores. The participants from the south and middle regions of the West Bank had higher rates of depression than the participants from north region of the West Bank.
- Note: for the qualitative variables, one unit decrease or increase means an increase or decrease in the level of the variable.

4.5 Summary

- The current study showed in general the prevalence of depression among health science students was (40.3%).
- The study showed that (47.9%) of the participants had minimal depressive symptoms, 23.2% had moderate depressive symptoms, 19.6% had mild depressive symptoms and 9.2% had severe depressive symptoms.
- The study found statistically significant relationships between depression and gender, age, region of living, place of residency, study year, religiosity level, psychological status and death thoughts.
- The study did not find statistically significant relationships between depression and medical paramedical specialty, parental marital status, economic status and number of sibling.
- The study found that nursing, midwifery and physiotherapy had higher prevalence of depression than their peers. It was (50%).
- The model of stepwise multiple linear regression analysis indicated that the variables, present of death thoughts, present of psychological problems and region of living were the significant predictors; the coefficients (B) of these predictors are positive and there is a direct relationship between these predictors and depression.
- The present of physical illness and religion were not analyzed statistically because of the low numbers of the participants.

Chapter Five

Discussions

Introduction

Discussion of the first research question

Discussion of the second research question

Discussion of the third research question

Chapter Five

Discussion

5.1 Introduction.

In this chapter, the results of the study that were reported in chapter four were discussed and interpreted. The results were compared with other studies and in relation to literature reviews in the Arab world and worldwide.

5.2 Discussion of the research's question one.

What is the prevalence of depression among health sciences students at Al- Quds University?

The question was answered through the results of Beck Depression Inventory. According to BDI score ≥ 17 which is the cutoff point, 59.7% of the students were not depressed, whereas 40.3% of them were depressed. The data indicate that 40% of the students had different grades of depression that 47.9% was mild, 23.2% moderate and 9.2% of them had severe depression.

As the literature review showed, depression is a common illness worldwide, with more than 300 million people affected, depression may become a serious health condition and cause the affected person to suffer greatly and function poorly at work, university and in the family (WHO, 2017).

The findings of the present study are congruent with many international studies, that believed health sciences students had more prevalence of depression than other peers, such as, the comparative study of Ten and Say (2012) which indicate that the prevalence of depression was the highest among health sciences students with a rate of (30%), followed by general sciences and engineering students with a rate of (18.4%) , and the lowest was among art and social sciences with a rate of (15.4%). Aghakani et al (2010) found that the prevalence of depression among health sciences students were 50%, that 35% was mild, 13.4% moderate and 1.2% of them had severe depression. In addition, Alfaris et al (2016) found that the prevalence rate of depression among students was 47.1%.

However, the results of the present study were lower in the prevalence of depression than other studies, such as, the study conducted by Abdalla and Gaber (2014) in Egypt that found the prevalence of depression to be 63.3 % among health sciences students. As well a study conducted by Ibrahim et al (2014), that found the prevalence of depression among medical and pharmacy students at Alexandria University 57.7%, and 51.1 % respectively.

Depression prevalence rate was higher in the current study than the rate in the study of Lupo and Stous (2011) at Tel Aviv University, (Goebert et al, 2004) at Hawaii University to be 25.2% and 21% respectively . As well a study of Al Busaide et al (2011) found that the rate of depression in Oman was 27%.

Although no one knows exactly why, depression and anxiety often occur together. In one study, 85% of those with major depression were also diagnosed with generalized anxiety disorder and 35% had symptoms of panic disorder. Other anxiety disorders include obsessive-compulsive disorder and post traumatic stress disorder (PTSD). Because they so often go hand in hand, anxiety and depression are considered the fraternal twins of mood disorders (Gelban, 2007).

5.3 . Discussion of the second question of the study

Is there a relationship between prevalence of depression and demographic variables (gender, age, economic status, parent marital state, place of residence, region of living, number of sibling, religion, and religiosity level) among Al- Quds health sciences students?

5.3.1 Gender.

Female participants were found to had more depression than male participants by a mean of 1.4356 and SD of 0.4969. In addition to that, the prevalence of depression among females was 43.6 % (n= 98) versus 34.8 % males (n=46). In the present study, there is an association between gender and depression prevalence.

This result is in agreement with the results of most of the other studies such as, Gebert et al (2004), Abdalla and Gabr (2014), Jarwan (2015), Dahlin (2005), Abolshamat (2016),

Abbas et al (2015) and Alivi et al (2010). These studies supported that there was a significant difference in depression in regard to students gender; depression was higher among females than males. Furthermore, the study of Lubad (2010) showed that the level of psychological distress among Palestinian female students was higher than male students. Sabih and Baber (2013) found that female students face more psychological and social stressors and they usually react more intensively than males.

Moreover, women are more prone to depression than men (WHO, 2016). Approximately women are twice as likely to have depression as men of the same age, because of the hormonal changes that women experience from puberty. Moreover, in the Arabic and Palestinian communities, there are many differences between males and females due to family's and social factors such as responsibility, caring, attention and love; males are allowed to take charge, share opinions and pay attention, while females behavior is controlled. These gender roles and biases have come from traditional values, cultural norms, patriarchal domination and religious belief (Sharabi, 2000).

However, some international studies found that there was no significant difference in depression in regard to gender, such as Mansour et al (2014), Phange et al (2015), Safiri et al (2013) and Sharma et al (2015). They found that the level of depression was not dependent on gender of students, but it depends on social, behavioral and educational factors. As well, Akbari et al (2014) found that health sciences students had the same prevalence of depression in regard to gender, and the main causes of depression is the field of education.

5.3.2 Age.

The study results showed that there is a significant difference in depression in regard to age among participants. The results indicated that the participants whose age was 22 and older had the highest prevalence of depression with a rate of (52.5%) than other ages. The age group 21 years had the lowest rate (29.4%), followed by age group 18 year with a rate of (34.9%). In the present study, there is an association between participants' age and depression prevalence. This association, disappeared when regression analysis was done.

The findings of the study was supported by other international studies such as Ibrahim et al (2014), Jarwan (2015) and Sharma et al (2015) who found that the age 22 and above

groups had higher prevalence of depression than other groups due to training hospital periods and not due to age itself.

These findings can be explained by the fact that all ages (18-24 year) of the current study are adolescences and young, they share the same characteristics of physical and psychological developments. However, final year students were found to have higher prevalence of depression. This could be due to their worry of getting job placement, distance from university friends, dealing with patients with complete and proper handling with full confidence and independently, and new responsibilities for their new life.

In addition, according to Avenevoli et al (2015) approximately 11% of adolescents will experience depression and the main sources of academic stress were academic achievement and parents expectations. Moreover, the participants of the current study were young adult ; between late adolescence and early adulthood. Eric Erikson's theory described the psychosocial conflict of this group as identity versus role confusion, morality and fidelity should arise from this conflict (Papalia, 2009).

5.3.5 Place of residence.

The study results showed that there was a significant difference in the prevalence of depression in relation to place of residence. The participants from rural areas (villages and refugee camps) had more depression than the participants from urban areas.

These findings were supported by Abdalla and Gabers' study (2014) which found that the students who live in rural areas were more liable to be depressed than their peers from urban areas. Nevertheless, the study of Oskous and Kskouei found that the depression scores had no significant correlation with living place.

The findings of the study can be explained by the fact that the Palestinian society is heterogeneous, there are classes and big differences in the standard of living between who live in city, town or refugee camps, where people who live in villages are poorer and less educated (most of the young people drop school early and leave to work mostly in Israel) and their life is more stressful.

There are many evidences that rural Palestinians' face greater challenges in their rural areas, to reach health services hospitals, clinics, shops and recreational facilities were often far from the participants' home. Also, the Israeli oppressive practices, including the separation Wall prevented individuals from reaching their agricultural lands which are

the main source of work and activity. The report that was conducted in the Occupied Palestinian Territories by the Steering Committee for Mental Health (2010), showed that living in rural Palestinian areas have negative consequences on mental health due to the influence of life stresses and adverse life events.

5.3.6 Region of living.

The results indicated that there was a significant difference at ($\alpha \leq 0.05$) level of significance in the prevalence of depression among students in regard to the region of living.

The means and the rates of depression showed that the participants from the south and middle regions of the West Bank had higher rates of depression with a means (1.4675,1.4056) and a rate of (46.8%, 40.6%) respectively. The participants from the north region of the West Bank had the lowest mean scores (0.5817) and a rate of (23.3%).

University students from middle and south of the West Bank travel daily to the university. Because of this, they face many problems such as high transportation expenses, exhaustion, and Israelis check point, so, they may come late to the lectures and be more stressed and their families spend more on their education. These difficulties lead to stress and possible depression. These findings are interesting and needs other studies to examine the role of living district on the prevalence of depression.

5.3.8 Religiosity level.

The findings showed statistically significant differences in the prevalence of depression among participants in relation to religiosity level. Results showed that committed religious participants had a higher prevalence of depression with a mean (1.4309) and a rate of (43.1%) than “somehow religious” participants with a mean of (1.3728) and a rate of (37.3).

The current study emphasized that committed religious participants had more depression than others. Thus, religious behavior was not a protective factor against depression among population of the present study. In addition, the analysis of guilty feeling and punishment questions of the current study questionnaire, indicated that 50% of the participants feel punished and about 60 % they feel guilty for a time.

The results of the current study can be explained by the fact that, guilt can be harmful or indicate pathology when it is excessive. When guilt becomes maladaptive it can lead to decreased functioning and specific developmental goals.

These results were not supported by Lupo and Stous study (2011) who found that there was no significant association between religiosity and depression among Tel Aviv University students and Vasegh and Mohammadi (2007) who found that there were negative associations between religiosity and depression. Moreover, Lubad (2010) found that (83%) of the students believed that religious practices had significant effects on their coping with daily stressors. Barakat (2006) found that students who have strong level of religiosity had more psychological and sociological adjustment in Al-Qudes Open University, Al-Qahtani (2009) found that there is a positive correlation between religiosity level and social efficacy of students at Mutah University in Jordan.

The finding of the study was supported by the study of Schumaker (1992) who found that higher levels of religiosity may lead to higher levels of depression, anxiety, and guilt. Thus, the researcher suggests that shame and guilt could be important mediating variables in the relationship between religiosity level and depression among students

5.4. Discussion of the third question of the study.

Is there a relationship between prevalence of depression and non-demographic variables (specialty, year of study, present or absence psychological problems, present or absence of physical illness and death thoughts) among Al- Quds health sciences students?

5.4.1 Specialty.

The study result showed that there is no significant difference in depression in regard to specialty.

The present study empathizes that health sciences students are homogeneous group since most of them had high grades at school period, they are concerned with scientific issues and health subjects, long hours of studying and contact with patients in hospitals during their practice time. As a result of that, the students are subjected to different kinds of stressors. They face social, emotional and physical problems which may affect their learning ability which placed them on a greater risk for depression.

This result is congruent with Aghakhani et al (2010) who showed that the prevalence of depression among medicine, dentistry, nursing and midwifery and public health was 50%. El-Bilsha (2012) found that there was a high prevalence of all forms of stress and depression among medical and paramedical students compared with students from arts and community college. This could be due to facing social and emotional stress, pressure of studying and achieving. Hamdan et al (2009) showed that the major psychological problem among nursing students was depression and anxiety disorders.

Furthermore, the results of descriptive statistics in the present study showed that the physiotherapy, nursing and midwifery participants had the highest prevalence of depression with a rate of 50%, followed by medical laboratory with a rate of (47.1%), pharmacy with a rate of (41.5%) and dentistry with a rate of (35.7). The participants from public health nutrition and radiology had the lowest prevalence of depression with a rate of (20%) and (15.4%) respectively.

Actually, there are several studies that indicate the prevalence of depression varies from one specialty to another, and which type of specialty had more depression symptoms such as, Akbari et al (2014) study which found that the prevalence of depression among students of medicine was the highest with a rate of (35.1), followed by nursing with a rate of (30 %), while the medical laboratory students had the lowest prevalence of depression with a rate of (9.5%). Safari et al (2013) showed that 62% of nutrition students had depression which contradicts the results of the current study. Ginawi et al (2014) found that the prevalence of depression among pharmacy was 51% while among medicine students were found to be 43%. Aboalshamat (2016) found that 70% of dental students were depressed. Costa et al (2008), Alivi et al (2010), Sharma et al (2015) showed that the prevalence of depression was higher among medical than paramedical students with a rate of 40%, 35%, and 31% respectively.

The possible explanations for the higher level of depression among nursing and midwifery students than other specialties in the present study is that, nursing and midwifery students encounter with patients early during their study and they are very close to patient and share patients problems and feelings. In addition to that, physiotherapy students are vulnerable to the onset of depression because of their important role in the rehabilitation process that requires close interaction with the patients, working with younger disability patients and particularly with children tends to be more distressing. Generally, all health sciences students had high depressive

symptoms in the current study in regards to their specialty. This could be interpreted due to high educational fees, heavy duties and foreign language than arts and social sciences students.

5.4.2 Study years.

The study results showed that there is a significant difference in the prevalence of depression in regard to study years. The results indicated that fifth year and above group had the highest prevalence of depression with a rate of (56.7%) than other groups. The second year group had more prevalence of depression with a rate of (47.9%) than the fourth year group with a rate of (40.8). The first and the third years groups had the lowest prevalence of depression with a rates of (36.5%) and (28%) respectively.

This finding of the present study was supported by most of international studies such as, Alivi et al (2010), Jarwan et al (2015), Ginawi et al (2014), Galan et al (2013), Goebert et al (2009) and, El Bilsha (2012) that found the prevalence of depression was higher among students in clinical years study than preclinical years.

Nevertheless, the findings of the present study was incongruent with other studies such as, Sharma et al (2015), Lupos and Srous (2011) and Comathi et al (2013) found that the prevalence of stress and depression was higher among the first year students than other years.

To the contrary, according to the study of Quince et al (2012) who found that there was no significant difference in the prevalence of depression in regard to study years among students at Cambridge University.

The findings are justified by the fact that studying heavy science subjects causes depression for many students regardless of the study year. In the first year, students achieve high marks because they studying general and repeated science courses such as, Biology, General Chemistry which was studied at high school years. While the second year is the time to start science of specialty courses such as Microbiology, Anatomy and Biochemistry. Students learn new sciences and take more requirements and homework. They face difficult exams and low marks, as a result, many students feel sadness, fear of failure and criticism, so depression was higher in the second year. Further, students at clinical years (four years and above) have more contact with patients that makes them

feel more depressed because they share patients' troubles and feelings and see dead and injured patients (Wright and Hogan, 2008; Abdalla and Gabr, 2014; Sun and Zorihah, 2015).

On the other hand final year students (nearly graduated students) were found to have higher prevalence of depression. This could be due to their worry of getting job placement, distance from university friends, dealing with patients with complete and proper handling with full confidence and being completely independent which are new responsibilities and new life challenges. In addition, those students may face anticipatory grief which refers to a grief reaction that occurs before impending loss. The anticipatory grief can be from non death-related losses, such as loss of friends, teachers, freedom and university lifestyle. Students who are grieving they can be hard to accept the loss and they may sad, angry and depressed (Zeihner, 2012; Balk, 2011; Fenstermaker, 2004).

5.4.3 Psychological problems.

The study results showed that there is a significant difference in the prevalence of depression in regards to psychological status, and the differences were toward the students suffering from psychological problems that were clear through the high mean rank (1.0459) and a rate of (69%).

The findings of the study was supported by many previous studies such as Ten and Say (2012), El-Bilsha (2012), Mansour et al.(2014), Jarwan et al.(2014), Ibrahim et al.(2014) and Nagraja et al.(2015). Depression is a psychological problem and stress is a risk factor for depression. The majority of stressful incidents in medical and paramedical education are related to the difficulty of health sciences studying in addition to personal problems. Moreover, health sciences students represent a highly educated population under significant pressures, these pressures could be associated with depression when students are failed to achieve their goals.

Moreover, Depression has been linked to other mental illness such as anxiety, stress panic attacks, social phobia and posttraumatic stress disorder and a person with a history of any psychiatric disorder has high incidence or chance of developing major depression as someone who has had major depression itself in the past.

5.4.5 Death thoughts.

The findings of the current study showed that there was significant difference in the prevalence of depression among the participants in relation to death thoughts with P-value = (0.001).

The results indicated that (6.7%) of the participants who thought that death is the solution to their problems had the highest prevalence rate of depression (95.8%), followed by those who said that they often have thoughts that are related to death with a rate of (75%). The group who said that they sometimes think in death and those who said that they don't think about death had the lowest prevalence of depression with a rate of (35.6%) and (26%) respectively.

Suicide is the third leading cause of death among adolescents . Anderson (2002) found that over 90% of people who die by suicide have clinical depression or another diagnosable mental disorder. Emory University report (2011) found that two-thirds of people that die by suicide are depressed at the time of their death. Further, 1% of Emory students have made a suicide attempt and approximately 5% of students have seriously considered suicide within the last 12 months (Emory University Site,2011).

In addition to that, obsessive and recurrent thoughts of death or suicide are part of severe depression symptoms and these thoughts must be taken very seriously. In addition, the analysis of question number (9) of the current study questionnaire showed that 24% of the participants have suicidal thoughts and wishes, and 6.7% of them think that death is the solution to their problems. This results were supported by the study of (Eskin et al, 2016) who found that (29%) of the participants having suicidal thoughts and (7%) reported attempting suicide. The study showed that suicide ideation, suicide attempt and psychological distress are common among university students. Suicidal thoughts have many causes most often people want to end their pain.

On the other hand, certain religion beliefs may influence people to commit suicide like go to haven. Some individual may beliefs that sacrificing their lives will be best for religion for example suicide bombers from extreme Muslim groups.

To clarify the relationship between the presence of death thoughts and depression among health sciences students may need to advance future research.

5.5. Multiple linear regression

Stepwise multiple linear regression analysis indicated that the predictors (present of psychological problems, death thoughts and region of living) had the largest absolute standardized coefficient; the coefficient of these predictors indicate that there are a direct relationship between these predictors and the prevalence of depression.

The comorbidity between depression and one of these predictors can increase the severity of depression and the predictor itself.

Several studies also identified through the considered the relationship between depression and psychological problems, death thoughts and region of living (Eskin et al.,2016; Anderson ,2002; Mansour et al.,2014; Jarwan et al.,2014; Ibrahim et al.,2014 and Nagraja et al.,2015). Tan et al.,(2013) found that depression among university students had six times higher in suicidality risk than those without depression.

Taha and Sabra (2012) found that mood disturbance, depression and anxiety were the main stresses experienced among health sciences students due to excessive workload and great demands of studying, with limited time available for social and recreational activities.

5.6 Conclusion of the results discussion

These results raised the alarm since depressive symptoms and stress will lead to major depression disorder among health sciences students. Ten and Say (2012) which indicate that the prevalence of depression was the highest among health sciences students with a rate of (30%), followed by general sciences and engineering students with a rate of (18.4%) , and the lowest was among art and social sciences with a rate of (15.4%).

Othman et al (2013) found that the highest mean scores of stress among health sciences students was due to getting a poor mark in examination following by a large amount of content to learn, having difficulty understanding the content, facing illness and death of the parents and the lowest were feeling of competence.

Aghakhni et al. (2010) found that students with the better grades of exam showed lower proportions of depression and stress. Ten and Say (2012) found that 63% of participants complained that depression affect their studies, 46.5% claimed that studies and academic performance are the main factors that caused them to be depressed, followed by relationship matters, financial matters and family problems.

It seems that several factors play significant roles in leading to high prevalence of depression among participants. Costa et al. (2008) found that the high prevalence of depression among health sciences students was associated with stress, that related to teaching and learning process. Comathi et al (2013) found that the causes of depression and stress among health sciences students at United Arab Emirate Universities were parental expectations with a rate of 40%. Worries regarding the future and planning with a rate of 53 % and taking action to coping with stress were cane possible causes for depression with a rate of (70%).

Chapter Six

Conclusion and recommendations.

Introduction

As a result of this study and what was found of its outcomes, related to the prevalence of depression among health sciences students at Al-Quds University, there are a number of recommendations that are suggested, which are directed to different stockholders in the community.

6.1 Conclusions

According to the findings from this study, the prevalence of depression among health sciences students at Al-Quds University. Health care organizations and university managers needed to acknowledge the problem and provide much needed appropriate measures. Examining students overload studying, learning process methods and provide resources to decrease the depressive symptoms and reduce risk factors for other mental problems such as anxiety disorders, suicide and drug abuse.

Drawing attention to challenges that face students during hospital training such as emotional exhaustion when students handle with dead or injured patients. Working with younger or children disability patients, students tends to be more distressing.

This study also showed many important evidences in regarding to depression prevalence such as death thoughts or suicidal ideation and the present of psychological problems among students. Twenty four percent of the participants have suicidal thoughts and wishes, 6.7% of the them think that death is the solution to their problems. Stepwise multiple linear regression analysis indicated that the predictors present of psychological problems with (Sig.0.0001), death thoughts (Sig.0.0001)and region of living (Sig.0.007) had the largest absolute standardized coefficient and the co morbidity between depression and one of these predictors can increase the severity of depression and the predictor itself.

The finding of the study showed that , 47.9% had minimal symptoms of depression and 40.3% of students were may clinically depressed. According to BDI score ≥ 17 which is

the cutoff point for diagnosis 23.2% of the participants had moderate depressive symptoms, 19.7% had mild symptoms and 9.2% had severe depressive symptoms.

There were a statistically significant positive correlation between the prevalence of depression and religiosity level (Sig. 0.029) , rural areas students(Sig. 0.02), south and middle areas students (Sig. 0.07) and training years students (Sig. 0.027).

6.2. Strengths , Limitation of the study.

There are some limitations in this study as the following:

- 1- The study utilized a descriptive design, this type of design may have limitations in the generalization of the results to a wider population since it measures both the prevalence of the outcomes and the determinants in a population at a point in time or over a short period of time.
- 2- The data collection for this study was done by using a self- administered questionnaire. So, the reliability of the results may be affected, since the participants may hesitate to express their points of view or they may describe their own thoughts, feelings or behaviors in the spurious way to please the researcher (Mcclafferty et al, 2000).
- 3- The sample included medical and paramedical students at Al-Quds University, which may limit the generalization of findings to other specialties in the university or other universities.
- 4- The sample size is convenient and may not truly represent the students at Al-Quds University.
- 5- The religiosity scale was self reported one , and may be the assessment of religiosity level need for more tools.

The study used articles for the literature review from studies about the depression prevalence among university health sciences students conducted in several countries such as European countries, United States, Malaysia, Arabic countries etc. which gives the study a boarder perspective from different areas.

This also shows that depression among university students is not limited to specific country. Most of the articles used in the study are recent studies, which is advantageous for this study. The study consider the first one which was done in the Palestinian universities.

6.3 Recommendations

6.3.1 Recommendations for policy makers

- 1- The results of this study revealed that 32% of depressed students had moderate and severe depression symptoms. That means, those students need psychotherapy intervention and help.
- 2- 24% of the students have suicidal thoughts and wishes, 6.7% of the them think that death is the solution to their problems. That means, those students need urgent help to solve their problems.
- 3- The university should be provide multistep care such as counseling clinic, web-based intervention and psychiatric services.
- 4- University team members should be evaluate the learning process methods, curriculum and students assignments to decrease the depressive symptoms and other mental problems such as anxiety disorders, suicide and drug abuse.
- 5- Integrate regular assessment for depression, anxiety and suicidal ideation for university students every six months at least.

6.3.2 Recommendations for mental health experts.

- 1- Mental health expert should encourage the depressed students to seek treatment and counseling.
- 2- The community mental health counselors and professionals should help students for :
 - Time management skills to adapt the difficult academic expectations.
 - Communication skills to learn how to deal with individuals from different cultures and beliefs
 - Stress management to meet their academic requirements.

- Create awareness and educational programs for students to identify the symptoms of depression.
- 3- Mental health professional should pay attention to depressive symptoms among high risk groups such as nursing, midwifery and physiotherapy students.
 - 4- Mental health professional should focus on females, fourth year students, students who live in the south of West Bank and rural areas, and who had suicidal thoughts and psychological problems.

6.3.3 Recommendation for researchers

- 1- There is a need for further quantitative study to assess the level of depression, anxiety and suicidality among Al- Quds university students in all disciplines.
- 2- There is a need for a future study to explore depression among medical and paramedical students and other possible causes and risk factors.
- 3- There is a need for a future qualitative study to explore the factors that affect quality of life among health sciences students.
- 4- There is a need for further quantitative study to assess anxiety disorder and stress among Al- Quds health sciences students.
- 5- There is a need for a comparative study to assess depression among health sciences students in regard to the place of living (Gaza, West Bank and Arabs who live in Israel), and compared it with the prevalence of depression around the world.

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جامعة القدس
عمادة الدراسات العليا
كلية الصحة العامة / ماجستير الصحة النفسية المجتمعية
رسالة ماجستير
2017

مدى انتشار الاكتئاب لدى طلبة العلوم الصحية في جامعة القدس

عزيزي / عزيزتي

تحية طيبة وبعد :

يقوم الباحث / الطالب بإجراء دراسة بعنوان "مدى انتشار الاكتئاب لدى طلبة العلوم الصحية في جامعة القدس" ، وذلك استكمالاً لنيل درجة الماجستير في الصحة النفسية ، ولتحقيق هذه الرسالة يضع الباحث / الطالب بين أيديكم استبانته تتكون من قسمين لجمع المعلومات اللازمة للدراسة .

لذا يرجو الباحث/ الطالب من حضرتكم الإجابة على جميع أسئلة وأقسام الاستبانته ، واختيار ما يناسبكم من الإجابات والتي تعكس شعوركم خلال الأسابيع الماضية بما فيه اليوم ، دون استثناء وبكل صراحة ومصداقية وأمانة ، مع التأكيد أن جميع المعلومات ستعامل بسرية كاملة ولن تستخدم إلا لغرض البحث العلمي ، وان مشاركتكم في هذه الدراسة طوعية فلا داعي لكتابة الاسم الشخصي على الاستبانته ، كما تستطيع/ي الانسحاب متى شئت .

شاكرا لكم حسن تعاونكم

الطالب / الباحث : عيسى ابو عرام

المشرف : الدكتورة نجاح الخطيب

القسم الأول / المعلومات الاجتماعية

- 1- الجنس : (1) أنثى (2) ذكر
- 2- العمر : (.....)
- 3- الوالدة : (1) على قيد الحياة (2) متوفاة
- 4- الوالد : (1) على قيد الحياة (2) متوفى
- 5- إذا كان الوالدين على قيد الحياة هل :
- (1) يعيشان معا (2) هما منفصلين او مطلقين (3) احد الوالدين متوفي
- 6- بصرف النظر عن نفسك ، ما عدد أخواتك وإخوانك :
- 7- التخصص الدراسي : (1) طب بشري (2) طب أسنان (3) صيدلة (4) تمريض
- (5) مختبرات (6) أشعة (7) علاج طبيعي (8) قبالة
- 8- السنة الدراسية : (1) السنة الأولى (2) السنة الثانية (3) السنة الثالثة
- (4) السنة الرابعة (5) الخامسة فما فوق
- 9- مكان السكن : (1) مدينة (2) قرية (3) مخيم
- 10- منطقة السكن : (1) شمال الضفة (2) وسط الضفة (3) جنوب الضفة
- 11- دخل الأسرة بالشيكل :
- (1) اقل من 2500 (2) من 2500-5000 (3) أكثر من 5000
- 12- ما هي ديانتك : (1) الإسلام (2) المسيحية (3) غير ذلك
- 13- على المقياس التالي ، ما تقييمك لقوة اعتقاداتك الدينية ؟ (يرجى وضع دائرة حول الإجابة التي تنطبق عليك تماما)

ضعيف	0	1	2	3	4	5	6	7	8	9	10	قوي جدا
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14- هل لديك أمراض عضوية : (1) نعم (2) لا

- إذا كانت الإجابة نعم الرجاء تحديدها :

15- هل تعتقد بان لديك مشكلات نفسية : (1) نعم (2) لا

إذا كانت الإجابة نعم اذكرها

القسم الثاني :

اقرأ /ي كل مجموعة على حدة ، ثم ضع/ي دائرة حول الرقم أمام العبارة التي تصف حالتك/ي خلال الشهر الأخير بما فيها اليوم ، تأكد /ي من قراءتك لكل عبارة في المجموعة قبل ان تختار /ي واحد منها ، تأكد /ي من انك قد أجبت على كل المجموعات.

المجموعة الأولى	أ	أنا اشعر بالحزن
	ب	أنا حزين طيلة الوقت ولا استطيع أن أتخلص من هذا الشعور
	ج	أنا لا اشعر بالحزن .
	د	أنا حزين جدا أو غير سعيد إلى حد لا استطيع تحمله

المجموعة الثانية	أ	اشعر بأن المستقبل غير مشجع
	ب	اشعر بأنه لم يعد لدى شيئا أتطلع إليه
	ج	أنا لست متشائما في نظرتي للمستقبل
	د	أشعر بأن المستقبل لا أمل فيه وأن الأمور لا يمكن أن تصبح أحسن

المجموعة الثالثة	أ	أشعر بأنني قد فشلت أكثر من الإنسان العادي
	ب	عندما انظر إلى حياتي الماضية ، فان كل ما استطيع رؤيته هو الكثير من الفشل
	ج	لا أشعر بأنني شخص فاشل
	د	أشعر بأنني شخص فاشل تماما

المجموعة الرابعة	أ	لم اعد استمتع بالأشياء بنفس الطريقة التي كنت عليها من قبل
	ب	لم اعد أحصل على الشعور بالرضا الحقيقي في أي شيء أبدا
	ج	اشعر بالرضا اتجاه ما افعله في حياتي
	د	أنا غير راضي أو أشعر بالملل في كل شيء

أ	أشعر بالذنب في كثير من الأوقات	المجموعة الخامسة
ب	أشعر بالذنب تقريبا معظم الأوقات	
ج	لا أشعر بالذنب لما أقوم به من تصرفات	
د	أشعر بالذنب طيلة الوقت	

أ	أشعر أنني قد أعاقب	المجموعة السادسة
ب	أنني أتوقع ان أعاقب	
ج	لا اشعر بأنني أعاقب	
د	أشعر بأنني أعاقب فعلا	

أ	أشعر بخيبة أمل في نفسي	المجموعة السابعة
ب	أنا مشمئز من نفسي	
ج	لا أشعر بخيبة أمل في قراره نفسي	
د	أنني أكره نفسي	

أ	إنني انتقد نفسي في حالات ضعفي او أخطائي	المجموعة الثامنة
ب	إنني ألوم نفسي طيلة الوقت في أخطائي	
ج	لا أشعر بأنني بحال من الأحوال أسوأ من الآخرين	
د	إنني ألوم نفسي على أي شيء سيئ يحدث	

أ	لدي أفكار حول التخلص من حياتي ولكني لن أقدم عليها	المجموعة التاسعة
ب	أرغب في التخلص من حياتي	
ج	ليس لدي أية أفكار للتخلص من حياتي	
د	سوف أتخلص من حياتي إذا أتاحت لي الفرصة	

أ	أصبحت أبكي أكثر من المعتاد	المجموعة العاشرة
ب	إنني ألان أبكي طيلة الوقت	
ج	لا ابكي أكثر من المعتاد	
د	لقد كان بمقدوري ان ابكي فيما قبل ولكني ألان لا أستطيع أن أبكي رغم إنني أريد ذلك	

أ	أزعج وأتوتر بسهولة أكثر من المعتاد	المجموعة الحادية عشر
ب	أشعر الآن بأنني منفعّل ومتهيج طيلة الوقت	
ج	لست الآن أكثر توترا او قلقا مما كنت عليه دائما	
د	لا انفعل ولا أتهيج إطلاقا حتى من الأشياء التي كانت تسبب لي ذلك (في الحقيقة لم أعد أبالي بشيء	

أ	أصبح اهتمامي بالناس الآخرين أقل من المعتاد	المجموعة الثانية عشر
ب	لقد فقدت معظم اهتمامي ورغبتي في الناس الآخرين	
ج	لم أفقد اهتمامي أو رغبتي بالناس الآخرين	
د	لقد فقدت كل اهتمامي ورغبتي في الناس الآخرين	

أ	أؤجل اتخاذ القرارات أكثر من المعتاد	المجموعة الثالثة عشر
ب	لدي صعوبة في اتخاذ القرارات أكثر من ذي قبل	
ج	قدرتي على اتخاذ القرارات لم تتغير تقريبا	
د	ليس بمقدوري اتخاذ قرارات إطلاقا	

أ	أنا قلق لأنه يبدو عليّ الكبر أو أنني لم أعد جذاب (يقلقني أنني عديم الجاذبية وغير جميل)	المجموعة الرابعة عشر
ب	أشعر أن هناك تغيرات دائمة في مظهري الشخصي مما يجعلني أبدو غير جذاب	
ج	لا أشعر بأنني أبدو بحال من الأحوال أسوأ من المعتاد	
د	أعتقد بأنني أبدو غير جميل	

أ	أحتاج إلى جهد إضافي للبدء في عمل شيء ما	المجموعة الخامسة عشر
ب	إنني أضطر لأن أضغط نفسي لأداء عمل ما	
ج	بإستطاعتي أن اعمل تقريبا بنفس القدرة التي كنت عليها من قبل	
د	لا أستطيع القيام بأي عمل على الإطلاق	

أ	نومي لم يعد كالمعتاد	المجموعة السادسة عشر
ب	استيقظ ساعة أو ساعتين قبل المعتاد و أجد صعوبة في الاستغراق في النوم ثانية	
ج	أستطيع أن أنام كالمعتاد	
د	استيقظ قبل ساعات من المعتاد ولا أستطيع النوم فيما بعد	

أ	أرهق بسرعة أكبر من ذي قبل	المجموعة السابعة عشر
ب	أشعر بالإرهاق من أداء أي شيء تقريبا	
ج	لا أشعر بالإرهاق أكثر من المعتاد	
د	إنني في غاية الإرهاق للقيام بأي عمل كان	

أ	شهيتي للأكل ليست جيدة	المجموعة الثامنة عشر
ب	شهيتي للأكل أصبحت أسوأ بكثير	
ج	شهيتي للأكل ليست أسوأ من المعتاد	
د	ليست لدي شهية للأكل على الإطلاق	

أ	لقد فقدت أكثر من 2 كيلو غرام من وزني	المجموعة التاسعة عشر
ب	لقد فقدت أكثر من 4.5 كيلو غرام من وزني	
ج	لم أفقد شيئا من وزني وان حصل لم يكن ملحوظ	
د	لقد فقدت أكثر من 6.5 كيلو غرام من وزني	

أ	إنني قلق نوعا ما بشأن مشكلات جسدية مثل الآلام ، الصداع ، آلام في المعدة او الإمساك .	المجموعة العشرون
ب	إنني قلق للغاية بشأن مشكلاتي الجسدية وانه لمن الصعب أن انظر إليها دون أن اقلق	
ج	ليس لدي قلق بشأن صحتي أكثر من المعتاد	
د	إنني قلق للغاية بشأن مشكلاتي الجسدية إلى درجة إنني لا أكاد أفكر في أي شيئا آخر	

أ	لدي رغبة في الجنس أقل مما كانت عليه	المجموعة الواحدة والعشرون
ب	رغبتني في الجنس أقل بكثير الآن	
ج	رغبتني الجنسية لم يطرأ عليها أي تغيير	
د	لم تعد لدي رغبة في الجنس على الإطلاق	

أي من هذه الأفكار تنطبق عليك/ي:

- 1- أفكر في الموت على انه حل لمشكلتي
- 2- لا أفكر بالموت أبدا
- 3- أحيانا أفكر بالموت
- 4- كثيرا ما يخطر على بالي أفكارا تتعلق بالموت

Appendix: 2

The participants' answers to the questions related to their (Beck Depression Inventory scales

Sadness	1- VALID											
	0- I do not feel sad.			1-I feel sad			2 - I am sad all the time and I can't snap out of it.			3 -I am so sad and unhappy that I can't stand it.		
	F.	%	CF	F.	%	CF	F.	%	CF	F.	%	CF
	171	47	47	131	36	84	25	7	93	25	7	100

Pessimism	2- VALID											
	0- I am not particularly discouraged about the future.			1- I feel discouraged about the future.			2 -I feel I have nothing to look forward to.			3- I feel the future is hopeless and that things cannot improve.		
	F.	%	CF	F.	%	CF	F.	%	CF	F.	%	CF
	230	64.4	64.4	77	21	86	25	7	93	25	7	100

Past failure	3- VALID											
	0- I do not feel like a failure.			1- I feel I have failed more than the average person.			2- As I look back on my life, all I can see is a lot of failures.			3- I feel I am a complete failure as a person.		
	F.	%	CF	F.	%	CF	F.	%	CF	F.	%	CF
	266	74.5	74.5	47	13.2	87.7	36	10.1	97.8	8	2.2	10

Loss of pleasure	4- VALID											
	0- I get as much satisfaction out of things as I used to			1- I don't enjoy things the way I used to.			2- I don't get real satisfaction out of anything anymore.					
	F.	%	CF	F.	%	CF	F.	%	CF	F.	%	CF
	144	40.3	40	123	34.5	74.8	55	15.4	90.2	35	9.8	100

Guilty feeling	5- VALID											
	0- I don't feel particularly guilty			1- I feel guilty part of the time.			2- I feel quite guilty most of the time.			3- I feel guilty all of the time.		
	F	%	CF	F	%	CF	F.	%	CF	F	%	CF
	146	40.9	40.9	120	33.6	74.5	83	23	97.8	8	2.2	100

Punishment feeling	6- VALID											
	0- I don't feel I am being punished.			1- I feel I may be punished.			2- I expect to be punished.			3- I feel I am being punished.		
	F	%	CF	F	%	CF	F	%	CF	F	%	CF
	179	50	50.1	73	20.4	70.6	56	15.7	86.3	49	13	

7- Valid												
Self-dislike	0- I don't feel disappointed in myself.			1- I am disappointed in myself.			2- I am disgusted with myself.			3- I hate myself.		
	F	%	CF	F	%	CF	F	%	CF	F	%	CF
	213	59.7	59.7	97	27.2	86.8	28	7.8	94.7	19	5.3	100.0

8- Valid												
Self-criticalness	0- I don't feel I am any worse than anybody else.			1- I am critical of myself for my weaknesses or mistakes.			2- I blame myself all the time for my faults.			3- I blame myself for everything bad that happens.		
	F	%	CF	F	%	CF	F	%	CF	F	%	C
	130	36.4	36.4	157	44	80.4	41	11.5	92	29	8.1	

9-VALID												
Suicidal thoughts and wishes	0- I don't have any thoughts of killing myself.			1- I have thoughts of killing myself, but I would not carry them out.			2- I would like to kill myself.			3- I would kill myself if I had the chance.		
	F	%	CF	F	%	CF	F	%	CF	F	%	C
	269	75.4	75.4	56	15.7	91	16	4.5	95.5	16	4.5	

Crying	10- VALID											
	0- I don't cry any more than usual.			1 -I cry more now than I used to.			2- I cry all the time now.			3- I used to be able to cry, but now I can't cry even though I want to.		
	F	%	CF	F	%	CF	F	%	CF	F	%	CF
	180	51.0	51	70	19.6	70	19	5.3	75	88	24.6	100

Irritability Agitation	11- VALID											
	0 -I am no more irritated by things than I ever was.			1- I am slightly more irritated now than usual.			2 -I am quite annoyed or irritated a good deal of the time.			3- I feel irritated all the time.		
	F.	%	CF	F.	%	CF	F.	%	CF	F.	%	CF
	116	32.5	32.5	166	46.5	79	40	11.2	90.2	35	9.8	100

Loss of interest	12- VALID											
	0- I have not lost interest in other people.			1- I am less interested in other people than I used to be.			2- I have lost most of my interest in other people.			3 -I have lost all of my interest in other people.		
	F.	%	CF	F.	%	CF	F.	%	CF	F.	%	CF
	130	36.4	36.4	140	39.2	75.6	63	17.6	93.3	24	6.7	100

Indecisiveness	13- VALID											
	0- I make decisions about as well as I ever could.			1- I put off making decisions more than I used to.			2- I have greater difficulty in making decisions more than I used to.			3- I can't make decisions at all anymore.		
	F.	%	CF	F.	%	CF	F	%	CF	F.	%	CF
	190	53.2	53.2	83	23.2	76.5	74	20	97	10	2.8	100

Body image, Worthlessness	14- VALID											
	0- I don't feel that I look any worse than I used to.			1- I am worried that I am looking old or unattractive.			2- I feel there are permanent changes in my appearance that make me look unattractive			3- I believe that I look ugly.		
	F.	%	CF	F.	%	CF	F.	%	CF	F	%	CF
	272	76	76.2	21	5.9	82	46	12.9	95	18	5	100

Loss of energy	15- VALID											
	0- I can work about as well as before.			1- It takes an extra effort to get started at doing something.			2- I have to push myself very hard to do anything.			3- I can't do any work at all.		
	F	%	CF	F.	%	CF	F	%	CF	F	%	CF
	145	76.2	76.2	21	5.9	82.1	46	12.9	95	18	5	100

Change sleep pattern	16- VALID											
	0 -I can sleep as well as usual.			1- I don't sleep as well as I used to.			2- I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.			3- I wake up several hours earlier than I used to and cannot get back to sleep.		
	F.	%	CF	F	%	CF	F	%	CF	F	%	CF
	163	45.7	45.7	138	38.7	84.3	41	11.5	95.8	15	4.2	100

Tiredness or fatigue	17- VALID											
	0- I don't get more tired than usual.			1- I get tired more easily than I used to.			2 -I get tired from doing almost anything.			3 -I am too tired to do anything.		
	F.	%	CF	F	%	CF	F.	%	CF	F.	%	CF
	164	45.9	45.9	113	31.7	77.6	55	15.4	93	25	7	100

Change of Appetite	18- VALID											
	0 -My appetite is no worse than usual.			1 -My appetite is not as good as it used to be.			2- My appetite is much worse now.			3- I have no appetite at all anymore.		
	F.	%	CF	F.	%	CF	F.	%	CF	F	%	CF
	221	61.9	61.9	86	24.1	86	37	10.4	96.4	13	3.6	100

Weight loss	19- VALID											
	0 -I haven't lost much weight, if any, lately.			1- I have lost more than five pounds.			2- I have lost more than ten pounds.			3- I have lost more than fifteen pounds.		
	F.	%	CF	F.	%	CF	F	%	CF	F	%	CF
	227	63.6	63.6	65	18.2	81.8	38	10.6	92.4	27	7.6	100

Health worried	20- VALID											
	0- I am no more worried about my health than usual.			1- I am worried about physical problems like aches, pains, upset stomach			2- I am very worried about physical problems and it's hard to think of much else.			3- I am so worried about my physical problems that I cannot think of anything else.		
	F.	%	CF	F	%	CF	F	%	CF	Freq	%	CF
	247	69.7	69.7	74	20.7	89.9	29	8.1	98.0	7	2.0	100

Loss of interest in sex	21- VALID											
	0- I have not noticed any recent change in my interest in sex.			1- I am less interested in sex than I used to be.			2- I have almost no interest in sex.			3- I have lost interest in sex completely.		
	Freq	%	CF	Freq	%	CF	Freq	%	CF	Freq	%	CF
	276	77.3	77.3	19	5.3	82.6	40	11.2	93.8	22	6.2	100

مدى انتشار الاكتئاب لدى طلبة العلوم الصحية في جامعة القدس

إعداد الطالب : عيسى رجا ابوعرام

إشراف : الدكتور نجاح الخطيب

ملخص الدراسة

المقدمة

تعرف دراسة العلوم الصحية على أنها تخصص وبيئة ضاغطة مليئة بالتحديات العالية والتي تؤثر على الطلاب من الناحية الجسدية والنفسية، طلاب العلوم الصحية يتميزون عن غيرهم من الطلاب بالدرجة العالية من التعليم تحت ضغوط كبيرة وهذه الضغوط شائعة بين الطلبة ولها علاقة بحدوث الاكتئاب النفسي.

هدفت هذه الدراسة إلى قياس مدى انتشار الاكتئاب بين طلبة العلوم الصحية في جامعة القدس.

تم استخدام المنهج الكمي المقطعي في هذه الدراسة، و تكون مجتمع الدراسة من جميع طلاب كليات العلوم الصحية في جامعة القدس (ابوديس – فلسطين) ; وكان عدد الطلبة (3395) طالبا وطالبة من جميع المستويات وسنوات الدراسة ، وقد كانت العينة الفعلية للدراسة (357) طالبا وطالبة، حيث تم اختيارهم باستخدام العينة القصدية غير العشوائية. استخدم الباحث الاستبانة أداء للدراسة، حيث احتوت على البيانات الاجتماعية والديموغرافية ومقياس بيك للاكتئاب (BDI-II) لعام 1969 ، حيث اشتمل المقياس على (21) سؤال تمت معالجة البيانات باستخدام الحزمة الإحصائية للعلوم الاجتماعية (SPSS) ، وتم استخدام عدة أساليب إحصائية منها : التكرارات، والنسب المئوية، والمتوسطات الحسابية، والانحرافات المعيارية، واختبار التباين الأحادي (ANOVA) ، و اختبار (T) للفروق ما بين مجموعات; للتعرف على العلاقات بين متغيرات الدراسة وأعراض الاكتئاب. وتم استخدام الانحدار الخطي المتعدد (Multilinear Regression) لإيجاد العوامل الأكثر تنبؤاً بنسبة الاكتئاب ضمن عملية البحث.

أظهرت نتائج الدراسة أن (47.9) % من المبحوثين كان لديهم الحد الأدنى من الاكتئاب ، وبينت النتائج بأن نسبة الاكتئاب للمبحوثين بلغت (40.3) % استنادا إلى نقطة الحسم للأداة وهي (17) فأعلى. أما بالنسبة لدرجات الاكتئاب فقد أظهرت الدراسة إن (19.7) % من المبحوثين كان لديهم أعراض اكتئاب بسيط ، (23.2) % لديهم أعراض اكتئاب متوسطة ، (9.2) % لديهم أعراض اكتئاب شديد، ونتيجة لذلك فقد أظهرت الدراسة أن 32% من المبحوثين يعانون من أعراض اكتئاب متوسطه وحادة وهذا يعني أنهم بحاجة إلى العلاج والمساعدة.

و فيما يتعلق بعلاقة مستوى الاكتئاب مع المتغيرات الديموغرافية فقد كشفت النتائج عن عدم وجود فروق ذات دلالة إحصائية في مدى انتشار الاكتئاب تعزى إلى عدد الأخوة ، ودخل الأسرة، والأمراض العضوية عند المبحوثين، والحالة الاجتماعية للوالدين والتخصص الجامعي ما بين طلبة الطب وطلبة المهن الصحية. في حين كشفت النتائج عن وجود فروق ذات دلالة إحصائية في مدى انتشار الاكتئاب تعزى إلى الجنس ، العمر، مكان السكن ، منطقة السكن، درجة التدين، السنة الدراسية ، وجود مشكلات نفسية، ووجود أفكار انتحارية . حيث أظهرت النتائج أن مدى انتشار الاكتئاب لدى الإناث أعلى من المبحوثين الذكور بمستوى دلالة = 0.001 بينما كان المبحوثين من فئة عمر 22 سنة فأكثر يعانون من مدى انتشار أعراض الاكتئاب بنسبة أعلى من زملائهم الأقل عمرا بمستوى دلالة = 0.024 . إضافة إلى ذلك فإن المبحوثين سكان جنوب ووسط الضفة الغربية كانوا أكثر اكتئاباً من المبحوثين سكان شمال الضفة بمستوى دلالة = 0.007 . كما أظهرت نتائج الدراسة أن المبحوثين من سكان المناطق الريفية لديهم مدى انتشار الاكتئاب أعلى من المبحوثين من سكان المدن (الحضر) بمستوى دلالة = 0.02 . وبينت النتائج أن المبحوثين من السنة الخامسة فما فوق يعانون من مدى انتشار أعراض الاكتئاب بنسبة أعلى من زملائهم في السنوات الأخرى عند مستوى دلالة = 0.027 . كما أظهرت النتائج أن نسبة الاكتئاب لدى طلبة التمريض والقبالة والعلاج الطبيعي هي (50%) وهي نسبة أعلى من نسبة الاكتئاب لدى زملائهم.

من جهة أخرى أظهرت نتائج الدراسة أن هناك ارتباط إيجابي بين مدى انتشار الاكتئاب ووجود المشكلات النفسية لدى المبحوثين بمستوى دلالة = 0.0001 ووجود الأفكار الانتحارية بمستوى دلالة = 0.0001 . كما أظهرت نتائج الدراسة بأن المبحوثين الملتزمين دينياً لديهم نسبة اكتئاب أعلى (الدلالة الإحصائية = 0.029) من المبحوثين المتدينين نوعاً ما.

و أخيراً فقد تم إدخال المتغيرات ذات الدلالة في معادلة الانحدار المتعدد وهي (الجنس ، العمر، درجة التدين ، مكان السكن ، منطقة السكن ، سنة الدراسة ، وجود مشكلات نفسية ، وجود أفكار انتحارية) أظهرت النتائج إن المتغيرات التي تنبأت بالاكتئاب لدى المبحوثين حسب معادلة الانحدار الخطي المتعدد هي (الأفكار الانتحارية، المشكلات النفسية ، ومنطقة السكن).

الخلاصة : واستناداً إلى النتائج، فإن الاكتئاب بين طلبة العلوم الصحية مسألة خطيرة ، حيث تشير نتائج الدراسة بأن 32% من المشاركين يعانون من أعراض الاكتئاب الحاد والمتوسط . كما بلغت نسبة الطلبة الذين لديهم أفكار انتحارية 24% منهم 6.7% يعتقدون بأن الموت هو الحل الوحيد لمشكلاتهم. وبناء على ذلك فإن الطلبة الذين يعانون من الاكتئاب بحاجة إلى التدخل النفسي والمساعدة ، في حين أن الطلبة الذين لديهم أفكار انتحارية بحاجة إلى التدخل العاجل لحل مشكلاتهم . وقد أوصت الدراسة بتطوير الوعي لدى أصحاب القرار بالاعتراف وحل المشاكل النفسية لدى طلبة جامعة القدس.



Research Ethics Committee
Committee's Decision Letter

Date: 7/3/2017
Ref No: 4/REC/2017

Dear Dr. Najah Al-Khatib,

Thank you for submitting your application for research ethics approval. After reviewing your application entitled "**The Prevalence of Depression among Health Sciences Students at Al-Quds University**". The Research Ethics Committee (REC) confirms that your application is in accordance with the research ethics guidelines at Al-Quds University.

We would appreciate receiving a copy of your final research report/ publication. Thank you again and wish you a productive research that serves the best interests of your subjects.



Dr. Dina M. Bitar
Research Ethics Committee Chair

Cc. Prof. Imad Abu Kishek - President
Cc. Members of the committee
Cc. file



School of Public Health <sphealth@admin.alquds.edu>


تزويد الطالب عيسى بمعلومات عن اعداد الطالبة

2 messages

School of Public Health <sphealth@admin.alquds.edu>

Wed, Jan 25, 2017 at 1:01 PM

To: Manal Jaber <manal.jaber@staff.alquds.edu>

 0001مساعدة الطالب عيسى ابو عرام.pdf
382K

Manal Jaber <manal.jaber@staff.alquds.edu>

Wed, Jan 25, 2017 at 1:22 PM

To: School of Public Health <sphealth@admin.alquds.edu>

تحياتي دكتور نجاح المحترمة
الاعداد حسب الفصل الاول 2016/2017 هي كما يلي
طب بشري 942 طالب وطالبة
طب اسنان 753
صيدلة 432
مهن صحية 1268
وشكرا

On Wed, Jan 25, 2017 at 1:01 PM, School of Public Health <sphealth@admin.alquds.edu> wrote: