**“In the name of allah the beneficence the merciful”**

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**An-Najah National University**

**Faculty of Medicine and health science**

 **(Nursing section)**

**Probable presence of a relationship between depression in elderly people and insufficient nutritional status among these people in the community.**

**( cross – sectional study )**

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**II. Abstract :**

**Objectives:**Malnutrition and depression are highly preventable in the elderly and can lead to unfavourable outcomes. The aims of the current study were to determine the association between malnutrition and depression and also to find any correlation of depression with some indices in free living elderly.

**Methods:** In this cross-sectional study, 118 elderly subjects were selected from two city in the west bank in Palestine, the individuals aged 60 years and above who did not present anymajor functional disability.

**Measures:** To evaluate nutritional status, we used Mini Nutritional Assessment (MNA) method in free-living elderly people and their relationship to Socio Economic Conditions (SECs). Based on the final scores, our patients were classified into three groups: score 8-11 (at risk for malnutrition), score less than 7 (with malnutrition), and score 12-14 (well nourished). To determine the mood status (depression), we used Geriatric Depression Score (GDS). According to this score our participants turned out to be in three groups: score less than 9 ( not depressed ) , score 10-19 ( mild depressed ) , and score 20-30 ( depressed ) .

**Results:**The study participant are 118 elderly people,the studyshows that the elderly people from the study sample have (mild depression,nutrition and overweight conditions according to the scales in tables ( 1,2,3). The study shows that there is a significant relationship between nutrition status and depression among the elderly who attend the primary health clinic. The relationship is (-0.441) and the P (value = 0.000\*) which is less than (0.05) and that means the more the depression among elderly, the less the nutrition status among the elderly who attend the primary health clinic, the prevalence of depression was 35 persons ( 29.7% ) are depressed, 70 person (59.3% ) are mild depression and 13 person ( 11% )are not depressed, also the 32 person ( 27.1% ) malnutrition, 57 persons ( 48.3% ) are risk of malnutrition, and 29 persons ( 24.6% ) are well nourished.

**Conclusions:**The percentage of malnutrition increase among the elderly who suffer from depression compared with older people who do not suffer from depression. Although, the nutritional status is less among the elderly who attend the primary health clinic.

**III. Keywords:**

**(**Elderly, Depression, Malnutrition**)**

1. **Old age:** Consists of ages nearing or surpassing the life expectancy of human beings, and thus the end of the human life cycle (more than 60 Y.O).

<http://en.wikipedia.org/wiki/Old_age>

1. **Nutritional status:**The assessment of the state of nourishment of a patient or subject.[http://medical-dictionary.thefreedictionary.com/nutritional+status](http://medical-dictionary.thefreedictionary.com/nutritional%2Bstatus)
2. **Depression:**Severe symptoms that interfere with your ability to work, sleep, study, eat, and enjoy life. An episode can occur only once in a person’s lifetime, but more often, a person has several episodes.<http://www.nimh.nih.gov/health/topics/depression/index.shtml>
3. **Malnutrition:**Is a condition that results from eating a diet in which nutrients are not enough or are too much such that it causes health problems.<http://en.wikipedia.org/wiki/Malnutrition>
4. **Geriatric depression scale (GDS):**Is a 30-item self-report assessment used to identify depression in the elderly. The scale was first developed in 1982 by J.A. Yesavage and others.

<http://en.wikipedia.org/wiki/Geriatric_Depression_Scale>

1. **Mini Nutritional assessment (MNA):** A diagnostic tool for malnutrition and a guide for nutritional intervention in older people. (Secher M , et al 2007 )

**Chapter I**

**Introduction**

1. **1 Introduction :**

The percentage of depression in Palestine and the prevalence among Palestinian people in west – bank are unclear.This is due to the lack of attention to topics related to these studies.There are a few studies about mental health in Palestine such as Posttraumatic stress disorders comorbid with major depression in West Bank, Palestine ( Madianos M, Sarhan A, Koukia E, 2011 ); and Prevalence of depression among people with type 2 diabetes mellitus ( Sweileh w, Abu-Hadeed H, Al-Jabi s, Zyoud s, 2014 ) .

Mental illness is found to be much worst in areas of dire poverty , in low and medium income countries people with mental disorder do not receive adequate care , due to the absence of a mental health policy and operational plans ,the lack of a mental health legislation, limited human resources and insufficient financial resources. (<http://www.cittadinanza.org/wpcontent/uploads/www.cittadinanza.org/intmeetprogrdef.pdf> (WHO, 2012) .

"Depression is a factor of both genetics and stress. Everyone who has the genetic predisposition to get depression will get it under a stressful environment ; And Palestine certainly is that, with a crumbling economy, rampant unemployment and constant tension with Israel".(Dr. Mohammad Herzallah , pag 6 )

Depression generally have negative effects on the individual, a person who suffers from depression to be susceptible to diseases due to negligence and the low level of physical performance , in addition to increasing suicide rate among these people.

Diversity must be submitted along with psychotherapy treatment in mental health centers, and should not be overlooked in the food side treatment.

Fewer people are aware of the connection between nutrition and depression. Depression is more typically thought of as strictly emotional or biochemical. Nutrition; However, can play a key role, both in the onset, severity, and duration of depression, including daily mood swings( Bonnie Beardsley et al.2000) .

Nutrient rich diets also run the risk of feeling depressed, because the brain chemicals that promote a feeling of well-being, tryptophan and serotonin, are triggered by carbohydrate rich foods. Anti-depressant drugs like Prozac also target serotonin production(Bonnie Beardsley et al.2000).

A lack of certain vitamins ,especially the B vitamins which are used in nervous system function.Folic acid deficiency can cause personality change and depression( Bonnie Beardsley et al.2000) .

There are a variety of factors that help affect the nutritional status of older people. Although the relationships are not linked or consistent with each other; First, the physical factors associated with the physical composition of the older people, as problems in the process of chewing and swallowing food; The second factor , is the health and safety of the psychological and mental condition of these people, the consensus was that the biggest and the main reason for the problems that afflict the elderly, especially weight loss and loss of appetite is a disease of mental depression, by suggestion and the consensus on the treatment mental depression a major role and effectiveness in the treatment of major loss of appetite as well as

some of the other problems that might be faced with these people in this age of advanced age (HCilan - ‎2013)

The current study is based on building a comprehensive picture of depression and its relationship to the nutritional status in Palestine, there is limited information on the prevalence of malnutrition and mental illness , in addition to any data related to factors associated with these cases in Palestinian society, and the precedent research is insufficient for depression related to old age persons .

Nutritional status among the elderly in the Palestinian community does not well study, The study objective is to identify the extent the prevalence of malnutrition and depression among the elderly and relationship between each other,with demographic factors such as place of living, education, gender, type of living , occupation ,and source of income in Palestine.

Palestinian society is a young and youthful community ,young people reach a half proportion of the community and the elderly in the community have very small percentage, according to Statistics erected in the middle of the year 2014 , the percentage of the elderly (aged 60 and over) reached 4.4% of the population in the Palestinian Territory (4.9% in West Bank and 3.7% in Gaza strip), (Palestinian Central Bureau of Statistics, 2014).

1. **2 Significance of study:**

The study aim to help those interested in these topics ,asit aims to identify if the elderly suffering from depression, also if they are at risk of malnutrition or not, and to assess the relationship if there is a link between nutritional status and depression.

In most communities elderly often suffer from poor nutrition, as resultone of the seriouslyreasons are present between them and it’s thedepression ( Bonnie Beardsley et al.2000 )

On the other hand, malnutrition leads to a reduction in energy consumption in the body, leading to weight loss due to physical factors, psychological or social . Undernutrition is associated with the worst cases to predict to an independent risk for mortality factors in the community, they should re-look at these things and increase the awareness of the community (H Cilan - ‎2013 ) .

In addition, this study will help researchers to determine the causes of depression and malnutrition among the elderly, and how it is possible to do some of the recommendations and guidelines for patients who suffer from depression or malnutrition, through the media and the sponsoring institutions for the elderly in the Palestinian society.

1. **3 Demography :**

This study was conducted in the West Bank –Palestine, in only two provinces Ramallah and Nablus .

The participant will be ;the elderly people in the nursing home care and the elderly client who visit the primary health care .

Even the low percentage of elderly people in the community, there are many nursinghomescare and elderly care center that provide care for the elderly in the community .

1. **4 Objectives :**

1.Screening depression among the elderly based on the probability of presence among them .

2.Screening nutritional status among the elderly based on the probability of presence among them .

3.Knowing or search for evidence to prove the existence of a correlation between depression and nutritional status among elderly people .

4.Investigate and inquire about the factors related to and its association with nutritional status .

1. **5 Research questions :**

1.How can the depression affected by nutritional status ?

2.What is the ratio of the prevalence of depression among the elderly in

Palestine ?

3.To what extent the evaluation , which can take the nutritional status among the elderly ?

1. **6 Research Hypothesis :**
2. A high rate of depression among the Palestinian elderly people .
3. The nutritional status among elderly affected by the depression .
4. The nutritional status not accepted and below the level among the Palestinian elderly .

**Chapter II**

**Literature Review**

**II.1 Articles matrix:**

**Table**

|  |  |  |  |
| --- | --- | --- | --- |
| Search words | Web site | Search Results  | No. of Taken results |
| Prevalence of depression among elderly ( IJPBS ) | Google web. | 708 | 2 |
| Prevalence of depression among community elderly | Google web. | 821000 | 3 |
| Evaluation of depression | Sciencedirect | 278861 | 7 |
| Prognosis of depression in the elderly and clinical pubmed | Google web. | 1630000 | 2 |
| Depression and hospitalsystematic review pubmed | Google web. | 1630000 | 1 |
| Nutritional status assessment | Sciencedirect | 82008 | 3 |
| Undernutrition in elderly | Sciencedirect | 2888 | 5 |
| Undernutrition in elderly | Sciencedirect | 2888 | 11 |
| Malnutrition and nursinghome | Sciencedirect | 7878 | 7 |
| Depression and nutritional status in elderly | Google web. | 804000 | 1 |
| Depression and malnutrition | Sciencedirect | 15270 | 11 |
| Depression and obesity | Sciencedirect | 43860 | 10 |
| Nutritional status anddepression | Sciencedirect | 27293 | 1 |
| Nutrition and depressive symptom | Sciencedirect | 9880 | 4 |
| Weight loss and depression | Sciencedirect | 121712 | 4 |
| Association between depression and malnutrition | Pub med. | 188 | 19 |

**II.2 LiteratureReview :**

Is a text of a scholarly paper, which includes the current knowledge including substantive findings, as well as theoretical and methodological contributions to a particular topic .

<http://en.wikipedia.org/wiki/Literature_review>

A literature review discusses published information in a particular subject area, and sometimes information in a particular subject area within a certain time period.

<http://writingcenter.unc.edu/handouts/literature-reviews/>

This thesis is based on the method of literature review. Literature review evaluates and interprets all available research evidence relevant to a particular question. Literature review systematically identifies, assesses the quality and synthesizes the result of the article. Systematic literature review is widely used to accomplish evidence-based decision making. In addition, it helps to solve the question about the effectiveness of health care interventions. Thus the literature review is a method of locating, evaluating the quality of the articles and synthesizing them. (Glasziou 2001,1; Petticrew 2001,98.).

 In health care services systematic review has an important role in evidence-based approaches and in decision making. On the other hand it enables information and research about health and social care to be viewed within its particular contexts and set amid other similar information. Literature review helps the health personnel to implement the recent developments and research on any health topics in their professional lives. (Petticrew 2001,98-99; Aveyard 2010,5-6.).

 In literature review databases and original articles are assessed and retrieved. Full protocol is written in advance and in details while conducting the literature review. The questions are framed and the appropriate methods are chosen. The features of the questions are expressed as an aim. The research questions determine the process of conducting the review and help to refine the ideas of the review into a set of precise objectives. The research questions are expanded into of full protocol later which forms method section of the review. The databases are searched by using the different search terms. The original articles are retrieved. Relevant data is extracted on outcomes and quality. The appropriate articles are chosen for the review. The 17 results of the articles are written. Finally the discussions and conclusion are made. (Aveyard 2010, 10; White& Schmidt 2005, 56-59.).

The selection of the articles was done thoroughly. The articles were selected based on the topics of this review. The focus was on depression and malnutrition among elderly . The articles related to those terms were chosen. Articles that fulfill the criteria by topics were chosen first. Secondly, the articles were chosen based on abstract that relates and fulfill the criteria of the topics. Lastly, the articles were chosen by full texts that fulfill the criteria of the topics.

**II.3 Depression among elderly people :**

There are many studied in literatures about the depression in the elderly people . one of the key studies are the following :

**1- Prevalence of Depression in an Elderly Population: A Population-Based Study in Iran (MajdiM , et al (2010) , Iran )**

Depression among elderly in Iran has not been well studied. Little is known about the true rates of depression, it correlates or how well it is treated. This research is part of a series examining health status of older people using the Geriatric depression scale-15 (GDS-15).

In this study One thousand and nine hundred seventy five (1975) older people living in RazaviKhorasan province were studied using the cluster sampling method. The Persian version of GDS-15 was completed based on filling in questionnaires and after recognition of sample size of each city. Admission and data analyzing was followed by examining the relationship between depression and place of living (rural and urban), education, gender, type of living (alone or with family), occupation, source of income, and supporting system (such as charities, etc).

The subjects' mean (±SD) age was 71.14 (±7.78) years (range: 60-98) and 52.9% of the subjects were female. According GDS score, 23.5% of the subjects suffered from depression. The GDS score was significantly related to type of living (alone or with family), source of income, and supporting system (such as charities) (p<0.01). The depression scores in elderly with family support was significantly higher than those living with personal wealth and retirement salary (p<0.01).

Depression may be related to some factors including living alone and to source of income, and supporting system. National programs should be developed in community centers focused on Finding and decreasing depression among the elderly population.

**2- Prevalence of Depression Among Community Dwelling Elderly in Karachi, Pakistan ( Mubeen S (2012) Pakistan )**

The objectives of the study were to find out the prevalence of depression and to identify associated risk factors among community dwelling elderly in Karachi.

It was a cross-sectional, descriptive study involving 284 community-dwelling elderly residing in Karachi, Pakistan. A non-probability convenience sampling was done. The Geriatric Depression Scale (GDS-15) was used to assess depression. Descriptive statistics was performed using SPSS version 12. Cross tabulation for different variables was done and Chi-square was used as test of significance. The level of significance was set as p < 0.05. An informal (verbal) consent was taken. Anonymity and confidentiality was assured.

Among 284 respondents, 74% were males while 26% were females. The mean age was 68.44 ±7.59 years. The study found that 16.5% respondents were depressed while 23.6% were suggestive of depression. Depression was more among men than in women. Depression was statistically significant among married respondents (p<0.05) and illiterate (p<0.001). Although a large proportion of the participants were satisfied with their income, this was statisticallysignificant (p<0.001) for depression among those who were not satisfied with their income. Similarly, sleep was significantly disturbed (p<0.001) among the depressed respondents.

A significant prevalence of geriatric depression was reported. In order to reduce its prevalence, general physicians and other health care professionals need to be sensitized about geriatric depression and its risk factors.

* The selected articles were published between the years 2010 and 2012 in the Iranian Journal of Psychiatry and Behavioural Sciences.

Various studies have been conducted to investigate depression in the elderly and many found depression to be largely under diagnosed and untreated .Primary-care doctors rarely diagnose depression and, when they do provide inappropriate treatment .

It was a cross-sectional, descriptive study using non-probability convenience sampling method spanned over a period of 12 months. The sample included community elderly population.

The questionnaire used in the study was divided into socio-demographic information and the GDS-15. The socio-demographic information included sex, age, residence, religion, mother tongue, education, marital status, occupation and family setup.

The GDS was found to have 92% sensitivity and 89% specificity when evaluated against diagnostic criteria. The validity and reliability of the tool have been supported through both clinical practice and research.

The inclusion criteria were consenting individuals above the age of 60 years irrespective of sex, ethnicity or religion. Elderly suffering from chronic diseases like diabetes and hypertension were also included.

The respondents of the questionnaire were informed of the purpose of the study and the usage of the information they provided. An informal (verbal) consent was taken before the respective respondents filled the questionnaire. The researcher(s) read out the questions for the respondents unable to read and write and recorded the responses. Anonymity and confidentiality of their information was assured and the right to withdraw upheld.

The prevalence of geriatric depression reported in these studies is less than that most of the other countries but still it is a significant percentage.

**II.4 Nutritional status among elderly people:**

There are many studied in literatures about the nutritional status in the elderly people . one of the key studies are the following :

**Turkish nursing homes and care homes nutritional status assessment project ( Cankurtaran M , et al , European Geriatric Medicine, Volume 4, Issue 5, November 2013, Pages 329-334 , turkey )**

Malnutrition is related with serious morbidity and mortality in institutionalized older adults. The aim of this study is to determine the frequency of malnutrition in nursing homes and care homes and to identify the factors associated with malnutrition in these settings.

This multicenter study was conducted in 14 centers of nursing homes/care homes in three different cities. Total number of 1797 residents aged ≥ 65 years was enrolled. Malnutrition screening was made by Mini Nutritional Assessment Short Form (MNA-SF) and full MNA. Statistical analyses were conducted by SPSS 15.0.

The median age (min–max) of the study population was 78.0 (65.0–108.0) and 917 (51%) were female. MNA-SF score of the residents was 11 (0-14). According to the MNA-SF 850 (49.3%) residents had normal nutritional status, 654 (38.3%) residents were at malnutrition risk, and 204 (11.9%) had malnutrition. Number of medications, gender, duration of stay in the institution, frequency of family visits, social security status, type of nursing home (government or not), daily life activities (ADL), Geriatric Depression Scale (GDS) and MMSE scores, get up & go test, hypertension, dementia, depression, and Parkinson disease were associated with malnutrition. Regression analyses revealed that get up&go test, GDS, hypertension, and ADL were independently related to malnutrition diagnosed by MNA-SF.

This study provides important information on the prevalence and associated factors of malnutrition in a large multicentered setting of nursing homes and care homes. It will direct the screening plans and interventions taken in order to detect, prevent, and manage malnutrition in these settings.

* The selected articles are published between in 2013 in the Journal of European Geriatric Medicine .

The Mini Nutritional Assessment (MNA) is commonly used to determine the nutritional status of elderly people.The assessment classifies individuals as well nourished, at risk or malnourished. The MNA is a tool of high sensitivity and specificity.

This study are aimed to determine the prevalence of malnutrition among the community elderly people; by using the mini nutritional assessment questionnaire on 1797 participants .

The study results shows that the majority of elderly people are at risk of malnutrition comparing with the same result in other countries.

**II.5 Depression and nutritional status among elderly people:**

There are many studied in literatures about the depression and nutritional status relationship in the elderly people . one of the key studies are the following :

**1- Ahmadi , et al ( 2013 ) Iranian Journal of Psychiatry , conducted a study with topic titled:Dependence of the Geriatric Depression on Nutritional Status and Anthropometric Indices in Elderly Population .**

The main purpose of their study was to determine that the  Malnutrition and depression are highly prevalent in the elderly and can lead to unfavorable outcomes. The aims of the current study were to determine the association between malnutrition and depression and also to find any correlation of depression with some anthropometric indices in free living elderly.

In this cross-sectional study, 337 elderly subjects (193 females) were selected using cluster sampling. Depressive symptoms and nutritional status were determined by the Geriatric Depression Scale (GDS) and the Mini-Nutritional Assessment (MNA) scores questionnaires, respectively. Anthropometric indices were measured all in standard situations. Chi squared test and t-test were used when necessary. Pearson correlation coefficients were calculated for linear relations between variables.

Of all the total subjects, 43.62 %were depressed; and of whom, 48.01% were malnourished or at risk of malnutrition. GDS had a significant negative dependence with the MNA for the entire sample (r=- 0.58, ρ <0.0001). However, there was no significant correlation between age and GDS or MNA scores. Moreover, the mean GDS scores differed significantly between men and women (p <0.05), and women were more depressed than men (27.9% vs. 15%, respectively). The elderly subjects living in urban areas were more depressed than those living in rural areas (39.46% vs. 3.85% respectively).

The results of the present study revealed a high prevalence of depression and malnutrition among old subjects. Moreover, depression was associated with worsening of nutritional status. The mechanism of this association needs further study.

**2- Cabrera .M , et al ( 2007 ) , conducted a study with topic titled: Malnutrition and Depression among Community-dwelling Elderly People , Paraná State, Brazil.,**

This study had the objective of analyzing the association between nutritional deficit and the presence of depression among community-dwelling elderly people.

Cross-sectional study.Population of elderly people living in one district of a city in southern Brazil. Participants: The subjects were 267 individuals aged 60 to 74 years who did not present any significant functional incapacity.

Nutritional deficit was considered to be present if the individuals were classified as malnourished or at nutritional risk by means of the Mini Nutritional Assessment (MNA). Depression was identified as regular use of antidepressives or scores higher than 5 points on the Geriatric Depression Scale.

A majority of the elderly individuals were female (59.9%). Nutritional deficit was identified in 58 elderly people (21.7%) and depression in 65 (24.3%). Nutritional deficit presented a significant association with depression, even after adjusting for control variables such as low schooling, low socioeconomic level, and smoking (OR = 4.38; 95% CI: 2.23–8.64; P < .001).

The results showed that there was an independent association between nutritional deficit and depression in this population of elderly people, which emphasizes the importance of early identification of depression among individuals with nutritional disorders.

* The selected articles were published between the years 2007 and 2013 in the Iranian Journal of Psychiatry and Behavioural Sciences and the journal of post-acute and long-term care medicine.

Depressive conditions are highly prevalent in later life and are among health policy priorities. According to the World Health Organization, the world elderly population will reach 800 million by 2025.

Depression has been correlated with some socio-demographic factors in adult life, On the other hand, people may be at greater risk of malnutrition in later life. Some observational studies have reported that depression may deteriorate the risk of malnutrition in older subjects.

To date, the causal association linking depression and nutritional status is indistinct. The effect of depression on nutritional status feeding habits and elderly weight is still controversial. Some studies have reported weight gain and visceral fat accumulation in old depressive subjects, while others report depression as a contributing factor to weight loss in older people.

The goal of these current studies were to determine the association between malnutrition and depression and also to find any correlation of depression with some anthropometric indices in free living elderly people based on Mini-Nutritional Assessment (MNA) and Geriatric Depression Scale (GDS).

Using cluster sampling, on free-living elderly subjects (females and males) were entered in a cross-sectional designed study. The study population was divided into regional clusters based on regional municipality; and, a random sample of these clusters was selected. Then, subjects were randomly selected from these clusters equally. Each subject signed the informed written consent form to take part into the study.

Following structured diagnostic interview by a psychologist, depressive signs were evaluated using the Geriatric Depression Scale (GDS). The nutritional status of subjects was determined using Mini-Nutritional Assessment (MNA) scores questionnaire via an interview conducted by a trained dietitian.

The result of studies shows that the majority of elderly people are at risk of malnutrition and mild depression; the elderly people in the community are suffering from mild depression comorbidity with risk of malnutrition comparing with the same result in other countries.

**Chapter III**

**Methodology**

**III.1 Methodology:**

This methodology section , described and contained ; study design , sample and setting , **Eligibility criteria** , scoring system , data analysis , sampling, instrumentation and procedure , data analysis , validity of the questionnaire , and ethical consideration .

**III.2 Study Design:**

Cross-sectional study (Quantitative descriptive) was used in this study to know the prevalence of depression and malnutrition and the association between these prevalence.

**III.3 Sample& setting :**

A cross-sectional survey design was used to calculate data about evaluating the nutrition status among elderly (aged more than 60 years) who attend the primary health clinics. about 118 individuals participated in the survey. Each individual was asked to singe consent to participate in the survey. The right to withdraw from the study at any stage was assured. This study was approved by the Faculty of Medicine and Health Science in the first semester of the academic year ( 2014-2015) at AN-Najah National University in Nablus. The questionnaire was filled out by the elderly.

Also, Was obtained approval to go to the relevant health centres and clinics, in advance by the university administration.

Table III-1 (The total population of study)

|  |  |  |  |
| --- | --- | --- | --- |
| **Nursing home\primary health care sitting** | **City** | **Number of participant.** | **Percentage** |
| Home of elderly | Nablus | 8 | 8\118 |
| Askar PHC centre | Nablus | 32 | 32\118 |
| Balata PHC centre | Nablus | 30 | 30\118 |
| Qalandya PCH centre | Ramallah | 40 | 40\118 |
| Nursing home | Ramallah | 8 | 8\118 |
| Total |  | 118 | 118/118 |

**III.4 Eligibility criteria:**

* **The Inclusion criteria were:**
1. Elderly people who are above 60 years old
2. Participants who have a depression according the Geriatric Depression Scale
* **The exclusion criteria were:**
1. Participant who refuse to be included in the study.
2. Participants who is away from the scales standard .

**III.5 Scoring system:**

The scoring systems for the study questions including ( Nutrition scale , BMI criteria , and criteria of the depression scale )

**Table III-2-1:** Nutrition scale

|  |
| --- |
| **0-7 Malnutrition** **8-11 Mild Nutrition****12- 14 GoodNutrition** |

**Table III-2-2:** Nutrition scale

|  |
| --- |
| **Less than 19 underweight** **19- 23 Normal weight** **More than 23 overweight**  |

**Table III-2-3:** criteria of the depression scale

|  |
| --- |
| **0-9 non - depressed****10-19 Mild depression** **20-30 Sever depression** |

The data was managed, entered and analyzed using SPSS 17 computer software statistical package.

The frequencies, percentages, means, standard deviations, t-test and One Way ANOVA test were used. Statistical significance was considered at *P*-value <0.05.

**III.6Data analysis :**

Descriptive analysis was completed using SPSS 17.0.( The data collected were analysed using (SPSS) to provide answers to the questions of the study. Means, frequencies, standard deviations, t-tests for independent Samples and One-Way Analysis of Variance (ANOVA) ) .

**III.7Sampling, Instrumentation and Procedure :**

The sample consisted of 118 elderly who live in (Nablus and Ramallah) . Moreover, the respondents were varied in terms of qualification, gender, place of residence, marital status, number of sons, economical situation, income, and suffering from chronic diseases as shown in Table below.

**Table (III-3) : Distribution of Sample According to Study Independent Variables**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **Class** | **Frequency** | **Percentage %** |
| **Gender** | Male | 46 | 39.0 |
| Female | 72 | 61.0 |
| **Age**  | 60-69 | 69 | 58.5 |
| 70-79 | 46 | 39.0 |
| >80 | 3 | 2.5 |
| **Place ( Governorate )**  | Ramallah | 44 | 37.3 |
| Nablus | 74 | 62.7 |
| **Place of residence**  | City | 8 | 6.8 |
| Village | 42 | 35.6 |
| Refugee camp | 68 | 57.6 |
| **Education**  | Literate | 31 | 26.3 |
| Elementary | 31 | 26.3 |
| Preparatory | 26 | 22.0 |
| Secondary | 19 | 16.1 |
| University | 11 | 9.3 |
| **Marital status**  | Married | 67 | 56.8 |
| Single | 10 | 8.5 |
| Divorced | 9 | 7.6 |
| Widowed | 32 | 27.1 |
| **Number of sons**  | No | 20 | 16.9 |
| 1-3 | 26 | 22.0 |
| 4-6 | 41 | 34.7 |
| More than 6 | 31 | 26.3 |
| **Economic status**  | Income | 43 | 36.4 |
| Without income | 75 | 63.6 |
| **Monthly income**  | .00 | 43 | 36.4 |
| > than 1000 | 14 | 11.9 |
| 1000-1900 | 33 | 28.0 |
| 2000-2900 | 23 | 19.5 |
| 3000-3900 | 2 | 1.7 |
| 4000 and more | 3 | 2.5 |
| **Chronic disease**  | No | 45 | 38.1 |
| Yes | 73 | 61.9 |
| **Kind of chronic disease**  | Free | 45 | 38.1 |
| Diabetes  | 16 | 13.6 |
| Hypertension | 20 | 16.9 |
| Diabetes and hypertension  | 26 | 22.0 |
| Rheumatism  | 1 | .8 |
| Respiratory diseases  | 3 | 2.5 |
| Cardiac | 3 | 2.5 |
| Cancer | 3 | 2.5 |
| الغدة الدرقية  | 1 | .8 |
| **Total**  |  | **118** | **100%** |

**Instrumentation:**To achieve the objectives of the study, the researchers used a questionnaire including Nutrition scale , BMI criteria , and criteria of the depression scale in addition to the demographic data of the study sample . The scores of responses to scale were calculated according to each scale and the results were obtained .

While there are many instruments available to measure depression, the Geriatric Depression Scale (GDS), first created by Yesavage, et al., has been tested and used extensively with the older population. The GDS Long Form is a brief, 30-item questionnaire in which participants are asked to respond by answering yes or no in reference to how they felt over the past week. A Short Form GDS consisting of 15 questions was developed in 1986. Questions from the Long Form GDS which had the highest correlation with depressive symptoms in validation studies were selected for the short version. Of the 15 items, 10 indicated the presence of depression when answered positively, while the rest (question numbers 1, 5, 7, 11, 13) indicated depression when answered negatively. Scores of 0-4 are considered normal, depending on age, education, and complaints; 5-8 indicate mild depression; 9-11 indicate moderate depression; and 12-15 indicate severe depression.

The Short Form is more easily used by physically ill and mildly to moderately demented patients who have short attention spans and/or feel easily fatigued. It takes about 5 to 7 minutes to complete. (Greenberg S , 2012 )

The MNA is a validated nutrition screening and assessment tool that can identify geriatric patients age 65 and above who are malnourished or at risk of malnutrition. The MNA was developed nearly 20 years ago and is the most well validated nutrition screening tool for the elderly , MNA score 14 , 0-7 (malnutrition) , 8-11 (risk of malnutrition ) , 12-14 ( well nutrition ) ( vellas B et al , 1999 ).

Table III-4 (Response rate)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Nursing home\primary health care sitting** | **Place**  | **Number Of Questionnaire** | **Number of personswho get questionnaire** | **Total of complete questionnaire** |
| Home of elderly | **Nablus** | **8** | **8\8** | **100%** |
| Askar PHC centre | Nablus | **32** | **32\32** | **100%** |
| Balata PHC centre | **Nablus** | **30** | **30\30** | **100%** |
| Nursing home | **Ramallah** | **8** | **8\8** | **100%** |
| Ramallah PCH centre | Ramallah | **40** | **40\40** | **100%** |

**III.8Validity of the Questionnaire** :

To ensure the validity of the questionnaire, it was rated by a jury of experts in the field of Medicine at the Faculty Medicine and Health Science at An-Najah National University .

**III.9Ethical Consideration :**

1. Formal approval was taken from the university and UNRWA clinic .

2. The aim the study was explained to each individual to be familiar with the importance of participation.

3. A brief explanation of the purpose and importance of the study was clarified to the study sample and assured them that the obtained information will be confidential and used only the purpose of the study.

**III.10 pilot study :**

A pilot study was conducted to determine reliability and validity of the questionnaire. The pilot study aimed to:

1. Estimate the time required for the data collection.

2. Determine the reliability of questionnaires.

3. Obtain the clarity and the content adequacy of the questionnaire.

4. Identify the barriers that may count during the data collection process.

**Chapter IV**

**Results**

**IV.1 Results :**

In table (IV-1) showed that the female participants more than male 72 persons to 46 persons respectively (61% to 39% respectively) and the sample was collected from two places nablus and ramallah , 74 persons from nablus and 44 persons from ramallah (62.7% to 37.3% respectively ) , the participants age are classify as (60-69 years , 69 persons , 58.5% ) ; (70-79 years , 46 persons , 39% ) , and ( above 80 years old , 3 persons , 2.5% ) , and education describe as : (literate , 31 persons , 26.3% ) ; (elementary , 31 persons , 26.3% ) ; (preparatory , 26 persons , 22% ) ; ( secondary , 19 persons , 16.1% ) ; (university , 11 persons , 9.3% ) .

**Table (IV-1)**

**Distribution of Sample According to Study Independent Variables**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **Class** | **Frequency** | **Percentage %** |
| **Gender** | Male | 46 | 39.0 |
| Female | 72 | 61.0 |
| **Age**  | 60-69 | 69 | 58.5 |
| 70-79 | 46 | 39.0 |
| >80 | 3 | 2.5 |
| **Place ( Governorate )**  | Ramallah | 44 | 37.3 |
| Nablus | 74 | 62.7 |
| **Place of residence**  | City | 8 | 6.8 |
| Village | 42 | 35.6 |
| Refugee camp | 68 | 57.6 |
| **Education**  | Literate | 31 | 26.3 |
| Elementary | 31 | 26.3 |
| Preparatory | 26 | 22.0 |
| Secondary | 19 | 16.1 |
| University | 11 | 9.3 |
| **Marital status**  | Married | 67 | 56.8 |
| Single | 10 | 8.5 |
| Divorced | 9 | 7.6 |
| Widowed | 32 | 27.1 |
| **Number of sons**  | No | 20 | 16.9 |
| 1-3 | 26 | 22.0 |
| 4-6 | 41 | 34.7 |
| More than 6 | 31 | 26.3 |
| **Economic status**  | Income | 43 | 36.4 |
| Without income | 75 | 63.6 |
| **Monthly income**  | .00 | 43 | 36.4 |
| > than 1000 | 14 | 11.9 |
| 1000-1900 | 33 | 28.0 |
| 2000-2900 | 23 | 19.5 |
| 3000-3900 | 2 | 1.7 |
| 4000 and more | 3 | 2.5 |
| **Chronic disease**  | No | 45 | 38.1 |
| Yes | 73 | 61.9 |
| **Kind of chronic disease**  | Free | 45 | 38.1 |
| Diabetes  | 16 | 13.6 |
| Hypertension | 20 | 16.9 |
| Diabetes and hypertension  | 26 | 22.0 |
| Rheumatism  | 1 | .8 |
| Respiratory diseases  | 3 | 2.5 |
| Cardiac | 3 | 2.5 |
| Cancer | 3 | 2.5 |
| الغدة الدرقية  | 1 | .8 |
| **Total**  |  | **118** | **100%** |

In table (IV-2) showed that the prevalence of nutrition and depression in the mild range .

**Table (IV-2)**

| **Prevalence**  |
| --- |
|  | N | Minimum | Maximum | Mean | Std. Deviation |
| Nutrition | 118 | 4.00 | 14.00 | 9.4831 | 2.48666 |
| Depression | 118 | .00 | 27.00 | 15.9492 | 6.21529 |
| Valid N (listwise) | 118 |  |  |  |  |

In table (IV-3) showed that the largest number of participants living in refugee camp and the largest number of participants are female gender.

**Table (IV-3)**

In table (IV-4) showed that the largest number of participants living inNablus city and the largest number of participants are elementary and literate.

**Table (IV-4)**

In table (IV-5) showed that the largest number of participants age between (60-69) and the largest number of participants are married and without income.

**Table (IV-5)**

In table (IV-6) showed that the largest number of participants have chronic disease and the largest number of participants are without monthly income.

**Table (IV-6)**

**IV.2Result of hypotheses :**

1. **The prevalence of depression among the elderly in the community :**

**Table (IV-7)**

|  |
| --- |
| **Level of depression**  |
|  | **Number ( F )** | **Percentage (%)** |
| No Depressed | 13 | 11 |
| Mild Depression | 70 | 59.3 |
| Severe Depression | 35 | 29.7 |
| Total | 118 | 100.0 |

In table (IV-7)and according to the geriatric depression scale we can described the result as , 13 participants are not suffer from depression ( 11% ) of total sample , the total sample was 118 participants , also 70 person have mild depression (59.3%) according to GDS , and 35 persons suffer from depression (29.7%)

1. **The condition of nutritional status among the elderly in the community:**

**Table (IV-8)**

|  |
| --- |
| **Nutritional status level** |
|  | Number (F) | Percentage (%) |
| Malnourished | 32 | 27.1 |
| Risk for malnutrition | 57 | 48.3 |
| Well nourished | 29 | 24.6 |
| Total | 118 | 100.0 |

In table (IV-8)we can classify the nutritional status as ; 32 persons are suffer from malnutrition (27.1%) , 57 participants are risk of malnutrition (48.3%) , 29 participants have a good nutritional status (24.6%) .

1. **Depression affect negatively the nutritional status,depression affect the elderly nutritional status:**

**Table (IV-9)**

|  |
| --- |
| **Depression and nutritional status** |
| **Level of depression**  | **Nutritional status level** | **Total** | **P value**  |
| **Well nourished** | **Risk for malnutrition** | **Malnutrition** |
| **No depressed**  | 24.2% | 8.8% | 3.1% | 11% | 0.000\* |
| **Mild Depression** | 62% | 71.9% | 34.4% | 59.3% |
| **Severe Depression** | 13.8% | 19.3% | 62.5% | 29.7% |
| **Total** | 24.6% | 48.3% | 27.1% |  |

From table(IV-9) we can concluded that the total prevalence around mild depression and risk of malnutrition ( cross mild depression and risk of malnutrition have the high score of 71.9%) and we can show that the increased in the depression status show on the other hand the increase of malnutrition and the percentage scored 62.5% , when the status of depression increased the malnutrition status increased and when the malnutrition status increase the depression squeeze to be increase .

**Chapter V**

**Discussion**

**V.Discussion:**

**V.1 Introduction:**

The purpose of the study is to investigate whether if there is any association between depression and nutritional status among Community elderly people , Additionally to erudition the prevalence of depression and malnutrition in the elderly people based in two scale ; Geriatric Depression scale ( GDS ) and Mini Nutritional Assessment ( MNA ) .

The elderly are exposed in the autonomous areas of the Palestinian National Authority to political, economic and socialpressures, could lead to a deterioration of the health and psychologicalstatus with some individuals , in addition to the lack of services and care provided to them.

This study was conducted to identify the nutritional status and psychological experienced by the elderly. And it became clear through the data and feedbacks that have been made on the number of participants in the study .A high proportion of participants are risk of malnutrition and link these data with depression in some individual.

The effectiveness of questionnaire which was used in the study. Have had the greatest impact on the success of the study, co-operation of participants and easy access to information.

Some information in the questionnaire need to be clarified to most of participants, and the large number of questions in the questionnaire, was a hindrance and an obstacle to bringing volunteers.

In the fieldwork, Formal approval was taken from the university and the health institution, the autonomy of the participants; they have the right to get in the study, refuse and withdraw from the study.

**V.2Results and Discussion:**

This study aimed at identifying the relationship between nutrition status and depression. It also aimed at identifying the effect of gender, qualification, experience and specialization on depression. To accomplish the aims of the study, the researchers analyzed the data in accordance with the study questions and the results were as follows:

**1-Results related to the First Question**. ***What are the nutrition status, depression status and the BMI of the elderly who attend the primary health clinic*** To answer this question, the researchers used means and standard deviations as shown in Tables (V-1).

**Table (V-1): Means and standard deviations of *nutrition status, depression status and the BMI***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Item** | **Means** | **standard****deviations** | **Estimation level** |
| 1. | Depression | 15.9492 | 6.21529 | **Mild depression** |
| 2. | Nutrition | 9.4831 | 2.48666 | **Mild nutrition**  |
| 3. | BMI | 25.1673 | 4.94215 | **overweight** |

Table (V-1) shows that the elderly people from the study sample have (mild depression, mild nutrition and overweight conditions.

**2-Results related to the Second Question**. ***What are the relationship between nutrition status and depression status of the elderly who attend the primary health clinic?*** To answer this question, the researchers used Pearson correlation as shown in Tables (V-2).

**Table (V-2): Pearson correlation relationship between nutrition status and depression status of the elderly who attend the primary health clinic**

|  |  |  |
| --- | --- | --- |
| ***nutrition status*** | Nutrition status |  |
| Pearson correlation  | -0.441 |
| Sig.\* | 0.000\* |

Table (V-2) shows that the there is a significant relationship between nutrition status and depression among the elderly who attend the primary health clinic. The relationship is (-0.441) and the P (value = 0.000\*) which is less than (0.01) and that means the more the depression among elderly , the less the nutrition status among the elderly who attend the primary health clinic.

**V.3Hypothesis:**

1. **The prevalence of depression among the elderly in the community :**

The study results show that the prevalence of depression high among the community elderly people, the subject of the study was 118 participants, the old people who are not depressed 13 persons (11%), mild depression 70 persons (59.3%), and the elderly who suffer from depression 35 persons (29.7%), and the prevalence of depression associated with Place of residence, Education, Marital status, Economic status, Chronic diseases and family support.

Jeung-Im Kim et al, (2009) conclude in his study which conducted at Korea, surprisingly the prevalence of depression inphysical and socio-environmental variables, shows that the high prevalence of participants who were depressed (17.3%).

1. **The condition of nutritional status among the elderly in the community:**

The study results show that the prevalence of malnutrition and risk of malnutrition are too high 32 persons and 57 persons Respectively (27.1% and 48.3% Respectively), also 29 persons well nourished (24.6%). and this high prevalence can be assumed by allot of factors like socioeconomic status (education, place of living , income and etc.), Another study conducted in Norway by Jan-Magnus etal in 2010, shows More women (9.6%) than men (5.6%) were at risk of malnutrition (medium- and high-risk combined). Quality of life was lower in women than in men.Overall, the majority of both women (70%) and men (53%) reported problems related to at least one of the health malnutrition).

1. **depression affect negatively the nutritional status,depression affect the elderly nutritional status:**

The study results show that the prevalence of malnutrition and risk of malnutrition are too high 20 persons and 11persons respectively (62.5% and 19.3% respectively) among elderly people who suffer from depression.

Furthermore, Mokhber etal, 2011, studied association between malnutrition and depression among community dwelling elderly people, used cross sectional design and found that there was independent association between nutritional deficit and depression in this population.

**V.4 Conclusion:**

The percentage of malnutrition increase among the elderly who suffer from depression compared with older people who do not suffer from depression. Although,the nutritional status is less among the elderly who attend the primary health clinic.

**V.5 Limitations of study:**

The study sample are 118 and we are want to take more than 150 participants and this limitation due to:

* Difficult transportation due to barriers and financial issues.
* Time limitation and delay of IRB approval.
* Loss of 40 questionnaires by the tester.
* Difficult to find elderly people in the institution.

**V.6 Recommendations:**

* Define standards and pathways of care for preventing and treating malnutrition in the community
* Raise awareness of malnutrition amongst older people, their families and the public at large.
* Ensure that access to nutritional food is incorporated into local and community planning
* Embed the practice of screening for malnutrition in the community by health, social care and community service providers and professionals

**Chapter VI**

**References**

**VI.1 References :**

1. Dennis M, Kadri A, Coffey J, 2014. Depression in older people in the general hospital: a systematic review of screening instruments. *Age Ageing,* 41(2), pp. 148-54.
2. Arvanitakisa M , Vandewoudeb M , Perkisasb S , Van Gossum A, 2013. Undernutrition in community dwelling elderly. *e-SPEN journal,* 8(5), p. 213–215.
3. Verbrugghe M, Beeckman D, Van Hecke A, Vanderwee K, Van Herck K, Clays E, Bocquaert I, Derycke H, Geurden B, Verhaeghe S, 2013. Malnutrition and associated factors in nursing home residents: A cross-sectional, multi-centre study. 32(3), p. 438–443.
4. Ahmadi S, Mohammadi M, Mostafavi S, Keshavarzi S, Kooshesh S, Joulaei H, Sarikhani Y, Peimani P, Heydari S, Lankarani K, 2013. Dependence of the Geriatric Depression on Nutritional Status and Anthropometric Indices in Elderly Population. *Iran J Psychiatry,* 8(2), p. 92–96.
5. Cabrera M, Mesas A, Garcia A, Andrade S, 2007. Malnutrition and depression among community-dwelling elderly people. *J Am Med Dir Assoc,* 8(9), pp. 582-4.
6. Arterburn D, Westbrook EO, Ludman EJ, Operskalski B, Linde JA, Rohde P, Jeffery RW, Simon GE, 2012. Relationship between Obesity, Depression, and Disability in Middle-Aged Women. *Obes Res Clin Pract,* 6(3), pp. 197-206.
7. Heuberger R, Wong H, 2014. The association between depression and widowhood and nutritional status in older adults. *Geriatr Nurs,* 35(6), pp. 428-33.
8. Tsai HJ, 2013. Nutrition risk, functional dependence, and co-morbidities affect depressive symptoms in Taiwanese aged 53 years and over: a population-based longitudinal study.. *J Psychosom Res,* 75(2), pp. 173-7.
9. Simon GE, Rohde P, Ludman EJ, Jeffery RW, Linde JA, Operskalski BH, Arterburn D, 2010. Association between change in depression and change in weight among women enrolled in weight loss treatment.. *Gen Hosp Psychiatry,* 32(6), pp. 583-9.
10. Vafaei Z, Mokhtari H, Sadooghi Z, Meamar R, Chitsaz A, Moeini M, 2013. Malnutrition is associated with depression in rural elderly population. *J Res Med Sci,* 18(1), pp. 15-9.
11. Guigoz Y, Lauque S, Vellas BJ, 2002. The Mini Nutritional Assessment , Nestlé Product and Technology Centre. *ClinGeriatr Med,* 18(4), p. 737–757.
12. Smoliner C, Norman k, Wagner k, Hartig W, Lochs H, Pirlich M, 2009. Malnutrition and depression in the institutionalized elderly. *British Journal of Nutrition,* 102(11), pp. 1663- 1667.
13. Wada H, 2000. Problems and strategies in the treatment of mental disorders in elderly patients with physical illness. *Nihon Ronen Igakkai Zasshi,* 37(11), pp. 885-8.
14. Kim, JI,Choe MA,Chae YR, 2009. Prevalence and Predictors of Geriatric Depression in Community-Dwelling Elderly. *Asian Nursing Research,* 3(3), pp. 121-12.
15. DiMaria-Ghalili RA, Guenter PA, 2008. *Nursing Center.* [Online]
Available at: http://www.nursingcenter.com/lnc/cearticle?tid=771233
[Accessed 10 11 2014].
16. DiMaria-Ghalili RA, Guenter PA, 2008. The Mini Nutritional Assessment. *American Journal of Nursing,* 108(2), pp. 50-59.
17. Cankurtarana M, Sakab B, Sahinc S, Varlıd M, Doventase A, Yavuza BB, Halila M, Curgunluf A, Ulgerg Z, Tekinh N, Akcicekc F, Karani MA, Atlid T, Begere T, ErdinclereDS, Ariogul S, 2013. Turkish nursing homes and care homes nutritional status assessment project (THN-malnutrition). *European Geriatric Medicine,* 4(5), p. 329–334.
18. Almeida OP, Almeida SA, 1999. Short versions of the geriatric depression scale: a study of their validity for the diagnosis of a major depressive episode according to ICD-10 and DSM-IV. *Int J Geriatr Psychiatry,* 14(10), pp. 858-65.
19. Yesavage JA, Brink TL, Rose TL, Lum O, Huang V, Adey M, Leirer VO, 1982. Development and validation of a geriatric depression screening scale: a preliminary report. *J Psychiatr Res,* 17(1), pp. 37-49.
20. Sechera M, Sotoa ME, Villarsa H, van Kana GA, Vellas CA, 2007. The Mini Nutritional Assessment (MNA) after 20 years of research and clinical practice. *Reviews in Clinical Gerontology,* 17(4), pp. 293-310.
21. Mamhidir A, Kihlgren M, Soerlie V, 2010. Malnutrition in elder care: qualitative analysis of ethical perceptions of politicians and civil servants. *Journal of Medical Ethics,* 36(5), pp. 319-20.
22. Koenig HG, Meador KG, Cohen HJ, Blazer DG, 1988. Self-rated depression scales and screening for major depression in the older hospitalized patient with medical illness. *J Am Geriatr Soc,* 36(8), pp. 699-706.
23. Brzosko S, Hryszko T, Kłopotowski M, Myśliwiec M, 2013. Validation of Mini Nutritional Assessment Scale in peritoneal dialysis patients. *Arch Med Sci,* 9(4), p. 669–676.
24. Kurlowicz LH, 1997. Nursing Stand or Practice Protocol: Depression in Elderly Patients. *Geriatric Nursing,* 107(4), pp. 192-199.
25. Frosty, 2014. *Wikipedia.* [Online]
Available at: http://en.wikipedia.org/wiki/Old\_age
[Accessed 15 11 2014].
26. Ritchie CS, Burgio KL, Locher JL, Cornwell A, Thomas D, Hardin M, Redden D. Rubenstein LZ, Harker JO, Salva A, Guigoz Y, Vellas B, 2001. Screening for Undernutrition in Geriatric Practice: Developing the Short-Form Mini. *J Gerontol A Biol Sci Med Sci,* 56(6), pp. 366-72.
27. Via Briolini, 2014.WHO. [Online]
Available at: http://www.cittadinanza.org/wpcontent/uploads/www.cittadinanza.org/intmeetprogrdef.pdf
[Accessed 30 10 2014].
28. Schilp J, Kruizenga HM, Wijnhoven HA, Leistra E, Evers AM, van Binsbergen JJ, Deeg DJ, Visser M., 2012. High prevalence of undernutrition in Dutch community-dwelling older individuals. *Nutrition,* 28(11-12), pp. 1151-6.
29. Herzallah, 2013. *A Young Doctor Fights The Depression Epidemic In Palestine* [Interview] (27 2 2013).
30. Mitchell AJ, Izquierdo de Santiago A, 2009. Prognosis of depression in the elderly in comparison with adult age. Is there a significant clinical difference?. *Actas Esp Psiquiatr,* 37(5), pp. 289-96.
31. Liebel DV, Friedman B, Conwell Y, Powers BA, 2014. Evaluation of Geriatric Home Healthcare Depression Assessment and Care Management: Are OASIS-C Depression Requirements Enough?. *Am J Geriatr Psychiatry,,* 14(195), pp. 1064-7481.
32. Majdi M, Mobarhan M, Salek M, Taghi M, Mokhber N, 2011. Prevalence of Depression in an Elderly Population: A Population-Based Study in Iran. *Iranian Journal of Psychiatry and Behavioral Sciences,* 5(1), pp. 17-24.
33. Mubeen S, Henry D, Qureshi S, 2012. Prevalence of Depression Among Community Dwelling Elderly in Karachi, Pakistan. *Iran J Psychiatry Behav Sci,* 2(6), p. 84–90.
34. Madianos MG, SarhanAL, Koukia E, 2012. Major depression across West Bank: a cross-sectional general population study. *Int J Soc Psychiatr,* 3(58), pp. 315-22.
35. Bruchas MR, Chavkin C, 2010. Kinase Cascades and Ligand-Directed Signaling at the Kappa Opioid Receptor. *Psychopharmacology (Berl),* 2(210), p. 137–147.
36. Cilan H, Sipahioglu MH, Oguzhan N, Unal A, Turan T, Koc AN, Tokgoz B, Utas C, Oymak O, 2013. Association between depression, nutritional status, and inflammatory markers in peritoneal dialysis patients. *Ren Fail,* 1(35), pp. 17-22.
37. The Writing Center at UNC Chapel Hill, 2010-2014. *writingcenter.* [Online]
Available at: [http://writingcenter.unc.edu/handouts/literature-reviews/
[Accessed 10 11 2014].
38. Sweileh WM, Abu-Hadeed HM, Al-Jabi SW, Zyoud SH, 2014. Prevalence of depression among people with type 2 diabetes mellitus: a cross sectional study in Palestine. *BMC Public Health,* 14(163), pp. 1471-2458-14-163.

**Chapter VII**

**Study scale**

**VII.1 Consent Form :**

**بسم الله الرحمن الرحيم**

**كلية الطب و علوم الصحة**

**تحية طيبة و بعد;**

****

**اخي المواطن الكريم أختي المواطنة الكريمة تقوم هيئة البحوثات الدراسية في جامعة النجاح الوطنية بصدد جمع بيانات من المشاركين تتعلق بالبحث العلمي الذي يتم في الضفة الغربية في فلسطين , بالتنويه إلى أخذ الوقت الكافي لقراءة التعليمات التالية بعنايه قبل الإقرار بالمشاركة بالبحث أو لا , و يمكن للمشترك الكريم الاستفسار عن أي معلومة تتعلق بالبحث أو توضيحات بخصوص الاستبيان المطروح .**

**يقوم البحث على أساس تقييم الحالة الغذائية لكبار السن ( اكبر من 60 عاماً ) الذين يرتادون و يزورون العيادات الصحية الأولية , وعلى أساس طرح نموذج استبيان لتقييم الوضع النفسي للمشاركين و أعتماده على الحالة الغذائية و ذلك من أجل التوصل إذا كانت هناك أي علاقة بين الحالة الغذائية و الأكتئاب لدي كبار السن في المجتمع الفلسطيني و أيضاً لتحديد الأشخاص العرضة لسوء التغذية .**

**الآثار السلبية للبحث :**

**لا يوجد أي أثار سلبية من الممكن أن تواجه المشارك , لأن البحث لا يهدف لإنشاء علاج جديد أو بحث بناءً على الخبرة , و لكن بالإمكان التعرض لبعض التوتر و الإحراج في بعض الإجابات مع العلم أن الباحث لا يطلب اسماً من المشترك للحفاظ على الخصوصية .**

**الأثار الإيجابية للبحث :**

1. **الحصول على الحالة الغذائية لكبار السن الذي يعانون من الاكتئاب .**
2. **تحديد المشاركين المعرضين لسوء التغذية .**
3. **تقديم النصائح للمشاركين من أجل تحسين الحالة الغذائية لديهم .**

**ملاحظة :لن يتم طلب أي اسم من المشاركين للحفاظ على خصوصية الإجابة مع العلم أن جميع الإجابات ستكون محفوظة بسرية .**

**" طلب موافقة من المشترك "**

**أنا المشترك المقيم في الضفة الغربية , أقر و أعترف أنني قرأت المعلومات السابقة و فهمت مغزاها , و إجابة الباحث على جميع أسئلتي . و بناءً عليه :**

**فإنني بحريتي و اختياري , أوافق على إجراء البحث و الاشتراك فيه , مع العلم أن الباحث سيكون مستعد للإجابة على أسئلتي و إيضاح المعلومات المحواه في الإستبيان , مع العلم أن باستطاعتي الانسحاب من البحث حتى بعد التوقيع على الموافقة دون الاضرار بالمشترك بأي شكل من الأشكال .**

**التوقيع ------------------------------------- التاريخ------------------**

* **إسم الباحث:**
1. **مؤمن الخطيب .**
2. **نرين فرخ .**
3. **مادلين مزيد .**
4. **سحر خميس .**
* **مشرف البحث : د. عمر المحمود ( جامعة النجاح الوطنية\ كلية الطب و علوم الصحة ).**
* **عنوان البحث:العلاقة بين الحالة الغذائية و الاكتئاب لدى كبار السن .**
* **مكان إجراء البحث : نابلس و رام الله.**

**معلوماتشخصية:( ضع دائرة حول المناسب ) :**

* **العمر: أ- 60-69ب- 70-79ج- 80فأكثر**
* **الجنس :أ-ذكر ب-انثى**
* **المنطقة : أ- رام اللهب- نابلس**
* **مكان السكن :أ-مدينة ب-قريةج-مخيم**
* **المستوى التعليمي :أ- غير متعلم ب- ابتدائيج- اعدادي د-ثانوي ه-جامعي**
* **الحالة الاجتماعية : أ- متزوج ب-اعزب ج- مطلق د-ارمل .**
* **عدد الابناء :أ-لا يوجد ب-( 1-3) ج- ( 4-6)د-اكثر من( 6) .**
* **الحالة الاقتصادية :**

**هل يوجد دخل :أ- لا ب- نعم . ( اذا كان نعم ,كم المبلغ بالشيقل ) :**

**أ-أقل من 1000 ب- 1000- 1900ج- 2000-2900**

**د-3000-3900 ه- 4000 فأكثر**

**هل تعاني من امراض مزمنة :أ- لا ب- نعم .( اذا كان نعم , ما هي ) ؟**

**....................................................................................................................................**

**VII.2 Questionnaire :**

 **(Geriatric Depression Scale )**

من فضلك ضع دائرة حول أفضل إجابة , تصب كيف تشعر خلال الأسبوع الماضي :

|  |  |  |
| --- | --- | --- |
| **السؤال** | **الجواب** | **الجواب** |
| 1-هل انت راضي بصورة اساسية بحياتك ؟ | نعم | لا |
| 2-هل اهملت كثيرا من انشطتك واهتماماتك؟ | نعم | لا |
| 3-هل تشعر ان حياتك اصبحت فارغة ودون جدوى؟ | نعم | لا |
| **4**-هل تشعر عادة بالملل ؟ | نعم | لا |
| **5**-هل لديك أمل في المستقبل؟ | نعم | لا |
| **6**-هل تنزعج عندما لا يمكنك تنفيذ فكرة واقعياً ؟ | نعم | لا |
| **7**-هل تشعر بأن معنوياتك عالية طوال الوقت ؟ | نعم | لا |
| **8**-هل تخاف ان شيئا سيئا سيحدث لك ؟ | نعم | لا |
| **9**-هل تشعر بانك سعيد معظم الوقت؟ | نعم | لا |
| 10-هل تشعر انك عاجز معظم الوقت ؟ | نعم | لا |
| 11-هل تشعر بعدم الراحة والعصبية غالبا ؟ | نعم | لا |
| 12-هل تفضل الجلوس بالبيت على عدم الخروج والقيام بأعمالجديدة ؟ | نعم | لا |
| 13-هل انت قلق كثيرا بما يتعلق بالمستقبل ؟ | نعم | لا |
| 14-هل تشعر انه لديك صعوبة في التذكر اكثر من العادة ؟ | نعم | لا |
| 1**5**-هل تعتقد انه امر رائع ان تكون على قيد الحياة الان ؟ | نعم | لا |
| 1**6**-هل تشعر بانك مكتئب وحزين؟ | نعم | لا |
| 1**7**-هل تشعر بانك لا تستحق الاحترامالأن ؟ | نعم | لا |
| 1**8**-هل تقلق كثير بشأن الماضي ؟ | نعم | لا |
| 1**9**-هل تجد الحياة مثيرة و مسلية ؟ | نعم | لا |
| 20-هل تجد من الصعوبة عليك ان تبدأ مشاريع جديدة لك ؟ | نعم | لا |
| 21-هل تشعر بانك مليء بالطاقة والحيوية؟ | نعم | لا |
| 22-هل تعتقد بان وضعك الان لا أمل فيه ؟ | نعم | لا |
| 23-هل تشعر بان الاخرين افضل واسعد منك ؟ | نعم | لا |
| 2**4**-هل غالبا تشعر بالاستياء من امور صغيرة ؟ | نعم | لا |
| 2**5**-هل تشعر احيانا بانك تريد البكاء ؟ | نعم | لا |
| 2**6**-هل لديك مشكلة في التركيز ؟ | نعم | لا |
| 2**7**-هل تستيقظ من النوم صباحاً دون مشاكل ؟ | نعم | لا |
| 2**8**-هل تفضل تجنب المناسبات الاجتماعية ؟ | نعم | لا |
| 2**9**-هل من السهل عليك اتخاذ القرارات ؟ | نعم | لا |
| 30-هل عقلك وتفكيرك صافي كالعادة ؟ | نعم | لا |

**( Mini Nutritional Assessment )**

**( تقييم الحالة الغذائية )**

* **الوزن (كغم):**
* **الطول (سم):**
* **أكمل المسح الأتي بملأ المربعات بالأرقام (النقاط) المناسبة , اجمع النقاط للحصول على المجموع النهائي للنقاط المحرزة لهذا المسح :**
1. **هل نقص تناول الطعام خلال الثلاث الأشهر الماضية نتيجة لفقدان الوزن أو مشاكل في الهضم أو صعوبات في المضغ و البلع ؟!**

0 = فقدان شديد للشهية

1 = فقدان متوسط للشهية

2 = لا يوجد فقدان للشهية

1. **مدى فقدان الوزن في الثلاث الأشهر الأخيرة :**

0 = فقدان الوزن أكثر من 3 كغم

1 = غير معروف

2 = فقدان الوزن من 1 الى 3 كغم

3 = لا يوجد فقدان للوزن

1. **القدرة على الحركة :**

0 = ملازم للفراش أو الكرسي

1 = قادر على مغادرة الفراش / الكرسي ولكنه غير قادر على مغادرة المنزل

2 = يغادر المنزل

1. **أي إصابة بضغط نفسي أو مرض حاد في الأشهر الثلاث الماضية :**

0 = نعم

2 = لا

1. **أي إصابات عصبية أو نفسيه :**

0 = خرف شيخوخة شديدة أو اكتئاب

1 = خرف شيخوخة خفيف (معتدل)

2=عير مصاب بأمراض

1. **معدل كتلة الجسم ( الوزن كغم / الطول سم2 ) :**

0 = معدل كتلة الجسم اقل من 19

1 = معدل كتلة الجسم من 19 الى اقل من 21

2 = معدل كتلة الجسم من 21 الى اقل من 23

3 = معدل كتلة الجسم اكثر أو يساوي 23

**Chapter VIII**

**Appendix**

**VIII.1 Study Results In Table :**

| **Age** |
| --- |
|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 60-69 | 69 | 58.5 | 58.5 | 58.5 |
| 70-79 | 46 | 39.0 | 39.0 | 97.5 |
| >80 | 3 | 2.5 | 2.5 | 100.0 |
| Total | 118 | 100.0 | 100.0 |  |

| **Gender** |
| --- |
|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Male | 46 | 39.0 | 39.0 | 39.0 |
| Female | 72 | 61.0 | 61.0 | 100.0 |
| Total | 118 | 100.0 | 100.0 |  |

| **Place** |
| --- |
|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Ramallah | 44 | 37.3 | 37.3 | 37.3 |
| Nablus | 74 | 62.7 | 62.7 | 100.0 |
| Total | 118 | 100.0 | 100.0 |  |

| **Residance** |
| --- |
|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | City | 8 | 6.8 | 6.8 | 6.8 |
| Village | 42 | 35.6 | 35.6 | 42.4 |
| Refugee camp | 68 | 57.6 | 57.6 | 100.0 |
| Total | 118 | 100.0 | 100.0 |  |

| **Education** |
| --- |
|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Literate | 31 | 26.3 | 26.3 | 26.3 |
| Elementary | 31 | 26.3 | 26.3 | 52.5 |
| Preparatory | 26 | 22.0 | 22.0 | 74.6 |
| Secondary | 19 | 16.1 | 16.1 | 90.7 |
| University | 11 | 9.3 | 9.3 | 100.0 |
| Total | 118 | 100.0 | 100.0 |  |

| **Marital** |
| --- |
|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Married | 67 | 56.8 | 56.8 | 56.8 |
| Single | 10 | 8.5 | 8.5 | 65.3 |
| Divorced | 9 | 7.6 | 7.6 | 72.9 |
| Widowed | 32 | 27.1 | 27.1 | 100.0 |
| Total | 118 | 100.0 | 100.0 |  |

| **Sons** |
| --- |
|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | No | 20 | 16.9 | 16.9 | 16.9 |
| 1-3 | 26 | 22.0 | 22.0 | 39.0 |
| 4-6 | 41 | 34.7 | 34.7 | 73.7 |
| More than 6 | 31 | 26.3 | 26.3 | 100.0 |
| Total | 118 | 100.0 | 100.0 |  |

| **Economic** |
| --- |
|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | No | 43 | 36.4 | 36.4 | 36.4 |
| Yes | 75 | 63.6 | 63.6 | 100.0 |
| Total | 118 | 100.0 | 100.0 |  |

| **How** |
| --- |
|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | .00 | 43 | 36.4 | 36.4 | 36.4 |
| > than 1000 | 14 | 11.9 | 11.9 | 48.3 |
| 1000-1900 | 33 | 28.0 | 28.0 | 76.3 |
| 2000-2900 | 23 | 19.5 | 19.5 | 95.8 |
| 3000-3900 | 2 | 1.7 | 1.7 | 97.5 |
| 4000 and more | 3 | 2.5 | 2.5 | 100.0 |
| Total | 118 | 100.0 | 100.0 |  |

| **Chronic** |
| --- |
|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Yes | 45 | 38.1 | 38.1 | 38.1 |
| No | 73 | 61.9 | 61.9 | 100.0 |
| Total | 118 | 100.0 | 100.0 |  |

| **Desease** |
| --- |
|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | .00 | 45 | 38.1 | 38.1 | 38.1 |
| 1.00 | 16 | 13.6 | 13.6 | 51.7 |
| 2.00 | 20 | 16.9 | 16.9 | 68.6 |
| 3.00 | 26 | 22.0 | 22.0 | 90.7 |
| 5.00 | 1 | .8 | .8 | 91.5 |
| 6.00 | 3 | 2.5 | 2.5 | 94.1 |
| 7.00 | 3 | 2.5 | 2.5 | 96.6 |
| 8.00 | 3 | 2.5 | 2.5 | 99.2 |
| 9.00 | 1 | .8 | .8 | 100.0 |
| Total | 118 | 100.0 | 100.0 |  |

| **Correlations** |
| --- |
|  |  | Nutrition | Depression |
| Nutrition | Pearson Correlation | 1 | -.441-\*\* |
| Sig. (2-tailed) |  | .000 |
| N | 118 | 118 |
| Depression | Pearson Correlation | -.441-\*\* | 1 |
| Sig. (2-tailed) | .000 |  |
| N | 118 | 118 |
| \*\*. Correlation is significant at the 0.01 level (2-tailed). |

|  | N | Minimum | Maximum | Mean | Std. Deviation |
| --- | --- | --- | --- | --- | --- |
| Nutrition | 118 | 4.00 | 14.00 | 9.4831 | 2.48666 |
| BMI | 118 | 16.60 | 44.00 | 25.1673 | 4.94215 |
| Depression | 118 | .00 | 27.00 | 15.9492 | 6.21529 |
| Valid N (listwise) | 118 |  |  |  |  |

|  |  | N | Mean | Std. Deviation | P( value) |
| --- | --- | --- | --- | --- | --- |
| Age |  |
| Nutrition | 60-69 | 69 | 9.9710 | 2.54357 |  |
| 70-79 | 46 | 8.9348 | 2.21512 | 0.012\* |
| >80 | 3 | 6.6667 | 2.08167 |  |
| Total | 118 | 9.4831 | 2.48666 |  |
| BMI | 60-69 | 69 | 25.8788 | 5.36959 | 0.102 |
| 70-79 | 46 | 23.9761 | 3.88628 |  |
| >80 | 3 | 27.0667 | 7.29475 |  |
| Total | 118 | 25.1673 | 4.94215 |  |
| Depression | 60-69 | 69 | 14.3188 | 6.42947 | 0.003\* |
| 70-79 | 46 | 18.2609 | 5.01746 |  |
| >80 | 3 | 18.0000 | 8.18535 |  |
| Total | 118 | 15.9492 | 6.21529 |  |

| **ANOVA** |
| --- |
| **Group Statistics** |
|  | **Gender** | N | Mean | Std. Deviation | P( value) |
| Nutrition | Male | 46 | 9.2609 | 2.55112 | 0.440 |
| Female | 72 | 9.6250 | 2.45200 |  |
| BMI | Male | 46 | 24.1465 | 5.01439 | 0.073\* |
| Female | 72 | 25.8194 | 4.81733 |  |
| Depression | Male | 46 | 14.4783 | 6.80764 | 0.039\* |
| Female | 72 | 16.8889 | 5.65575 |  |

| **Group Statistics** |
| --- |
|  | Place | N | Mean | Std. Deviation | P( value) |
| Nutrition | Ramallah | 44 | 8.0682 | 1.98128 | 0.000\* |
| Nablus | 74 | 10.3243 | 2.38206 |  |
| BMI | Ramallah | 44 | 22.2727 | 2.20321 | 0.000\* |
| Nablus | 74 | 26.8884 | 5.31363 |  |
| Depression | Ramallah | 44 | 18.2727 | 5.67886 | 0.001\* |
| Nablus | 74 | 14.5676 | 6.14233 |  |

|  |
| --- |

|  |  | N | Mean | Std. Deviation | P( value) |
| --- | --- | --- | --- | --- | --- |
| Place of residence |  |
| Nutrition | City | 8 | 9.2500 | 1.75255 | 0.937 |
| Village | 42 | 9.4286 | 2.60527 |  |
| Refugee camp | 68 | 9.5441 | 2.51226 |  |
| Total | 118 | 9.4831 | 2.48666 |  |
| BMI | City | 8 | 25.8750 | 4.22366 |  |
| Village | 42 | 24.3152 | 4.54326 |  |
| Refugee camp | 68 | 25.6103 | 5.23864 |  |
| Total | 118 | 25.1673 | 4.94215 |  |
| Depression | City | 8 | 12.8750 | 4.82368 | 0.379 |
| Village | 42 | 15.7619 | 6.26959 | 0.304 |
| Refugee camp | 68 | 16.4265 | 6.29218 |  |
| Total | 118 | 15.9492 | 6.21529 |  |

|  |  | N | Mean | Std. Deviation | P( value) |
| --- | --- | --- | --- | --- | --- |
| Education |  |
| Nutrition | Literate | 31 | 8.9355 | 2.60686 |  |
| Elementary | 31 | 10.0645 | 1.84274 | 0.003\* |
| Preparatory | 26 | 8.9615 | 1.96938 |  |
| Secondary | 19 | 8.7895 | 2.80038 |  |
| University | 11 | 11.8182 | 2.89200 |  |
| Total | 118 | 9.4831 | 2.48666 |  |
| BMI | Literate | 31 | 25.8871 | 6.25368 | 0.030\* |
| Elementary | 31 | 26.1000 | 5.08035 |  |
| Preparatory | 26 | 23.1423 | 3.10202 |  |
| Secondary | 19 | 23.7842 | 3.45804 |  |
| University | 11 | 27.6855 | 4.45649 |  |
| Total | 118 | 25.1673 | 4.94215 |  |
| Depression | Literate | 31 | 16.1613 | 7.07624 |  |
| Elementary | 31 | 13.9677 | 6.32711 | 0.030\* |
| Preparatory | 26 | 17.3462 | 5.25313 |  |
| Secondary | 19 | 18.6316 | 3.86164 |  |
| University | 11 | 13.0000 | 6.72309 |  |
| Total | 118 | 15.9492 | 6.21529 |  |

|  |  | N | Mean | Std. Deviation | P( value) |
| --- | --- | --- | --- | --- | --- |
| Marital status |  |
| Nutrition | Married | 67 | 9.5075 | 2.69328 | 0.860 |
| Single | 10 | 9.8000 | 2.74064 |  |
| Divorced | 9 | 9.8889 | 1.83333 |  |
| Widowed | 32 | 9.2188 | 2.16623 |  |
| Total | 118 | 9.4831 | 2.48666 |  |
| BMI | Married | 67 | 25.1693 | 4.87276 | 0.562 |
| Single | 10 | 24.1900 | 4.41272 |  |
| Divorced | 9 | 23.5667 | 2.11896 |  |
| Widowed | 32 | 25.9188 | 5.76074 |  |
| Total | 118 | 25.1673 | 4.94215 |  |
| Depression | Married | 67 | 15.3134 | 6.35850 | 0.165 |
| Single | 10 | 17.6000 | 5.81569 |  |
| Divorced | 9 | 19.8889 | 3.85501 |  |
| Widowed | 32 | 15.6563 | 6.30212 |  |
| Total | 118 | 15.9492 | 6.21529 |  |

|  |  | N | Mean | Std. Deviation | P( value) |
| --- | --- | --- | --- | --- | --- |
| sons |  |
| Nutrition | No | 20 | 9.1000 | 2.57314 | 0.501 |
| 1-3 | 26 | 9.0385 | 2.52160 |  |
| 4-6 | 41 | 9.8780 | 2.49194 |  |
| More than 6 | 31 | 9.5806 | 2.41901 |  |
| Total | 118 | 9.4831 | 2.48666 |  |
| BMI | No | 20 | 23.2800 | 3.63414 | 0.169 |
| 1-3 | 26 | 24.6269 | 3.36708 |  |
| 4-6 | 41 | 26.1585 | 5.61271 |  |
| More than 6 | 31 | 25.5271 | 5.59797 |  |
| Total | 118 | 25.1673 | 4.94215 |  |
| Depression | No | 20 | 18.6000 | 5.48107 | 0.064 |
| 1-3 | 26 | 17.1154 | 4.31117 |  |
| 4-6 | 41 | 14.5610 | 7.06063 |  |
| More than 6 | 31 | 15.0968 | 6.35796 |  |
| Total | 118 | 15.9492 | 6.21529 |  |

| **Group Statistics** |
| --- |
|  | Economic | N | Mean | Std. Deviation | P( value) |
| Nutrition | No | 43 | 9.4884 | 1.96847 | 0.986 |
| Yes | 75 | 9.4800 | 2.75269 |  |
| BMI | No | 43 | 26.4512 | 5.90885 | 0.032 |
| Yes | 75 | 24.4312 | 4.15866 |  |
| Depression | No | 43 | 16.3256 | 5.35288 | 0.620 |
| Yes | 75 | 15.7333 | 6.68466 |  |

|  |  | N | Mean | Std. Deviation | P( value) |
| --- | --- | --- | --- | --- | --- |
|  | Income |
| Nutrition | .00 | 43 | 9.5814 | 2.03812 | 0.032\* |
| > than 1000 | 14 | 8.0714 | 2.05555 |  |
| 1000-1900 | 33 | 9.3333 | 2.45798 |  |
| 2000-2900 | 23 | 9.7391 | 3.07804 |  |
| 3000-3900 | 2 | 12.0000 | 2.82843 |  |
| 4000 and more | 3 | 12.6667 | 2.30940 |  |
| Total | 118 | 9.4831 | 2.48666 |  |
| BMI | .00 | 43 | 26.0558 | 5.53781 | 0.364 |
| > than 1000 | 14 | 24.4714 | 5.85497 |  |
| 1000-1900 | 33 | 25.4467 | 3.98869 |  |
| 2000-2900 | 23 | 23.3913 | 4.49383 |  |
| 3000-3900 | 2 | 28.0000 | 4.24264 |  |
| 4000 and more | 3 | 24.3333 | 3.05505 |  |
| Total | 118 | 25.1673 | 4.94215 |  |
| Depression | .00 | 43 | 16.2558 | 5.54674 | 0.035\* |
| > than 1000 | 14 | 17.2857 | 7.47744 |  |
| 1000-1900 | 33 | 17.3333 | 5.68258 |  |
| 2000-2900 | 23 | 14.1739 | 6.75313 |  |
| 3000-3900 | 2 | 11.0000 | 2.82843 |  |
| 4000 and more | 3 | 7.0000 | 1.00000 |  |
| Total | 118 | 15.9492 | 6.21529 |  |

|  |
| --- |
|  | Chronic | N | Mean | Std. Deviation | P( value) |
| Nutrition | Yes | 45 | 9.6000 | 2.56196 | 0.690 |
| No | 73 | 9.4110 | 2.45422 |  |
| BMI | Yes | 45 | 24.2920 | 3.80495 | 0.132 |
| No | 73 | 25.7068 | 5.48352 |  |
| Depression | Yes | 45 | 15.7778 | 5.90027 | 0.815 |
| No | 73 | 16.0548 | 6.43966 |  |

|  |  | N | Mean | Std. Deviation | P( value) |
| --- | --- | --- | --- | --- | --- |
|  | Disease |
| Nutrition | Free | 45 | 9.6000 | 2.56196 | 0.438 |
| Diabetes | 16 | 9.1875 | 2.45544 |  |
| Hypertension | 20 | 10.1000 | 2.57314 |  |
| Diabetes and hypertension | 26 | 9.3846 | 2.41788 |  |
| Rheumatism | 1 | 12.0000 | . |  |
| Respiratory diseases | 3 | 9.0000 | 2.00000 |  |
| Cardiac | 3 | 8.0000 | 2.64575 |  |
| Cancer | 3 | 6.6667 | .57735 |  |
| الغدة الدرقية | 1 | 11.0000 | . |  |
| Total | 118 | 9.4831 | 2.48666 |  |
| BMI | Free | 45 | 24.2920 | 3.80495 | 0.070 |
| Diabetes | 16 | 25.2938 | 4.72066 |  |
| Hypertension | 20 | 26.3350 | 5.59570 |  |
| Diabetes and hypertension | 26 | 26.5846 | 6.01642 |  |
| Rheumatism | 1 | 35.0000 | . |  |
| Respiratory diseases | 3 | 21.3333 | 1.15470 |  |
| Cardiac | 3 | 21.6667 | 4.16333 |  |
| Cancer | 3 | 21.0000 | 1.00000 |  |
| الغدة الدرقية | 1 | 27.0000 | . | . |
| Free | 118 | 25.1673 | 4.94215 |  |
| Depression | Free | 45 | 15.7778 | 5.90027 | 0.477 |
| Diabetes | 16 | 14.8750 | 6.95581 |  |
| Hypertension | 20 | 16.9500 | 5.61460 |  |
| Diabetes and hypertension | 26 | 14.8846 | 6.99901 |  |
| Rheumatism | 1 | 13.0000 | . |  |
| Respiratory diseases | 3 | 17.0000 | 7.00000 |  |
| Cardiac | 3 | 19.3333 | 4.72582 |  |
| Cancer | 3 | 23.6667 | .57735 |  |
| الغدة الدرقية | 1 | 15.0000 | . |  |
| Total | 118 | 15.9492 | 6.21529 |  |

**Depression among elderly people :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Author,year,country | Title | Objectives | Method | Result |
| Dianne V, et al , The American Journal of Geriatric Psychiatry, (2014),NY,USA . | Evaluation of Geriatric Home Healthcare Depression Assessment and Care Management: Are OASIS-C Depression Requirements Enough? | Research is scarce on how depression is identified and treated among Medicare home healthcare (HHC) patients age 65+ with disability. to evaluate and characterize depression care management (DCM) in an HHC agency after CMS increased its depression requirements and to determine if there was an association of DCM with disability . | 100 new Medicare HHC admissions patients age 65+ (mean age: 81.7) who screened positive for depression and had disability and multimorbidity. Clinical and administrative records were examined and descriptive analyses used. Multivariate regression analyses investigated the association of six DCM components with ADLs improvement. | Depression was recognized in care plans of 60% ofpatients. Documentation of only one nurse care management activity, antidepressant use, indicated the use of evidence-based standards of depression assessment and DCM. Depression measureswere not administered at discharge, recertification, or transfer. Forty percent of patients had a formal depression diagnosis by the referring physician in the chart,and 65% were receiving an antidepressant. Having a depression care plan and depression medication were significantly associated with a large ADLs improvement. |
| Dennis M , et al , (2011) , Swansea university , Swansea, Wales, UK | Depression in older people in the general hospital: a systematic review of screening instruments | the aim of this study is to review all relevant literature on rating scales used to detect depression in older people in general hospitals so as to identify the most appropriate tool and cut-off score with optimal performance. | an electronic search was conducted applying key search terms. Selection of articles was conducted in a staged manner and by utilising predetermined quality criteria. When appropriate pooled analysis was undertaken. | only 14 studies satisfied the inclusion criteria and only one instrument—the Geriatric Depression Scale (GDS)—has been studied to an adequate extent in older people in the acute generalhospital setting. Best performance for the GDS was for a cut-off of 5/6 for the GDS-15 and 10/11 forthe GDS-30. |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Author,year,country | Title | Objectives | Method | Result |
| Mitchell AJ , et al , ( 2009) , spain . | Prognosis of depression in the elderly in comparison with adult age. Is there a significant clinical difference? | Major depressive disorder is typically a chronic disorder in which the chances of suffering a single non-recurring episode are low. | To date it has been uncertain how <<age>> moderates prognosis. It has been especially difficult to separate the effect of age of first episode onset from the overall effect of age at the time of recruitment. From a methodological perspective, this question is best studied in inception cohort studies rather than naturalistic studies. In inception cohort studies, all patients receive treatment under controlled conditions and therefore the effect of age (if any) may be more apparent. In addition, the best evidence comes from comparative studies which have examined older and middle aged patients within the same study.  | After conducting a thorough review of the literature,we have found three comparative inceptioncohort studies of episode remission in older versus middle aged patients. Wefound only one comparativeinception cohort study of relapse and recurrence inolder versus middle agedpatients. This evidencesuggests that depression in the elderly (those of olderchronological age) responds equally to the initialtreatment but has a more adverse longitudinaltrajectory than depressionin middle age. An early age of illness onset also seems to adversely affectprognosis in comparison to those with a first onset inlater life who do not havemedical comorbidity. The effect of age on prognosismay be largely explainedby factors such as previousepisodes and medicalcomorbidity. |

**Nutritional status among older adults :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Author,year,country | Title | Objectives | Method | Result |
| ArvanitakisM , et al , ( 2013) , Belgium . | Undernutrition in community dwelling elderly | The aim of the present study was to assess the risk and the prevalence of undernutrition as well as associated factors among community dwelling elderly adults (home dwelling as well as nursing home residents). | During one week a questionnaire was completed in 70 general practices and in 70 nursing homes. The questionnaire was based on items from validated screening instruments such as the MNA (Mini Nutritional Assessment; short form), the SNAQ (Short Nutritional Assessment Questionnaire) and some additional parameters (mobility, independence, social isolation and co-morbidities). | The study sample consisted of 5334 elderly of which 975lived at home (Mean age: 83 years). Sixteen percent was older than 90. The overall risk for undernutrition (MNA≤ 11) was 57%, and was significantly higher in nursing home residents, women andin the older age groups.Undernutrition wasalready present in15.9% (BMI < 20 kg/m2), 17.1% (SNAQ) and17.6% (clinicalevaluation). Decreasedmobility was associatedwith older age andundernutrition. |
| Verbrugghe M , et al , ( 2013 ) , Belgium . | Malnutrition and associated factors in nursing home residents: A cross-sectional, multi-centre study | Malnutrition is a common problem in the elderly living in nursing homes. A clear understanding of associated factors is missing. The aim was evaluate prevalence of malnutrition and to determine factors independently associated with malnutrition in this setting. | A cross-sectional, multi-centre study was conducted in 23 nursing homes in Flanders, Belgium. The nutritional status was assessed using the Mini Nutritional Assessment (MNA). Data on possible associated factors were collected using validated scales. | The study included 1188 elderly residents; 38.7%were at risk for malnutrition and 19.4%were malnourished.The presence of a wound /pressure ulcer, a recent hospitalization(<3 months ago), being involved in a tailored nutritional intervention , and suffering from a lower cognitive state were significantly associated with malnutrition. Receiving additional meals provided by family members was negatively associated with malnutrition. |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Author,year,country | Title | Objectives | Method | Result |
| Schilp J , et al ,( 2012) , Netherlands . | High prevalence of undernutrition in Dutch community-dwelling older individuals  | To examine the prevalence of undernutrition in community-dwelling older individuals (≥65 y) using data from various settings. | A cross-sectional observational study was performed to examine the prevalence of undernutrition in three samples (all ≥65 y): 1) 1267 community-dwelling individuals participating in a large prospective population-based study, the Longitudinal Aging Study Amsterdam (LASA) in 1998/99; 2) 814 patients receiving home care in 2009/10; and 3) 1878 patients from general practices during the annual influenza vaccination in 2009/10.Undernutrition was assessed by the Short Nutritional Assessment Questionnaire 65+. | Mean age was 77.3 y (SD 6.7) in the LASA sample, 81.6 y (SD 7.4)in the home care sample, and 75.3 y (SD 6.5) in the general practice sample. The prevalence of undernutrition was highest in the home care sample (35%),followed by the general practice (12%) and LASA (11%) samples. The prevalence of undernutrition increased significantly with age in the general practice and LASA samples. Gender differences were observed in the general practice and home care samples; women were more likely to be undernourished in the general practice sample and men were more likely to beundernourished in the home care sample. |

**Comorbidity between Depression and Malnutrition among older adult :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Author,year,country | Title | Objectives | Method | Result |
| David Arterburn ,et al .Volume 6, Issue 3, Pages e197–e206, July–September, 2012.Washington State. | Relationship between obesity, depression, and disability in middle-aged women  | Obesity and depression are closely linked, and each has been associated with disability. However, few studies have assessed inter-relationships between these conditions | In this study, 4641 women aged 40–65 completed a structured telephone interview including height and weight, the Patient Health Questionnaire assessment of depression, and the World Health Organization DisabilityAssessment ,The survey response rate was 62%. We used multivariable regression models to assess relationships between obesity, depression, and disability. | The mean age was 52 years; 82% were White; and 80%werecurrently employed. One percent were underweight, 39% normal weight, 27% overweight, and 34% obese. Mild depressive symptoms were present in 23% and moderate-to-severe symptoms were present in13%. After multivariable adjustment, depression was a strong independent predictor of worse disability in all 7 domains (cognition,mobility, self-care, social interaction, role functioning, household, and work), butobesity was only a significant predictor of greater mobility, role-functioning, household, and work limitations |
| [ZamaneVafaei](http://www.ncbi.nlm.nih.gov/pubmed/?term=Vafaei%20Z%5Bauth%5D) , et al , journal of research in medical sciences ,  2013 ,  Isfahan university of Medical Science, Isfahan, Iran. | Malnutrition is associated with depression in rural elderly population | Aging induces physiological changes and affects all of organs.Nutritional status and mental health deteriorate with aging. As malnutrition and depression are main problem in elderly this study was performed to assess the association between malnutrition and depression among rural elderly. | Three hundred and seventy rural elderly aged over 60 years were examined in a cross-sectional study by systematic sampling method and using mini nutritional assessment (MNA), Depression was evaluated by a validated questionnaire | Mean ± SD age was 70.6 ± 7.3 years. Frequency of malnutrition was similar in both genders. According to MNA, 3.8% of subjects suffered from malnutrition, 32.7% were at risk of malnutrition and 63.5% were well-nourished Nutrition status correlated with body mass index (*P* = 0.028) and depression (*P* = 0.001). The risk of severe depression in patients with malnutrition was 15.5 times higher than non-depressed persons (odd ratio: 15.5; 95% CI: 2.9-82.5). |

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| --- | --- | --- | --- | --- |
| Author,year,country | Title | Objectives | Method | Result |
| RoschelleHeuberger , et al . 29 July 2014 Department of Human Environmental Studies, Central Michigan University, 106A Wightman Hall, Mount Pleasant. | The association between depression and widowhood and nutritional status in older adults | This study aimed to investigate the association of depression and widowhood on the nutritional status of older adults. | A cross-sectional study of community-dwelling older adults in the rural United States was conducted. Dietary intake was measured via questionnaires. Depression status was classified by asking participants if they have ever been diagnosed with the condition, or by review of medical records. | The final sample consisted of 1065 participants with 141 (13.2%) depressed, 384 (36.1%) widowed, and 67 (6.3%) both depressedand widowed.Mean caloric intake for total study population was low; widows and widowers had the lowest energy consumptionamong all groups. Greater intake of several nutrients was observed in depressed and/or widowed subjects. |
| Hsin-Jen Tsai , Journal of Psychosomatic Research, Volume 75, Issue 2, August 2013, Pages 173-177 , Department of Health Management, I-Shou University, Kaohsiung, Taiwan.  | [**Nutrition risk, functional dependence, and co-morbidities affect depressive  symptoms in Taiwanese aged 53 years and over: A population-based longitudinal study**](http://www.sciencedirect.com/science/article/pii/S0022399913001864) | This study examined cross-sectional and longitudinal associations of nutritional risk, functional dependence and co-morbidities with depressive symptoms in people aged 53 years and over in Taiwan. | Study data were obtained from a population-based longitudinal study, the Taiwan Longitudinal Study of Aging (TLSA), with a nationally representative sample of nearly-old and old Taiwanese. | The prevalence of depressive symptoms and risk of malnutrition/malnourishment in 1999 was 23% and 21%. (MNA) score, , reported co-morbidities, and Activities of Daily Living (ADL) score were all cross-sectionally correlated with depressive symptoms (all *p* < .05). Being at risk of malnutrition/malnourishment and co-morbidities were also longitudinally associated with increased risk of depressive symptoms over four and eight years (all *p* < .05). The relationship between nutritional risk and subsequent depressive symptoms was stronger than the relationship between co-morbidities and ADL score and subsequent depressive symptoms. |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Author,year,country | Title | Objectives | Method | Result |
| Gregory E. Simon, et al , General Hospital Psychiatry, Volume 32, Issue 6, November–December 2010, Pages 583-589 , Minneapolis, USA . | Association between change in depression and change in weight among women enrolled in weight loss treatment | To examine the association between improvement in depression and loss of weight among women with depressive symptoms entering a behavioral weight loss program. | Women aged 40 to 65 with body mass index (BMI) of 30 or more and co-occurring symptoms of depression were identified by a population-based survey. A total of 203 of these women were enrolled in one of two behavioral treatment programs: one focused on weight loss and another on both weight loss and depression. Both programs included up to 26 group sessions over 12 months. Assessments at baseline, 6months, 12 months and 24 months included measurement of weight, depressive symptoms, self-reported physical activity and estimated caloric intake (via food frequency questionnaire). | Over the first 6 months, women with a decrease in depression score were more likely to lose 5 kg or more than women without a significant decrease in depression (38% vs. 22%, odds ratio=2.20, 95% CI=1.09 to 4.44). Over the same period, improvement in depression was associated with increase in physical activity but not with change in caloric intake. Change in depression and change in weight were not significantly associated over later intervals (between 6 and 12 months or between 12 and 24 months). |

VIII.2 IRB

AN-NAJAH UNIVERS

PROTOCOL FOR HUMAN SUBJECTS RESEARCH

##### *NEW PROJECTS ONLY*

***PLEASE BE SURE TO COMPLETE ALL SECTIONS***

# Current Date of Submission: 23/9/2014

*IRB office use only*: Date received in IRB office (stamp)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

If this is a revision in response to an IRB Report of Action (ROA)-approval pending, indicate the date of the ROA: 9/9/2014

Title of Research : probable presence of a relationship between depression in elderly people and insufficient nutritional status among these people in the Palestinian community .

|  |
| --- |
| Principal Investigator: Momen Hassan alkhataib  |
| Department/School: Nursing |
| Room # where mail can be sent: \_\_\_\_\_\_\_\_\_\_\_\_\_\_  |
| Phone: 059-8855088 E-mail: m.alkhataib@gmail.com |
| Other Investigator: Nareen farekh , Madlien mazid , Sahar khamees . |
| Department/School: Nursing |
| Room # where mail can be sent:  |
| Phone \_\_\_\_\_\_\_\_\_\_\_\_\_\_ E-mail \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| \*\*Faculty Sponsor (for Student Research): Dr. Omar almahmoud . |
| Department/School: An-Najah National University |
| Room # where mail can be sent: \_\_\_\_\_\_\_\_\_\_\_\_\_\_  |
| Phone \_0597309866\_ E-mail : o\_almahmoud@najah.edu |
| Student Street Address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| City: Tulkarm State Palestine Zip 00972 |
| Type of Research (please check):  |
| Dissertation \_\_\_\_\_\_ (PLEASE NOTE: IRB review of dissertation research                                             requires  prior successful proposal defense.) PhD Defense Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Master’s Thesis \_\_\_\_\_ |
| Class project: Yes |
| all other projects\_\_\_\_\_ |
| \*\* If the primary investigator is a student, check here to indicate that your faculty sponsor has read the entire application, including cover letters, informed consents, and data collection instruments, and asserts that this application is accurate and complete. |
| **Dates Human Subjects Portion of Research Scheduled: from:25/9/2014 – 30/10/2014** |
| **Site(s) of Human Subject Data Collection: Palestine – West bank** .(*NOTE: If sites are administratively separate from the University, please submit approval letters, or indicate when they will be forthcoming.)*Funding Agency (if applicable):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

### I. NATURE OF THE RESEARCH

In the judgment of the Principal Investigator, this research qualifies for which of the following types of review:

**Review Type: exempt (category) expedited (category) full Board[[1]](#footnote-2)**

## II. PURPOSE OF RESEARCH

#### Briefly describe the objective(s) of the research (please keep description jargon free and use 100 words or less; the IRB will file this information in our descriptions of approved projects).

Many of elderly people in palestine are suffering from malnutrition and depression , so the study aim to determine the prevalence of malnutrition and depression in elderly people and the association between the depression and malnutrition .

* The objectives of this research are :
1. Screening depression among the elderly based on the probability of presence among them .
2. Screening nutritional status among the elderly based on the probability of presence among them .
3. Knowing or search for evidence to prove the existence of a correlation between depression and nutritional status among elderly people .
4. Investigate and inquire about the factors related to and its association with nutritional status .
* Research question :
1. How can the depression affect the elderly nutritional status ?
2. What is the ratio of the prevalence of depression among the elderly in Palestine ?
3. To what extent the evaluation , which can take the nutritional status among the elderly ?

\* Work environment factors: safety precautions, materials and equipments that needed to do job, job duties, supervision, nurses-health staff relationship (cooperated), nurses-patients relationship, ratio of nurses to patients, number of shifts and benefits, motivations, rewards, continuous education and evidence based practice.

III. METHODS

**Approximate number of subjects**:150 Palestinian elderly people in west bank .

**Subjects will be (check only if applicable):**

**minors (under 18)**

**involuntarily institutionalized**

**mentally handicapped**

**Describe in detail how the subjects will be selected and recruited:**

**1. Sample**

 The sample size consists of 150 Palestinian elderly people in west bank . In addition, The participation process in this study will be voluntary according to the person, also the participant in this study will be taken specially ( the elderly people in the nursing home care and the elderly client who visit the primary health care ) , there is no matter between tow gender ( it will not be defferent ) and the participant will be chosen randomly .

**2. Study Design**

Cross-sectional study , quantitative descriptive study .

**3. Data collection methodology**

in this study the researcher will use the Cross-sectional design on the elderly people in the Palestinian community by discovering if there any association between the nutritional status and the depression among these people .

The participation process in this study will be voluntary according to the person, also the participant in this study will be taken specially ( the elderly people in the nursing home care and the elderly client who visit the primary health care ) , there is no matter between tow gender ( it will not be different ) and the participant will be chosen randomly .

This study are depend on a tow scale added to the questioner , the geriatric depression scale ( dependant ) and the nutritional status scale ( independent ) , the questioner will be translate from English version to the Arabic version .

In this study we will take around one-hundred participant ( 150 elderly people above 60 years old ) divided in a five health foundation .the study analysis will depend on the questioner using the SPSS technique .

**The Inclusion criteria were:**

Elderly people who are above 60 years old

Participant who have a depression according the Geriatric Depression Scale .

**The exclusion criteria were:**

Participant who refuse to be included in the study.

Participants who is away from the scales standard .

**Describe exactly what will be done to subjects once they have agreed to participate in the project**:

 The questionnaire will be given for the participant to fill it in situations where there is a need to develop initial ideas, and for more focused on research questions. It has the specific purpose of exploring and gathering new facts. In addition, the questionnaire will explain what they have to do about the questions and how to answer of it. In addition, there is aninstruction at the each section of the questionnaire.

**What incentives will be offered, if any? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

IV. RISKS/BENEFITS TO PARTICIPANTS

**Identify possible risks to subjects:**

**(NOTE: These may be of a physical, psychological, social or legal nature. If subjects are vulnerable populations, or if risks are more than minimal, please describe what additional safeguards will be taken.)**

**Ethical Consideration**

 The project will abide by the regulations outlined in the University’s Ethical Approval Process (IRB course) which identifies ethics procedure policies and principles. The research will include primary data, but it will not include any personal information on individuals. Before sending out the questionnaires, I will check them with my supervisor. Participation consent forms will be also accomplished. Participants were assured that their participation will be entirely voluntary, and each participant had the right to withdraw or refuse. Data will kept away from the people and there is no one can reach them. In addition, we will focus on the privacy and confidentiality without writing their names on the survey.

**What are the benefits and how will they be optimized?**

The purpose of the study is to investigate whether there is association between depression and nutritional status among community old people or not , and to make a proper solution to prevent the causes of this problem .

**Do benefits outweigh risks in your opinion?** Yes

**Are there potential principal Investigator or University?** No

## V. INFORMED CONSENT

|  |
| --- |
| *Describe how participants will be informed about the research before they give their consent. Be sure to submit with this protocol a copy of the informed consent/assent letter(s) you will use. Please prepare your informed consent letter at the 8th grade reading level or lower as dictated by the needs of the subjects. (See IRB website for required elements of an informed consent.)*I have read this form of acceptance and understand their content. Has the answer to all my questions. Accordingly, I, freely chosen, passed conduct this research and agree to participate in it, and I know that the researcher and his colleagues and his aides or his aides would be willing to answer my questions. As I know very well that I am free to withdraw from this research whenever you want, even after the signing of the consent without affecting the medical care provided to me.- Signature of the participant - Date |

VI. PRIVACY/CONFIDENTIALITY

|  |
| --- |
| *Please describe whether the research would involve observation or intrusion in situations where subjects have a reasonable expectation of privacy. If existing records are to be examined, has appropriate permission been sought; i.e. from institutions, subjects, physicians? What specific provisions have been made to protect the confidentiality of sensitive information about individuals?*Anonymity and the confidentiality of the data provided will be strictly maintained. Participants were assured that their participation will be entirely voluntary, and each participant had the right to withdraw or refuse to give information at any time during the study without any penalties. In addition, we will focus on the privacy and confidentiality without writing their names on the survey.  |

1. Sample size 100 or 150 or …..? page 2,3
2. What is review type ? page 1
3. The questionnaire (page 3) may need authorization and authentic translation .
4. من يقرر اذا كان المريض عنده اكتئاب ؟ومن يقرر اذا كان الاكتئاب له علاقة بالتغذية ؟ وهل يمكن اخيتار كبار السن الذين يشكون من حالات مرضية او يستعملون ادوية تعالج / تؤدي الى الاكتئاب ؟
5. Send the questionnaire
6. Validity and reliability testing of the original questionnaire
7. Translate process should be clarified –validity and reliability of the Arabic version .
8. Pilot testing
9. It is across sectional design . what do you mean will qualitative descriptive study ???
10. What do you mean (participant with be chose randomly ) how???
11. Informative to the patients is missed .

Iam sorry for that :

1. There is a lot of mistake the sample size is 150 participants not 100 ( writing error )
2. I will send to you the original version of questionnaire and the world translation , on the other hand I assure that the questionnaire for public use .

<http://www.nari.unimelb.edu.au/nari_research/pdf_docs/6_GDS.PDF>

<http://www.mna-elderly.com/forms/mini/mna_mini_english.pdf>

1. We will use the geriatric depression scale to assess and decide if this participant have a depression according to his answer ( he will get a mark and the mark he gets reflect the degree of depression (no depression , moderate , sever ) like the mini nutritional assessment scale.

According to a previous literature reviews that related directly or indirectly with this topic , and as we learn that there is a lot of factors affecting the depression so we are focusing on the nutritional factors , and I think that the elderly people in the Palestinian community are neglect , so by doing this study we will know the prevalence of depression among them , malnutrition among them and the relationship or the ratio of depression affected with the nutritional factor .

1. I will send the questionnaire .
2. The questionnaire used in a lot of research studied that ( assess the prevalence of depression in old people and the prevalence of mal nutrition in old people ) and this questionnaire is Universally recognized, and has been affixed in some medical curricula.
3. The Arabic version are world translated .
4. I think that , we must and should take the agreement and approval before making the questionnaire test .
5. ( writing error ) its close to ( quantitative descriptive ) we know the number of participants who have a depression or mal nutrition ( prevalence ) and we will describe the relation between these items .
6. We will take a two area of collecting the data ( Nablus and Ramallah ) three institution in Nablus and one institution in Ramallah , any old one we are give him a questionnaire we will but him in the study ( to take a 150 participants we will collect the maximum number of old adult visit these institutions ) , with considering the exclusion criteria .
7. …

بسماللهالرحمنالرحيم

تحية طيبة و بعد ;

اخي المواطن الكريم أختي المواطنة الكريمة تقوم هيئة البحوثات الدراسية في جامعة النجاح الوطنية بصدد جمع بيانات من المشاركين تتعلق بالبحث العلمي الذي يتم في الضفة الغربية في فلسطين , بالتنويه إلى أخذ الوقت الكافي لقراءة التعليمات التالية بعنايه قبل الإقرار بالمشاركة بالبحث أو لا , و يمكن للمشترك الكريم الاستفسار عن أي معلومة تتعلق بالبحث أو توضيحات بخصوص الاستبيان المطروح .

يقوم البحث على أساس تقييم الحالة الغذائية لكبار السن ( اكبر من 60 عاماً ) الذين يرتادون و يزورون العيادات الصحية الأولية , وعلى أساس طرح نموذج استبيان لتقييم الوضع النفسي للمشاركين و أعتماده على الحالة الغذائية و ذلك من أجل التوصل إذا كانت هناك أي علاقة بين الحالة الغذائية و الأكتئاب لدي كبار السن في المجتمع الفلسطيني و أيضاً لتحديد الأشخاص العرضة لسوء التغذية .

الآثار السلبية للبحث :

لا يوجد أي أثار سلبية من الممكن أن تواجه المشارك , لأن البحث لا يهدف لإنشاء علاج جديد أو بحث بناءً على الخبرة , و لكن بالإمكان التعرض لبعض التوتر و الإحراج في بعض الإجابات مع العلم أن الباحث لا يطلب اسماً من المشترك للحفاظ على الخصوصية .

الأثار الإيجابية للبحث :

1. الحصول على الحالة الغذائية لكبار السن الذي يعانون من الاكتئاب .
2. تحديد المشاركين المعرضين لسوء التغذية .
3. تقديم النصائح للمشاركين من أجل تحسين الحالة الغذائية لديهم .

ملاحظة : لن يتم طلب أي اسم من المشاركين للحفاظ على خصوصية الإجابة مع العلم أن جميع الإجابات ستكون محفوظة بسرية .

1. All research that is either externally funded or greater than minimal risk must be reviewed by the full Board [↑](#footnote-ref-2)