

Psychosocial and Sociodemographic Predictors of Depression among Older Persons in Jordan

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Abstract

The average annual growth rate for the ageing population is increasing considerably. The purpose of this study is to examine the psychosocial predictors of depression among older persons in Jordan. **Methods:** A quantitative approach using cross-sectional, descriptive-correlational design was used to carry out on a nationally representative, stratified multistage clustered area probability sample of non-institutionalized adults (aged ≥ 60 years). Data collected using self-report (structured format) of data collection. Data collected in regards to depression, social support, life satisfaction, and psychological distress. **Results:** About 55.5% of the participants have none to slight depressive symptoms, 22% of them have mild depressive symptoms, 17.3% of them have moderate depressive symptoms, and only 5.2% of them have severe depressive symptoms. Older persons have moderate levels of life satisfaction, perceived social support and psychological distress. Type of diagnosis was not a significant predictor of depressive symptoms as it was in model 1 while working status and marital status remained significant predictors. In addition, perceived social support total ($\beta = -1.98, 0.016$), psychological distress ($\beta = 0.465, <0.001$), and life satisfaction ($\beta = -0.284, <0.001$) were significant predictors of depressive symptoms. **Conclusion:** Effective, community-level primary mental health care for older people is crucial, and its recommended to equally focus on the long-term care of older adults suffering from mental health problems, as well as to provide caregivers with education, training and support.

Keywords

Older Person, Depression, Social Support, Life Satisfaction, Psychological Distress, Jordan

1. Introduction

The average annual growth rate for the ageing population is increasing considerably. During the period 1950-

1955, the annual growth rate for persons aged 60 years or over was 1.7%, while by the year 2005-2010, the annual growth rate for the older population increased up to 2.6% [1]. The world's older population, those at age of 60 or above, in 2010 was about 760 million and expected to reach two billions by the year 2050 (UN, 2009). Between 2015 and 2050, the proportion of the world's older adults is estimated to almost double from about 12% to 22% [1]. The literature provides evidence that older persons are not privileged with housing and community facilities that help them to live comfortably, remain active, engaged effectively, and sustain their wellbeing in social activity [1]. Such conditions have called for more attention to aspects and quality of health care provided to older persons. For example, studies show that older individuals in good health enjoy a greater sense of personal wellbeing and can participate more actively in the economic, social, cultural and political life of society [2]. Given the increased age of survival and decline of mortality rate, it is unclear how many of the additional years of life are spent in good health. People living in developing countries not only have lower life expectancies than those in developed countries, but also live in poor health [1]. For all age groups, levels of moderate and severe impairment are higher in low- and middle-income countries than in high-income countries [2]. The average global prevalence of moderate and severe impairment is about three times higher among persons aged 60 years or over than among those aged 15 - 59 years. Studies in both developed and developing countries show that women's advantage in life expectancy is accompanied by a greater burden of chronic disease and impairment in old age. Although women can expect to live longer than men and to spend a greater total number of years in good health; however, women spend a greater proportion of their older years in poor health [1]. Several of these long-term physical, mental, intellectual or sensory impairments, in interaction with various barriers, may constitute a disability and interfere with the full and effective participation of older persons in society. Thus this study attempts to investigate physical, psychological and social wellbeing of older person in Jordan.

According to Doumit and Nasser [3], older persons are overwhelmed with psychological stressors due to requirement related to management of their health problems. However, individual's psychosocial status may interfere with their ability to manage their needs independently that may exacerbate their health condition [4]. The comorbidity of psychological problems with physical problems and health conditions raise the issue of the impact of psychological disturbances on health condition. The literature shows that the psychological difficulties and psychological follow up care have been linked with increased morbidity, mortality, and expenditure of health services [5]. Health care professional may sacrifice psychological care and focus only on patients' physiological needs. This will negatively influence the disease prognosis resulting in poor treatment outcomes and may increase mortality rate [6]. The impact of aging on the bio-psycho-social aspects of individual's health and wellbeing cannot be interpreted solely in terms of disease process, but also relates to difficulties of individuals' adjustment to their illnesses and the evolved changes of their lifestyle [7] [8] (Chen, & Chang, 2012; MacDonald, 2005). Therefore, issues, for example, related to depression, coping, social support, stress, optimism, and life satisfaction are significant in process of health-illness continuum.

In Jordan, older people will continue to grow at a rate of 4.1%, from 220,000 to half million by 2030 and to 1.25 million by 2050 [9]. The dependency ratio for older people over 64 years of age is expected to increase from 6.0% to 16.0% [10]. Few studies have addressed the bio-psycho-social wellbeing of older person since that study. For example, Shishani [11] reported that most of the diagnosed cases of hypertension and cancer in Jordan are older people and that physical impairment forms more than one third of the older people in Jordan. Previous Jordanian studies focusing on physical problems showed that 10% - 16% of older person have neurological problems that include vision, speech, hearing, and neurological deficits [11]. Also about 7% - 15% of older persons found to have chronic illnesses [11]-[13]. Moreover, the most common psycho-social problems among Jordanian's older people include relationship issues with family, lack of interest in social activities, loneliness, sleep disorders, anxiety and depression, and neglect and insufficient care [10].

As noted, few studies have addressed the physical and psychosocial problems of older persons. However, with evidence growing in Jordan, similar to the other countries in the world, small portion of expenditure (26%) of health care spending was allocated to preventative services while older population ratio is increasing. This provokes the need to understand older persons' psychosocial and physical health status as an indicative measure of the effectiveness and adequacy of quality of care provided. This also allows for better planning and allocation for health care expenditure that improve access to and the effectiveness and efficiency of health care services provided for elderly. This study came to respond to these concerns and more to increase our knowledge about the physical and psychosocial wellbeing of older persons at age of 60 years or above. Therefore, the purpose of this study is to examine the psychosocial predictors of depression among older persons in Jordan. The specific

aims are:

- To examine prediction power of stress, social support, life satisfaction, on depressive symptoms among older persons in Jordan controlling for demographic and personal characteristics.
- To identify the differences in depressive symptoms among older persons in relation to demographic and personal characteristics; age, gender, working status, and medical diagnosis.

2. Materials and Methods

2.1. Design

A quantitative approach using cross-sectional, descriptive-correlational design was used to carry out on a nationally representative, stratified multistage clustered area probability sample of non-institutionalized adults (aged ≥ 60 years). Data collected using self-report (structured format) of data collection. Data collected in regards to depression, social support, life satisfaction, and psychological distress.

2.2. Sample and Setting

All Jordanian persons at age of 60 years or above represented the population of this study. A total sample of 1400 older persons approached and 1058 agreed and participated in the study with a 76% response rate. Multistage quota sampling technique was used. The sample was drawn using quota sampling representing the proportion of older persons in the geographical areas in Jordan. Inclusion criteria included: 1) at age of 60 years or older, and 2) able to read and write in Arabic. Exclusion criteria were: persons who are physically and mentally incompetent to answer the surveys.

2.3. Data Collection Procedures

Ethical approval obtained prior data collection from the research committee at the University of Jordan. Consent form obtained from each participant. Privacy and confidentiality maintained and guaranteed for the participants. Structured format of data collection was used in the respondents' households by research team. Research assistants approached targeted population using door-to-door approach to invite person who are eligible for the study to participate in the study. For those who express interest to participate in the study, the research assistant asked the participants to sign the consent form, and collect the data and screen for their eligibility using the inclusion and exclusion criteria. Then, the researcher assistants explain the study and provide them with all details and answer all their questions. If the participant is unable to read, the research assistant with the presence of family member read the consent form and had the family member sign as witness. The consent form included information related to the title of the study, its purpose, its significance and a statement informing the participants that their privacy protected by assuring them that their responses will be treated confidentially, and information that reveal their identity will not be recorded. Also, the information will be used for the purpose of the study. Research assistants used the structured format. The whole package was presented in Arabic language. All data kept in a locked cabinet. To fill out the questionnaire, approximately 30 minutes needed, and if the participant is tired or wanted to rest the research assistants will give a recess period.

2.4. Instruments

The data collected using an Arabic version of scales. The instruments were:

- 1) **Depression** measured using the DSM-5 severity measure of depression scale [14]. The measure is formed of 9 items and asks the individual to rate his depressive feeling on a rank scale ranging from not at all (0) to nearly every day (3). A score of 0 - 4 (none), 5 - 9 (mild depression), 10 - 14 (moderate depression), 15 - 19 (moderately to severe depression), and 20 - 27 (severe depression). The scale has high agreement with major depression diagnosis based on structured interviews (78% sensitivity and 98% specificity).
- 2) **Stress** measured using the brief form of Psychological Stress Measure, Arabic version [15] study. The PSM was designed using nine items drawn from descriptors generated by focus groups on stress. The scale is unifactorial in structure and maintains a test-retest stability of 0.68 to 0.80. Participants checks the answer that best indicates the degree to which each statement has applied to him/her recently The responses made on a Likert scale and ranged from 1 (null) to 4 (much). The higher the score in the scale reflect higher level of psychological stress.

- 3) **Life satisfaction:** measured using the Satisfaction with Life Scale, Arabic version [15]. This is a general measure of life satisfaction, which consisted of five statements. Participants were asked to rate each statement according to the following seven-point scale: a) strongly disagree; b) disagree; c) slightly disagree; d) neither agree nor disagree; e) slightly agree; f) agree; g) strongly agree. The scores of the total scale ranges from 5 to 35 and interpreted as follow: from 31 - 35 (extremely satisfied), from 26 - 30 (satisfied), from 21 - 25 (slightly satisfied), 20 (neutral), from 15 - 19 (slightly dissatisfied), from 10 - 14 (dissatisfied), and 5 - 9 (extremely dissatisfied). The test-retest reliability was estimated in this study to be 0.87.
- 4) **Perceived social support:** measured by Multidimensional Scale of Perceived Social Support, Arabic version [16]. This scale is 12-item self-reported scale to assess the perception of social support adequacy from the family, friends, and significant others such as health care team. Each item is measured using a 7-point likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). The scale has three sub scales, family (items 3, 4, 8 & 11), friends (items, 7, 9 & 12), and significant others (items, 1, 2, 5 & 10). The total score ranges from 7 to 84. The higher the score is the higher the perceived social support. This scale had good internal consistency for the scale as whole which was 0.88.
- 5) **Potential covariates:** gender, age, marital status, type of disease, duration of disease, smoking status, income, education level and work status. The demographic information obtained from an investigator-developed subject profile.

3. Results

3.1. Descriptive Characteristics

A total number 1058 completed the questioners. The analysis of demographic information showed that the age of older persons ranged from 60 to 100 years with a mean of 68.0 (SD = 21.0). Of them, 54.3% (n = 574) were males and 45.7% (n = 484) were females. The majority of the participants 68.5% (n = 725) were married, and about 53.4% (n = 565) of them were not currently working. In relation to the smoking status, 25.8% (n = 774) were non-smoker, and 25.8% (n = 278) were smoker. Of the sample, 53.8% (n = 569) have comorbid diagnoses of medical diagnosis, 10.8% (n = 114) have a diagnosis of diabetes mellitus, 9.5% (n = 100) have hypertension. In addition, the analysis showed that the duration of the medical diagnosis ranged from one year to 76 years, with a mean of 17.9 (SD = 15.4).

3.2. Depression

Regarding the depressive symptoms, the analysis (**Table 1**) showed that the depressive symptoms ranged 5 - 40 with a mean of 17.9 (SD = 7.7). About 55.5% of the participants has non to slight depressive symptoms, 22% of them has mild depressive symptoms, 17.3% of them has moderate depressive symptoms, and only 5.2% of them has sever depressive symptoms. In general the result indicates slight to mild level of depression.

Life satisfaction: In regards to participant's life satisfaction level, the analysis (**Table 2**) showed that, the life satisfaction level ranged from 5 - 35 with a mean of 24.1 (SD = 5.6). In general, participants' life satisfaction scores were at moderate to high level given that the possible range of score is between 5 and 35.

Perceived social Support: Regarding participants' perception of perceived social support, the analysis (**Table 1**) showed that participants' highest perception of perceived social support was from others and family with mean scores of 22.1 (SD = 4.6) and 20.6 (SD = 4.3) respectively. However, participants had lower perception of social support from friends with mean scores of 20.0 (SD = 4.8). In general, perception of social support from family, friends and other were at the moderate level given that the possible range of score for each subscale is 4 - 28. And the median scores for all subscales were almost equal and at the moderate to high level (19 - 24). The analysis is showing that the lowest level of perception was perceived social support from friends although the scores reflecting moderate level of perception.

Psychological distress: In regards to participant's psychological distress level, the analysis (**Table 1**) showed that participants had a mean score of 39.08 (SD = 11.31) with scores ranging from 9 to 72. In general, participants' psychological distress scores were at the mild to moderate level given that possible range of scores is 9 - 72.

3.3. Differences in Depressive Symptoms in Relation to Demographic Characteristics

Regarding the relationship between demographic and personal characteristic and depressive symptoms, the

Table 1. Descriptive statistics of psychological; and social variables (N = 1058).

| Variables | M | SD | Min | Max | P ₂₅ | P ₅₀ | P ₇₅ |
|--------------------------|------|------|-----|-----|-----------------|-----------------|-----------------|
| Depression | 17.9 | 7.7 | 5 | 40 | 11 | 16 | 22 |
| Stress | 39.1 | 11.3 | 9 | 72 | 31 | 39 | 48 |
| Life Satisfaction | 24.1 | 5.6 | 5 | 35 | 21 | 25 | 28 |
| Social support - Family | 20.6 | 4.6 | 4 | 28 | 19 | 21 | 24 |
| Social support - Friends | 20.0 | 4.8 | 4 | 28 | 16 | 19 | 23 |
| Social support - Others | 22.1 | 4.3 | 4 | 28 | 20 | 24 | 25 |

Table 2. Differences in psychological and social health variables related to demographic characteristics (N = 1058).

| Variables | Social status | | Working status | | Educational status | | Medical diagnosis | |
|-------------------------------|---------------|--------|----------------|--------|--------------------|--------|-------------------|--------|
| | F | p | F | p | F | p | F | p |
| Depression | 14.9 | <0.001 | 10.0 | <0.001 | 2.1 | 0.04 | 4.9 | <0.001 |
| PSS-O | 7.0 | <0.001 | 3.5 | 0.02 | 1.8 | 0.71 | 1.1 | 0.38 |
| PSS-FR | 2.5 | 0.04 | 3.3 | 0.02 | 1.9 | 0.28 | 0.9 | 0.56 |
| PSS-FA | 6.3 | <0.001 | 2.1 | 0.09 | 1.2 | 0.57 | 0.3 | 0.98 |
| Psychological distress | 1.5 | <0.001 | 2.1 | 0.10 | 3.5 | <0.001 | 2.5 | 0.01 |
| Life satisfaction | 8.6 | 0.19 | 1.6 | 0.18 | 0.5 | 0.86 | 1.1 | 0.33 |

PSS-O: Perceived social support from others; PSS-FR: Perceived social support from Friends; PSS-FA: Perceived social support from family.

analysis showed that although there was a negative correlation between patients’ age depressive symptoms, this relationship was not statistically significant. Regarding gender differences, the independent sample t-test was conducted to examine differences among older persons related to their gender. The analysis showed that there was a significant difference between male and female older persons in their depression score ($t = -4.40, p < 0.001$), with mean score of depression of males ($M = 16.3, SD = 7.5$) lower than the females ($M = 18.3, SD = 7.8$). Using ANOVA test, the analysis (Table 2) showed that there was a significant difference in depression level ($p < 0.05$) related to social status. Post hoc comparison (Scheffe) showed that mean score of depression of married older persons ($M = 24.7, SD = 5.5$) was significantly different than single ($M = 22.6, SD = 9.3$), divorced ($M = 21.0, SD = 6.4$), and widowed participants ($M = 23.0, SD = 6.0$). Also the analysis showed that there were a significant difference in depression related to older persons’ working status ($F = 10.0, p < 0.05$). Post hoc comparison (Scheffe) showed that mean score of full time working ($M = 15.6, SD = 7.4$) was significantly different than those not working ($M = 18.1, SD = 7.6$), and part time working ($M = 19.3, SD = 8.5$) older persons.

In addition, there was a significant difference in depression related to older persons’ medical diagnoses ($F = 4.9, p < 0.001$). Using post hoc comparison (Scheffe), the analysis showed that mean score of older persons diagnosed with cancer ($M = 23.3, SD = 8.5$) was significantly different than those diagnosed with diabetes ($M = 16.6, SD = 6.3$), hypertension ($M = 14.8, SD = 5.1$), and comorbid diagnoses ($M = 16.8, SD = 7.8$).

3.4. Bivariate Analysis

Firstly and to examine the relation between depression, perceived social support from others, friends, and family levels, psychological distress level, and life satisfaction level, Pearson coefficient (r) was used. The analysis results showed that the depression among participants has significant and positive association psychological distress level ($r = 0.50, p < 0.001$), and has significant and negative association with perceived social support from others ($r = -0.24, p < 0.001$), from the friends ($r = -0.19, p < 0.001$), and from the family ($r = -0.24, p < 0.001$), and life satisfaction level ($r = -0.36, p < 0.001$).

To examine whether stress, social support, life satisfaction, are significant predictors of depressive symptoms among controlling for the demographic and personal characteristics (age, gender, working status, marital status, medical diagnose, smoking status, and period of diagnosis), two-steps multiple hierarchical regression analysis was performed. The results (Table 3) showed that model 1 that contained demographics and personal cha-

Table 3. Two steps multiple hierarchal regressing depressive symptoms on stress, social support, life satisfaction, controlling for demographic and personal characteristics among older person in Jordan (N = 1058).

| Variables | Model 1 | | Model 2 | |
|------------------------|---------|--------------|---------|---------|
| | β | P-value | β | P-value |
| Age | -0.001 | 0.976 | 0.020 | 0.489 |
| Gender | 0.044 | 0.235 | 0.015 | 0.619 |
| Marital status | 0.095 | 0.007 | 0.071 | 0.013 |
| Working status | -0.083 | 0.022 | -0.084 | 0.005 |
| Education level | -0.030 | 0.388 | 0.000 | 1.00 |
| Medical diagnoses | -0.141 | <0.001 | -0.041 | 0.160 |
| PSS-Fa | | | -0.043 | 0.715 |
| PSS-Fr | | | -1.27 | 0.204 |
| PSS-others | | | -0.36 | 0.721 |
| Life satisfaction | | | -9.53 | <0.001 |
| Psychological distress | | | 16.38 | <0.001 |
| R^2 | 0.052 | <0.001 | 0.384 | <0.001 |
| Adjusted R^2 | 0.043 | | 0.374 | |
| R^2 change | -- | | 0.332 | |

PSS-Fr: Perceived social support from friends; PSS-Fa: Perceived social support from family; PSS-others: Perceived social support from others.

racteristics explained 5.2% ($R^2 = 0.052$) of the variance in depressive symptoms. Although the R^2 was very small, the model was significant ($F_{4,1058} = 5.69, p < 0.001$). In this model, working status, marital, and type of medical diagnosis were significant predictors of depressive symptom. After entry of stress, social support, and life satisfaction at step 2, the total variance explained by the model as a whole was 37.4% ($R^2 = 0.374$) and was significant ($F_{11,1058} = 88.16, p < 0.001$). The variables in step 2 explained an additional 33.2% of variance in depressive symptoms. In Model 2, type of diagnosis was not a significant predictor of depressive symptoms as it was in model 1 while working status and marital status remain significant predictors. In addition, perceived social support total ($\beta = -1.98, 0.016$), psychological distress ($\beta = 0.465, <0.001$), and life satisfaction ($\beta = -0.284, <0.001$) were significant predictors of depressive symptoms. The results indicates that higher scores of life satisfaction, perceived social support and being actively working are protective factors against depressive symptoms. While higher score of psychological distress and being widowed or divorced are risk factors of depressive symptoms.

4. Discussion

The average global prevalence of moderate and severe impairment is about three times higher among persons aged 60 years or over than among those aged 15 - 59 years [1]. International reports sustained that older persons are at greater burden of chronic diseases and impairment, including physical and psychological disabilities, than any other age groups. Older adults with physical health conditions such as heart disease have higher rates of depression than those who are medically well [17], and conversely, untreated depression in an older persons with heart diseases can negatively affect the outcome of the physical disease [18]. Depression is considered the second reason of death among people around the world and increase among aged people [19]. This study aimed at examining psychological and socio-demographic predictors of depression among older persons in Jordan. In general, the study found that significant proportion (22%) of older persons are suffering depression, and that psychological distress and being lonely (divorced and widow) are risk factors for the development and severity of depressive feeling among older persons. Also we have found that social support, life satisfaction and being actively working are protective factors against depression. Older person also in this study reported moderate levels of psychological distress, life satisfaction and perceived social support (from family, friends and others). Few studies have addressed the psychosocial problems of older people at national level, and most of studies were not published [10] [11] [20]. The results support partially previous national reports focusing on psycholog-

ical and social wellbeing of older persons. Previous national reports asserted that the most common psychosocial problems among Jordan's older people included problems in family relationship, loneliness, anxiety and depression [10]. This partially agrees with what we have found that depression and social relationship are significant issues among older persons. However, the limited number of studies does not actually agree with results in this study. We found that older persons are slightly depressed and have moderate level of depression and life satisfaction, while in the national studies [10] [11] older persons have moderate level of depression and high level of stress.

Depression can cause great suffering and leads to impaired functioning in daily life (WHO, 2015). Unipolar depression occurs in 7% of the general elderly population and it accounts for 5.7% among over 60 year olds [19]. Symptoms of depression in older adults are often overlooked and untreated because they coincide with other problems encountered by older adults [13]. Older adults with depressive symptoms have poorer functioning compared to those with chronic medical conditions such as lung disease, hypertension or diabetes [21] [22]. Depression also increases the perception of poor health, utilization of medical services, and health care costs [19] [23]. Furthermore, over 20% of adults aged 60 and over suffer from a mental or neurological conditions and 6.6% of all disability among over 60 s is attributed to neurological and mental disorders. These disorders in the elderly population account for 17.4% of Years Lived with Disability (YLDs). Mental health problems are under-identified by health-care professionals and older people themselves, and the stigma surrounding mental illness makes people reluctant to seek help.

The results of this study had some agreement with previous international reports. Globally, regards to psychosocial predictors of depression, we found that perceived social support from family, life satisfaction, and psychological distress were significant predictors of depressive symptoms, whereas; age, gender, education level and type of medical diagnoses were not. The results support previous reports that depression is associated with number of clinical and demographic characteristic [24] [25]. One possible explanation is that patients had depressive feeling, however; they have also utilized available sources of social support and their level of life satisfaction as means to manage the negative feeling resting from depression and stress. Another explanation might be related to the inter-correlation of depressive symptoms and psychological distress and the use of social support as buffering system. According to Cohen, Gottlieb and Underwood [26], social support influences health through either the stress-buffering model or the main effect model. The main premises of the stress-buffering model is that others will provide necessary resources that may redefine the potential for harm posed by a situation and cushions one's perceived ability to cope with imposed demands, thereby preventing a particular situation from being perceived as stressful. These two models provide an explanation for how an individual's physical and mental health is maintained and promoted. The individual's social support, based on the stress buffering and main effect models, influences the individual's emotions, cognition, and behaviors, and consequently; is able to perceive risk factors and functions in a healthy way that improves their level of life satisfaction and their optimistic perspectives [27]. This may resulted in maintaining positive level of life satisfaction. One limitation for this study is that data were collected cross sectional, while a longitudinal one may allow better understanding for the factors that contribute to development of depression and provides a cumulative experience over long period of time.

5. Conclusion

The study has an implication for health professionals at the community and primary care settings. There is a need to assess and screen for psychosocial factors; stress, depression, social support, life satisfaction among older persons in their routine checkups and visits to outpatients units. There is also a need to develop large treatment trials aimed at improving quality outcomes of physical and psychosocial wellbeing in medical illnesses to prospect the cost and burden of caring of older persons. Good general health and social care are important for promoting older people's health, preventing disease and managing chronic illnesses. Effective, community-level primary mental health care for older people is crucial, and is recommended to equally focus on the long-term care of older adults suffering from mental health problems, as well as to provide caregivers with education, training and support. There is a need to initiate a national collaborative effort that aims at increasing the public awareness about the impact of aging and its association with psychological disturbances. Such a national agenda would urge building health professional capacity to manage and improve mental health of the older persons, and policy makers to create/modify laws that integrate psychological care of older persons.

References

- [1] Population Reference Bureau (2010) World Population Data Sheet. PRB, Washington.
- [2] National Council for Family Affairs (2008) National Strategy for Senior Citizens. <http://www.ncfa.org.jo/Default.aspx?tabid=71&language=en-GB>
- [3] Doumit, J. and Nasser, R. (2010) Quality of Life and Wellbeing of the Elderly in Lebanese Nursing Homes. *International Journal of Health Care*, **23**, 72-93. <http://dx.doi.org/10.1108/09526861011010695>
- [4] Sareen, J., Cox, B.J., Clara, I. and Asmundson, G. (2005) The Relationship between Anxiety Disorders and Physical Disorders in the U.S.: National Comorbidity Survey. *Depression & Anxiety*, **21**, 193-202. <http://dx.doi.org/10.1002/da.20072>
- [5] Wang, P.S., Demler, O., Olfson, M., Pincus, H.A., Wells, K.B. and Kessler, R.C. (2006) Changing Profiles of Service Sectors Used for Mental Health Care in the United States. *The American Journal of Psychiatry*, **163**, 1187-1198. <http://dx.doi.org/10.1176/ajp.2006.163.7.1187>
- [6] Frasure-Smith, N. and Lespérance, F. (2006) Recent Evidence Linking Coronary Heart Disease and Depression. *The Canadian Journal of Psychiatry*, **51**, 730-715.
- [7] Chen, P.Y. and Chang, H.C. (2012) The Coping Process of Patients with Cancer. *European Journal of Oncology Nursing*, **16**, 10-16. <http://dx.doi.org/10.1016/j.ejon.2011.01.002>
- [8] MacDonald, B.H. (2001) Quality of Life in Cancer Care: Patients' Experiences and Nurses' Contribution. *European Journal of Oncology Nursing*, **5**, 32-41. <http://dx.doi.org/10.1054/ejon.2000.0118>
- [9] Department of Statistics (2008) National Population Surveillance 2007/2008. Department of Surveillance, Department of Statistics, Amman, Jordan.
- [10] Mahasneh, S.M. (2000) Survey of the Health of the Elderly in Jordan. *Medical Journal of Islamic Academy of Sciences*, **13**, 39-48.
- [11] Shishani, K. (2007) Health and Future Needs for Elderly People within the Demographic Transfer. *Development and Population Journal*, **13**, 57-68.
- [12] Arabiat, D., ALqaissi, N. and Hamdan-Mansour, A. (2011) Children's Knowledge of Their Cancer Diagnosis and Treatment: Jordanian Mothers' Perceptions and Satisfaction with the Process. *International Nursing Review*, **58**, 443-449. <http://dx.doi.org/10.1111/j.1466-7657.2011.00899.x>
- [13] Hamdan-Mansour, A., Nawafeh, D., Hanouneh, S. and Al Omari, H. (2015) Psychosocial Aspects of Patients Diagnosed with Diabetes Mellitus Type-II in Jordan. *International Journal of Diabetes in the Developing Countries*, **36**, 65-69.
- [14] Hamdan-Mansour, A., Azzeghaiby, S.N., Arabiat, D. and Al Badawi, T. (2014) Psychological and Social Health Status of Patients with Lung Diseases in Jordan. *Health*, **6**, 1143-1151. <http://dx.doi.org/10.4236/health.2014.611141>
- [15] Hamaideh, S. and Hamdan-Mansour, A. (2014) Psychological, Cognitive, and Personal Variables That Predict College Academic Achievement among Health Sciences Students. *Nurse Education Today*, **34**, 703-708. <http://dx.doi.org/10.1016/j.nedt.2013.09.010>
- [16] Yehia, D., Callister, L. and Hamdan-Mansour, A. (2013) Prevalence and Predictors of Postpartum Depression among Arabic Muslim Jordanian Women Serving in the Military. *Journal of Perinatal & Neonatal Nursing*, **27**, 25-33. <http://dx.doi.org/10.1097/JPN.0b013e31827ed6db>
- [17] Al Abeiat, D., Hamdan-Mansour, A., Ghannam, B., Azzeghaiby, S.N. and Dawood, L. (2014) Psychosocial Health Status of Patients Diagnosed with Chronic Illnesses in Jordan. *Open Journal of Medical Psychology*, **3**, 281-291. <http://dx.doi.org/10.4236/ojmp.2014.34029>
- [18] Freedland, K.E., Rich, M.W., Skala, J.A., Carney, R.M., Dávila-román, V.G. and Jaffe, A.S. (2003) Prevalence of Depression in Hospitalized Patients with Congestive Heart Failure. *Psychosomatic Medicine*, **65**, 119-128. <http://dx.doi.org/10.1097/01.PSY.0000038938.67401.85>
- [19] World Health Organization (2015) Fact Sheet 381. September 2015. <http://www.who.int/mediacentre/factsheets/fs381/en/>
- [20] Ghannam, B., Hamdan-Mansour, A., Arabiat, D., Azzeghaiby, S.N., Al Abeiat, D. and Al Badawi, T. (2014) Psychosocial Wellbeing of Patients Diagnosed with Coronary Artery Disease. *Psychology*, **5**, 801-807. <http://dx.doi.org/10.4236/psych.2014.58091>
- [21] Hamdan-Mansour, A., Ghannam, B., Al Abeiat, D., Al Badawi, T., Thulthian, I. and Shamali, I. (2014) Predicting Depression among Jordanian Patients Diagnosed with Physical Illnesses. *Psychology*, **5**, 2120-2130. <http://dx.doi.org/10.4236/psych.2014.519214>
- [22] Katon, W. (2003) Clinical and Health Services Relationships between Major Depression, Depressive Symptoms, and

- General Medical Illness. *Biological Psychiatry*, **54**, 216-226. [http://dx.doi.org/10.1016/S0006-3223\(03\)00273-7](http://dx.doi.org/10.1016/S0006-3223(03)00273-7)
- [23] Cruice, M., Worrall, L. and Hickson, L. (2011) Reporting on Psychological Well-Being of Older Adults with Chronic Aphasia in the Context of Unaffected Peers. *Disability and Rehabilitation*, **33**, 219-228. <http://dx.doi.org/10.3109/09638288.2010.503835>
- [24] Katon, W., Lin, E.H. and Kroenke, K. (2007) The Association of Depression and Anxiety with Medical Symptom Burden in Patients with Chronic Medical Illness. *General Hospital Psychiatry*, **29**, 147-155. <http://dx.doi.org/10.1016/j.genhosppsy.2006.11.005>
- [25] Hamdan-Mansour, A., Constantino, R., Farrell, M., Doswell, W., Gallagher, M.E., Safadi, R., Shishani, K. and Bani-mustafa, R. (2011) Evaluating the Mental Health of Jordanian Women in Intimate Partner Abuse. *Issues in Mental Health Nursing*, **32**, 614-623. <http://dx.doi.org/10.3109/01612840.2011.580494>
- [26] Cohen, S., Underwood, L.G. and Gottlieb, B.H. (2000) Social Relationships and Health. In: Cohen, S., Underwood, L.G. and Gottlieb, B.H., Ed., *Social Support Measurement and Intervention: A Guide for Health and Social Scientists*, Oxford University Press, New York, 3-25. <http://dx.doi.org/10.1093/med:psych/9780195126709.003.0001>
- [27] Amer, N. and Hamdan-Mansour, A. (2014) Psychosocial Predictors of Suicidal Ideation among Patients Diagnosed with Chronic Illnesses in Jordan. *Issues in Mental Health Nursing*, **35**, 864-871. <http://dx.doi.org/10.3109/01612840.2014.917752>



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