

# The Relationship between Loneliness, Anxiety Level and Depressive Symptoms among Elderly

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**Abstract:** The likelihood of experiencing age-related health problems increase with growing age. Many people experience mental and psychological illnesses such as loneliness, depression, and anxiety in old age. The purpose of this study was to assess the relationship between loneliness, anxiety level and depressive symptoms among elderly. A descriptive correlational design was utilized. The study was conducted at geriatric nursing homes in Berket EL Sabba and Alsadat City. A Convenient sample of 53 elderly who met inclusion and exclusion criteria were selected from geriatric nursing home. Three tools were used to fulfill: Loneliness Scale, Geriatric Anxiety Scale and Patient Health Questionnaire depression scale. The results of this study indicated that nearly half of the sample had high degree of loneliness, half of the sample had mild level of anxiety and one third of the sample had moderate depressive symptoms. There was also a positive correlation between loneliness, anxiety and depressive symptoms. The study concluded that there was a positive correlation between loneliness, anxiety and depressive symptoms. Therefore, it is recommended that, a screening program for early discovering and intervention program for reducing loneliness, anxiety and depressive symptoms among elderly and training programs for increasing the community awareness about needs, problems of elderly, how to adjust with it and and the available community mental health services.

**Keywords:** Loneliness; Anxiety Level; Depressive Symptoms; Elderly.

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## 1. INTRODUCTION

Aging is a normal process in the course of human life. It is a condition with many particularities, but not a disease. It is characterized by a fall in organic function and degeneration of the human body cells resulting in physical, biological, intellectual, mental and social downfall (Legget & Zarit, 2014). Many people experience mental and psychological illnesses such as loneliness, depression, and anxiety in old age. Empirical findings have provided evidence for the positive predictive relationship between loneliness, anxiety and depressive symptoms in the elderly (Barakat, Elattar & Zaki ,2019).

Loneliness is part of the human condition that affects all ages. It is a subjective negative feeling related to the person's own experience of deficient social relations. A sense of loneliness is associated with an evaluation of their overall level of social interaction of individual and describes as a deficit between the real and desired quantity and quality of social engagement (Richard., et al, 2017). Loneliness is more common among elderly in nursing homes than those living at their homes. Loneliness is related to inadequate social contact, gender, low socioeconomic status, and even predicted a series of bad health outcomes, such as cognitive decline and increased mortality risk. Residents in nursing homes were also associated with higher degree of loneliness (Bandari,2019).

Anxiety is a common neuropsychiatric condition in later life, significantly reducing life quality of elderly and increasing the likelihood of placement in residential environments such as nursing homes (Hoe, Cooper & Livingston, 2013). According to the American Psychiatric Association, 2004 “anxiety is an unpleasant emotional state which is characterized by an intense negative emotion, physical tension symptoms and concern about the future” (Vasilopoulos, et al, 2018). Both assessment and management of anxiety in later life, particularly if it is comorbid with other conditions, are challenging. Elderly who experience anxiety exhibit a high level of psychological distress (Scott, Neville & Pachana, 2019).

Depressive symptoms is a common mental condition that presents with depressed mood, loss of interest or pleasure, decreased energy, feeling of guilt or low self-worth, disturbed sleep or appetite and poor concentration. According to WHO, by 2020, depression will be the second leading cause of disability in world and by 2030, it is expected to be the major contributor to burden of disease. (WHO, 2016). Various risk factors for depressive symptoms are female gender, insufficient economics, low education, genetics, exposure to violence, being separated, divorced or widowed, and having chronic illnesses (Avasthi & Grover, 2018).

Elderly live in institutional settings have fewer social interactions and support from family and friends, which could influence physical and psychological health, and development of severe depressive symptoms. A study on the emotional status of institutionalized older adults in Taiwan found 31.3± 94.2% had depression, while the incidence of depression in older adults living in communities was only 8.8±15.3% (Chuang, Kao, Lee & Chang 2018). Depressive symptoms can lead to irritability, anxiety, and somatic complaints. Severe depressive symptoms can lead to feelings of isolation, thoughts of death, and even suicide (Saracino & Nelson, 2019).

Loneliness, anxiety, and depressive symptoms are closely associated with each other. Although it is difficult to assess the prevalence separately, the high burden of these mental conditions has been reported around the world. A meta-analysis reported the worldwide prevalence rate of depressive symptoms in the elderly population between 4.7 to 16%. Prevalence of late-life anxiety disorders are quite high and can be two to eight times higher than major psychiatric illness like dementia or major depressive disorders. This affects substantially on quality of life, morbidity, and mortality of older adults (Anil, Prasad & Puttaswamy, 2016).

The psychiatric nurse has an important role in alleviating loneliness in elderly and subsequently anxiety level and depressive symptoms by several interventions that divided into social and psychosocial intervention. Social interventions include encouraging frequent contact and spending time with family, friends and children. Participating in community based food and beverage consumption rituals with older friends and family promotes healthy social engagement and engaging them in community based social activities such as clubs, day centers and community café, family visitation and other socialization measures (Aroh, Omobukola & Cabdulle, 2016). While psychosocial interventions which include health education to increase physical activities, use coping strategies (problem-solving), rather than maladaptive coping (avoidance) and use relaxation training (breathing exercises, muscle relaxation, meditation, guided imagery and mindfulness).

### **The Current Study was Aimed at**

Assess the relationship between loneliness, anxiety level and depressive symptoms among elderly.

### **Research Questions**

1. What are the levels of loneliness, anxiety and depressive symptoms among elderly?
2. Is there a relationship between the loneliness and anxiety level and depressive symptoms among elderly?

### **Theoretical and Operational Definitions**

**1-Elderly** : is theoretically defined as a cut-off at 60 years or more. It can be categorized into three different groups: young old (60-74 year), old old (75-84year), and oldest old (>85 years) (Naja, Makhlof, Chehab, 2017). In the present study it is operationally defined as people who have 60 years old or more.

**2- Loneliness** : is theoretically defined as a subjective, unpleasant, and distressing phenomenon stemming from a discrepancy between an individual's desired and achieved levels of social relations (De Jong Gierveld & Van Tilburg,

2010 ). In the present study it is operationally defined as a subjective negative feeling related to the elderly’s own experience of deficient social relations and the obtained score that will be measured by UCLA Loneliness Scale developed by Russell ( 1996).

3- **Anxiety**: is theoretically defined as an aversive feeling of unease, worry, nervousness or fear about something that is happening or might happen (Tales & Basoudan, 2016). In the present study it is operationally defined as somatic symptoms, cognitive symptoms, and affective symptoms will be measured by Geriatric Anxiety Scale( GAS) developed by Segal, June, Payne, Coolidge, & Yochim, (2010).

4- **Depression** : is theoretically defined as a common mental disorder involving biological, psychological and social aspects have a serious functional impact on the lives of individuals of all ages (WHO, 2012). In the present study it is operationally defined as the present of depressed mood, loss of interest or pleasure, decreased energy, feelings of guilt or low self-worth, disturbed sleep or appetite, and poor concentration and the obtained score will be measured by Patient Health Questionnaire depression scale (PHQ-9) developed by Kroenke, Spitzer and Williams ( 2001).

**2. SUBJECTS AND METHOD**

**1-Research Design:**A descriptive correlational design was used.

**2-Research Setting:** This study was conducted at two geriatric nursing homes at Berket EL Sabba and Alsadat city.

**3-Sample:** A Convenient sample of 53 elderly who had the following criteria :-

- 1- Free from any problem in communication(as aphasia or deafness).
- 2- Free from history of psychiatric diseases because it may lead to anxiety or depressive symptoms and will bias the results.
- 3- Free from history of neurological problems because it may lead to anxiety or depressive symptoms and will bias the results.

**Tools of Data Collection**

The following tools were used to achieve the aim of the study:-

**(1): A structured interviewing questionnaire:**

It was developed by the researcher after reviewing literature Barakat, Elattar & Zaki (2019) to assess sociodemographic characteristics of the subjects as age, gender, educational level, income, marital status, occupational status, questions about if there is problems in communication or history of neurological or psychiatric disease and any chronic diseases.

**(2): Loneliness Scale (University of California, Los Angeles) UCLA:**

This scale was developed by Russell (1996), and adopted by Aung, Nurumal, & Bukhari (2017). It was used to assess loneliness. It was translated into Arabic and back to English by the researcher. The scale consists of 20 statements related to the elder socialization activity. The participants rated each item as either “Never”, “Rarely”, “Sometimes” or “Often”. Each item has its own score, Never = 1, Rarely = 2, Sometime = 3 and Often = 4. Items (1-5-6-9-10-15-16-19-20) reversed (Never = 4, Rarely = 3, Sometime = 2 and Often = 1). After that, the score was calculated to get a total score. The evaluation for the level of loneliness depended on the range of the total scores, described as the following :-

20-34	low degree of loneliness
35-49	moderate degree of loneliness
50-80	moderately high degree of loneliness

**(3): Anxiety Scale (Geriatric Anxiety Scale GAS):**

This scale was developed by Segal, June, Payne, Coolidge, & Yochim (2010) and translated into Arabic and back to English by the researcher. It consists of a 25-item. It used to measure current anxiety in elderly. It was. Participates rated their current feeling based on the 4-point Likert-type scale ranging from not at all (0) to all of the time (3). The GAS

includes three subscales: somatic symptoms, cognitive symptoms, and affective symptoms. The number of items for each subscale ranges from 8 to 9. Scores range from 0 to 75; higher scores indicate greater anxiety . Scores described as the following:

0-12	No anxiety
13-37	Mild anxiety
38-62	Moderate anxiety
63-75	Severe anxiety

**(4): Patient Health Questionnaire depression scale (PHQ-9).**

It was developed by Kroenke, Williams, and Spitzer (2001) and translated into Arabic and back to English by the researcher. It was used to assess depressive symptoms. It consists of 9 items. Calculated by assigning scores of 0, 1, 2, and 3, to the response categories of (not at all, several days, more than half the days, and nearly every day). Total score from 0 to 27. Scores described as the following:

0-4	No depression
5-9	mild depression
10-14	moderate depression
15-19	moderately severe depression
20-27	severe depression

**Validity of the Tools**

Before starting, the data collection tools were translated into Arabic and back to English and tested for its face and content validity by three psychiatric nursing experts to check the relevance, coverage of the content and clarity of the questions. The required modification was carried out accordingly.

**Reliability of the Tools**

All tools which used in this study were tested for its reliability using test-retest reliability and all tools proved to be strongly reliable at (r 0.92) for tool 1, (r 0.94) for tool 2 and (0,82) for tool 3.

**Procedure**

**Administrative Approval**

A written letter was issued from the Dean of Faculty of Nursing, Menoufia University to the Director of the Elderly Care Association to obtain the official approval to collect the study data. The objectives and the nature of the study were explained and then it was possible to carry out the study.

**Ethical considerations:-**

An informed consent was taken from every elderly in the study after explaining the purpose and the importance of the study. The subjects who agreed to participate in the study were assured about confidentiality and anonymity of the study. They were informed about their right to withdraw from the study at any time without giving a reason.

**Pilot study:-**

A pilot study was conducted in order to test the reliability and validity of the questionnaire items and clarity of questions. A total of 10% of the sample were recruited for the pilot study. All subjects included in the pilot study met the inclusion criteria for. The pilot study revealed minimal modifications in the questionnaires. Subjects in the pilot study were excluded from the main study sample.

**Procedure of data collection:-**

data collection was done by interviewing with the elderly at the hall or their room in nursing home at Berket EL Sabba then nursing home at Alsadat; each interview lasted for 30-40 minutes depending on the response of the interviewee. The data was collected from from 15 July 2019 to 15 August 2019.

**Statistical Analysis:-**

The collected data were organized, tabulated and statistically analyzed using SPSS software (Statistical Package for the Social Sciences, version 20, SPSS Inc. Chicago, IL, USA). Descriptive statistics: quantitative data were presented in the form of mean ( $\bar{X}$ ), standard deviation (SD) and qualitative data were presented in the form of numbers (No) and percentages (%). Analytical statistics: Chi-square test ( $\chi^2$ ) was used to study relationship between two qualitative variables. Spearman correlation (r) test was used to measure the association between two qualitative variables. Significance was adopted at  $p < 0.05$  for interpretation of results of tests of significance. P value of  $< 0.001$  was considered statistically highly significant. P value of  $> 0.05$  was considered statistically non-significant

**3. RESULTS**

**Table (1) :** More than three quarters of studied sample (79.2%) age is between (60-70) years old with mean age  $67.0 \pm 4.46$  ranged from 60-83 and half of the sample are females. More than two thirds of the sample (64.2%) are widowed. More than half of the sample (56.6%) have basic education . More than two thirds of the sample (67.9%) are retired. More than three quarters of studied sample (77.4%) have enough income. Nearly half of the studied sample (50.9%) not have chronic diseases while (49.1%) have chronic diseases.

**Figure (1) :** Nearly half of the sample (49.1%) have high degree of loneliness and one third of the sample (32.1%) have moderate degree of loneliness while only (18.8%) have low degree of loneliness.

**Figure (2) :** Nearly half of the sample (47.2%) have mild level of anxiety while one third of the sample (35.8%) have moderate anxiety.

**Figure (3) :** One third of the sample (34.5%) have moderate depressive symptoms while only (3.80%) have severe depressive symptoms.

**Table (2) :** There is a significant relation between loneliness and marital state (p value 0.014). Mean loneliness score is higher in widowed more than divorced and single. While there is no significant relation between loneliness, age, gender, educational level, occupation, income and chronic diseases.

**Table (3) :** There is a significant relation between anxiety , marital status and income. Mean anxiety score was higher in single and not have enough income, while there is no significant relation between anxiety and age, gender, educational level, occupation and chronic diseases.

**Table (4) :** There is no significant relation between geriatric depressive symptoms and age, gender, educational level, occupation and chronic diseases, marital status and income.

**Table (5) :** There is a positive correlation between loneliness, anxiety and depressive symptoms with high statistical significant P value (0.001). This means that when loneliness increases, anxiety and depressive symptoms increase

**Table (1): Socio demographic characteristics of the studied sample (N =53)**

Socio demographic characters		Study group (N=53)	
		No.	%
Age / years	60 -70	42	79.2
	More than 70	11	20.8
	Mean $\pm$ SD	67.0 $\pm$ 4.46	
	Range	60 - 83	
Gender	Male	26	49.1
	Female	27	50.9

<b>Marital state</b>	Widowed	34	64.2
	Divorced	12	22.6
	Single	7	13.2
<b>Educational level</b>	Illiterate	10	18.9
	Basic education	30	56.6
	High education	13	24.5
<b>Occupation</b>	Retired	36	67.9
	Employed	1	1.90
	Unemployed	16	30.2
<b>Income</b>	Enough	41	77.4
	Not enough	12	22.6
<b>Chronic diseases</b>	Yes	26	49.1
	No	27	50.9

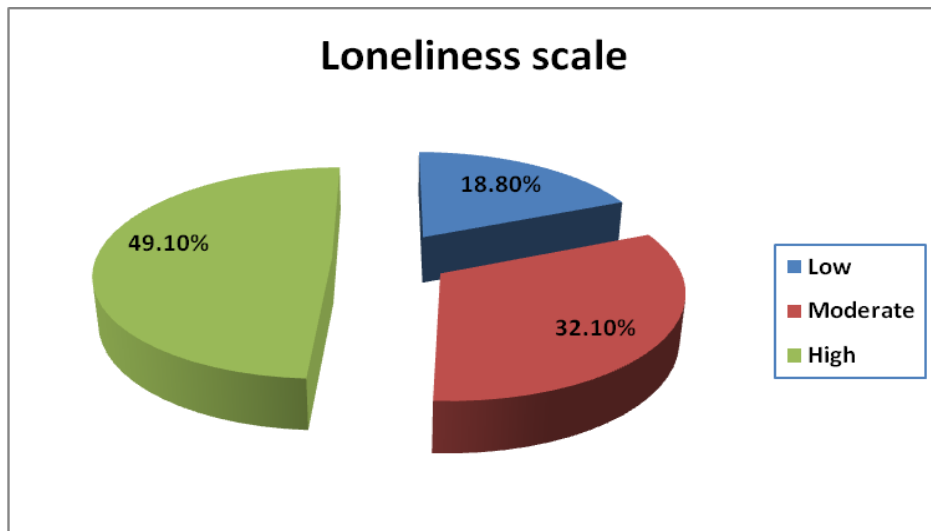


Figure (1) Distribution of loneliness levels among the studied sample

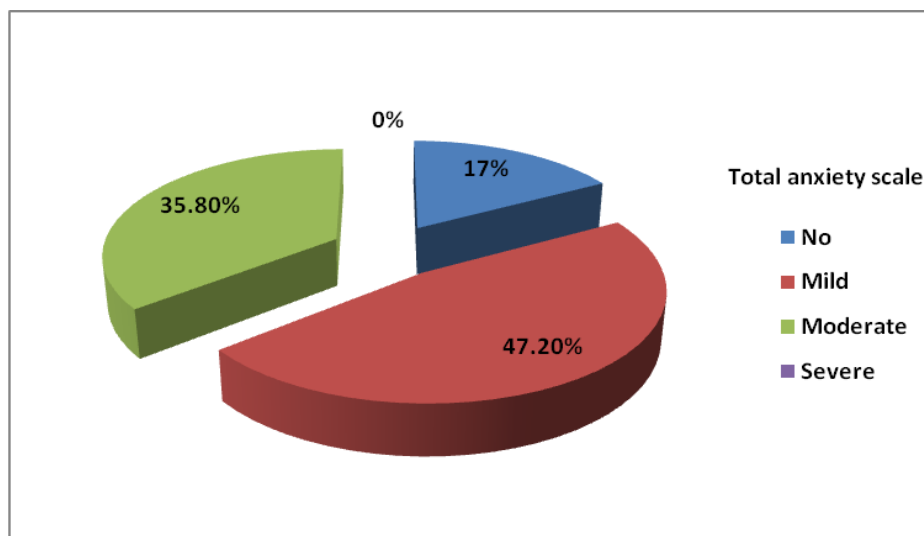
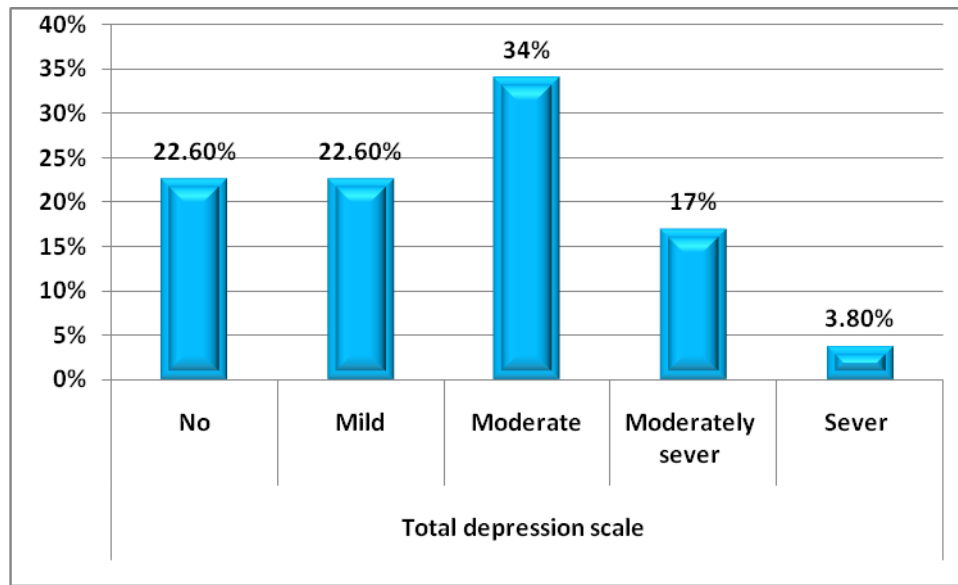


Figure (2) Distribution of total anxiety among the studied sample



Figure( 3) Distribution of total geriatric depression among the studied sample

Table (2): Relation between loneliness and socio demographic characters of the studied sample (N =53):

Socio demographic characters		Loneliness scale						X2	P value
		Low (N=10)		Moderate (N=17)		High (N=26)			
		No.	%	No.	%	No.	%		
Age / years	60 -70	7	70.0	13	67.5	22	84.6	1.05	0.590
	More than 70	3	30.0	4	23.5	4	15.4		
Gender	Male	5	50.0	6	35.3	15	57.7	2.06	0.356
	Female	5	50.0	11	64.7	11	42.3		
Marital state	Widowed	10	100	13	76.5	11	42.3	12.4	<b>0.014*</b>
	Divorced	0	0.00	2	11.8	10	38.5		
	Single	0	0.00	2	11.8	5	19.2		
Educational level	Illiterate	1	10.0	3	17.6	6	23.1	2.31	0.679
	Basic education	5	50.0	11	64.7	14	53.8		
	High education	4	40.0	3	17.6	6	23.1		
Occupation	Retired	8	80.0	9	52.9	19	73.1	4.11	0.391
	Employed	0	0.00	1	5.90	0	0.00		
	Unemployed	2	20.0	7	41.2	7	26.9		
Income	Enough	9	90.0	13	67.5	19	73.1	1.19	0.551
	Not enough	1	10.0	4	23.5	7	26.9		
Chronic diseases	Yes	5	50.0	12	70.6	9	34.6	5.32	0.070
	No	5	50.0	5	29.4	17	65.4		

\* significant

Table (3): Relation between total geriatric anxiety and socio demographic characters of the studied sample (N =53):

Socio demographic characters		Total geriatric anxiety scale	Test of sig.	P value
		Mean ±SD		
Age / years	60 -70	28.2±14.6	U= 0.099	0.921
	More than 70	29.3±13.6		
Gender	Male	28.2±14.5	U= 0.231	0.817
	Female	28.7±14.4		



<b>Marital state</b>	Widowed	24.3±12.6	K= 9.00	<b>0.011*</b>
	Divorced	33.5±15.4		
	Single	39.8±12.9		
<b>Educational level</b>	Illiterate	34.5±14.4	K= 2.27	0.321
	Basic education	27.5±14.6		
	High education	26.3±13.5		
<b>Occupation</b>	Retired	28.8±14.4	K= 1.55	0.460
	Employed	12.0±0.00		
	Unemployed	28.7±14.4		
<b>Income</b>	Enough	26.2±14.0	U= 2.08	<b>0.037*</b>
	Not enough	36.4±13.1		
<b>Chronic diseases</b>	Yes	26.4±12.1	U= 0.899	0.369
	No	30.4±16.1		

\* significant U:Mann Whitney test K:Kruskal Wallis test

**Table (4): Relation between total geriatric depressive symptoms and socio demographic characters of the studied sample (N =53):**

Socio demographic characters		Total geriatric depressive symptoms	Test of sig.	P value
		Mean ±SD		
<b>Age / years</b>	60 -70	10.1±5.76	U= 0.033	0.974
	More than 70	9.90±4.70		
<b>Gender</b>	Male	9.42±6.16	U= 1.23	0.218
	Female	10.6±4.86		
<b>Marital state</b>	Widowed	8.50±4.73	K= 5.33	0.069
	Divorced	12.7±6.04		
	Single	12.8±6.03		
<b>Educational level</b>	Illiterate	12.2±5.20	K= 3.90	0.142
	Basic education	10.3±5.92		
	High education	7.61±4.07		
<b>Occupation</b>	Retired	9.61±5.75	K= 3.47	0.176
	Employed	3.00±0.00		
	Unemployed	11.4±4.76		
<b>Income</b>	Enough	9.56±5.57	U= 1.15	0.250
	Not enough	11.7±5.22		
<b>Chronic diseases</b>	Yes	9.19±4.26	U= 0.750	0.453
	No	10.8±6.49		

U:Mann Whitney test K:Kruskal Wallis test

**Table (5): Correlation between total geriatric loneliness, anxiety and depressive symptoms among studied sample (N =53)**

Studied variable	Loneliness		Depressive symptoms	
	r	P value	r	P value
<b>Anxiety</b>	0.578	<b>0.001**</b>	0.861	<b>0.001**</b>
<b>Depressive symptoms</b>	0.583	<b>0.001**</b>	--	--

\*\*High significant

#### 4. DISCUSSION

Old age is considered as an anathema being associated with deterioration of all psychological, physical factors, isolation from economic, social and extra activities (Kossek., et al 2019). Loneliness, depression and anxiety are the most common psychiatric morbidity among elderly. Understanding this issue is essential for comprehensive assessment and care of



elderly however, about half of cases are not diagnosed (Panwar, Kumar & Belsiyal, 2019). Present study aimed to assess levels of loneliness, anxiety and depressive symptoms among elderly who live in geriatric homes and the relationship between them.

Regarding the socio-demographic features of the sample, the results of this study revealed that the mean age of the studied sample was  $67.0 \pm 4.46$  and ranged from 60-83 years. The researcher's view of point that elderly people leave their homes due to conflicts as financial problems or power struggles between elderly and their sons' wives and their residence now is the geriatric home. This result was on the same line with Grover., et al (2018), who studied relationship of loneliness and social connectedness with depression in elderly: a multicentric study under the aegis of Indian association for geriatric mental health, and the study illustrated that mean age for studied elderly was  $66.55 \pm 5.83$  ranged between 60-83 years old.

On the other hand the result by Tarugu., et al (2019) who studied effectiveness of structured group reminiscence therapy in decreasing the feelings of loneliness, depressive symptoms and anxiety among inmates of a residential home for the elderly in Chittoor district and stated that the studied elderly ages that ranged from 55-84 years with mean age 71.8 (9.1).

Concerning to gender, the present study revealed that slightly more than half of the studied sample were females, this may be due to increased longevity of females more than males, their sensitivity and frequent mood swings due to changes in hormones of females. This result consistent with El-Bilsha (2019) who studied the effect of interpersonal psychotherapy on the depression and loneliness among the elderly residing in residential homes, who found that more than half of the studied sample were females. On the other hand this result inconsistent with Grover, et al (2018) who studied relationship of loneliness and social connectedness with depression in elderly, and founded that more than half of the sample comprised of males.

Regarding the marital state, the present study revealed that more than two thirds of the studied sample were widowed. This may be due to the fact that female in Egyptian culture is married younger than males so that, loss of spouse is much more common for women than for men. This result agree with the study done by Hassan, Abd El-Halim, Ahmed & Mostafa (2017) about psychological problems as perceived by institutionalized and non-institutionalized elderly, which stated that more than half of elderly were widowed. On the other hand this result inconsistent with study which carried by Eskimez, Demirci, TosunOz, Oztunç, & Kumas (2019) on loneliness and social support level of elderly people living in nursing home and illusterated that more than half of the studied elderly were single.

Concerning to level of education more than half of the sample to have basic education. This may be because there was a common belief that marriage was best than education for girls or due to lower economic status. This result was consistent with result of a study by Sayied & Abd-Elaziz (2015) on effect of counseling sessions as a nursing intervention on depression and loneliness among elderly at assiut city which their result illustrated that less than one third had secondary school. This result was inconsistent with El-Bilsha (2019) who studied the effect of interpersonal psychotherapy on the depression and loneliness among the elderly residing in residential homes, who found that more than one third were illiterate.

Regarding to occupation, about more than two thirds of the sample were retired. This result in the same line with the result by Bektaş, Körükcü & Kabukcuoğlu (2017) about undercover fear of elderly people in nursing home: death anxiety and depression, who founded that more than one third of the elderly retired. The previous result was inconsistent with result by Udayar, Patil, & Vadivel (2016) about study of socioeconomic factors in relation to depression among elderly people living in rural area of and hra Pradesh, whose result revealed that nearly to two thirds of the elderly sample were working and earning.

The findings of the present study revealed that about more than three quarters of the sample have enough monthly income. This findings supported by the study conducted by Elsayed, El-Etreby & Ibrahim (2019) about the relationship between social support, loneliness, and depression among elderly people, who stated that more than two thirds of the sample had enough income. On the other side, this result inconsistent with Kumar, Satapathy, Adhish & Nripsuta, (2017) whose studied psychiatric morbidity among residents of government old age homes in Delhi, and stated that more than two thirds of the sample had no monthly income.

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Regarding chronic diseases, the results of the present study found that nearly half of the studied sample have chronic diseases. This result was similar to the study done by Bhattarai & Poudyal (2017) on depression among elderly people attending at senior citizen home which results showed that more than half of the sample had chronic illnesses. On the other hand it was not matched with the results of the study done by Patinan, Esmaeilpour-Bandboni, Mansour-Ghanaei & Atrkar-Roshan (2017) on the relationship between chronic diseases and quality of life of elderly residing in nursing homes across Gilan. Which demonstrated that the majority of the sample have chronic diseases.

Concerning the levels of loneliness, the current study showed that nearly half of the study sample have high degree of loneliness and one third of the sample had moderate degree of loneliness while only one fifth had low degree of loneliness. This may be due to feeling of neglect from others, feeling of dull and separation from society, retirement, disability or poor health, absence of an intimate partner, family members, friends and contacts, and also due to reduce the structure and the value of their social network and social integration.

This result was congruent with the result of study which conducted by Aung, Nurumal & Wan Bukhar (2017) about loneliness among elderly in nursing homes. The result indicated that all elderly experience loneliness at nursing homes, while only one quarter feel loneliness moderately and three quarters feel very lonely. The previous result was consistent with study which conducted by Al-Ameri (2019) about assessing levels of loneliness among elderly people residing in the nursing homes of Baghdad City which revealed that half of elderly people have high and extremely high levels of loneliness and nearly one third have moderate level and only one fifth of them have low level of loneliness.

Regarding the level of anxiety among studied sample, the current study showed that the majority of the sample had mild and moderate anxiety levels. Nearly half of the sample had mild level of anxiety and one third of the sample had moderate anxiety, while no body has severe anxiety. This may be due to the unfavorable financial condition experienced by Egyptian population in recent years or due to the lack of a psychosocial support both for the elderly and for their families. Other reasons of the presence of anxiety are older age, a lower social class, the presence of co morbidities, increased loneliness feeling and being widowed or divorced.

This result in the same context with a study which done by Vasilopoulos, et al (2018) about a research on anxiety and depression of the elderly in the community which revealed that the majority of the participants had anxiety symptoms. But it was contradicted with the study which done by Timalina (2013) on the factors associated with elderly anxiety and depression among elderly living in old aged homes in Kathmandu Valley which reported that more than two thirds of respondents had no anxiety.

Concerning the level of depressive symptoms among studied sample. The present study found that one third of the sample had moderate depressive symptoms and the minority of the sample had severe depressive symptoms. This may be due to being separated from family; having no privacy; lacking special care, love and warmth which represents a stressor. These findings matched with Elsayed, El-Etreby, and Ibrahim (2019) who conducted study about relationship between social support, loneliness, and depression among elderly people and found that three quarters of the sample had depressive symptoms, one fifth of the sample had moderate depressive symptoms and no body had severe depressive symptoms. In addition to it was inconsistent with a study which done by Kaur and Bajwa (2017) about a comparative study to assess the prevalence of depression and loneliness among institutionalized and non-institutionalized elderly in selected community in district Amritsar and Tarntaran (Punjab) which revealed that two fifth of institutionalized elderly were having mild depression and more than half of the institutionalized elderly were having severe depression. the majority of the sample have chronic diseases.

According to the results of this study, there was a significant relation between loneliness and marital state ( $p$  value 0.014). Mean loneliness score is higher in widowed more than divorced and single. This may be due to two thirds of the sample were widowed. The loss of the spouse is one of the most disorganizing life events and elderly who lose spouse through death experience a painful period of bereavement accompanied by severe loneliness, low wellbeing and restlessness. This result was identical with the outcomes of a study done by Saady and Bekdash (2017) about the level of a sense of loneliness a field study in a sample of elderly residents in social care homes in the cities of Latakia and Tartous and another study done by Teh, Tey and Ng (2014) about family support and loneliness among older persons in multiethnic Malaysia. Both studies illustrated that loneliness was associated with the marital status, widowed is significantly associated with loneliness, while it was contradicted with a research conducted by Aung, Nurumal and Wan Bukhar

(2017) about loneliness among elderly in nursing homes which indicated that the relationship between the marital status and level of loneliness was not significant.

Regarding the relation between anxiety and sociodemographic characteristics, the present study showed that there was a significant relation between anxiety, marital status and income. Mean anxiety score was higher in single and not have enough income. This may be due to insufficient income resulting from over daily needs in the Egyptian community, also two thirds of the sample were retired and one third unemployed with not enough income this lead to increase anxiety among them also being single with no sons or partners who can help elderly, visit or support them increase anxiety level among them.

On the other hand, Ahmed, El Shair, Taher and Zyada (2014) whose study prevalence and predictors of depression and anxiety among the elderly population living in geriatric homes in Cairo, Egypt, revealed that anxiety was significantly more frequent among the married elderly. The above finding was consistent with study done by Babazadeh, et al (2016) about the prevalence of depression, anxiety and stress disorders in elderly people residing in Khoy, Iran (2014-2015), which found that the marital status had a significant effect on the depression and anxiety levels in the elderly participants where the people who had lost their spouses had more depression and anxiety. The findings of the present study were contradicted with study conducted by Tak, Maheshwari, and Kaur (2016) about effectiveness of progressive muscle relaxation technique on anxiety among elderly, the result found that no significant association between income and anxiety level.

The present study showed that there was no significant relation between geriatric depressive symptoms and age, gender, educational level, occupation and chronic diseases, marital status and income. This may be due to using coping mechanisms which used by this age, adaptation, high religion status and social and emotional support between elderly in the institution. These findings were consistent with a study conducted by Zhao, et al (2018) about loneliness and depressive symptoms among the elderly in nursing homes: a moderated mediation model of resilience and social support, which revealed that all demographic variables (age, sex, education and financial status except marital status (unmarried) are significantly associated with depressive symptoms among the elderly.

A study performed by Bhattarai and Poudyal (2018) about depression among elderly people attending at Senior Citizen Home, Bhaktapur, also matched with the previous findings which illustrated that there was no relationship between depression among elderly people and the age, educational level, and marital status, type of family, income and disability, while there was contradiction with the present study in chronic illness and gender as its findings showed that depression among elderly people was significantly associated with the gender ( $p=0.05$ ) and the presence of chronic illness ( $p=0.000$ ).

Concerning the correlation between loneliness, anxiety and depressive symptoms, the present study demonstrated that there was a positive correlation between loneliness, anxiety and depressive symptoms with high statistical significant (P value, 0.001). This mean that when loneliness increases, anxiety and depressive symptoms increase. This may be due to the emerging social and cultural diversions in our Egyptian society are leading to a decline in traditional family morals as we are detaching from joint family system which is directly affecting elderly particularly in the form of institutionalization.

This changing value system makes elderly mentally isolated from their families that make them exposed to psychological disorders such as death anxiety and depression. This result was on the same line with a study which done by Elias (2018) about prevalence of loneliness, anxiety, and depression among older people living in long-term care and another study conducted by Barakat, Elattar and Zaki (2019) about depression, anxiety and loneliness among elderly living in geriatric homes. Both studies demonstrated that there was a significant positive correlation between loneliness, anxiety and depressive symptoms.

In the light of the study findings, psycho-educational program is needed to assist psychologists, counselors and social workers, nurses, who work with the elderly, to utilize the theoretical principles and the therapeutic process of this approach as a nursing intervention on reducing loneliness, anxiety and depressive symptoms among the elderly. Training to geriatric clubs personal about how to deal with the elderly and help them to express their feeling (Sayied & Abd-Elaziz, 2015).

## 5. CONCLUSION

It was concluded that nearly half of the sample had high degree of loneliness, one third of the sample had moderate anxiety level and one third of the sample had moderate depressive symptoms. There was positive correlation between loneliness, anxiety and depressive symptoms with highly statistical significant.

## 6. RECOMMENDATIONS

It was recommended that a screening program for early discovering and intervention program for managing or overcoming loneliness, anxiety and depressive symptoms among elderly. However, training programs for increasing the community awareness about the needs and problems of elderly, how to adjust with it and to make an appropriate referral and the available community mental health services. Extra studies are also needed on large numbers of elderly in different geographical areas to generalize results.

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