

Relationship between Loneliness and Depression among Elderly in Minia City

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Abstract: Loneliness and depression are usually associated, especially in older adults. So, the aim of this study was examining the relationship between loneliness and depression in elderly people. The study used a **descriptive and correlational** design and the sample of the study comprised of 50 older adults aged sixty and above who were recorded at **geriatric club in Red Christine and geriatric nursing home located in Minia city**. The data was collected by using **three questionnaires** Socio-demographic data which developed by the investigators, the Geriatric Depression Scale (GDS) and the UCLA Loneliness Scale (ULS). **The results** revealed that there is a positive correlation between Geriatric Depression and loneliness ($r = 606$, at $p < 0.000$). It was observed that female represent higher mean score in relation to (GDS) and (UCLS) scale than male. Also, there were highly statistically significant differences between whom the patient lived with geriatric depression and loneliness scale at p -value= (0.000) with high mean score for patients who live alone (24.41) and (44.12) respectively. Findings of this study will aid nurses and other health care staffs when assessing the social support networks, beliefs and preferences of older adults to design and implement the best practices. The findings may also offer health care facilities recommended ways to decrease or struggle loneliness and depression among the elderly people.

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Introduction

The world population is ageing rapidly, which is a result of better nutrition, improved healthcare and ability to treat illnesses that previously were fatal. If these extra years are experienced in good health, there is possibility to live a life with few limitations. If these years instead are dominated by reduced physical and mental abilities, the negative impact on older people and society may become significant. Older people contribute to society in many ways, including within the family, in local community and in a broader social context. However, the extent to which this contribution is possible depends a great deal on the individual's health. The risk of declining physical and mental abilities increases with age, which can result in negative implications for both the individual and society. Thus, a comprehensive public-health response is needed (WHO, 2015).

Loneliness is defined by Masi (2011) as the subjective and unpleasant experience of distress when a person's network of social relations is poor or not has sufficient contact with people. Even though the two concepts can be interrelated, an individual can be socially isolated but not feel lonely, whereas an individual with apparently great social network can still report loneliness. Loneliness should also not be mistaken for depression, although they may also be associated. The author added that if loneliness is not about having adequate persons to interact with, then what causes it? One theory is that loneliness arises due to maladaptive thoughts about oneself and others. Lonely individuals are more likely than persons who are not lonely to accept as true that other people will throwaway them.

Additionally, loneliness people are more expected to have feelings of low self-esteem.

Feelings of loneliness in older people have been shown to have significant impact on physical health such as elevated blood pressure, sleep disturbance and immune stress response (Luanagh&Lawlor, 2008). There is also higher risk for intellectual deterioration and dementia when feeling lonely (Wilson et al., 2007). Loneliness has also shown to be associated with increased mortality, where for people over 50 years, those with peak levels of aloneness had 1.96 times higher risk of dying within a 6-year period than persons with lowest levels of isolation (Luo, et al., 2012).

Depression in older people can have serious consequences related to the high rate of comorbidity with physical disease, reduced operational and increased risk for suicide. Over 50% of older adults with depression have their first incident after 60 years old (Fiske, et al., 2009). Aspects which significantly increase the risk of developing depressive symptoms in later life are female gender, history of stroke, alcohol consumption, decrease self-rated health status, functional impairment, and poor social network (Luppa, et al., 2012)

Through extensive research, it has emerged that more women than men ≥ 65 years of age suffer from depression (Copeland et al., 1999; Sonnenberg et al., 2000; Zunzunegui, et al., 2009). While other studies show that there is no sex difference in prevalence of depression in old age people. For instance, Stordal et al. (2001) found that there are no statistically significant differences between females and males in the age group 60–79 years old. In a study with a population aged between 55 to 85 years, Sonnenberg et al.

(2000) showed almost twice as high prevalence of depression for women than men. They also found that differences in sex that association with risk factors were small, but females were considerably more exposed to risk factors than male. For women, the risk factors constituted of: not being or no longer being married, lower income, having completed lower level of education, one or more chronic physical illnesses and one or more functional limitations (Sonnenberg et al., 2000). Previous studies have also shown sex differences in the way depression is expressed, where women are more expected to internalize (e.g. become silent, cry) and men are more expected to externalize (e.g. express anger, and increased intake of alcohol) (Parker&Brothie, 2010; Sonnenberg et al., 2000). According to Martin et al. (2013), men experienced alternative symptoms of depression compared to women and reported significantly higher rates of anger attacks/violence, addiction and thrill-seeking behavior. Females stated significantly further traditional symptoms like irritability, stress; sleep problems and loss of curiosity usually enjoyed than men.

Earlier research among older people has shown a relationship between loneliness and depressive manifestations for both women and men (Cacioppo et al., 2006; Zebhauser et al., 2014). However, in the study by Cacioppo et al. (2006), reported that, there was a stronger connection between loneliness and depressing symptoms between men than women. Even the research conducted by Zebhauser et al. (2014) showed that males who experienced loneliness have a tendency to be more depressed than females. Perceived loneliness has been found to increase in elder people (Jylhä, 2004; Luanaigh & Lawlor, 2008), and the older women seem to experience loneliness compared with men (Pinquart&Sörensen, 2001; Victor&Yang, 2012).

Significance of the study

Old age people are at increased risk of developing loneliness. By the time most people with 80 years, tend to live on their own, and the most reason because of widowhood as in case for older women who are widowed than older men. The social networks for older people usually get lesser for many other reasons such as moving children away, along with grandchildren, in addition aging relatives and friends may have died. Further risk factors for loneliness and depression in old age people including living alone, suffering from health problems and disability, sensory impairment such as loss of hearing, and exposure to major life events such as spouse loss (Grenade&Boldy, 2008). Depression in older people is currently and might continue to be a public health problem, as it concerns a growing age group and there is a high rate of comorbidity with physical illness and impaired functioning. Factors considered as having importance for being at risk for depression in older people are, for example, loneliness, poor social support, not having access to a social network and retirement. In all, there seems to be shortcomings in the attention and care of older people with depressive symptoms. It is essential to identify those older people who at risk for depression and to have the ability to offer different treatment or preventive alternatives. Nurses have a key role in identifying those at risk for depression as they often encounter older people, and they could also be the most

appropriate caregiver to work preventively using nursing interventions (Djukanovic, 2017).

Research question

Is there is a relationship between loneliness and depression in elderly people?

Aim of the work

This study aimed to identify the relation between loneliness and depression among elderly people.

2. Subjects and Method

Research design

A descriptive correlational research design was applied to meet the study aim.

Setting of the study

This study was done in geriatric club in Red Christine and geriatric nursing home which located in Minia city.

Sample

A convenient sample which consisted of 50 elderly persons were included in this study.

Inclusion Criteria

- Participants aged 60 years and older.
- Both genders were included (male and female).
- Either who are come to visit the geriatric club or who are residing in geriatric nursing home.

Exclusion Criteria

- Those adults with definitive diagnosis of dementia.

Tools of data collection:

1- Socio-demographic data sheet:

An interview questionnaire sheet was developed by the researchers and covered the following items: age, sex, residence, level of education, marital status, number of children, with whom the elderly lives with, and general health state.

2-Geriatric Depression Scale

The Geriatric Depression Scale (GDS) was developed by Yesavage et al. in 1983 and used to measure depression in older adults. The scale has been translated into many languages, tested and used widely with the old age population in many countries (Garrard et al., 1998; Whooley, et al., 2000). Geriatric Depression Scale target population usually healthy or medically ill and mild to moderately cognitively impaired older adults. This scale used in research between older adults in acute, long-term care setting and community. The original scale, which included a 30-item questionnaire, demonstrated to be overwhelming and challenging for patients and staff. The revised 15-item test which used in this study showed a sensitivity of 0.97, a specificity of 0.85, predictive value of 0.85, negative predictive value of 0.94, and accuracy of 0.90 for predicting depression (Hoyl, et al.1999). The GDS test is performed verbally with "Yes" or "No" answers scored. The test has been interpreted in this study as the following:

- From 1-10 suggestive of no depressive symptoms.
- From 11-20 mild to moderate depressive symptoms.
- From 21-30 severe depression.

This scale translated into Arabic version by the researchers and revised by professors in English and Arabic language. By testing reliability, it was found that Cronbach alpha value was (0.92).

3-University of California Los Angeles (UCLA) Loneliness Scale

The UCLA Loneliness Scale (Version 3) designed to recognize feelings of loneliness in large groups of respondents, especially older adults (Russell, 1996). This scale involves of 20 questions and used to measure loneliness in this study. The scoring system for this scale is 1-3 scale, ranged from 'never' to 'often'. These three Likert scales were adapted for this study for easy explanations. Content validity is accomplished through items reflecting different aspects of loneliness. In addition, emotional state usually associated with loneliness, for example disappointment, shyness, anxiety and depression, were correlated strongly to the loneliness scores than feelings that are not associated with loneliness (Russell et al., 1978).

Higher scores on this scale indicate more intense feelings of loneliness. Russell (1996) also reported that alpha coefficients for the UCLA Loneliness Scale ranged from 0.89 to 0.94 (Adams et al. 2004). Factor analysis showed that it measures emotional, as well as social, loneliness, thereby offering a more complete measure of loneliness than other scales. The Range of scores expands from 20 as the lowest to 60 as the highest and the higher the score, the greater the loneliness level. This scale translated into Arabic version by the researchers and revised by experts in English and Arabic language. By testing reliability, it was found that Cronbach alpha value was (0.91).

Administrative design

An official letter was issued from the Dean of the Faculty of Nursing to the Heads of geriatric club in Red Christine and geriatric nursing home to carry out this study and patient consent to participate in the study after the researchers explained the aim and nature of the study to gain their cooperation. Clarification of the study nature and purpose were done on initial interview with each patient. The researchers emphasized that the participations absolutely voluntary and confidentiality as well as

anonymity of each subject will absolutely assure throughout the whole study.

Ethical Consideration

The purpose of this study was explained for every interviewed elderly person (males & females). The participant has the ethical right to agree or refuse participation in the study, verbal informed consent to participate in the study was obtained from participant, they informed that the information obtained will be confidential and used only for the purpose of the study and there was no any risk for their participation. Also, each patient has the right to withdraw from the study at any time without any rational.

Pilot Study

A pilot study was done to evaluate the questionnaires clarity and applicability as well as the time needed to fulfill each sheet. It was carried out on a sample of 5 elderly people.

Statistical design

Subjects' responses to each category were analyzed, categorized and coded by investigator then tabulated separately by using the statistical package for social science (SPSS) version 21. Descriptive statistics were calculated as frequency, percentage, mean, standard deviation. T-test and ANOVA test and Pearson correlation were also used among studied values. Probability (p-value) less than 0.05 is significant and less than 0.001 is highly significant.

Limitation of the study

Small sample size because sons don't like to leave their parents in nursing home especially in the Upper Egypt culture; it is considered humiliating for them.

3. Results

Table (1) shows that more than half of the studied sample were male (58%), the majority of them are residing urban area (86%) and (48%) of them were graduated from university. Also (52. %) are married and have three or more children. (34%) of them are living alone and (36%) their general health state is not so good. Mean age of the studied are (69.12).

Table (1): Distribution of studied sample according to their socio-demographic data (n=50).

Item			
		No.	%
Gender	Male	29	58.0
	Female	21	42.0
Residence	Rural	7	14.0
	Urban	43	86.0
Educational level	Illiterate	3	6.0
	Read and write	3	6.0
	Secondary school	20	40.0
	University	24	48.0
Marital status	Never married	1	2.0
	Married	26	52.0
	Divorced	6	12.0
	Widow	17	34.0
Number of children	None	4	8.0
	One	2	4.0
	Two	18	36.0
	Three or more	26	52.0
Whom do you live with?	Living alone	17	34.0
	Living with partner only	15	30.0
	Living with partner & children or other relatives	15	30.0

Item			
		No.	%
	Living without partner in family	3	6.0
What is your general health state?	Poor	11	22.0
	Not so good	18	36.0
	Fair	11	22.0
	Good	10	20.0

Age

Mean \pm SD 69.12 \pm 4.534

Table (2) demonstrates the differences among the total mean scores of the two scales in relation to the gender. It was noted that the statistically significant differences were not found between male and female patients as

regards to total geriatric depression scale and total loneliness scale. With the highest mean is for female especially total loneliness scale.

Table (2): Differences between male and female patients in relation to total geriatric depression scale and total loneliness scale.

Total scales	Gender		F	p-value
	Male	Female		
	Mean \pm SD	Mean \pm SD		
Total geriatric depression scale	22.62 \pm 2.611	22.67 \pm 2.106	.682	.413
Total loneliness scale	37.93 \pm 8.026	40.19 \pm 6.369	1.255	.268

Table (3) shows that, the statistically significant differences were not found between patients who residing urban and ruler area as regards to geriatric depression scale

and loneliness scale at p-value= (0.885) and (0.0146) respectively. The highest mean is in ruler than urban population.

Table (3): Differences between ruler and urban patients in relation to total geriatric depression and total loneliness scales.

Total scales	Residence		F	p-value
	Rural	Urban		
	Mean \pm SD	Mean \pm SD		
Total geriatric depression scale	24.71 \pm 2.563	22.30 \pm 2.210	.021	.885
Total loneliness scale	45.71 \pm 5.438	37.77 \pm 7.104	2.183	.146

As shown from **Table (4)** that the statistically significant differences were not found between educational level with geriatric depression and loneliness scale, while there were statistically significant differences between number of children with geriatric depression and loneliness scale at p-value= (0.01) and (0.05) respectively. Also there were statistically significant differences between general health state with geriatric depression and loneliness scale at p-value= (0.019) and (0.005) respectively.

Furthermore, there were highly statistically significant differences between marital state with geriatric depression and loneliness scale at p-value= (0.000) and (0.003) respectively. Moreover, there were highly statistically significant differences between whom the patient lived with geriatric depression and loneliness scale at p-value= (0.000) with high mean score for patients who live alone (24.41) and (44.12) respectively.

Table (4): Differences between socio-demographic data of the studied sample with total geriatric depression and loneliness scale (n=50).

Item	Category	Geriatric depression scale				Loneliness scale			
		Mean	SD	F	P	Mean	SD	F	P
Educational level	Illiterate	23.33	2.517	.223	.880	46.67	5.033	2.496	.072
	Read and write	22.67	2.309			35.00	13.528		
	Secondary school	22.85	2.477			40.60	6.411		
	University	22.38	2.428			36.96	6.931		
Marital status	Never married	29.00	.	7.448	.000**	51.00	.	5.297	.003**
	Married	21.69	2.205			35.58	6.795		
	Divorced	22.17	2.137			43.67	4.320		
	Widow	23.88	1.654			41.53	6.811		
Number of children	None	26.00	2.582	4.184	.011*	47.25	2.630	2.761	.053*
	One	24.50	.707			44.50	4.950		
	Two	22.44	1.886			38.67	5.520		
	Three or more	22.12	2.355			37.31	8.260		
Whom he live with	Alone	24.41	1.698	7.482	.000**	44.12	4.386	8.649	.000**
	With partner only	22.33	2.526			38.27	6.065		
	With partner and children and other relatives	21.13	1.846			33.20	7.812		
	Without partner in family	21.67	1.528			40.67	4.163		
General health state	Poor	23.64	2.063	3.642	.019*	43.64	2.203	4.795	.005**
	Not so good	23.17	1.757			40.61	6.545		
	Fair	22.55	3.142			35.27	9.424		
	Good	20.70	1.889			34.50	6.451		

(*) P value is significant at ≤ 0.05 and highly significant at ≤ 0.01 **

Table (5) illustrates the percentage of depressive symptoms among the studied sample according to Geriatric

Depression Scale (GDS) and shows that 76% of the studied sample has severe depression.

Table (5): Distribution of the studied sample according to (GDS).N= 50

Depression level	Number of cases
suggestive of no depressive symptoms	0%
Mild to moderate depressive symptoms	24%
Severe depression	76%

As observed from **Table (6)** that, there were highly significant positive correlations between geriatric depression score with loneliness score ($r=606$, at $P \leq 0.000$).

Table (6): Correlation between total geriatric depression and total loneliness scales scale (n=50).

	Mean \pm SD	r- value	p-value
Geriatric depression scale	22.64 \pm 2.388	.606**	.000**
Elderly loneliness Scale	38.88 \pm 7.392		

(*) P value is significant at ≤ 0.05 and highly significant at ≤ 0.01 **

4. Discussion

Many aspects have been recognized to contributing to loneliness in elderly people such as retirement, some demographic characteristics, living activities, modification in living conditions, personality characteristics and decrease the role of a person's in the community which generate great sense of depression among elderly.(Gang H et al, 2017). Also, the two concepts depression and loneliness are further

themselves affected by many factors, such as age, sex, support and care from both family and friends (Kanamori et al, 2014).

The present study shows that, more than fifty percent of the sample included in the study was male (58%) this can be explained by that, in our culture and community it is difficult or not accepted for females to go or live in geriatric home. While Erika et al, 2017registries that, women are

over-represented in their study group than men. As regards to residence the majority of the studied sample are residing urban area (86%) because in Egypt especially in Upper Egypt which still shaped of extended family the sons refuse and reject the idea of leaving their fathers staying in geriatric home. Also (48%) of them were graduated from university and they represent the most of the study group which go to geriatric home because they don't tolerate loneliness especially after widow, retirement or traveling of their sons.

Also, this study explore that more than fifty percent (52. %) of studied sample were married and have three or more children; despite that (34%) of them are living alone and (36%) their general health state is not so good. This can be attributed to that they are living alone because leaving of their sons after marriage and this loneliness produce feeling of depression which affects their general health state.

In the same respect(**Julsing et al, 2017**) founded that, people suffering from depression were more commonly married with a small number of children and/or widow, among those not feeling lonely, depression was associated with being previously married. Feelings of loneliness in people with depression were associated with limited social network; in other hand people without depression, feelings of loneliness were associated with being married.

Results of the current study are moderately reliable with findings stated in previously studies. However, there are some areas where present. It was noted that the statistically significant differences were not found between male and female clients as regards to total geriatric depression scale MD.S (22.62 ± 2.611) for male and (22.67 ± 2.106) for female and total loneliness scale. These results, which were observed because loneliness is considered to be major cause for depression regardless the sex. This finding was supported by (**Joan Domènech-Abella, 2017**) who investigated differences in the relationship between depressive symptoms and loneliness in both genders equally and establish that they were comparably strong in men and women.

Moreover, despite the statistically significant differences were not found between male and female as regards to total geriatric depression scale and total loneliness scale but the heights mean (40.19 ± 6.369) for female this may be attributed to that females are prone to depression related to many factors as being single, separated, divorced or widowed, living in a rural setting with a lower frequency of social interactions and smaller social network. These results are congruent with (**Guojun Wang, et al 2017**) they reported that older women had significantly higher levels of loneliness and depressive symptoms and a higher prevalence of major depressive episodes. Also (**Oluwabusola Olutoyin Oni, 2010**) found that the association between loneliness and depressive symptoms was significant for both men and women but went further and found that women were more susceptible to loneliness and depression than men.

While, (**Julsing et al. 2017**) cleared that gender difference in the loneliness feelings among older adults seems to be important. Widowed men often are at risk of rapid physical and psychological deterioration, especially in men when depend on their spouses in daily living. Accepting the loss of spouse and engaging in social networks themselves would decrease the level of perception for loneliness, which might lead to decreased risk in mortality.

Furthermore, (**Oluwabusola Olutoyin Oni, 2010**) showed that, there were no difference between categories of most demographic data and the depression scores however gender was significant with $p = 0.038$.

The current study showed that there were no statistically significant differences between geriatric who residing urban and ruler area as regards to geriatric depression scale and loneliness scale at p -value= (0.885) and (0.0146) respectively this may be interpreted by, the practice of daily living seem to be not extremely change and similarity factors for loneliness and depression. However, this results were not agree with (**Guojun Wang, 2017**) who indicated that depression affects 40.4% of the rural elderly living in China (95% CI 28.6% to 52.2%) than urban.

As well as there were no statistically significant differences between educational level with geriatric depression and loneliness scale may be due to low contact with others or loss of social network after retirement however, there were statistically significant differences between general health state with geriatric depression and loneliness scale at p -value= (0.019) and (0.005) respectively. This can be explained by that feeling of loneliness and depression will affect the general health state according to mind body relationship factors. These finding are consistent with(**Julsing et al. 2017**) they evaluated the association between loneliness and all-cause cardiovascular, or non-cardio vascular disease and show that, depression was the strongest explanatory variable associated with loneliness, explained both poorer physical and mental health, in addition to poorer quality of life, lead to an increased need for social and health care services. Furthermore, better physical health was not unexpectedly partly explained by lower age and absence of disease (s), but also by being able to engage in meaningful leisure activities.

This in the same line with (**Joan Domènech-Abella et al, 2017**) found that No significant differences between the groups were found regarding age, gender, marital status, educational level, annual income per household or physical disease.

In addition, this study cleared that there were statistically significant differences between number of children with geriatric depression and loneliness scale at p -value= (0.01) and (0.05) respectively. This interpreted by that the number of children has a positive effects regarding older life and sense of loneliness. These findings are consistent with (**Kanamori et al, 2014**) they found a significant association between depression and children support.

Moreover, there were highly significant positive correlations between geriatric depression score with loneliness score ($r = 0.606$, at $P \leq 0.000$). This may be attributed to that loneliness and isolation are considering important factors which increase the depressive symptoms among elderly population.

This finding is consistent with a qualitative study by **Barg et al. (2006)**, which suggests that loneliness in older adults is closely tied to depression. Also (**Wenger, et al, 1995**) found a positive correlation with depression loneliness in geriatric. Also, this results agree with (**Julsing, et al. 2017**) has been recognized loneliness as a strong correlative of depressive symptoms and his study shows that, regardless

of where the elderly live, loneliness is one of the strongest predictors of depression $P=0.000$.

Further, loneliness, experienced by people 50 years and older, has shown to have a strong negative effect on general wellbeing and that support from spouse/partner and friends alleviates loneliness and thus results in increased wellbeing (Chen&Feeley, 2014). In the same respect Cohen-Mansfield, &Parpura-Gill (2007) stated that, loneliness has been associated with a number of negative outcomes such as poor physical and mental health; increased utilization of health care services, such as increase admission into nursing homes; and negative psychological effects such as depression.

Recommendations

- Designing and implementing psychological counseling programs to help in decreasing depression level among elderly people.
- Longitudinal studies on a larger group of elderly men and women are needed in future.

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