

## LONELINESS AND DEPRESSION AMONG INSTITUTIONALIZED AND NON-INSTITUTIONALIZED ELDERS COMPARATIVE STUDY

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### Abstract:

**Background:** Loneliness is defined as a subjective phenomenon, based upon people's perceptions or experiences of a deficiency in their social relationships. Depression is the commonest psychiatric disorder in the elderly. **Aim of the study:** To assess loneliness and depression among institutionalized and noninstitutionalized elders. **Design:** A comparative cross-sectional design was used. **Setting:** The present study was conducted in two different settings, one for recruitment of institutionalized elders and another for noninstitutionalized ones. **Subject and Methods:** A purposeful sample of two equal groups of 60 elders for each group. **Tools:** Five tools were used in the present study; a structured interview questionnaire sheet, Mini-Mental State Examination (MMSE), Barthel Index scale, Loneliness Scale and Geriatric Depression Scale (GDS). **Results:** 6.7% of the non-institutionalized elderly were having high loneliness feeling, compared with 1.7% of the institutionalized ones. 31.7% of the institutionalized elderly were having mild depression, compared with 43.3% of the non-institutionalized ones. **Conclusion:** Institutionalized ones tend to be older, divorced or widow, with insufficient income, and having a lower perception of own health. **Recommendation:** More recreational and social activities are recommended, with flexibility in the rules and regulations nursing homes. Elderly should be encouraged to be self-dependent.

**Key words:** Elderly, loneliness, Depression, Institutionalized, non-institutionalized and Comparative Study

### Introduction:

The term elderly means an ongoing change of ageing. In easy terms elderly is defined as growing old of a person, meanwhile changes such as social, psychological and physical aspects are revealed as an individual's age. In dealing with the elderly, terms such as gerontology and geriatrics are commonly used. Gerontology means the study of the physical (biological), psychological and social issues related to the elderly. Geriatrics means preventing or managing diseases affecting elderly individuals. Geriatrics deals with offering medicine

and supporting aspects such as nursing to the elderly people (López et al., 2013).

The number of persons aged 60 years or older in the world is projected to grow to nearly two billion by 2050. Persons aged 60 or older currently comprise 10% of the world population, and by 2050, it is projected to reach 21%. In Egypt, the percentage of older people was 4.2 of the total population, according to the last Egyptian census in 1995; this percentage reached 5.8% in 2006 and reached 8.9% in

2016 and may reach 10.9% in 2026 (Gadallah, 2014).

There are so many changes in the human's life due to aging and approaching to the geriatric phase. These include most importantly feelings of loneliness and social isolation, poverty, sense of rejection, trying to find the meaning of life, dependence, despair and hopelessness, fear of death and dying, grieving the death of others, regretting the past and concerns about the deterioration of mind and body. These changes can make special These concerns and approaching to end of life and to death, compels a particular stress on the elderly people, which loneliness and depression are more noticeable among them (corey et al., 2013).

Institutional care includes long-term care services that are supplied or available 24 hours a day in institutions that also serve as places of residency for those receiving care. Therefore „institutional care“ stands for institutions and living arrangements where care and accommodation are provided jointly with a group of people residing in the same premises, or sharing common living areas, even if they have separate rooms. This does not include, however, temporary or short-term stays, such as respite care (Abot-okelo, 2014).

#### **Significance of the study**

Loneliness is common in older people and is associated with adverse health consequences both from a mental and physical health point of view. Loneliness appears to have a significant impact on physical health being linked detrimentally to higher blood pressure, worse sleep, immune stress responses and worse cognition over time in the elderly. (Cohen and Perach, 2015).

Depression is an important public-health problem and one of the leading

causes of disease burden worldwide. Depression is often comorbid with other chronic diseases and can worsen their associated health outcomes. Few studies have explored the effect of depression, alone or as comorbidity, on overall health status. (American Journal of Psychology and Cognitive Science, 2016).

#### **Aim of the study**

*The aim of the study was to* assess loneliness and depression among institutionalized and non-institutionalized elders.

#### **Research questions**

1. What is the prevalence of loneliness and Depression among institutionalized and non- institutionalized elders?
2. What are factors affecting loneliness and Depression among institutionalized and non- institutionalized elders?
3. What are factors affecting cognitive impairment and dependency among institutionalized and non- institutionalized elders?

#### **Research Design**

A comparative cross-sectional design was utilized to contrast loneliness and depression among institutionalized and non- institutionalized elders..

#### **Study Setting**

This study was carried out at Dar El-Walaa in Meet-Ghamr city, Zagazig University Hospitals and El-Ahrar General hospital in Zagazig.

#### **Study Subjects**

The subjects of this study consisted of two equal groups of elderly persons, 60 elders each. One group included elders institutionalized in Dar El-Walaa nursing home. The other group of non- institutionalized elders was recruited from outpatient clinics.

#### **Inclusion criteria:**

- o Aged 65 years and above,
- o Able to communicate.

#### **Exclusion criteria:**

- o Cognitive impairment,

o Mental illness.

Sample size: A purposive sampling technique was used. All available elderly in the institution (60) were recruited, and an equal number was recruited from the clinics.

**Tools of data collection:**

A tool was used to collect the necessary data for achieving the study objectives. Five tools were used to collect the necessary data.

**Tool I: An interview questionnaire sheet** was developed by the researcher after extensive literature review. It was used in data collection. It consisted of five parts: demographic characteristics, data about institutionalized elderly, Medical history, physical status, social activities and elderly home.

**Tool II: Mini – Mental State Examination (MMSE):** This scale was developed by (Folstien, 1999). It was translated into Arabic language by (Elokl, 2008), Validated and tested for its reliability ( $r = .093$ ) by (Abd El moniem, 2012). It was designed for assessing the elder's cognitive function. It consist of 10 item that investigate the memory, orientation to time and place , attention, calculation naming , repetition , registration, language, praxis and copying of a design. This tool will used to exclude patients with mild and severe degree of cognitive impairment. Scoring system: The MMSE scale score is 30 points and classified as follows: Score of 24-30 indicates normal cognitive function. Score of 18-23 indicates mild cognitive impairment. Score of 0-17 indicates severe cognitive impairment.

**Tool III: Barthel Index scale:** The Barthel Index scale was developed by (Malhoney and Barthel 1965) to measure the activities of daily living of elders. This scale was translated into Arabic by (Hallaj 2007), validated and tested for its reliability ( $r = 0.971$ ). The scale consists of 10 questions which assess the person's

abilities in the areas of feeding, moving ( from wheel chair to bed and return), personal toilet, getting on and off toilet, bathing self, walking on level surface, propelling wheelchair, ascending and descending stairs, dressing/undressing, and controlling bowel and bladder. A score of 0 is given when patient cannot meet criteria as defined (dependent), 5 is given when he needs help and 10 is given when he is independent. **Scoring system:** The total score of the scale is (100), are evaluated in the following manner: 0-20 = total dependency, 21-60= severe dependency, 61-90= moderate dependency, 91-99= slight dependency and 100= independence.

**Tool IV: UCLA (University of California, Los Angeles) Loneliness Scale: UCLA loneliness scale (Russell, 1996)** version 3: It was designed to measure one's subjective feelings of loneliness as well as feelings of social isolation. It consists of 20 item scale. It was translated into Arabic language by ( El Desoky, 1996) , validated and tested for its reliability by ( Ebraheem, 2000). **Scoring system** This measured using 4 point they often(4), sometimes(3), rarely(2)& never(1) are Participants rate each item as often (I often feel this way), Sometimes (I sometimes feel this way), Rarely (I rarely feel this way) and Never (I never feel this way). Scoring : Make all O 's =4, all S 's=3, all R 's=2 and all N 's=1. The total score will be classified into mild, moderate and severe loneliness.

**Tool V: Geriatric Depression Scale (GDS):**

A Short Form GDS consisting of 15 questions was developed in 1986 by (Sheikh, & Yesavage, 1986). It was translated into Arabic language and validate tested for its reliability ( $r = .70$ ) by El Husseini (2013). Questions from the long GDS which had the highest correlation with depressive symptoms in validate studies were selected for short

version. **Scoring system:** This measured using 2 point answer by(Yes or No) of the 15 items, 10 indicated prevalence of depression when answered positively, while the rest (question numbers 1, 5, 13) indicated depression when answered negatively. Scores of 0-4 are considered normal, depending on age, education and complaints: 5-8 indicate mild depression, 9-11 indicate moderate depression and 12-15 indicate severe depression.

#### **Content validity**

The prepared tool was revised by three experts from nursing and medical staffs. They reviewed the tools' content for clarity, relevance, comprehensiveness, and understandability. All recommended modifications were applied. Meanwhile, the three scales used have documented validity and reliability.

#### **Reliability**

Reliability of the proposed tools was done by Cronbach's Alpha coefficient test; it was **0.622** for the loneliness scale **.0955** for the Berthel dependence scale.

#### **Field work**

Once permission was obtained from Director of Dar El-Walaanursing home and the Director of the outpatient clinics at Zagazig University Hospital and El-Ahrar General Hospital, the fieldwork was started. The researcher visited the study settings, met with the elderly persons, explained to them the aim of the study as well as the process of collection of the data. They were then invited to participate after being informed about their rights.

The elderly who fulfilled the inclusion and exclusion criteria, and gave their verbal informed consent to participate were interviewed using the interview questionnaire sheet. This was done individually, ensuring total privacy. The questionnaire was read, explained, and choices were recorded by the elder persons themselves. Their relatives provided some help when needed. The work was done in each setting two days per week. The data

collection period lasted for about three months from the beginning of September to the beginning of December 2016.

#### **Pilot study:**

A pilot study was conducted on a sample representing about 10% of the main study sample. It was done to test the clarity and applicability of the tool, and helped to know the time needed for filling the form. It was found that the average time to fill in the interview form ranged from 25 to 30 minutes. Since no modifications were done in the tool, those who shared in the pilot study were included in the main study sample.

#### **Ethical Considerations**

A verbal informed consent to participate was secured from each participant after full explanation of the aim of the study. Participants were informed about their rights to refuse participation, and that they could withdraw at any stage of the data collection interviews. They were also reassured that any information obtained would be confidential and used only for the research purpose. The researcher was ensured maintaining anonymity and confidentiality all collected data.

#### **Statistical design**

Data entry and statistical analysis were done using SPSS 20.0 statistical software package. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations and medians for quantitative variables. Cronbach alpha coefficient was calculated to assess the reliability of the developed tools through their internal consistency. Quantitative continuous data were compared using the non-parametric Mann-Whitney test. Qualitative categorical variables were compared using chi-square test. Whenever the expected values in one or more of the cells in a 2x2 tables was less than 5, Fisher exact test was used instead. In larger than 2x2

crosstables, no test could be applied whenever the expected value in 10% or more

of the cells was less than 5. Spearman rank correlation was used for assessment of the inter-relationships among quantitative variables and ranked ones. In order to identify the independent predictors of loneliness, independence, and depression scores, multiple linear regression analysis was used and analysis of variance for the full regression models was done. Statistical significance was considered at  $p$ -value  $<0.05$

#### Results:

Table (1) demonstrates that The institutionalized elderly were significantly more aged, with mean age 76.2 years, compared to 72.6 years in the non-institutionalized ones ( $p>0.001$ ), with almost equal gender distribution in the two groups. Moreover, more than half of the non-institutionalized elderly were married (58.3%) compared to none in the other group, and the difference was statistically significant ( $p>0.001$ ). Additionally, a higher percentage of them was having sufficient income ( $p>0.001$ ). Table (2) shows that more than half of the elderly in both groups were having diabetes and/or hypertension, with median 2.0 diseases per elderly. Table (3) shows that the score of Barthel independence had statistically significant positive correlations with elderly' score of loneliness and cognitive ability. Their score of depression had statistically significant negative correlations with the scores of independence and loneliness. Mean while, the scores of depression and cognitive ability are negatively correlated ( $r=-0.424$ ). The strongest correlation was between independence and cognitive ability ( $r=0.736$ ). Table (4) shows that elderly' income was the only statistically significant independent positive predictor of loneliness. On the other hand, the Religious practices and numbers of

visiting were negative predictors. This latter was the most influential. The model explains 23% of the variation in the loneliness score. None of the other elderly' characteristics had a significant influence on this score. Table (5) illustrates that the statistically significant independent negative predictors of depression were the number of hobbies, loneliness score, and Barthel independence score. The model explains 32% of the variation in the depression score. None of the other elderly' characteristics had a significant influence on this score.

#### Discussion:

**Concerning the answering of the research question regarding the prevalence of loneliness among institutionalized and noninstitutionalized elders**, the findings of the present study demonstrated a high prevalence of moderate to severe loneliness among both institutionalized and non- institutionalized ones. Although the median score of loneliness was significantly higher among the non- institutionalized, the absolute difference in the median scores was minimal. In agreement with this, **Evangelista et al (2014)** found that the elderly institutionalized in nursing homes in Brazil were having a high perception of loneliness. **Concerning the answering of the research question regarding the factors associated with the feeling of loneliness among the elderly in the present study**, the bivariate analysis showed that the elderly with sufficient income suffered more loneliness. Moreover, income had a positive correlation with the loneliness score, and it was identified as a significant positive predictor of it in multivariate analysis. This could be explained by that the elderly with high income could be used to live more active life, and thus he/she might be more affected by being lonely at this stage of life. In agreement with this, a study

conducted by **Berg et al (2016)** In the Netherlands showed that people who were more restricted in their daily activities tended to have more loneliness feelings. **Concerning the answering of the research question regarding the prevalence of depression among institutionalized and non-institutionalized elders**, the current study found that it was highly among them, with a tendency to more depression among institutionalized ones. Thus, more than two-thirds of institutionalized elderly had moderate to severe depression, compared with only around a half of the non-institutionalized ones. However, the difference was not statistically significant as further confirmed in multivariate analysis. Thus, the status of being institutionalized carries no risk of more depression. Moreover, the institutionalization characteristics had no significant relation with depression. In agreement with this, **Chauhan et al (2016)** showed that age older than 70 years was associated with a significant increase in the prevalence of depression. Nonetheless, a study in Pakistan reported more depressive symptoms among institutionalized elderly (**Azeem and Mahwesh, 2015**). **Concerning the answering of the research question regarding the factors affecting depression among institutionalized and**

**non-institutionalized elders**, the present study demonstrated higher prevalence with age 70 years or older, being currently unmarried, and having any type of disability. These relations were further confirmed in correlation analyses, where positive correlations were revealed between the depression score and elderly age and number of disabilities. A similar relation between depression and advanced age was reported by **Sum et al (2015)**. On the same line, a study conducted by **Kasemy et al (2016)** in Menoufia, Egypt reported that unfavorable employment conditions, being divorced/widow and having low income were among the factors determining depression symptoms among elderly. Additionally, a study by **Beam et al (2016)** in Sweden found a positive correlation between widowhood and late life depression.

#### **Recommendations**

More social activities are needed to prevent feelings of loneliness and depression and improve or decrease cognitive impairment. The elderly should be screened periodically for the main disorders such as loneliness, depression, as well as for cognitive abilities. Health education programs addressing aging changes, related nutritional requirements, potential psychological problems and their prevention.

**Table 1:** Demographic characteristics of elderly in the two study groups (n=120)

Demographic characteristics	Group				X <sup>2</sup> test	p-value
	Institutionalized (n=60)		Non-institutionalized (n=60)			
	No.	%	No.	%		
<b>Age:</b>						
<70	5	8.6	14	23.3	5.07	<b>0.02*</b>
70+	55	91.7	46	76.7		
<b>Range</b>	65.0-85.0		65.0-85.0		U=13.74	<b>&lt;0.001*</b>
<b>Mean±SD</b>	76.2±4.7		72.6±5.1			
<b>Median</b>	76.5		72.0			
<b>Gender:</b>						
Male	31	51.7	30	50.0	0.03	0.86
Female	29	48.3	30	50.0		
<b>Marital status:</b>						
Unmarried#	60	100.0	25	41.7	49.41	<b>&lt;0.001*</b>
Married	0	0.0	35	58.3		
<b>Education:</b>						
None	39	65.0	34	56.7	0.87	0.35
Educated	21	35.0	26	43.3		
<b>Previous job:</b>						
None /housewife	25	41.7	25	41.7	2.95	0.23
Employee	10	16.7	17	28.3		
Worker	25	41.7	18	30.0		
<b>Income:</b>						
Insufficient	32	53.3	15	25.0	10.11	<b>0.001*</b>
Sufficient	28	46.7	45	75.0		

(\*) Statistically significant at p&lt;0.05

(U) Mann-Whitney -test (#) divorced/widow

**Table 2:** Medical history of elderly in the two study groups (n=120)

Medical history	Group				X <sup>2</sup> test	P-value
	Institutionalized (n=60)		Non-institutionalized (n=60)			
	No.	%	No.	%		
<b>Chronic diseases:</b>						
Hypertension	39	65.0	38	63.3	0.04	0.85
Diabetes	37	61.7	31	51.7	1.22	0.27
Cardiac	26	43.3	17	28.3	2.94	0.09
<i>Rheumatic</i>	10	16.7	13	21.7	0.48	0.49
Respiratory	17	28.3	11	18.3	1.68	0.20
Gastric	9	15.0	14	23.3	1.34	0.25
No. of diseases:						
Range	1-5		1-4			
Mean±SD	2.3±0.8		2.1±0.9		U=1.47	0.22
Median	2.0		2.0			
<b>Falls in last 5 yrs:</b>						
No	45	75.0	40	66.7	1.01	0.32
Yes	15	25.0	20	33.3		
Time (years):						
Range	1.0-6.0		0.0-5.0			
Mean±SD	3.3±1.5		2.3±1.5		U=3.75	0.053
Median	3.00		2.00			
No. of falls:						
Range	1.0-2.0		1.0-8.0			
Mean±SD	1.2±0.4		2.5±2.2		U=4.83	<b>0.03*</b>
Median	1.00		1.50			
<b>Sequels:@</b>						
None	4	26.7	7	35.0		
Fissure	3	20.0	1	5.0		
Fracture	7	46.7	10	50.0	--	--
Immobility	1	6.6	2	10.0		

(\*) Statistically significant at p<0.05

(--) Test result not valid

(U) Mann-Whitney –test

(@) Not mutually

exclusive



**Table 3:** Correlation matrix of Barthel, loneliness, depression, and cognitive impairment scores

Scales	Spearman's rank correlation coefficient			
	Barthel Independence	Loneliness	Depression	Cognitive Ability
Barthe Independence				
Loneliness	.226*			
Depression	-.512**	-.229*		
Cognitive Ability	.736**	.218*	-.424**	

(\*) Statistically significant at  $p < 0.05$ (\*\*) Statistically significant at  $p < 0.01$ **Table 4:** Correlation of elderly Barthel, loneliness, depression, and cognitive impairment scores and their characteristics

Scales	Spearman's rank correlation coefficient			
	Barthel Independence	Loneliness	Depression	Cognitive Ability
Age	-.660**	-.099	.363**	-.600**
Education level	.262**	.002	-.127	.460**
Income	.112	.257**	-.139	.081
Duration in institution	-.506**	.057	.177	-.398**
No. of chronic diseases	-.339**	.068	.112	-.246**
No. of disabilities	-.829**	-.270**	.442**	-.607**
Frequency of religious practices	.470**	.189*	-.299**	.460**
No. of visitors	.248**	.441**	-.166	.313**
No. of hobbies	.492**	.231*	-.451**	.469**

(\*) Statistically significant at  $p < 0.05$   
p < 0.01.

(\*\*) Statistically significant at

**Reference**

- López, O.C., Blasco, M.A., Partridge, L., et al, (2013):** The hallmarks of aging. Jun 6;153(6):1194217.doi:10.1016/j.cell.05.039.
- Gadallah, M. (2014):** Draft country profile on ageing: Egyptian case study. Available at: <http://www.un.org/esa/socdev/ageing/documents/workshops/Vienna/egypt.pdf>. [Accessed 22 June].
- Corey M, Corey G, Corey C. Groups, (2013):** Process and practice. South-Western: Cengage Learning.
- Abot-okelo, M. (2014):** Loneliness among elderly people in Finnish health care institutions. Available at: [https://www.theseus.fi/bitstream/handle/10024/74665/Thesis\\_work\\_1.pdf;sequence=1](https://www.theseus.fi/bitstream/handle/10024/74665/Thesis_work_1.pdf;sequence=1)
- Evangelista, M.S., Ciccone, G., Omedé, P. et al, (2014):** Autologous Transplantation and Maintenance Therapy in Multiple Myeloma. *N*

8. *Engl Journal Med* 371:895-905. September 4, DOI: 10.1056/NEJMoa1402888.
9. **Berg,M.D,Zwam,M.D., Diederik, W., et al, (2016):** Endovascular thrombectomy after large-vessel ischemic stroke: a meta-analysis of individual patient data from five randomized trials. Volume 387, Issue 10029, 23–29 April, Pages17231731.[https://doi.org/10.1016/S0140-6736\(16\)00163-X](https://doi.org/10.1016/S0140-6736(16)00163-X).
10. **Chauhan, P. et al, (2016):** A study on prevalence and correlates of depression among elderly population of rural South India. *International Journal of Community Medicine and Public Health,Int J Community Med Public Health*. Jan; 3(1):236- 239. DOI: 10.18203/2394-6040.
11. **Azeem, F., and Mahwesh, A.N. (2015):** Resilience, Death Anxiety, And Depression Among Institutionalized and Noninstitutionalized Elderly. *Pakistan Journal of Psychological Research*, Vol. 30, No.1, 111-130.
12. **Sum,S., Saboor,M., & Sahaf, R. (2015):**Older People, Loneliness And Depression Feeling Of Loneliness And Depression Among Older Adults With Higher *Educational Achievements*. *Medicinskiglasnik / str.* 31-42. [http://cigotars.radionicakrug.com/sites/default/files/05%20%20Medicinskiglasnik%20-%20Prelom%2056.30/2017 at 12 Pm](http://cigotars.radionicakrug.com/sites/default/files/05%20%20Medicinskiglasnik%20-%20Prelom%2056.30/2017%20at%2012%20Pm)
13. **Kasemy, Z.A., Salama, A.A., Abo Salem, M.E., et al, (2016):** Factors related to depression symptoms among working women in Menoufia, Egypt.*J Egypt Public Health Assoc.* Dec;91(4):163-168. doi: 10.1097/01.EPX.0000508417.45250.9f
14. **Beam, M.J., Hertel, J., Sun, T., et al, (2016):** The spotted gar genome illuminates vertebrate evolution and facilitates human-teleost comparisons. 48, 427–437. doi:10.1038/ng.3526.