

Assessment of Depression in Elderly. Is Perceived Social Support Related? A Nursing Home Study

Depression and Social Support in Elderly

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Abstract Geriatric depression is more common in nursing homes and social support is a mechanism that mitigates the stressors of life factors and simultaneously promotes wellness and health. The purpose of the study was to assess the levels of depression and social support among elderly in nursing homes. During the period February 2016–March 2016 170 elderly residents in nursing homes completed the Geriatric Depression Scale-15 (GDS-15) and the Multidimensional Scale of

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Perceived Social Support (MSPSS). Statistical analysis was conducted with IBM SPSS Statistics 23. 37, 1% of the sample had depressive symptoms. Depression is statistically correlated with age and it is affected by the years of education ($p = 0.003$), the number of the children ($p = 0.006$), whether the elderly person is bedridden or not ($p < 0.001$), the frequency of visits by family members ($p < 0.001$) and whether the elderly performs activities outside the nursing home (0.001). Higher GDS score had those who were illiterate (6.41), those with one or no children (6.82 and 6.59 respectively), the bedridden (6.70), people without visits from relatives (7.69) and without activities outside (5.64). Also, social support is affected by the family status ($p < 0.001$), the number of children ($p < 0.001$), the frequency of visits by relatives ($p < 0.001$) and whether the elderly performs activities outside the foundation ($p < 0.008$). Higher MSPSS score had those who were married (61.60), those who had four children (63.50), people who accept visits from relatives every day (64.58) and people who do activities outside the institution (58.07). The appearance of this increased rate of depression symptoms in this elderly population leads to the need for more aid social support.

Keywords Depression • Elderly • Nursing home • Social support

1 Introduction

In modern societies of industrial countries, the phenomenon of population aging is particularly intense [1, 2]. It is estimated that by 2040, 22% of the total population will belong to the age group of over 65. The rapidly increasing number of older people is due to several factors such as the migration, urbanization and, mainly, the reduction of the mortality rate and births [3].

Aging is a non-pathological biological process that affects the human body, but differs from one person to another. It is often difficult to separate the physical changes that occur due to aging from those caused by chronic diseases. Most diseases for the elderly are chronic and, apart from medical procedures, psychological and social support may be needed through a wide range of services, home care or long-term care in special units [4]. When elderly people admitted to hospitals or nursing homes, interactions with family and community are severely limited [5]. This sudden environmental change brings the elderly faced with several stress factors, such as treatment regimens, diagnostic tests and unknown nurses and doctors. This unknown routine does not allow the elderly to control and understand the new environmental conditions. Therefore, when the elderly are no longer able to look after themselves, nurses need to help them in activities which cannot be performed, to provide health education and emotional support [6].

1.1 Depression in Elderly People

In people over 65, depression is the most common mental disorder, which affects one in seven elderly [7, 8]. However, geriatric depression is one of the most underdiagnosed and inadequately treated diseases which have physical, social and psychological consequences. Geriatric depression is very common in hospitals and nursing homes [9, 10]. Depression robs the satisfaction of life and reduces life expectancy while loss of executive functions includes disturbances in the organization, the removal as well as in designing [11]. The elderly with a higher risk of developing depression are women, unmarried, those who live alone and those with a physical disability or illness. If depression in the elderly coexists with other diseases, the risk of early insertion into nursing homes is increased [9].

1.2 Effect of Social Support in Depression

The concept of aging is linked to the contempt and dislike. The elderly are marginalized while it is widely considered that they are unreliable and unable to learn due to the loss of their memory. Psychological distress such as depression or anxiety and stress are effectively reduced with the help of social support. This leads to a variety of physical health benefits and adaptation in diseases such as diabetes mellitus, heart disease, pulmonary disease, arthritis and cancer [12]. Even if social support cannot eliminate the stressful situation, it allows elderly people to be more optimistic. Therefore, social support helps elderly people to cope with difficult situations, creating new solutions and reducing their despair [13, 14].

2 Methods

2.1 Aim

The aim of the study was to evaluate depression in elderly as well as to assess the perceived social support.

2.1.1 Design

In this analytic study 170 elderly people from nursing homes in the broader area of Epirus were asked to take part. The inclusion criteria were: (a) aged >60 years, (b) ability to communicate in Greek language, (c) ability to write and read the Greek language. The exclusion criteria were: (a) elderly people with psychiatric illness. The study was conducted from February 2016 to March 2016.

2.1.2 Data Collection

Elderly residents who participated in the study were given two anonymous questionnaires. In the first part, questions related to sociodemographic data were contained followed by the Geriatric Depression Scale-15 (GDS-15) and the Multidimensional Scale of Perceived Social Support.

2.2 *The Multidimensional Scale of Perceived Social Support (MSPSS)*

This questionnaire was developed [15] to measure the perceived social support and it is consisted of 12 items referred to three sources of support: family, friends and a special person. Each group is consisted of four items. This questionnaire scores a Likert type scale ranging from 1 (absolutely disagree) to 7 (absolutely agree). The sum of each group gives the sub-scale score. To construct the total score of the scale, all the responses on 12 questions is required to be added. Therefore, the score ranges between 12 and 84. The higher the score, the higher the perceived social support. It takes 3 min to complete. This questionnaire has been translated and cultural adapted in Greek population with Cronbach's α 0.804 [16].

2.3 *The Geriatric Depression Scale-15 (GDS-15)*

It is a valid and handy tool which has been developed by Yesavage et al. [17] and has been widely used [18, 19], for assessing elderly depression. It includes 15 closed questions where the elderly respond with "yes" or "no". It takes approximately 5 min to complete. The answer "yes" in items 2, 3, 4, 6, 8, 9, 10, 12 and 14 and the answer "no" in questions 1, 5, 7, 11 and 13 suggest depression. Answers "yes" are encoded with 1 while answers "no" are coded with 0. Therefore, the score ranges from 0 to 15 (0–5: no depression, 6–10: moderate depression, 11–15: severe depression). To calculate the total score of the scale, the score of the 15 responses is required to be summed after the coding of questions 1, 5, 7, 11, 13 has been reversed. The internal consistency has been tested in Greece by Fountoulakis et al. [20] with Cronbach's $\alpha = 0.94$.

2.4 *Statistic Analysis*

To describe the demographic characteristics and questions about social support and depression in the elderly, the basic position and dispersion measures, frequencies

and relative frequencies were calculated. For the statistical association between social support and the onset of depressive symptoms, parametric correlation coefficient Pearson r was used. To compare the social support and the occurrence of depressive symptoms between groups, the parametric t test for two groups and the non-parametric tests Mann-Whitney and Kruskal-Wallis were used. P-value less than 0.05 were considered statistically significant while for statistical analysis the statistical package IBM SPSS Statistics 23 was used.

2.5 Ethics

The survey responded to the fundamental ethical principles governing the investigation. More in detail, permissions required for the use of the questionnaires were ensured. Permission of the administration of the nursing home was secured, also. Subjects were informed in order to complete the questionnaires. In respect of information related to the elderly, complete confidentiality was observed and the security of data was preserved. Finally, elderly people were informed that their anonymity will be guaranteed and that the results obtained will be used only for the purpose of the research.

3 Results

In this study, 170 elderly people participated. Of these, 33.5% were male while the mean age was 79.52 (± 7.135). 11.8% of elderly people were married while 24.1% had no children. A percent of 74.7% was not bedridden, 31.2% had visits from relatives 5–10 times/month while 94.1% was not staying with relatives annually. At the same time, on the question about activities outside the nursing home 77.1% answered negatively (Table 1).

The basic descriptive measures of location and dispersion of depression and perceived social support are presented in Table 2.

Regarding the severity of geriatric depression, 107 elderly people (62.9%) had “no depression”, 52 (30.6%) had “moderate depression” while 11 (6.5%) had severe depression. Therefore, in total 37.1% of the residents suffered by depression.

3.1 Correlations

The statistical analysis showed that the total GDS-15 score was significantly correlated with the total MSPSS score. In particular, it was revealed that there is a moderate negative correlation between the two scales (Pearson's $r = -0.552$; $p < 0.001$).

Table 1 Demographic and general characteristics of the participants

		Frequency	(%)
Gender	Male	57	33.5
	Female	113	66.5
Age	79.52 (± 7.135)		
Years of education	0	39	22.9
	2–7	94	55.3
	8–13	23	13.5
	>13	14	8.2
Family status	Unmarried	23	13.5
	Married	20	11.8
	Divorced	21	12.4
	Widowed	106	62.4
Number of children	None	41	24.1
	1	22	12.9
	2	41	24.1
	3	39	22.9
	4	14	8.2
	>4	13	7.6
Job	Non manual work	26	15.3
	Manual work	28	16.5
	Farmer	77	45.3
	Household	39	22.9
Bedridden	No	127	74.7
	Yes	43	25.3
Visits by relatives	None	16	9.4
	<5 times/month	48	28.2
	5–10 times/month	53	31.2
	10–20 times/month	29	17.1
	Every day	24	14.1
Staying with relatives annually	Not at all	160	94.1
	Often	9	5.3
	Poorly	1	0.6
Activities outside the nursing home	No	131	77.1
	Yes	59	22.9

Table 2 Basic statistics measures about perceived social support and depression among elderly people

Score	Mean	SD	Minimum	Maximum
MSPSS	54.44	11.315	13.00	80.00
GDS-15	4.98	3.191	0.00	14.00

Also, it was revealed that there is a low positive correlation between GDS-15 score and age (Pearson's $r = 0.174$; $p < 0.023$). GDS-15 score was significantly affected by years of education ($p = 0.003$), number of children ($p = 0.006$),

frequency of visits from relatives ($p < 0.001$) and activities outside the nursing home ($p < 0.001$). Higher GDS-15 score was noted by subjects with 0 years of education, those with none or one child, the bedridden, those who had no visits from relatives and no activities outside the nursing home.

As far as the correlation of MSPSS score with demographic characteristics is concerned, it was revealed that the total MSPSS score is not statistically correlated with age (Pearson's $r = -0.074$; $p = 0.337$). In contrast, the total MSPSS score was significantly affected by family status ($p < 0.001$), number of children ($p < 0.001$), frequency of visits from relatives ($p < 0.001$) and activities outside the nursing home ($p < 0.008$). Higher MSPSS score was noted by married, those with four children, those who had daily visits from relatives and those with activities outside the nursing home (Table 3).

4 Discussion

This study aimed to identify the perceived social support and depression levels among 170 elderly individuals who lived in nursing homes in the broad area of Epirus. In addition, the study aimed to explore correlations between social support and depression. The MSPSS was used in Greek elderly patients for first time. It was constructed in order to assess the perceived social support from family, friends and a special person. According to our findings, the presence of depression is common among elderly residents of nursing homes. In particular, social support can reduce depression levels in elderly.

This study showed that on average elderly persons experience depression. In particular, 30.6% and 6.5% of residents suffered from “moderate depression” and “severe depression” respectively. The reported levels of depression vary widely in elderly residents [21]. Many studies explore the frequency of depression among elderly. In the studies of Stylianopoulou et al. [22] and Argyropoulos et al. [23] 73.4% and 38.6% referred “moderate depression” while 26.6% and 9.5% “severe depression” respectively. In another study [24], 23.9% of residents referred “moderate depression” while the levels of severe depression was high (18.3%).

In current study, a major risk factor associated with depression was the advanced age. More specifically, the higher the age the higher the levels of depression. Similar results are mentioned in several studies [22, 25].

Important factors that affect depression levels are the number of children and the years of education. Argyropoulos et al. [23] found, also, that the low educational level might contribute to increased depression. Regarding the role of children it appears that as the number of children grows, the depression felt by elders is reduced. Stylianopoulou et al. [22] and Unsar et al. [2] highlight, also, the crucial role of children in the development of depression. Chao et al. [26] mention that children is the primary source of support even though the support is not the one they expect.

Table 3 Correlation of demographic characteristics with GDS-15 and MSPSS

	GDS-15				MSPSS			
	Frequency	Mean	SD	P	Mean	SD	P	
Gender	Male	4.68	3.429	0.389 ^a	53.63	12.785	0.512 ^a	
	Female	5.13	3.069		54.84	10.534		
Years of education	0	6.41	3.338	0.003 ^b	53.72	12.092	0.879 ^b	
	2-7	4.79	2.976		54.20	10.862		
	8-13	3.48	3.013		54.70	9.068		
	>13	4.79	3.262		57.57	15.530		
Family status	Unmarried	6.00	3219	0.062 ^b	48.30	13.620	<0.001 ^b	
	Married	3.70	2598		61.60	6.176		
	Divorced	6.10	3.986		48.29	11.727		
	Widowed	106	4.78	3.024	55.63	10.349		
Number of children	0	6.59	3263	0.006 ^b	46.05	13.662	<0.001 ^b	
	1	6.82	3.647		49.82	9.490		
	2	4.29	2.866		56.46	7.820		
	3	3.54	2.522		57.69	7.226		
	4	3.71	2.367		63.50	9.501		
>4	13	4.69	2.394		62.77	7.574		

Job	No manual work	26	4.15	3.107	0.079 ^b	57.39	12.020	0.509 ^b
	Manual work	28	5.04	4.096		52.21	11.911	
	Farmer	77	4.75	3.018		54.65	9.737	
Bedridden	Household	39	5.95	2.695		53.64	13.176	
	No	127	4.40	3.053	<0.001 ^a	55.10	11.419	0.080 ^c
	Yes	43	6.70	2.996		52.46	10.89	
Visits from relatives	Not at all	16	7.69	2.626	<0.001 ^b	38.43	8.049	<0.001 ^b
	<5 times/month	48	6.21	3.549		50.41	11.81	
	5-10 times/month	53	4.06	2.878		54.94	6.895	
	10-20 times/month	29	3.66	2.256		60.58	7.173	
	Daily	24	4.38	2.618		64.58	8.697	
Activities outside the nursing home	No	131	5.64	2.956	<0.001 ^c	53.35	10.67	0.008 ^c
	Yes	39	2.77	2.978		58.07	12.71	

^at-test

^bKruskal-Wallis test

^cMann-Whitney test

From this study, also, it was revealed that social support is not significantly correlated with age, but is affected significantly by marital status, the number of children, the frequency of visits received by the residents and the activities carried out by the elderly outside the nursing home. We found that there is risk of developing depression among unmarried or if the elderly subjects do not have visits from their family. This indicates that there is a strong association between lack of family support and depression. We recommend therefore the importance for elderly to ensure family support for preventing depression. Drageset et al. [27] argue that social support is positively correlated with depression while according to Han et al. [28] social support received by a depressed person can help in relieving depressive symptoms. Unsar et al. [2] emphasize to the importance of family support or living with a spouse. Simsek et al. [29] found that elderly who were living in nursing homes experienced worse quality of life than those living at their home with their children or a spouse. Loneliness and depression is strongly associated with a poor social network [30, 31]. This might be related to the emotional benefit of social support.

4.1 Limitations

As already mentioned, the study was conducted in the broad area of Epirus. Thus, we cannot generalize these results for all elderly residents of nursing homes. If the geographic area and the sample were larger, the findings would be more reliable. In addition, elderly completed the questionnaires with the presence of the rest residents and staff. However, the fact that the results agree with the major part of the literature limit the bias.

5 Conclusion

Through this study we found a significant negative correlation between GDS-15 score and MSPSS score. High GDS-score was noted by residents with advanced age, low educational level, those without children, without visits by relatives and, finally, those who long stay in bed. Higher MSPSS score was found among married elderly, those with children and visits by relatives and subjects who had activities outside the nursing home. Thus, these findings helps to better understand the needs of older people who have symptoms of depression. These elements can help to reinforce the social support which in turn can help elderly people cope with depression.

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