Anxiety and Depression in Lone Elderly Living at Their own Homes & Going to Geriatric Clubs Versus Those Living at Geriatric Homes

or

Anxiety and Depression in Lone Elderly

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ABSTRACT

Anxiety and depression are common in elderly. Studies have shown a relatively low prevalence of anxiety disorders in older individuals. While, other studies have shown that among elderly, anxiety disorders occur two to seven times more often than depression problems. The rate of anxiety disorders may be even higher among elderly living at institutional settings.
The aim of this study is to evaluate the prevalence of anxiety & depression in lone elderly living at their own homes & going to geriatric clubs regularly or living at geriatric homes.

Subjects and method: 164 lone elderly participants from geriatric clubs (group I) & 168 lone elderly participants from geriatric homes (group II) were included in this study. Hamilton Anxiety Scale & Hamilton Depression Rating Scale were used for detection of anxiety & depression respectively.

Results were as follow: The co-occurrence of anxiety and depression is 34.1% & 57.1% in group I and group II respectively, while depression per se is 22.0% & 23.8% and anxiety per se is 2.4% & 1.2% in group I & group II respectively ($p<0.001$). Living at geriatric homes and age group 60 to 70 are independent risk factors for anxiety, depression or mixed anxiety

and depression. While, male gender is an independent risk factor for depression**.**

Conclusion: In lone elderly, living at institutional settings such as geriatric homes is an independent risk factor for anxiety, depression or mixed anxiety and depression. Mixed anxiety and depression is more prevalent than anxiety or depression per se.

Key words: elderly; anxiety; depression

Introduction

With the growth of aging population in the community, mental health problems among elderly are receiving more attention. Studies have shown a relatively low prevalence of anxiety disorders in older individuals [1, 2]. While, other studies have shown that among elderly, anxiety disorders occur two to seven times more often than depression problems. This suggests that anxiety disorders are real and relatively common problems among elderly.

The overall prevalence rate of all anxiety disorders among adults aged 65 and older is 5.5%. The rate of anxiety disorders may be even higher among elderly living at institutional settings such as nursing homes. Older women are twice more prone to anxiety disorders than older men (ratio of 2:1). Older adults are more susceptible than young and middle aged adults to experience depression problems along with an anxiety disorder [3]. There are several possible reasons why anxiety disorders have not achieved prominence in the field of geriatric psychiatry.

Firstly, despite their frequency in the community, late-life anxiety disorders per se are not common in mental health settings. When they do occur in specialist practice, they are usually co-morbid with major depressive disorder, and the depression is usually the primary reason for referral and the primary focus of treatment. Secondly, older people with anxiety do not meet criteria for a specific disorder [4, 5].

It also reflects the fact that existing diagnostic criteria frequently do not capture the quality of anxiety in elderly persons. A fairly common manifestation of anxiety in late life is a cluster of symptoms characterized by anxious mood; tension; and diffuse somatic complaints, such as dizziness, shakiness, and nausea. Many older individuals with these symptoms, however, do not endorse multiple, uncontrollable worries occurring on more days than not, which is the defining feature of DSM-IV generalized anxiety disorder (GAD) [6].

A third possible reason for the relative lack of interest in anxiety in elderly people is the age at onset of these disorders [2]. Fourthly, phobic disorders, which account for a major proportion of anxiety disorders in late life, may be less likely to come to psychiatric attention in older than in younger people [4]. Finally, "ageist" assumptions may hinder the detection and management of anxiety in late life. For example, agoraphobia developing after a fall or a sudden medical

event, such as myocardial infarction or stroke, may be dismissed by the affected person, family members, or healthcare workers as an "age-appropriate" response to the event [4].

Subjects and Methods

A cross sectional study was done to evaluate the prevalence of anxiety and depression in lone elderly aged 60 years or more. They are living at their own homes and going to geriatric clubs regularly as Elwaily, Elshams and Eltayaran (group I) or living at geriatric homes as Elsafa, Elmarwa and Oly Elalbab (group II). Both geriatric clubs and geriatric homes are present in Cairo. Geriatric homes are residential homes where the elderly live with their peers and are helped in their activity of daily living and instrumental activity of daily living by trained workers. Demented subjects or the completely dependent ones were excluded from this study. By hypothesizing a normal distribution at the mean values on the basis of 0.5% precision and 0.5 alpha level, sample size of at least 110 subjects from each group would be necessary.

The survey continued until 168 and 164 subjects participated from the geriatric homes and geriatric clubs respectively. The duration of survey was 6 months starting august 2005. Hamilton Anxiety Scale (HAMA) was used in this study [8]. It is a scale used for detection of anxiety in addition to quantifying the severity of anxiety symptomatology. It consists of 14 items, each defined by a series of symptoms. Each item is rated on a 5-point scale, ranging from 0 (not present) to 4 (severe). The total score is 0 – 17 for normal individual, 18 – 24 for mild anxiety, 25 – 29 for moderate anxiety and $\geq$ 30 for severe anxiety.

Hamilton Depression Rating Scale was used for detection of depression [9]. It provides an indication of depression and, over time, provides a valuable guide to progress. Classification of symptoms can be scored as; 0 = absent, 1 = doubtful or trivial and 2 = present. Classification of symptoms where more detail can be obtained can be expanded to; 0 = absent; 1 = mild; 2 = moderate; 3 = severe and 4 = incapacitating. In general the higher the total scores the more severe the depression. HAM-D total score is 10-13 for mild depression; 14-17 for mild to moderate and >17 for moderate to severe depression.

Statistical analysis

Data was coded for analysis using SPSS 10th version (Statistical Package for Social science). χ^2 test was used for categorical data. P-value < 0.05 was considered statistically significant. Logistic regression analysis was used for multivariate analysis. The multiple logistic regression coefficients were calculated by the maximum likelihood method. These coefficients describe the independent relationships between variables. They can be used for calculation of probabilities of different levels of the dependent variable.

Results

One hundred sixty four subjects (134 females and 30 males) and one hundred sixty eight subjects (134 females and 34 males) participated from geriatric clubs and geriatric homes respectively. Their ages are ranging from 60 to 80.

Table 1 Baseline characteristics

	Group I (N=164)	Group II (N=168)	P-Value
Age (mean ±S.D)	65.0±4.5	66.0±5.5	0.2
Female n (%)	134 (81.7%)	134 (79.8%)	0.9
Females in the age group 60 to 70	95 (70.9%)	87 (64.9%)	0.06
Males in the age group 60 to 70	12 (40.0%)	10 (29.4%)	0.18
Smoking n (%)	29 (18.0%)	30 (18.0%)	1.0
Anxiety in females	52 (38.8%)	82 (61.2%)	0.001
Anxiety in males	6 (20.0%)	16 (47.0%)	0.09
Depression in females	76 (56.7%)	108 (80.6%)	< 0.001
Depression in males	15 (50.0%)	28 (82.4%)	0.023

As shown in table 1, females in group II have significant anxiety (p=0.001) as well as depression (p<0.001). While males in group II have significant depression (p=0.023).

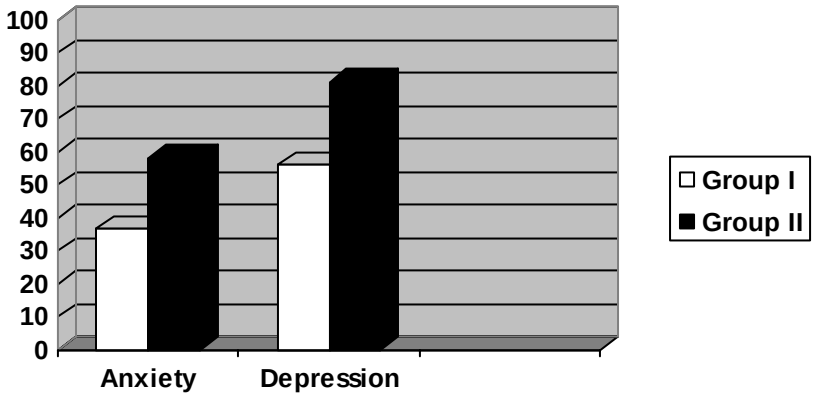

Figure 1 Prevalence of anxiety and depression in group I and group II

As shown in figure 1, the prevalence of anxiety in group I is 36.6% (34.1% mild, 1.2% moderate and 1.2% severe) and in group II is 58.3% (47.6% mild, 6.0% moderate & 4.8% severe) ($p<0.001$). The prevalence of depression in group I is 56.1% (25.6% mild, 13.4% mild to moderate and 17.1% moderate to severe) and in group II is 81% (17.9% mild, 17.9% mild to moderate and 45.2% moderate to severe) ($p<0.001$).

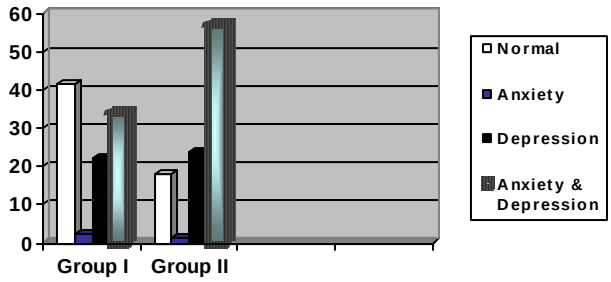

Figure 2 Normal, anxiety, depression, or mixed anxiety and depression in group I and group II

In figure 2, the co-occurrence of anxiety and depression is 34.1% and 57.1% in group I and group II respectively, while depression per se is 22.0% & 23.8% and anxiety per se is 2.4% and 1.2% in group I and group II respectively ($p<0.001$).

In group I, the significant manifestations of anxiety in males are autonomic symptoms ($p<0.001$). While in females, the significant manifestations of anxiety are fear ($p=0.036$) and somatic muscular complaints ($p=0.008$). In group II, the significant manifestations of anxiety in males are insomnia ($p=0.040$), somatic muscular complaints ($p=0.038$), somatic sensory complaints ($p=0.003$), genitourinary symptoms ($p<0.001$), autonomic symptoms ($p=0.007$) and behavioral symptoms ($p=0.025$). While in females, the significant manifestations of anxiety are the anxious mood ($p<0.001$), cardiovascular symptoms ($p=0.012$) and gastrointestinal symptoms ($p=0.021$).

In group I, the significant manifestations of depression in males are depressed mood ($p=0.011$), guilt feeling ($p<0.001$) & interrupted sleep ($p<0.001$). While in females, the significant manifestations of depression are somatic anxiety symptoms ($p=0.001$) and gastrointestinal symptoms ($p=0.013$). In group II, the significant manifestations of depression in males are depressed mood ($p<0.001$), guilt feeling ($p<0.001$), interrupted sleep ($p<0.001$) and weight loss ($p=0.033$). While in females, the significant manifestations of depression are somatic anxiety symptoms ($p=0.039$) and gastrointestinal symptoms ($p<0.001$).

Table 2 Multivariate logistic regression analysis of risk factors for depression

Variables	Regression coefficient (B)	Standard Error of B	P value	Odds Ratio	Confidence Interval
Ger. Homes	1.107	0.339	0.001	3.0	1.6 – 5.9
Females	-0.905	0.459	0.049	0.4	0.2 – 1.0
Older Age	-0.965	0.358	0.007	0.4	0.2 – 0.8

Ger. (Geriatric)

In table 2 multivariate logistic regression analysis was done in which variables as age, gender, residence either at the individual own homes or geriatric homes were included. It revealed that living at geriatric homes, male gender and age group 60 to 70 are at higher risk for developing depression than those living at their own homes and going to geriatric clubs, female gender and age group above 70.

Table 3 Multivariate logistic regression analysis of risk factors for anxiety

Variables	Regression coefficient (B)	Standard Error of B	P value	Odds Ratio	Confidence Interval
Ger. homes	3.958	0.789	0.000	5.018	2.9 – 9.9
Older Age	-0.992	0.277	<0.001	0.4	0.971 – 0.988

In table 3 it was revealed that the independent risk factors for anxiety are living at geriatric homes and age group 60 to 70.

Table 4 Multivariate logistic regression analysis of risk factors for mixed anxiety and depression

Variables	Regression coefficient (B)	Standard Error of B	P value	Odds Ratio	Confidence Interval
Ger. Homes	1.684	0.309	<0.001	5.4	2.9 – 9.9
Older Age	-0.932	0.277	0.001	0.4	0.2 – 0.7

In table 4 it was revealed that living at geriatric homes and age group 60 to 70 are at higher risk for developing mixed anxiety and depression than those living at their own homes and age group above 70.

Discussion

In this study, it was found that anxiety and depression are more prevalent in group II than in group I. Also depression is more common than anxiety in lone elderly. The prevalence of depression is 56.1% & 81% in group I and group II respectively ($p<0.001$), while, the prevalence of anxiety is 36.6% & 58.3% in group I and group II respectively ($p<0.001$). The co-occurrence of anxiety and depression is 34.1% & 57.1% in group I and group II respectively, while depression per se is 22.0% and 23.8% and anxiety per se is 2.4% and 1.2% in group I and group II respectively ($p<0.001$).

There are differences between studies regarding the prevalence of depression and anxiety in elderly. These differences are probably due to the differences between communities. As regard depression, American Association of Geriatric Psychiatry found that depression affects 15 percent of adults older than 65 in the United States [10]. While regarding anxiety, there are two recent articles address the issue of anxiety in elderly persons. Le Roux et al. (2005)[11] found that approximately 25% of subjects reported onset of anxiety after the age of 60 years. While in the study done by Lenze et al. (2005)[12], this figure was close to 50%. These clinical data, however, stand in contrast with data from a recent community-based epidemiologic study finding that fewer than 7% of older persons with anxiety reported onset of the disorder after the age of 60 years[13].

The co-occurrence of anxiety and depression in elderly patients is a true fact. There is a close association between anxiety and depression. The strength of this association in older persons is detected by Brenes et al. (2005)[14] and Gagnon et al. (2005)[15] who, in quite different studies, found that anxiety had a much stronger association with depression than with any of the other variables that were measured. Moreover, not only is there a high rate of concurrence of generalized anxiety with depressive disorders & a considerable symptomatic overlap between anxiety and depressive disorders, but there is also frequent progression of anxiety to depression over time. [4,5,16]

The rates of depression and anxiety disorders are higher both in older adults and in those living in institutional settings [3]. As detected in this study, living at geriatric homes and age group 60 to 70 are independent risk factors for developing anxiety, depression and mixed anxiety and depression.

This can be explained by geriatric homes which can be described as a prison for elderly, in which they become deconditioned and lose their ability to do their usual instrumental activity of daily life, together with the lack of privacy, social activity and emotional support. They also suffer from negative life events. On the other hand, elderly living at their own homes and going regularly to geriatric clubs walk every morning to the club, share in social activity and voluntary work. They feel that their lives have a meaning and an aim.

Regarding the age group 60 to 70, the elders at this age start to change their lives; they retire & suffer from shrinkage of their social activities and their roles. This represents a sort of stress on the elderly resulting in anxiety and depression. In Egypt, there is shrinkage in the role of elderly men more than elderly women after the age of 60. In addition, elderly men try to mask their weakness and try to tomb it inside themselves. These make them more prone to depression than females. This is not seen in elderly above 70 years as they accommodate their lives.

What is mentioned before can explain why male gender in this study is an independent risk factor for depression. Inspite of the results of univariate analysis which revealed that in geriatric homes females have significant anxiety ($p=0.001$) as well as depression ($p<0.001$). This finding appeared in univariate analysis not in multivariate logistic regression analysis. This can be explained by most of female participants (70.9% of females in group I and 64.9% of females in group II) were in the age group 60 to 70 which is an independent risk factor for anxiety or depression. Also this is related to their residence at geriatric home which is an independent risk factor for anxiety or depression.

Not only is anxiety highly prevalent in geriatric homes but also the manifestations of anxiety are more in elderly living at geriatric homes than in those living at their own homes and going to geriatric clubs regularly. The characteristic manifestations of anxiety in elderly men living at geriatric homes are insomnia, somatic muscular complaints, somatic sensory complaints, genitourinary symptoms, autonomic symptoms and behavioral symptoms. In women, the significant manifestations of anxiety are the anxious mood, cardiovascular symptoms and gastrointestinal symptoms. While in elderly men living at their own homes and going to geriatric clubs, the significant manifestations of anxiety are autonomic symptoms. In women, the significant manifestations of anxiety are fear and somatic muscular complaints.

The manifestations of depression are the same in elderly living at geriatric homes as in those living at their own homes and going to geriatric clubs regularly. That is in addition to weight loss which occurs in elderly men living at geriatric homes. It occurs mostly due to loss of appetite occurring due to depression per se or due to limited types of food delivered at geriatric homes.

Conclusion

Anxiety and depression are more prevalent in elderly living at geriatric homes than in elderly living at their own homes and going to geriatric clubs regularly. Mixed anxiety and depression is more common than anxiety or depression per se. Living at geriatric homes is an independent risk factor for anxiety, depression or mixed anxiety and depression. Age group 60 to 70 is an independent risk factor for anxiety, depression or mixed anxiety and depression. Male gender is an independent risk factor for depression.

Recommendations

Screening the lone elderly for anxiety and depression is mandatory to pick up individuals who have these problems. Depression and anxiety are not just conditions that occur when people get older, but rather, they are medical illnesses and they may also be related to medical illnesses. So, further studies are required to evaluate the effect of these medical illnesses on geriatric psychiatry. Health education (about the manifestations of anxiety and depression in elderly) for anyone dealing with an elderly is a must. Attention must be paid to the age group 60 to 70 as they are more prone to anxiety, depression and mixed anxiety and depression. Attention must be paid to lone elderly males, as they are susceptible to depression. Geriatric homes in Egypt must be replaced by well planned homes with gardens under supervision of geriatricians, geriatric psychiatrists, social workers qualified in this field and social agencies. The government must not allow unqualified individuals to run and supervise these institutions.

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