

Patterns of psychiatric symptoms in geriatric persons living in care homes

Mohamed Shawky^b, Ibtihal M.A. Ibrahim^a, Eman El-Sheshtawy^a, Mohamed Elsayed^a, Mohamed E. El-Hadidy^a

^aDepartment of Psychiatry, School of Medicine, Mansoura University, ^bDepartment of Psychiatry and Neurology, Mansoura New General Hospital, Mansoura, Egypt

Correspondence to Ibtihal M.A. Ibrahim, MD, Department of Psychiatry, Mansoura Faculty of Medicine, Mansoura University, Mansoura 35111, Egypt Tel: +20 122 714 4687; e-mail: drpossy2002@yahoo.com

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Background

The aging population possesses sociological problems that are usually associated with medical problems. Elderly persons 'living in old age homes' are expanding in numbers; are people in such settings prone to psychological stress rather than those living in community?

Aim

To assess the extent of mental illness in old age group living in care homes, and to determine the level of social support.

Participants and methods

A case–control study was conducted on 116 elderly individuals, who were divided into two groups – group A included 56 individuals living in old-age homes, and group B included 60 individuals living with their families (control group). All of them were subjected to the following: assessment of sociodemographic status and clinical diagnoses using the Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders scale, the Brief Psychiatric Rating Scale, and the Multidimensional Scale of Perceived Social Support (MSPSS).

Results

There was no significant statistical differences between both groups regarding the presence of a possible psychiatric disorder ($P < 0.05$). In the case group, we found significant differences for factor neurotic ($t = 2.894$), factor positive ($t = 4.633$), and factor negative ($t = 8.893$) compared with the control group.

Conclusion

Special care should be provided for the elderly living in old-age homes as they are more prone to psychiatric illnesses and have a higher risk for depression, less social support, and more severe isolated psychiatric symptoms.

Keywords:

brief symptom rating scale, caring homes, old age, psychiatric manifestations

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Introduction

Aging is a biological reality that has its own dynamics, largely beyond human control. The aging population possesses sociological problems that are usually associated with medical problems. It creates a greater demand on the healthcare services of a community. Stress associated with taking care of the elderly, with increasing longevity, has increased, with its attendant issues of disease, disability, and psycho–physical deteriorations. The dynamics in the structure and functions of family along with the ongoing changes in social values have placed a serious dent on the space the elderly had been enjoying, bringing old-age homes to the focus of discourse on aging (Vanitha, 2014).

Because of their coexisting physical conditions, older adults are significantly more likely to seek and accept services in primary care versus specialty mental healthcare settings. Previous studies have shown that older adults having evidence of mental disorders are less

likely to receive mental health services than younger-aged and middle-aged adults, and that even when they do so they are less likely to receive care from a mental health specialist (Flint, 2002; Karel *et al.*, 2012).

The clinical expression of dementia is usually heralded by memory impairment. Early memory impairment normally involves declining recall of recent events Barnes and Yaffe (2011).

Late-onset depression is a descriptive term for depression first diagnosed after the age of 65 years. It shares many characteristics with earlier-onset depression, but some distinctions include greater apathy, less personality dysfunction, and more

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prominent cognitive deficits including memory and executive functioning (Alexopoulos, 2005).

Older people underutilize mental health services for a variety of reasons including stigma, denial of problem, inadequate insurance coverage, access barrier such as transportation, shortage of trained geriatric mental health providers, and lack of coordination among primary care, mental health, and aging service providers (Bartels *et al.*, 2005).

The feeling of isolation, living away from family and friends, in general, is the major disadvantage reported by the elderly living in care homes. Other disadvantage is the loss of independence not only meant loss of freedom but also resulted in a sense of not being useful any more, lack of purpose in life, and lack of privacy (Choi *et al.*, 2008).

Elderly "living in old age care homes" are expanding in numbers; people in such settings are prone to psychological stress rather than those living in community. Providing assistance to this age group is mandatory nowadays, either by government or by medical research facilities. Studying psychiatric manifestations in this age group gives us an idea about the extent of mental illness, and the need of social support.

Participants and methods

This was a case-control study that was carried out in several old-age caring homes in Daqahlyia Egypt, including Dar El-Aml, Dar El-Fadl, and Dar Qolongil, between March 2014 and March 2016. Written informed consent was obtained after explaining the aim and procedures of the study. The study was approved by the ethics committee of Mansoura Faculty of Medicine. Psychiatric disorders were diagnosed according to Diagnostic and Statistical Manual of Mental Disorders (DSM)-IV-TR criteria. This study was conducted on elderly individuals more than 60 years of and both sexes. A total of 116 individuals were screened and divided into two groups - group A included 56 individuals living in old-age homes (case) and group B included 60 individuals living with their families (control). We excluded those who refused to participate, those without caregivers, and those with a past history of mental retardation.

All participants were subjected to the following:

A semi-structured interview was carried out to collect data on age, sex, residency, marital status, and socioeconomic status.

Complete physical examination

Psychometric assessment was performed using the following:

- (1) Structured clinical interview for DSM-IV axis I disorder (SCID) to determine DSM-IV Axis I psychiatric disorders (First *et al.*, 2001).
- (2) Brief Psychiatric Rating Scale (BPRS): the BPRS is administered by a 20-min interview and is usually performed by the interviewer. The BPRS is an 18-item, seven-point requested classification rating scale with scores ranging from 0 if the symptom is not assessed to 7 if the symptom is extremely severe. Thus, the scores range from 0 to 126, with lower scores indicating less-affected individuals. BPRS has been updated after previous use in various studies (Overall and Gorham, 1962). BPRS-5 is a subscale of BPRS, which has five factors: Factor neurotic (hostility and somatic concerns), factor negative (emotional withdrawal, blunt affect, uncooperativeness, and motor retardation), and factor positive (conceptual disorganization, mannerism, suspiciousness, hallucination, and unusual thought content) factor depressive (anxiety, tension, depressed mood, and guilt feeling) and factor manic (grandiosity, excitement).
- (3) Multidimensional Scale of Perceived Social Support (Zimet *et al.*, 1988): a brief research tool designed to measure perceptions of support from three sources: family, friends, and a significant other. The scale is comprised of a total of 12 items, with four items for each subscale. The Arabic version was used in this study (Merhi and Kazarian, 2012).

Results

Regarding sociodemographic data, there were highly significant differences between both groups regarding marital status, social support (where 76.7% of those living with their families reported good social support vs. 28.6% in the care homes), and residence (those in the care homes were more from urban areas). There was no statistically significant difference between both groups regarding sex and family history of psychiatric disorders (Table 1).

Brief Symptom Rating Scale Scores showed highly statistically significant differences in anxiety, emotional withdrawal, guilt feeling, mannerism, depressed mood, hostility, motor retardation items, conceptual disorganization, tension, and blunt affect where these symptoms were more severe in those living in care homes. Other items showed no statistically significant differences (Table 2).

There was no significant statistical difference between both groups regarding the presence of a possible psychiatric disorder. Thirty-seven individuals showed no psychiatric disorders in the case group, representing 66.1%, versus 44 individuals, representing 73.3%, in the control group. The most common diagnosis found was major depression; the second most common diagnosis was Alzheimer's disease (Table 3).

Table 4 shows the differences in the subscales of BPRS scores in both groups. Factor negative and factor positive

Table 1 Comparing demographics, social support, and family history between both groups

	Case [n (%)]	Control [n (%)]	χ^2	P
Sex				
Male	26 (46.4)	30 (50.0)	0.148	0.700
Female	30 (53.6)	30 (50.0)		
Marital status				
Married	0 (0.0)	35 (58.3)	46.881	<0.0001
Divorce	18 (32.1)	9 (15.0)		
Widow	38 (67.9)	16 (26.7)		
Social support				
Fair	19 (33.9)	12 (20.0)	31.692	<0.0001
Good	16 (28.6)	46 (76.7)		
Poor	21 (37.5)	2 (3.3)		
Residence				
Urban	40 (71.4)	22 (36.7)	14.068	<0.0001
Rural	16 (28.6)	38 (63.3)		
Family history of psychiatric disorders	9 (16.1)	11 (18.3)	0.104	0.747

Table 2 Brief psychiatric rating scale scores between control and case groups

	Case (N=56)	Control (N=60)	t	P
Somatic concern	2.73±1.31	2.43±1.36	1.203	0.231
Anxiety	2.18±1.10	3.40±1.55	4.916	<0.0001
Emotional withdrawal	3.13±1.34	1.82±0.85	6.237	<0.0001
Conceptual disorganization	1.95±0.90	1.47±0.72	3.167	0.002
Guilt feeling	3.13±1.49	1.85±1.09	5.235	<0.0001
Tension	2.20±1.30	2.90±1.35	2.857	0.005
Mannerism	2.43±1.23	1.40±0.72	5.439	<0.0001
Grandiosity	2.04±0.95	1.87±1.19	0.849	0.398
Depressed mood	3.57±1.49	2.10±1.16	5.912	<0.0001
Hostility	1.77±0.81	1.25±0.54	4.025	<0.0001
Suspiciousness	2.30±1.03	2.28±1.08	0.104	0.918
Hallucinatory behavior	1.88±0.92	1.60±0.72	1.806	0.073
Motor retardation	3.25±1.59	1.53±0.75	7.369	<0.0001
Uncooperativeness	2.39±0.98	1.98±1.24	1.959	0.053
Unusual thought content	2.11±0.98	1.93±1.02	0.931	0.354
Blunt affect	2.77±1.40	2.02±1.24	3.060	0.003
Excitement	1.96±1.16	1.87±0.95	0.498	0.619

showed significant statistical differences, whereas factor depressive and factor manic showed no statistically significant difference between both groups.

Discussion

Regarding psychiatric disorders found in both groups, major depression has been the most common diagnosis according to DSM-IV-TR criteria, reaching 14.3% (eight) in the case group and 6.7% (four) in the control group; this is similar to results found in multiple studies (Al-Shehri and Sabra, 2012; Al Atram, 2014). Those studies were done in Saudi Arabia with similar cultural and religious beliefs. However, a study performed in various European countries by Andreas *et al.* (2017) showed that the prevalence of anxiety disorders among elderly reached 17%, whereas depression came second with a prevalence reaching 14%; this difference might be due to the differences in cultural and social bonds, lifestyle, and also the huge sample size of that study.

Mild cognitive impairment (MCI) and dementia come in the second place after depression, reaching rates of 10.7% in the case group and 6.7% in the control group. These values are similar to previous studies (Chowdhury and Rasania, 2007), where depression

Table 3 Prevalence of current possible diagnosis among case and control groups

	File [n (%)]		χ^2	P
	Case	Control		
Current diagnosis				
No psychiatric illness	37 (66.1)	44 (73.3)	6.541	0.587
Depression	8 (14.3)	4 (6.7)		
OCD	1 (1.8)	2 (3.3)		
Bipolar disorder	1 (1.8)	1 (1.7)		
Schizophrenia	2 (3.6)	2 (3.3)		
Alzheimer's disease	6 (10.7)	4 (6.7)		
Adjustment disorder	1 (1.8)	0 (0.0)		
Generalized anxiety disorder	0 (0.0)	1 (1.7)		
Delusional disorder	0 (0.0)	2 (3.3)		

OCD, obsessive-compulsive disorder.

Table 4 Comparison of Brief Psychiatric Rating Scale-5 subscales among groups

	Case (N=56)	Control (N=60)	t	P
Factor neurotic	4.50±1.66	3.68±1.37	2.894	0.005
Factor depressive	11.07±2.70	10.25±2.70	1.635	0.105
Factor negative	11.54±2.71	7.35±2.36	8.893	<0.001
Factor positive	10.66±2.12	8.68±2.45	4.633	<0.001
Factor manic	4.00±1.57	3.73±1.42	0.958	0.340

came in first place recording as high as 23.6% while dementia came second with a nearly similar values as our study of 11.6%. This similarity may be due to similar socioeconomic status, educational level, and the tools used as in our study. While the higher percentage of depression found might be due to using different assessment scale Goldberg's General Health Questionnaire (Gautam *et al.*, 1987) besides using the DSM-III-R for diagnosis, whereas our study used the DSM-IV-TR.

The similar prevalence of these psychiatric disorders was noticed in a previous study by Nair *et al.* (2015). The study revealed higher incidence of major depression (21.9%), mild cognitive impairment (16.3%), and generalized anxiety (10.7%), and was carried out in rural areas in India with a higher sample size of 336 using geriatric depression scale and General Health Questionnaire-12. This gives a clue that higher rates of depression among elderly are not related to residence or cultural values.

The overall percentage of current possible mental disorders among elderly in group A and B reached 33.9 and 26.7%, respectively, which is a higher rate compared with younger individuals. This is similar to a study published by Ritchie *et al.* (2004), which was conducted in France on 1873 elderly persons, with high rates of more than 17% of French elderly having a current mental disorder. However, that study excluded individuals with dementia and included individuals above 65 years of age, which may have lowered the percentage reached in our study. In addition, our results are in agreement globally with the results of the Epidemiologic Catchment Area study by Robins and Regier (1991), which reported a high rate of 20% in elderly above 55 years of age. Also results were similar with those of the National Co-Morbidity Survey, which found 30% prevalence of mental disorders in a life time (Kessler *et al.*, 1994).

Prevalence of depression and dementia among case group was higher compared with control group. Although there is a positive relationship between depression and bad quality of social support, the control group had overall better social support from their families. Other causes included the reluctance of mental health practitioners to treat elderly, lower socioeconomic status, lack of healthcare services in old-age caring homes, higher physical comorbidities, and reluctance among elderly to seek help and treatment.

Studying psychiatric manifestations using the BPRS scale showed many statistically significant differences

between both groups. Symptoms scores were generally higher in the case group, except for anxiety and tension, which had higher mean scores in the control group. All differences were statistically significant, except for somatic concerns, grandiosity, suspiciousness, hallucinatory behaviors, uncooperativeness, unusual thought content, and excitement. The overall BPRS score was higher in the case group with a significant statistical difference compared with the control group.

By using the BPRS-5 subscale to compare between both groups, we found significant differences in factor neurotic (hostility and somatic concern), factor negative (emotional withdrawal, blunt affect, motor retardation, and uncooperativeness), and factor positive (conceptual disorganization, mannerism, suspiciousness, hallucinations, and unusual thought content). These results are in agreement with an early study by Bartels *et al.* (1997), who found significant differences in factor positive and factor negative among elderly living in old-age homes with schizophrenia and bipolar disorder. They (Bartels *et al.*, 1997) also found that major depressive episodes in community are more severe and have higher rates than in old-age homes; this may be due to using the DSM-III-R for diagnosis, which might made that difference from our study, also the selective nature of the study involved (188) elderly individual mainly with schizophrenia and bipolar disorder might have eliminated the difference in neurotic factor that was significantly different in our study.

Comparing subscale factors of BPRS between both groups showed significant statistical differences in factor neurotic, factor negative, and factor positive. Differences in other factors were statistically insignificant. This differs from a study conducted by Nagaraj *et al.* (2012), who found no significant statistical differences between both groups, and concluded that psychiatric morbidity is high in elderly, irrespective of the setting in which they live.

Another study conducted in India by Chowdhury and Rasania (2007) revealed no significant statistical differences in BPRS scores, except for emotional withdrawal, grandiosity, and motor retardation. This variation may be due to the smaller sample size, cultural and educational variabilities, and interview techniques used for evaluation.

Studying the relationship between social support and depressive symptoms, we found a significant inverse relationship between them; lack of social support causes increase in depressed mood. This finding is

coherent with findings of a previous study (Pimentel *et al.*, 2012).

The findings of this study reveal that lack of social support leads to worse and more severe symptoms of depression, regardless of the living environment. Liu *et al.* (2016) stated that loneliness and lack of social support are strong predictors that can significantly raise the likelihood of developing depression. In our study, there was a significant statistical inverse relationship between anxiety symptom scores using the BPRS and social support. This means that the higher the social support perceived, the lower the severity of anxiety. These results are similar to a study conducted in Iran by Alipour *et al.* (2009), which used the geriatric anxiety scale and Social Support Appraisals Scale and found a significant relationship between good social support and lower anxiety symptoms.

Conclusion

Elderly people living in old-age homes are more prone to psychiatric illnesses and have higher risk for depression, less social support, and more severe isolated psychiatric symptoms. The most common psychiatric illness found in this group was depression, which was inversely related to the quality of social support. Alzheimer's disease was the second most common illness and anxiety disorders were the third most common. Psychiatric symptoms were more severe in people living in old-age homes.

Limitations and recommendations

One of the limitations in our study was the small sample size, and thus further studies are needed on a larger scale. We recommend regular psychological support and psychiatric counseling in old-age homes, as this group of aging individuals is vulnerable and rarely report their cognitive decline or psychological illnesses.

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Conflicts of interest

There are no conflicts of interest.

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