Assessment of Geriatric Depression through GDS-SF Scale in Residents of Old Age Homes of Lahore, Pakistan

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Abstract

Objective: The objective of this research was to find out the prevalence of depression and associated factors among geriatric population living in elderly homes in Lahore Pakistan.

Methods: An analytical cross-sectional study was carried out from 1st March - 30th August 2019 among residents of five different old age care homes in Lahore. A sample of 133 inhabitants, both males and females were included using non-probability, purposive sampling technique. After getting IRB approval and informed consent from the participants, data was collected via pre-designed questionnaire using Geriatric Depression Scale through interview technique. Data was analyzed via SPSS version 22 and was presented in form of frequency tables. Chi-square test was applied and p-value was fixed at ≤ 0.05 to declare results significant.

Results: The mean age of inhabitants was 70.36 years ± 8.61. Majority of them, 70 (52.6%), were males and 48 (33.83%) were widowed. Of the studied, 47 (35.3%) inhabitants were diabetic and 40 (30.0%) were hypertensive. Based upon GDS-SF scoring almost 1/3rd i.e 50 (37.6%) participants were categorized to had mild depression while 19 (14.7%) and 18 (13.5 %) had moderate depression and severe depression respectively. Significant difference was observed in memory loss among female participants (p= 0.001).

Conclusion: Depression was common among residents of old age care homes, where 65.71% of the male residents and 65.07% of the females were depressed. The major themes related to cause of depression were dissatisfaction with life, staying indoor and memory problems.

Keywords: Depression, Geriatric population, Elderly homes

Introduction

Alterations in lifestyle and the ever-changing society standards has led to increased incidence of admitting the elderly into care homes.[1] The percentage of population above 65 years of age varies considerably in developing and in developed countries like in the United States it is around 15.41% of the total population, while in India, Iran and Afghanistan, the proportion is 5.99%, 5.44% and 2.58% respectively.[2] In Pakistan, the geriatric population above 65 years is around 5.6%.[3] Studies have shown that the elderly living in old age homes show more symptoms of depression, anxiety and other psychiatric symptoms than those living with their own families.[4]

Community-based mental health studies have revealed that the prevalence of depressive disorders in the elderly population of the world varies between 10% and 20%, depending on cultural situations.[5] The percentage of depression in elderly Caucasians admitted in old age care homes ranges from 14-42%.[6] A study conducted in Norway has shown surprisingly high prevalence i.e 56.8%. In Iran, the prevalence of depression in geriatric population varies between 33-41%. In Nepal, a study showed that 47.33% of the population in care homes suffers from depressive symptoms.[7] Depression among people living in old age homes in India varies from

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mild (29%), moderate (48%) and severe (14%). However, in comparison to above statistics, the prevalence of depression in geriatric population of Pakistan is much less. In a study conducted in Pakistan with a sample size of 60 people, 5.87% of them showed symptoms of depression, and 6.25% showed symptoms of anxiety.[8]

According to World Health Organization approximately 15% of geriatric population suffers from mental disorder worldwide.[9] Contributing to this depression are various socio-demographic factors like the level of care provided by the old homes, social support, the age, educational status of the person, the gender and the duration of stay in the old age home, along with other physical diseases and disabilities.[10]

The rationale of this study is to find the prevalence of depression among old home residents in Pakistani context along with the causative factors so that measures can be taken to remove these factors to a possible limit to minimize depression, anxiety and stress. The objective of this research was to find out the prevalence of depression and associated factors among geriatric population living in elderly home.

Methods

An analytical cross-sectional study was carried out from 1st March to 30th August 2019 among residents of old age homes in Lahore. There are eight old age care homes in Lahore, out of which five were select randomly which included namely Old-age Happy Homes, Heaven for Senior Citizens, Edhi-homes, Darul Kafala and Afiyat Old-ages Homes. After taking permission from institutional review board of Akhtar Saeed Medical & Dental College for conduction of research with IRB approval number M-18/026/CM, permission was sought from heads of the institution mentioned above to access the residence and conduction of interviews. After taking permission for data collection for this study the inhabitants were approached for informed written consent. A sample of 133 inhabitants, both males and females were included using non-probability, purposive sampling technique. Residents that were mentally handicapped or those who didn't give consent were excluded. Data was collected via pre-designed questionnaire using Geriatric Depression Scale, short form (GDS-SF) through interview technique. This scale was first developed in 1982 by J.A Yesavage and its a reliable and valid self-rating depression screening scale for elderly population. The tool was translated in local language and was validated through pilot study. The calculated Crown Bach alpha was 0.73 making it a highly valid and reliable tool. Socio-demographic variables like age, education, marital and employment status, time spent at old age home, etc were included in the tool. Later the data was coded, entered and analyzed via SPSS (statistical package for social sciences) version 22. Results were presented in form of frequency tables for univariate analysis. For bivariate analysis chi-square test was applied keeping p-value of <0.05 as significant

Results

A total of 133 residents from five different old age care homes, in Lahore, were included. The mean age of inhabitants was 70.36 years $\pm$ 8.61. Majority of them, 70 (52.6%), were males and Lahore was hometown for 69(51.87%) of participants. Of the sample studied, 69 (51.87%) were married and 48 (33.83%) were widowed. Out of total 133 participants, only 33 (24.81%) were graduates. Out of total, 43 (32.3%) had no children. The mean number of children of these inhabitants was 3.09 and +3.634 and only 40 (30%) were employed. **(Table 1)**

Out of total 133 participants, 47 (35.3%) inhabitants were diabetic and 40 (30.0%) were hypertensive. More than 2/3rd of the participants, 105 (78.9%), reported to have normal appetite while 44 (33.1%) gave history that they lost weight in the past few months. **(Table 2)**

Table 1: *Socio Demographic Profile of Geriatric Population*

Variable	Frequency (n= 133)	Percentage (%)
Gender Distribution		
Male	70	52.6%
Female	63	47.4%
Hometown		
Lahore	69	51.87 %
Out of Lahore	64	48.12 %
Marital Status		
Married	69	51.87 %
Unmarried	9	6.76 %
Divorced	10	7.51 %
Education		
Illiterate	25	18.79 %
Primary	18	13.53 %
Matric	39	29.32 %
Intermediate	18	13.53 %
Graduate	33	24.81 %
Employment Status		
Employed	40	30.0 %
Unemployed	93	70.0 %

After application of GDS-SF Geriatric Depression Scale, short form, geriatric population was labeled as normal with the score of 0-4, with mild depression with the score of 5-8, with moderate depression 8-11, with severe depression 12-15. Of the studied, 50 (37.6%) were

Table 3: *Physical Health Profile of Participants*

Variable	Frequency (n=133)	Percentage (%)
Prevalence of chronic diseases		
Diabetes	47	35.3 %
Hypertension	40	30.0 %
COPD	4	3.0 %
Joint Pain	14	10.5 %
None	28	21.0 %
Normal appetite		
Yes	105	78.9 %
No	28	21.1 %
Loss of weight in the past few months		
Yes	44	33.1 %
No	89	66.9 %

normal with no signs and symptoms of anxiety and depression. 46 (34.6%) had mild depression while 19 (14.7%) had moderate depression. A slight percentage above 13% was found to had severe depression. There was no gender difference observed in degrees of depression (p= 0.943). **(Table 3)**
Further analysis of the data showed that there was no gender difference in satisfaction level with life among the participants (p= 0.628). However majority of the female reported that they felt happy most of the time in their lives (p= 0.049). Significant difference was observed between two genders when it comes to their memory problems among the participants (p=0.001). **(Table 4)**

Table 4: *Symptomatic Presentation according to GDS-SF Scale for Participants of Geriatric Population in Lahore*

Variable	Male	Female	p-value
Satisfied with life	54	50	0.628
Not satisfied with life	16	13	
Drop in activities	39	33	0.700
No Drop in activities	31	30	
Feeling of emptiness	33	30	0.571
No Feeling of emptiness	37	33	
Constant feeling of boredom	42	35	0.575
No Constant feeling of boredom	28	28	
Good spirits most of the time	45	44	0.498*
No Good spirits most of the time	25	19	
Fear of something bad going to happen	17	16	0.882
No Fear of something bad going to happen	53	47	
Feeling of happiness	33	40	0.049
No feeling of happiness	37	23	
Memory problems	22	38	0.001**
No Memory problems	48	25	
Feeling of helplessness	28	23	0.679
No Feeling of helplessness	42	40	
Feeling wonderful of being alive	50	43	0.413
No Feeling wonderful of being alive	20	20	
Intent of staying indoors	38	35	0.883
No Intent of staying indoors	32	28	
Feeling of being full of energy	36	29	0.534
No Feeling of being full of energy	34	34	
Feeling of worthlessness	23	25	0.413
No Feeling of worthlessness	47	38	
Feeling of hopelessness	21	19	0.984
No Feeling of hopelessness	49	44	
Feeling of being better off than most	29	24	0.695
No Feeling of being better off than most	41	39	

Table 3: *Gender difference in Degrees of Depression Among Geriatric Population*

Variable							
Total score	Normal	Mild depression	Moderate depression	Severe depression	Frequency (n=133)	Percentage (%)	p-value
Males	26	24	11	9	70	52.6 %	0.943
Females	24	22	8	9	63	47.3 %	
Total	50	46	19	18	133	100%	

Discussion

According to the study conducted, the mean age of the residents of old age homes of Lahore was 70.36 (SD±8.61). In a study conducted in America in 2011, the mean age in old age homes was found to be 82.3 (SD±7.4).[11] This shows that in developed countries, the mean age of old age homes residents is more as compared to developing countries. A study conducted in Hyderabad, India, found the mean age of the old age care homes inhabitants to be 67.4 (SD±4.7), with most of the residents in the age group 66-70 years (61%), which is in accordance with the findings in our study.[12]

There were more males residing in the old age homes, 70(52.6%), as compared to females. However, a study conducted in Kathmandu, Nepal, had contrast finding i.e most of the inmates of old age care homes were females (56.34%) compared to males (43.66%).[13]

Majority of the participants, 100 (57.5%), in this study were widowed. This finding is also reflected in a study conducted in Tehran, Iran, which showed that majority of the participants of that study were widowers (68%).[9].

Out of the sample studied, matriculation was the highest education level of 39 (29.32%) of participants while only 33 (24.81%) were graduates in different subjects. This finding is in contrast to a study conducted in Lucknow, which showed that most of the inmates of the old age care homes were illiterate, 13 (28.9%).[14]

Out of the studied sample, 105 (78.9%) had normal appetite, while 44 (33.1%) had experienced weight loss in the past few months. However, this anorexic state among residents can be attributed to many factors like changes in taste, hyposmia, difficulty in chewing due to loss of teeth, gastro-esophageal reflux disease, reduction in gastric and pancreatic enzyme secretions, increased leptin levels and finally, a major cause can be depression.[15]

Regarding life satisfaction, no gender difference was observed among the inmates (p 0.628). This finding is in contrast to a study conducted among 593 residents of old age care home in Pennsylvania i.e women were more satisfied with their lives compared to men.[16] In support of this, when the habitants of the old age homes were asked about their leisure time activities, 72 (54.1%) said that they had dropped many of their hobbies and other social activities. Similarly, most of the inmates of the old age homes, 73 (54.9%), preferred to stay indoors rather than going out and getting involved in social and recreational activities. This implies that most of the inhabitants did not enjoy any company, which is an indicator of depression in which the person prefers to stay in his own company and away from social situations. A study conducted in China states that leisure and recreational activities serve as a buffer for depression.[17]

Regarding cognitive abilities, memory problems were more prevalent among females as compared to males (p 0.001). However data of a cross-sectional study conducted on 188 Swedish nursing homes showed that male and female inmates suffered equally from memory impairment.[18]

According to current research, no gender difference was observed regarding the prevalence of depression among male and female participants (p 0.943). However a research conducted at United States, including 11,788 participants showed that women suffered more from depressive disorders compared to males.[19]

This suggests that most of the inmates of old age homes suffer from depression, whether mild, severe or in-between. This simply could be because of the effects of old age, lack of energy due to old age, separation from loved ones, death of a spouse or feeling of being neglected by their siblings and their family. No one wants to be alone or to live in a house full of strangers with different levels of understanding, especially away from their loved ones. All these feelings of worthlessness, hopelessness, abandonment and neglect, ultimately amalgamate into many physical and psychological effects, one of them being depression.

Conclusion

Depression was common among residents of old age care homes, where 65.71% of the male residents and 65.07% of the females were depressed. The major themes related to cause of depression were satisfaction with life, staying indoor, drop in routine life activities and memory problems.

Acknowledgements/ disclaimer/ conflict of interest

The authors declare no potential conflicts of interest with respect to research, authorship or publication.

Ethical Standards

This study was conducted after Institutional review board approval of AMDC through IRB certificate number M-18/026/CM on 30/3/2019. After IRB approval, permissions were sought from five mentioned geriatric homes. After approval of entry and getting access to population, each participant was informed about objective of study. Written informed consent was taken from each participant with a promise to keep confidentiality and anonymity of participants in mind.

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Authors Contribution

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N.U.A.L, S.A, R: Literature Search

I.M, S.A: Statistical Analysis

I.A, T.Z: Drafting, Revision,

T.Z, N.U.A.L, S.A, R: Writing of Manuscript