Original article

Depression among the elderly people

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Summary

Depression is a common but neglected psychological disorder among elderlies which have the potential of worsening the general health condition, thus is a considerable public health problem. The present study attempted to evaluate the status of depression among the elderlies in regard with socio-demographic background and the co-morbid conditions. With a cross sectional study design, this study was conducted in one of the area in Dhaka city during the period of January to December, 2019, among 175 elderly people aged e"60 years using convenient sampling technique. Depression among the respondents was evaluated with Bangla version of Geriatric Depression Scale-Short Form (GDS-SF Bangla version). Data regarding socio-demographic background and their co-morbidities had been collected. The results showed that, respondents with no depression was 46.9% where mild, moderate and severe level of depression was found in 26.9%, 12.6% and 13.7% of the respondents respectively. Being female and not having spouse found to make the elderlies more vulnerable to be suffering from depression (p<0.05). On the other hand, hypertension, stroke, arthritis and hearing problems found to be significantly high among the respondents with depression (p<0.05). More than half of the elderlies under this study were prevalent with depression which was an alarming finding demanding for more researches in this regard in our country.

Introduction

Elderly Depression is linked with increased morbidity and disability and is a significant public health problem.[1] Among many geriatric syndromes which are better predictors of mortality than many specific geriatric diseases, depression is the common one.[2] Worldwide, the prevalence of depression among elderlies reported to be 7%.[3] Elderly depression generally observed among older adults who are suffering from other physical and psychosocial co-morbidities, also other factors like poor socio-economic condition, social isolation, and forced relocation precipitates depressive symptoms among them.[4–7] Study findings showed that, the geriatric depression does not recover fully, also the relapse is common.[8,9] Geriatric depression is thought to be the common response to geriatric health problems which often remains undiagnosed, thus untreated in the elderly.[10] Elderly depression also can result from as injury, ailments, loss of near ones or where somatic complaints are more prioritized then cognitive needs.[11] The psychological health and needs of an elderly may differ from one country to another, attributed by socio-economic and environmental attributes of ethnic and racial differences. In our country context, people aged 60 years and above are considered as the elderly group of population and this is the chosen age to be consider them under the old-age social benefits and allowances.[12] They have to retire from work even if in cases where they are able to carry it out with full potential thus, the quality of life gets denounced. An older person who is dependent on others for his most basic needs and also does not have love or companionship, would not wish to survive a long life.[13]

The future estimation of people over 60 years by the year of 2050 in Asia continent is projected to reach 922.7 million and there is possibility that this region is at risk of having one of the highest proportion of elderlies.[14] In Bangladesh between the years of 1990 and 2010, life expectancy has increased by 10 years, from 59 to 69 years, in both upper and lower worth quantile groups.[15] Improved survival rate of the old population is anticipated to reach the age of 75 years in higher proportion and entering to the oldest old age group is highly suggestive of living even longer.[16] The long questionnaire survey, census 2011 reported that 60 years and older population in Bangladesh is 7.7% and Barisal division has the highest proportion of this age group of people among all the divisions.[17] Therefore, it is evident

that, geriatric depression can be prevalent in much higher proportion than ever before and can cause significant impact on the health outcome of themselves as well as the mental health of the people living around them. Along with that, as depression is linked with increased risk of other co-morbid conditions, the overall health care expenditure may increase in familial, social and national level. Hence, it is necessary to observe the status of depression in elderlies to put an insight on the present condition, which will guide to implement planning strategy on national level. In this regard, the present study aimed to observe the status of depression of the elderlies who are living with their family members in an urban setting.

Materials and methods

This study undertook a cross sectional study design, which was conducted during the period of January to December, 2019 in one of the mohallas of Razia Sultana road, Shahid Salimullah road and Nurjahan road which were from ward no 44 of Mohammadpur thana of Mohammadpur area in Dhaka district, among 175 elderly people aged e"60 years using convenient sampling technique. After obtaining ethical approval from the Institutional Review Board (IRB) of National Institute of Preventive and Social Medicine (NIPSOM), the study was conducted. Informed written consent was taken from the participants and then the data was collected through face to face interview with a semi-structured questionnaire to collect information about the socio-demographic characteristics of the participants, co-morbidities among them and the status of depression. In this study depression was evaluated with Bangla version of Geriatric Depression Scale-Short Form (GDS-SF Bangla version). The GDS-SF (Bangla version) is the validated translated short form,[18] of the original Geriatric Depression Scale of 30 items developed by Brink et al in 1982.[19] It consists of 15 questions of which 10 are based on positive answers and 5 are negative, answered

with yes or no and the scores ranged from 0 to 15. According to this scale, score 0-4 represents no depression, 5-8 represents mild depression, 9-11 represents moderate depression and 12-15 represents severe depression. Data were analyzed by Statistical package for Social Science (SPSS) version 22. Percentage, mean and range were calculated and used to describe continuous and categorical variables. Frequency distribution table and cross tables were formulated to describe.

Results

This study recorded that, when evaluated with the Geriatric depression scale, 26.9%, 12.6% and 13.7% of the respondents showed mild, moderate and severe level of depression respectively, while majority of the respondents (46.9%) didn't show any symptoms of depression (Figure 1).
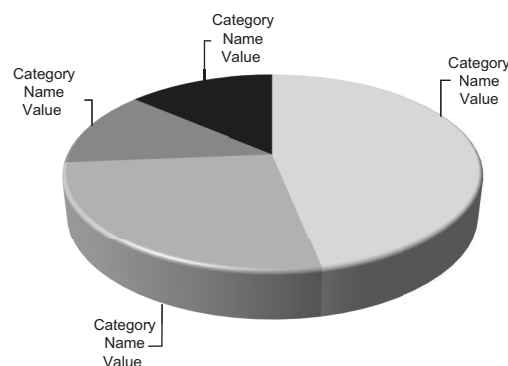
Figure 1: Level of depression of the respondents (n=175)

Socio-demographic background of the respondents showed that, their depression level was significantly dependent on gender, occupational status and marital status (p<0.05). Here, being female, not involving with any income generation, not having spouses showed to higher incidence of depression (Table 1).

Table 1: Socio-demographic background of the respondents in association with depression (n=175)

Variables		Depression (n=93) N (%)	No depression (n=82) N (%)	p value
Gender	Male	39 (42.9%)	52 (57.1%)	0.006
	Female	54 (64.3%)	30 (35.7%)	
Age (years)	60-90	66 (52.8%)	59 (47.2%)	
	70-79	20 (57.1%)	15 (42.9%)	0.772
	80-90	7 (46.7%)	8 (53.3%)	
Educational status	Iliterate and informal	23 (57.5%)	17 (42.5%)	0.109
	Primary	13 (52.0%)	12 (48.0%)	
	Secondary	26 (63.4%)	15 (36.6%)	
	Higher secondary	5 (26.3%)	14 (73.7%)	
	Graduation and above	26 (52.0%)	24 (48.0%)	
Occupational status	Service	4 (26.7%)	11 (73.3%)	0.051
	Business	9 (36.0%)	16 (64.0%)	
	Day laborer	3 (75.0%)	1 (25.0%)	
	Retired	33 (56.9%)	25 (43.1%)	
	House maker	44 (60.3%)	29 (39.7%)	

(table continued)

Table 1: (contd)

Variables		Depression (n=93) N (%)	No depression (n=82) N (%)	p value
Marital status	Unmarried	1 (100.0%)	0 (0.0%)	0.000
	Married	44 (41.1%)	63 (58.9%)	
	Divorced	1 (100.0%)	0 (0.0%)	
	Widowed	47 (72.3%)	18 (27.7%)	
	Separated	0 (0.0%)	1 (100.0%)	
Type of family	Nuclear	39 (48.8%)	41 (51.2%)	0.292
	Joint	54 (56.8%)	41 (43.2%)	
Number of family members	1-6	78 (54.2%)	66 (45.8%)	0.878
	7-12	13 (48.1%)	14 (51.9%)	
	13-18	2 (50.0%)	2 (50.0%)	
Monthly family income (Bangladeshi taka)	7000-30000	17 (53.1%)	15 (46.9%)	0.377
	30001-60000	39 (47.0%)	44 (53.0%)	
	60001-100000	33 (62.3%)	20 (37.7%)	
	100001-200000	4 (57.1%)	3 (42.9%)	
Residing in their own house	Yes	46 (50.5%)	45 (49.5%)	0.545
	No	47 (56.0%)	37 (44.0%)	

Among the depressed participants, 56.6% had diabetes, 57.7% had hypertension, 12.6% gave history of stroke, 16.0% had asthma, 72.6% had vision problem, 23.4% has arthritis, 12.6% had cardiac disease, 34.9% had dental problems, 29.7% had hearing problems and 9.7% had Parkinson's disease. Among these co-morbid conditions, hypertension, stroke, arthritis and hearing problems found to be significantly associated with depression (p<0.05) (Table 2).

Table 2: Co-morbid conditions of the respondents in association with depression (n= 175)

Co-morbidities		Depression (n=93) N (%)	No Depression (n=82) N (%)	p value
Diabetes Mellitus	Yes	54 (54.5%)	45 (45.5%)	0.760
	No	39 (51.3%)	37 (48.7%)	
Hypertension	Yes	63 (62.4%)	38 (37.6%)	0.006
	No	30 (40.5%)	44 (59.5%)	
Stroke	Yes	18 (81.8%)	4 (18.2%)	0.005
	No	75 (49.0%)	78 (51.0%)	
Asthma	Yes	15 (53.6%)	13 (46.4%)	1.000
	No	78 (53.1%)	69 (46.9%)	
Visual problem	Yes	70 (55.1%)	57 (44.9%)	0.402
	No	23 (47.9%)	25 (52.1%)	
Arthritis	Yes	31 (75.6%)	10 (24.4%)	0.001
	No	62 (46.3%)	72 (53.7%)	
Cardiac diseases	Yes	16 (72.7%)	6 (27.3%)	0.067
	No	77 (50.3%)	76 (49.7%)	
Teeth problem	Yes	37 (60.7%)	24 (39.3%)	0.156
	No	56 (49.1%)	58 (50.9%)	
Hearing problem	Yes	34 (65.4%)	18 (34.6%)	0.046
	No	59 (48.0%)	64 (52.0%)	
Parkinson's disease	Yes	9 (52.9%)	8 (47.1%)	1.000
	No	84 (53.2%)	74 (46.8%)	

Discussion

Getting old is accompanied with deterioration of overall health and wellbeing which are influenced by various factors, among whom, the physical and psychological health condition are the major determinants. Psychological wellbeing has definite controls over the general physical health condition.[3] Depression is one of the most common psychological issue among elderlies which can cause worsening of the existing co-morbidities in an old individual making them even more vulnerable. On the other hand, increasing physical ailment also can precipitate depression in the old age.[3] In attempt to evaluate the status of depression among the elderlies, this study also observed the socio-demographic as well as the co-morbid conditions in relation to the presence of depression.

Respondents under this study who scored between 0-4, which represents having no depression were 46.9%. Among the rest of the 53.1% respondents with depression, 26.9% respondents scored between 5-8, which represents having mild depression, 12.6% respondents scored between 9-11, representing having moderate depression and 13.7% scored between 12-15, representing having severe depression. Concomitant with the findings of ours, in another study on the same field, it was found that, depression among elderlies was highly prevalent; among them only 15.7% had no depression, whereas, 79.0% had moderate depression and 5.3% had severe depression.[20]

Among the socio-demographic characteristics the status of depression was significantly associated with gender and marital status (p<0.05). The study revealed that the fraction of female depressed respondents were higher (42.9%) than the male depressed respondents (64.3%). This study finding was comparable to the study conducted by Pracheth R et al. where in a sample of 218 elderlies, individuals of mean age 65.1 years old, showed that females 43 (31.4%) were more depressed than males 21 (25.9%).[21] Although in their study, this association was not statistically significant (p>0.05). Here, regarding marital status, depression was more evident in widowed elderlies than married, unmarried and separated individuals. This association was statistically signification (p<0.001). In another community-based study, it was observed that widowed, divorced or unmarried respondents were depressed compared to married respondents without depression. In their study this association was highly statistically significant (p<0.0001).[21]

Study findings suggest that, elderly patients with depression have higher rates of physical illnesses.[22] In the present study, the majority of elderlies (72.6%) found to be suffering from visual problem. Hypertension, diabetes mellitus was also found to be high among the study population that is, 57.7% and 56.6% respectively. Other co-morbidities, such as dental problems, hearing difficulties, arthritis, asthma and cardiovascular diseases was prevalent among 34.9%, 29.7%, 23.4%, 16.0% and 12.6% respectively. Previous history of stroke was recorded among 9.7% of them and 1.7% had Parkinson's disease. In another study in Bangladesh showed that, the study population was prevalent with arthritis in majority of cases (77.5%), in that study, the respondents suffering from visual and hearing difficulties were 53.8% and 16.7% respectively, diabetes and hypertension was present in 1.5% and 28.3% respondents respectively.[22] Among these co-morbid conditions, hypertension, stroke, arthritis and hearing problems found to be significantly high among the respondents with depression than the respondents with no depression (p<0.05). As similar to our findings, other studies showed that, physical co-morbidities are significantly correlated with geriatric depression [1,23,24,25]

This study has the limitations of undertaking the cross sectional study design which had been carried out on a sample selected by convenient sampling technique from a confined urban area of our country.

Conclusion

With a very high incidence of depression among the respondents, this study observed that, the gender and marital status was significant socio-demographic determinant of depression among elderlies. Among the co-morbid conditions, hypertension, stroke, arthritis and hearing problems found to be significantly high among the respondents with depression. Depression should be considered as an important health issue and appropriate management should be undertaken to provide with a satisfactory quality of life for the elderlies. Morbidities, those were found to be more common in depressed elderlies, their mechanism in precipitation of depression needed to be comprehended, in order to take necessary long term actions.

References

1. Cole MG, Dendukuri N. Risk factors for depression among elderly community subjects: a systematic review and meta-analysis. Am J Psychiatry 2003;160(6):1147-56.

2. Inouye SK, Studenski S, Tinetti ME, Kuchel GA. Geriatric Syndromes: Clinical, Research and Policy Implications of a Core Geriatric Concept J Am Geriatr Soc 2007;55(5):780-91.

3. World Health Organization. Mental health of older adults [Internet]. 2017 [cited 2021 Mar 14]. Available from: https://www.who.int/news-room/fact-sheets/detail/mental-health-of-older-adults

4. Alexopoulos GS, Buckwalter K, Olin J, Martinez R, Wainscott C, Krishnan KRR. Comorbidity of late life depression: an opportunity for research on mechanisms and treatment. Biol Psychiatry 2002;52(6):543-58.

5. Armer JM. Elderly relocation to a congregate setting: factors influencing adjustment. Issues Ment Health Nurs 1993;14(2):157-72.

6. West CG, Reed DM, Gildengorin GL. Can money buy happiness? Depressive symptoms in an affluent older population. J Am Geriatr Soc 1998;46(1):49-57.

7. Wilson KC, Chen R, Taylor S, McCracken CF, Copeland JR. Socio-economic deprivation and the prevalence and prediction of depression in older community residents. The MRC-ALPHA Study. Br J Psychiatry 1999;175:549-53.

8. Jhingan HP, Sagar R, Pandey RM. Prognosis of Late-Onset Depression in the Elderly: A Study From India. International Psychogeriatrics 2001;13(1):51-61.

9. Mitchell AJ, Subramaniam H. Prognosis of depression in old age compared to middle age: a systematic review of comparative studies. Am J Psychiatry 2005;162(9):1588-601.

10. Unützer J. Diagnosis and treatment of older adults with depression in primary care. Biol Psychiatry 2002;52(3):285-92.

11. Smeltzer SCO, Bare BG, Hinkle JL, Cheever KH. Brunner & Suddarth's Textbook of Medical-surgical Nursing. Lippincott Williams & Wilkins; 2010. p.2362.

12. Barikdar A, Ahmed T, Lasker SP. The Situation of the Elderly in Bangladesh. BJBio 2016;7(1):27-36.

13. Quadagno JS. Aging and the life course: an introduction to social gerontology. Seventh edition. New York, NY: McGraw-Hill Education; 2018. p.441.

14. Asian Development Bank. Population and Aging in Asia: The Growing Elderly Population [Internet]. Asian Development Bank. 2017 [cited 2020 Feb 5]. Available from: https://www.adb.org/features/asia-s-growing-elderly-population-adb-s-take

15. The Economist. The path through the fields. The Economist [Internet]. 2012 [cited 2020 Feb 15]; Available from: https://www.economist.com/briefing/2012/11/03/the-path-through-the-fields

16. Bangladesh Bureau of Statistics. Editor. Elderly population in Bangladesh: current features and future perspectives. Dhaka: Bangladesh Bureau of Statistics, Statistics and Informatics Division, Ministry of Planning, Government of the People's Republic of Bangladesh; 2015. p. 85. (Population monograph of Bangladesh).

17. Bangladesh Bureau of Statistics. Population and housing census 2011, 2012 (socio-economic and demographic report, National series).

18. Lahiri A, Chakraborty A. Psychometric validation of geriatric depression scale - Short form among bengali-speaking elderly from a rural area of West Bengal: Application of item response theory. Indian J Public Health 2020;64(2):109-15.

19. Brink TL, Yesavage JA, Lum O, Heersema PH, Adey M, Rose TL. Screening Tests for Geriatric Depression. Clin Gerontol 1982;1(1):37-43.

20. Babatsikou FEK, Notara VMK, Zyga S, Koutis G. Depression in the Elderly: A Descriptive Study of Urban and Semi-Urban Greek Population. Int. J. Caring Sci 2017; 10 (3):1286-1295. Int. J. Caring Sci 2017;10: 1286-95.

21. Pracheth R, Mayur SS, Chowti JV. Geriatric Depression Scale: A tool to assess depression in elderly. Int J Med Sci Public Health 2013;2(1):31.

22. Munsur A, Tareque I, Rahman KMM. Determinants of Living Arrangements, Health Status and Abuse among Elderly Women: A Study of Rural Naogaon District, Bangladesh. J. Int. Women's Stud. 2013;11(4):162-76.

23. Grover S, Dalla E, Mehra A, Chakrabarti S, Avasthi A. Physical Comorbidity and its Impact on Symptom Profile of Depression among Elderly Patients Attending Psychiatry Services of a Tertiary Care Hospital. Indian J Psychol Med 2017;39(4):450-6.

24. Osborn DPJ, Fletcher AE, Smeeth L, Stirling S, Bulpitt CJ, Breeze E, et al. Factors associated with depression in a representative sample of 14 217 people aged 75 and over in the United Kingdom: results from the MRC trial of assessment and management of older people in the community. Int J Geriatr Psychiatry 2003;18(7):623-30.

25. Sherina MS, Rampal L, Mustaqim A. The prevalence of depression among the elderly in Sepang, Selangor. Med J Malaysia 2004;59(1):45-9.