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"Prevalence of Depression and Associated Factors Among Elderly Population: A Community-Based Cross-Sectional Study"

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Abstract

Background: Depression is one of the most common psychiatric disorders among the elderly and is associated with substantial impairment in quality of life, functional ability, and overall health outcomes. Aging is frequently accompanied by chronic medical illnesses, sensory impairments, and psychosocial stressors, all of which may contribute to the development of depression. Early identification of depression and its associated factors is essential for improving geriatric mental health care.

Objectives: To determine the prevalence of depression among elderly individuals and to assess its association with sociodemographic characteristics, medical comorbidities, sensory impairments, psychiatric morbidities, and perceived stress

Methods: A community-based cross-sectional study was conducted among 275 elderly individuals aged 60 years and above. Sociodemographic details, medical comorbidities, sensory impairments, psychiatric morbidities, and perceived stress were assessed using a structured proforma and standardized assessment tools. Statistical analysis was performed using Pearson's chi-square test and Mann–Whitney U test. A p-value <0.05 was considered statistically significant.

Results: The prevalence of depression among the study participants was 23.6% (65/275). Depression was the most common psychiatric morbidity identified. Visual impairment was present in 53.8% of participants, while hearing impairment was present in 45.5%. Depression showed significant associations with lower educational status (p=0.047), visual impairment (p=0.027), chronic obstructive pulmonary disease (COPD) (p=0.012), ischemic heart disease (IHD) (p=0.002), and higher perceived stress scores (mean PSS score 15.05±10.41 vs. 10.37±8.54; p=0.0001). No significant associations were observed with place of residence, religion, marital status, occupation, family history, hypertension, diabetes mellitus, combined hypertension and diabetes, or hearing impairment.

Conclusion: Depression is a common mental health problem among the elderly. Lower educational attainment, visual impairment, COPD, IHD, and increased perceived stress were significantly associated with depression. Routine screening for depression in elderly individuals, particularly those with sensory impairment and chronic medical illnesses, may facilitate early identification and timely intervention.

Keywords: Depression, Geriatric Psychiatry, Visual Impairment, Perceived Stress.

Introduction

Population ageing is a major demographic phenomenon worldwide. Improvements in healthcare and living conditions have led to increased life expectancy, resulting in a rapidly growing elderly population. According to the World Health Organization (WHO), the proportion of individuals aged 60 years and above is expected to increase substantially over the coming decades, particularly in developing countries.[1]

India is also undergoing a demographic transition with a steadily increasing geriatric population. Older adults are particularly vulnerable to chronic medical illnesses, functional disability, social isolation, and mental health disorders.[2] Psychiatric morbidity among the elderly is increasingly recognized as a significant public health concern because of its adverse effects on quality of life, healthcare utilization, and mortality.[3]

Depression is one of the most common psychiatric disorders in late life and is associated with considerable psychological, social, and physical morbidity.[4] Late-life depression often presents atypically with somatic complaints, cognitive symptoms, sleep disturbances, and reduced functional ability, leading to underrecognition in routine clinical

practice.[5] Untreated depression in the elderly is associated with increased disability, poor adherence to treatment, higher healthcare costs, and increased mortality.[6]

The etiology of geriatric depression is multifactorial. Biological factors, chronic medical illnesses, sensory impairments, disability, bereavement, loneliness, reduced social support, and stressful life events have all been implicated in the development of depression among older adults.[7] Several studies have demonstrated significant associations between depression and chronic conditions such as cardiovascular disease, diabetes mellitus, chronic obstructive pulmonary disease, and visual impairment.[8]

Studies from India have consistently reported depression as the most prevalent psychiatric disorder among the elderly, with prevalence rates ranging from 13% to 39% depending on the study setting and assessment methods.[9,10] Despite its high prevalence, depression frequently remains undetected in geriatric clinics and general medical settings where elderly individuals often seek care for physical illnesses. Early identification of depression and associated risk factors is therefore essential for comprehensive geriatric healthcare.

In view of the growing burden of geriatric depression and the limited data from tertiary care geriatric clinics, the present study was undertaken to determine the prevalence of depression and to evaluate the sociodemographic and clinical factors associated with depression among elderly patients attending a geriatric clinic in a tertiary care centre.

Objectives

1. To determine the prevalence of depression among elderly patients attending a geriatric clinic in a tertiary care centre.
2. To assess the association between depression and sociodemographic factors, medical comorbidities, sensory impairments, and perceived stress among elderly patients.

Materials and Methods

Study design and setting

This hospital-based cross-sectional study was conducted in the Geriatric Clinic of Victoria Hospital, Bangalore Medical College and Research Institute, Bengaluru, Karnataka, over a period of 18 months. The study was approved by the Institutional Ethics Committee, and written informed consent was obtained from all participants prior to enrolment.

Study Population

Elderly patients aged 60 years and above attending the geriatric clinic during the study period were screened for inclusion. A total of 275 participants were recruited using consecutive sampling.

Inclusion criteria

1. Patients aged 60 years and above.
2. Patients willing to provide informed consent.
3. Patients capable of participating in the interview and assessment procedures.

Exclusion criteria

1. Patients with severe medical illness requiring emergency intervention.
2. Patients with severe cognitive impairment precluding meaningful assessment.
3. Patients unwilling to participate in the study.

Study instruments

A semi-structured proforma was used to collect sociodemographic and clinical details. Depression was screened using the Geriatric Depression Scale (GDS), a validated instrument widely used for assessing depressive symptoms among older adults.[11] Cognitive functioning was assessed using the Hindi Mental State Examination (HMSE).[12] Perceived stress was measured using the Perceived Stress Scale (PSS).[13] Information regarding medical comorbidities and sensory impairments was obtained through clinical evaluation and review of available medical records.

Study Procedure

Eligible participants were interviewed individually after obtaining informed consent. Sociodemographic variables including age, gender, education, marital status, occupation, religion, and place of residence were recorded. Details regarding medical illnesses, visual impairment, hearing impairment, and family history of psychiatric illness were obtained.

Participants were subsequently assessed using the Geriatric Depression Scale. Individuals meeting the predetermined cut-off score were classified as having depression. Perceived stress scores and relevant clinical variables were analyzed in relation to depressive status.

Statistical Analysis

Data were entered and analyzed using the Statistical Package for Social Sciences (SPSS) software. Descriptive statistics were used to summarize demographic and clinical characteristics. Categorical variables were compared using the Chi-square test or Fisher's exact test wherever appropriate. Continuous variables were compared using the Mann–Whitney U test. A p-value of less than 0.05 was considered statistically significant.[14]

Results

A total of 275 elderly patients aged 60 years and above attending the geriatric clinic were included in

the study. The mean age of the study population was 67.22 ± 5.39 years. Males constituted 53% of the sample, while females accounted for 47%.

Prevalence of Depression

Among the 275 participants, 65 individuals were found to have depression, yielding a prevalence of 23.6%. Depression was the most common psychiatric morbidity identified in the study population.

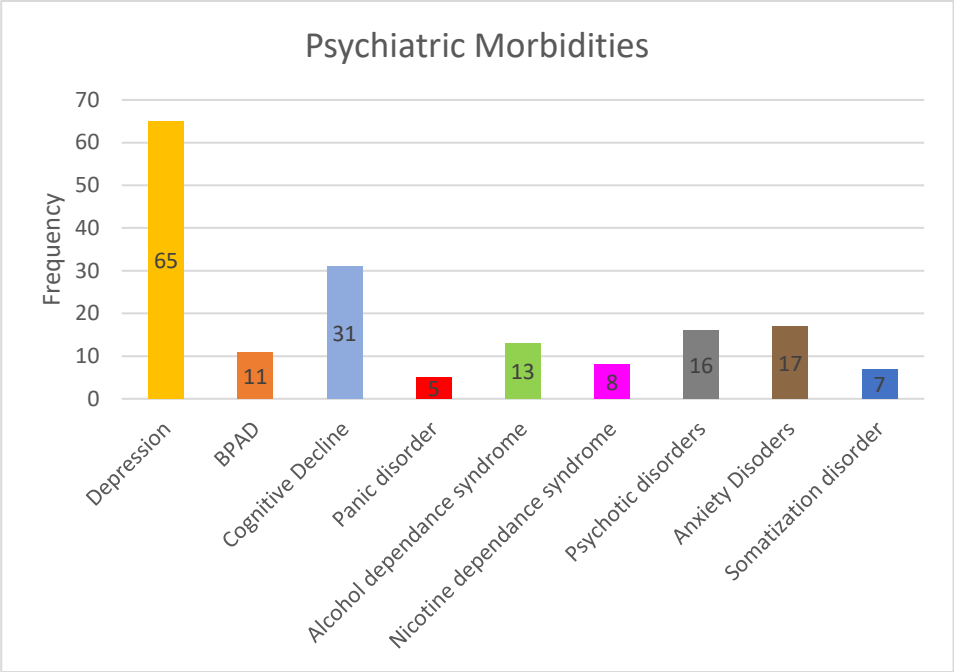

EXHIBIT 1 : PSYCHIATRIC MORBIDITIES

Association of Depression with Sociodemographic Variables

The prevalence of depression was significantly higher among participants with educational attainment up to 10th standard compared to those with education beyond 10th standard (26.3% vs. 13.8%; $\chi^2 = 3.94$, $p = 0.047$).

No statistically significant association was observed between depression and place of residence. Depression was present in 40 (23.0%) urban residents and 25 (24.8%) rural residents ($\chi^2 = 0.11$, $p = 0.740$).

Similarly, religion was not significantly associated with depression. Depression was observed in 53 (24.3%) Hindus and 12 (21.1%) participants belonging to other religions ($\chi^2 = 0.27$, $p = 0.606$).

Marital status also did not show a significant association with depression. Among married participants, 56 (23.2%) had depression compared to 9 (26.5%) among widowed, divorced, or separated participants ($\chi^2 = 0.17$, $p = 0.678$).

Occupation was not significantly associated with depression. Depression was identified in 38 (27.1%) unemployed participants and 27 (20.0%) employed participants ($\chi^2 = 1.95$, $p = 0.163$).

Family history of psychiatric illness was not significantly associated with depression ($\chi^2 = 0.72$, $p = 0.397$).

TABLE 1: ASSOCIATION BETWEEN AGE AND DEPRESSION.

DEPRESSION	MEAN AGE	STANDARD DEVIATION(SD)	P value
PRESENT	68.75	5.624	0.008
ABSENT	66.75	5.246	

TABLE 2: ASSOCIATION BETWEEN GENDER AND DEPRESSION.

DEPRESSION	MALE	FEMALE	P value
PRESENT	34	31	0.885
ABSENT	112	98	

Calculated using PEARSON CHI-SQUARE TEST.

TABLE 3: ASSOCIATION BETWEEN GENDER AND DEPRESSION.

			Place			P value
			Rural	Urban	Total	
DEPRESSION	Absent	Count	76	134	210	0.740
		%	36.2%	63.8%	100.0%	
	Present	Count	25	40	65	
		%	38.5%	61.5%	100.0%	
Total		Count	101	174	275	
		%	36.7%	63.3%	100.0%	

Calculated using PEARSON CHI-SQUARE TEST.

TABLE 4: ASSOCIATION BETWEEN EDUCATION STATUS AND DEPRESSION.

			EDUCATION STATUS			P value
			ABOVE CLASS 10	CLASS 10 AND BELOW	Total	
DEPRESSION	Absent	Count	50	160	210	0.047
		%	23.8%	76.2%	100.0%	
	Present	Count	8	57	65	
		%	12.3%	87.7%	100.0%	
Total		Count	58	217	275	
		%	21.1%	78.9%	100.0%	

Calculated using PEARSON CHI-SQUARE TEST.

TABLE 5: ASSOCIATION BETWEEN FAMILY HISTORY AND DEPRESSION.

			FAMILY HISTORY			P value
			ABSENT	PRESENT	Total	
DEPRESSION	Absent	Count	186	24	210	0.397
		%	88.6%	11.4%	100.0%	
	Present	Count	55	10	65	
		%	84.6%	15.4%	100.0%	
Total		Count	241	34	275	
		%	87.6%	12.4%	100.0%	

Calculated using PEARSON CHI-SQUARE TEST.

Association of Depression with Medical Comorbidities

No significant association was observed between depression and hypertension. Depression was present in 27 (23.1%) participants with hypertension and 38 (24.1%) participants without hypertension ($\chi^2 = 0.03$, $p = 0.855$).

Similarly, diabetes mellitus was not significantly associated with depression. Depression was identified in 16 (21.6%) participants with diabetes mellitus and 49 (24.4%) participants without diabetes mellitus ($\chi^2 = 0.35$, $p = 0.552$).

The coexistence of hypertension and diabetes mellitus also did not demonstrate a significant relationship with depression ($\chi^2 = 0.001$, $p = 0.993$).However, depression showed a significant association with chronic obstructive pulmonary disease (COPD) ($p = 0.012$) and ischemic heart disease (IHD) ($p = 0.002$).

TABLE 6: ASSOCIATION BETWEEN HYPERTENSION AND DEPRESSION.

			HYPERTENSION			P value
			ABSENT	PRESENT	Total	
DEPRESSION	Absent	Count	91	19	210	0.855
		%	43.3%	56.7%	100.0%	
	Present	Count	29	36	65	
		%	44.6%	55.4%	100.0%	
Total		Count	120	155	275	
		%	43.6%	56.4%	100.0%	

Calculated using PEARSON CHI-SQUARE TEST.

TABLE 7: ASSOCIATION BETWEEN DIABETES MELLITUS AND DEPRESSION.

			DIABETES MELLITUS		Total	P value
			ABSENT	PRESENT		
DEPRESSION	Absent	Count	137	73	210	0.552
		%	65.2%	34.8%	100.0%	
	Present	Count	45	20	65	
		%	69.2%	30.8%	100.0%	
Total		Count	182	93	275	
		%	66.2%	33.8%	100.0%	

Calculated using PEARSON CHI-SQUARE TEST.

TABLE 8: ASSOCIATION BETWEEN HYPERTENSIONAND DIABETES MELLITUS VERSUS DEPRESSION.
Calculated using PEARSON CHI-SQUARE TEST.

			HYPERTENSION AND DIABETES MELLITUS		Total	P value
			ABSENT	PRESENT		
DEPRESSION	Absent	Count	169	41	210	0.993
		%	80.5%	19.5%	100.0%	
	Present	Count	52	13	65	
		%	80.0%	20.0%	100.0%	
Total		Count	224	54	275	
		%	80.4%	19.6%	100.0%	

Association of Depression with Sensory Impairment

Visual impairment was present in 148 participants. Depression was significantly more common among participants with visual impairment than among those without visual impairment (23.0% vs. 24.4%; $\chi^2 = 4.89$, p = 0.027).

TABLE 9: ASSOCIATION BETWEEN VISUAL IMPAIRMENT AND DEPRESSION

Calculated using PEARSON CHI-SQUARE TEST.

			VISUAL IMPAIRMENT		Total	P value
			ABSENT	PRESENT		
DEPRESSION	Absent	Count	96	114	210	0.027
		%	45.7%	54.3%	100.0%	
	Present	Count	31	34	65	
		%	47.7%	52.3%	100.0%	
Total		Count	127	148	275	
		%	46.2%	53.8%	100.0%	

Hearing impairment was identified in 125 participants. Although depression was more frequent among participants with hearing impairment, the association did not reach statistical significance ($\chi^2 = 1.75$, p = 0.186).

TABLE 10: ASSOCIATION BETWEEN HEARING IMPAIRMENT AND DEPRESSION.

			HYPERTENSION		Total	P value
			ABSENT	PRESENT		
DEPRESSION	Absent	Count	91	19	210	0.855
		%	43.3%	56.7%	100.0%	
	Present	Count	29	36	65	
		%	44.6%	55.4%	100.0%	
Total		Count	120	155	275	
		%	43.6%	56.4%	100.0%	

Calculated using PEARSON CHI-SQUARE TEST.

Association of Depression with Sensory Impairment

Participants with depression had significantly higher perceived stress scores compared to those without depression. The mean Perceived Stress Scale (PSS) score among depressed participants was 15.05 ± 10.41, whereas the mean score among non-depressed participants was 10.37 ± 8.54. This difference was statistically highly significant (Mann–Whitney U test, p < 0.001).

TABLE 11: ASSOCIATION BETWEEN PSS SCORES AND DEPRESSION.

DEPRESSION	MEAN PSS SCORE	STANDARD	P value

		DEVIATION(SD)	
PRESENT	15.05	10.412	0.0001
ABSENT	10.37	8.541	

Performed using MANN WHITNEY U TEST.

DISCUSSION

The present study evaluated the prevalence of depression and its associated factors among elderly patients attending a geriatric clinic in a tertiary care centre. Depression was identified in 23.6% of the study population, making it the most common psychiatric morbidity observed. This finding highlights the substantial burden of depressive disorders among older adults and emphasizes the need for routine mental health screening in geriatric healthcare settings.

The prevalence of depression observed in the present study is comparable to findings from several Indian studies. Chowdhury et al. reported a prevalence of 23.6% among elderly individuals in a community-based sample, while Barua et al. reported a prevalence of 21.7% in elderly subjects from South India.[9,10] Similarly, studies conducted in geriatric outpatient settings have consistently identified depression as the most common psychiatric disorder among older adults.[15,16] The similarity of findings across studies suggests that depression remains a major public health concern among the elderly irrespective of geographical setting.

Educational status emerged as a significant factor associated with depression in the present study. Participants with lower educational attainment were more likely to suffer from depression than those with higher levels of education. Education may serve as a protective factor by improving health literacy, coping skills, social participation, and access to healthcare services. Similar associations between low educational status and depression have been reported in previous Indian and international studies.[17,18]

Visual impairment was significantly associated with depression in the present study. Elderly individuals with visual impairment may experience reduced mobility, loss of independence, social isolation, and difficulty performing activities of daily living, thereby increasing vulnerability to depressive symptoms. Previous studies have similarly demonstrated a strong relationship between sensory impairment and late-life depression.[19,20] Recognition and management of visual impairment may therefore contribute to improved psychological well-being among older adults.

An important finding of this study was the significant association between depression and higher perceived stress scores. Participants with depression had substantially higher mean PSS scores compared to non-depressed participants. Stressful life events, declining physical health, financial dependence, bereavement, and reduced social support are common challenges faced by older adults and may contribute to the development of depressive symptoms. Similar findings have been reported in studies examining psychosocial determinants of geriatric depression.[21] The results underscore the importance of addressing psychosocial stressors as part of comprehensive geriatric mental healthcare.Among medical comorbidities, depression was significantly associated with chronic obstructive pulmonary disease and ischemic heart disease. Chronic medical illnesses often result in functional limitations, increased healthcare utilization, reduced quality of life, and psychological distress, all of which may predispose elderly individuals to depression. Previous studies have reported higher rates of depressive disorders among patients with chronic cardiovascular and respiratory illnesses.[22,23] The bidirectional relationship between depression and chronic medical conditions further highlights the need for integrated physical and mental healthcare services. In contrast, hypertension and diabetes mellitus were not significantly associated with depression in the present study. Although several studies have reported positive associations between depression and these chronic conditions, findings have been inconsistent across

different populations and study settings.[24,25] The absence of a significant association in the present study may be attributable to differences in sample characteristics, severity of illness, treatment status, or healthcare access.

No significant associations were observed between depression and place of residence, religion, marital status, occupation, family history of psychiatric illness, or hearing impairment. Similar observations have been reported by some previous studies, suggesting that the influence of these factors may vary across populations and sociocultural contexts.[26]

The findings of the present study emphasize that depression is highly prevalent among elderly individuals attending geriatric services and is closely linked with lower educational status, visual impairment, chronic medical illnesses, and perceived stress. These findings support the incorporation of routine depression screening and psychosocial assessment into geriatric healthcare services to facilitate early identification and intervention.

Clinical Implications

The findings of the present study have important clinical implications for geriatric mental healthcare. Nearly one-fourth of elderly patients attending the geriatric clinic were found to have depression, highlighting the need for routine mental health screening in geriatric settings. The significant associations observed between depression and lower educational status, visual impairment, chronic obstructive pulmonary disease, ischemic heart disease, and higher perceived stress scores suggest that elderly individuals with these risk factors should be actively screened for depressive symptoms. Early identification and treatment of depression may improve quality of life, treatment adherence, functional outcomes, and overall well-being among older adults. Integration of psychiatric assessment into routine geriatric services may facilitate timely diagnosis and comprehensive patient care.

Strengths of the Study

The present study focused specifically on elderly patients attending a dedicated geriatric clinic, a setting where psychiatric disorders are frequently underrecognized. Standardized and validated instruments were used for assessment of depression, cognitive status, and perceived stress. The study also evaluated a wide range of sociodemographic, medical, and sensory factors associated with depression, providing a comprehensive understanding of factors influencing late-life depression in a tertiary care setting.

Limitations

The study was cross-sectional in design; therefore, causal relationships between depression and associated factors could not be established. Being a hospital-based study, the findings may not be generalizable to the entire community-dwelling elderly population. The sample was recruited from a single tertiary care centre, which may limit external validity. In addition, some clinical variables were based on patient or caregiver reports and may be subject to recall bias.

Future Directions

Prospective longitudinal studies are required to evaluate the temporal relationship between depression and associated medical and psychosocial factors among elderly individuals. Community-based multicentric studies with larger sample sizes may provide more representative estimates of depression among older adults. Future research should also examine the effectiveness of routine depression screening programs and integrated geriatric mental health services in improving clinical outcomes among elderly populations.

Ethical Approval

The study was conducted after obtaining approval from the Institutional Ethics Committee of Bangalore Medical College and Research Institute, Bengaluru. All procedures performed in the study were in accordance with the ethical standards of the institutional ethics committee and the principles of the Declaration of Helsinki. Written informed consent was obtained from all participants prior to enrolment.

Conflict of Interest

The authors declare that there are no conflicts of interest related to this study.

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References

1. World Health Organization. Mental health of older adults. Geneva: WHO; 2017.
2. United Nations, Department of Economic and Social Affairs, Population Division. World Population Ageing 2019. New York: United Nations; 2020.
3. Fiske A, Wetherell JL, Gatz M. Depression in older adults. Annu Rev Clin Psychol. 2009;5:363-89.
4. Blazer DG. Depression in late life: Review and commentary. J Gerontol A Biol Sci Med Sci. 2003;58(3):249-65.
5. Alexopoulos GS. Depression in the elderly. Lancet. 2005;365(9475):1961-70.
6. Beekman AT, Copeland JR, Prince MJ. Review of community prevalence of depression in later life. Br J Psychiatry. 1999;174:307-11.
7. Djernes JK. Prevalence and predictors of depression in populations of elderly: A review. Acta Psychiatr Scand. 2006;113(5):372-87.

8. 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.
9. Seby K, Chaudhury S, Chakraborty R. Prevalence of psychiatric and physical morbidity in an urban geriatric population. Indian J Psychiatry. 2011;53(2):121-7.
10. Barua A, Ghosh MK, Kar N, Basilio MA. Prevalence of depressive disorders in the elderly. Indian J Psychiatry. 2011;53(2):152-7.
11. Yesavage JA, Brink TL, Rose TL, Lum O, Huang V, Adey M, et al. Development and validation of a geriatric depression screening scale: A preliminary report. J Psychiatr Res. 1982;17(1):37-49.
12. Ganguli M, Ratcliff G, Chandra V, Sharma S, Gilby J, Pandav R, et al. A Hindi version of the MMSE: The development of the Hindi Mental State Examination. Int J Geriatr Psychiatry. 1995;10(5):367-77.
13. Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress. J Health Soc Behav. 1983;24(4):385-96.
14. Kirkwood BR, Sterne JAC. Essential Medical Statistics. 2nd ed. Oxford: Blackwell Science; 2003.
15. Shah SN, Chavada PD, Patel SV. Psychiatric comorbidity in geriatric medical outpatients of a tertiary care hospital. Indian J Psychiatry. 2017;59(Suppl 1):S95.
16. Thapa P, Chakraborty P, Khattri JB, Ramesh K, Sharma B. Psychiatric morbidity among elderly patients attending a tertiary care centre in Nepal. Kathmandu Univ Med J. 2013;11(42):123-7.
17. Prince MJ, Harwood RH, Thomas A, Mann AH. A prospective population-based cohort study of the effects of education on depression in old age. Psychol Med. 1998;28(3):555-64.
18. Steffens DC, Fisher GG, Langa KM, Potter GG, Plassman BL. Prevalence of depression among older Americans: The Aging, Demographics and Memory Study. Int Psychogeriatry. 2009;21(5):879-88.
19. Evans JR, Fletcher AE, Wormald RP. Depression and anxiety in visually impaired older people. Ophthalmology. 2007;114(2):283-8.
20. Chou KL. Combined effect of vision and hearing impairment on depression in older adults. Aging Ment Health. 2008;12(4):521-6.
21. Jang Y, Bergman E, Schonfeld L, Molinari V. The mediating role of perceived stress in the relationship between physical health and depressive symptoms among older adults. Aging Ment Health. 2007;11(5):531-8.
22. Katon W. Depression and chronic medical illness. J Clin Psychiatry. 2011;72(8):e22.
23. Moussavi S, Chatterji S, Verdes E, Tandon A, Patel V, Ustun B. Depression, chronic diseases, and decrements in health: Results from the World Health Surveys. Lancet. 2007;370(9590):851-8.
24. Li C, Ford ES, Strine TW, Mokdad AH. Prevalence of depression among U.S. adults with diabetes. Diabetes Care. 2008;31(1):105-7.
25. Katon WJ. The comorbidity of diabetes mellitus and depression. Am J Med. 2008;121(11 Suppl 2):S8-S15.
26. Blazer DG. Depression in late life. N Engl J Med. 2003;349(20):1886-95.