

# Clinical features of depression in the elderly and younger patients at tertiary care center of Saurashtra, India - A comparative study

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## ABSTRACT

**Background:** Depression in the elderly has serious consequences such as poor quality of life, dependency, increases comorbidity, and premature death. Symptom profile of depression in the elderly was not extensively researched in India. **Objectives:** The objective of the study is to compare clinical features of depression between elderly and younger groups and its relation to various sociodemographic variables between two groups. **Materials and Methods:** A cross-sectional, observational, comparative study carried out at tertiary care center of Jamnagar. Forty patients with depression for each elderly and younger groups were selected using simple convenient sampling from the outpatient department and inpatient department of the Department of Psychiatry, M. P. Shah Government Medical College and Guru Gobind Singh Hospital, Jamnagar. Depression was diagnosed using diagnostic and statistical manual of mental disorder-5 diagnostic criteria for major depressive disorder. HAM-D-17 was used for assessment and comparison of clinical features of depression between two groups. Mini-Mental State Examination used to rule out dementia in elderly patients. Descriptive statistics, *t*-test, Chi-square test, and binary logistic regression were used for statistical analysis. **Results:** Symptom profile of depression is somewhat different in the elderly compare to younger patients. Elderly patients with depression compared to young scored significantly less for depressed mood (odds ratio [OR]: 0.98, *P* = 0.001) and genital symptoms (OR: 0.20, *P* = 0.038) but significantly higher for somatic symptoms - gastrointestinal (OR: 5.18, *P* = 0.049) and somatic symptoms - general (OR: 7.06, *P* = 0.023) and insomnia - delayed (OR: 4.15, *P* = 0.042). **Conclusions:** Clinical features of depression are different in the elderly as depressed mood is often masked. Somatic symptoms and insomnia are often reported by elderly depressed patients than younger patients.


**KEY WORDS:** Clinical Features; Depression; Comparative; Elderly; Young

## INTRODUCTION

The older population (60 years or more) are fastest increasing and will almost triple by 2050. Depression is rapidly becoming one of the leading causes of disability around the world.

Depression is the most common mental illness in the elderly population. Depression in the elderly is under-recognized, reported, and treated. The prevalence of elderly depression varies between 10% and 20%, and it leads to greater losses in health-related quality of life and increases dependence on others.<sup>[1,2]</sup>

Many factors contribute to late-life depression, including biological and psychosocial. Biological risk factors are vascular, general health, dementia, and diabetes mellitus and Parkinson disease. Psychosocial factors are personality attributes, maladaptive thoughts and behavior, learned hopelessness, life stressors, social stressors, and bereavement.<sup>[3]</sup>

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Most of the researchers in India reported high prevalence of somatic symptoms in elderly depression.<sup>[4]</sup> A serious suicide attempt, such as self-inflicted gunshot wound, or even suicide death may occasionally be the initial presentation of late-life depression.<sup>[5]</sup> Elder suicide remains a major public health crisis, and suicide has been overrepresented in this population. Although suicidal ideation decreases with age, elders with suicidal thoughts are more likely to act on them and successfully commit suicide than their younger counterparts.<sup>[3]</sup>

Elderly depression has a poor long-term prognosis, chronic course, and a higher relapse rate compared to depression at younger ages. In addition, it is linked to more medical comorbidity and a high risk of mortality.<sup>[6-8]</sup> Only 13% of patients with depression were treated with antidepressants and 14% at the follow-up in the community. Undertreatment of depression in old age is particularly regrettable because the efficacy of a variety of treatments has been established.<sup>[9]</sup>

Studies suggest that the symptoms of depression in the elderly are slightly different than in adult population.<sup>[10]</sup> Meta-analysis on phenomenology of depression in older compared with younger adults reported major depression in older people may have a more somatic presentation, whereas feelings of guilt and loss of sexual function may be more prevalent in younger people.<sup>[11]</sup> Indian study mention, suicide attempts are more planned, and less impulsive in the elderly compares to younger counterparts.<sup>[12]</sup> In India, till date no research studies published on differentiating clinical features of depression between younger and elderly patients; early detection and initiation of treatment of depression in the elderly would prevent serious consequences; hence, this study would contribute toward filling this gap. The present study was designed to compare clinical features of major depressive disorder (MDD) between elderly and younger group at Department of Psychiatry, Guru Gobind Singh Hospital, Jamnagar.

## MATERIALS AND METHODS

### Study Design

This was a cross-sectional, observational, comparative study between elder and younger patients with MDD. In and outpatients with MDD in the department of psychiatry from August 2015 to September 2016 were included in the study using simple convenient sampling method. After explaining study objectives to participants, written informed consent was taken.

### Subjects

We recruited 80 patients (40 in each group of the elderly and younger adults) of in and outpatient department of psychiatry over the period of 12 months. Patients below 19 years having mental retardation, neurocognitive and neurological disorders,

medical disorders, psychotic disorders, and substance use disorder (except nicotine) were excluded from the study. The study was approved by Institutional Ethical Committee M. P. Shah Government Medical College (MPSGMC), Jamnagar

### Tools

Diagnostic and statistical manual of mental disorder-5 (DSM-5) diagnostic criterion was used for the diagnosis of MDD.<sup>[13]</sup> Mini-mental state examination was used to rule out cognitive deficit with a cutoff score of 25.<sup>[14]</sup> Hamilton rating scale for depression (HRSD) was used to record the clinical features of MDD for a comparison between the two groups. It is a clinician-rated scale aimed at assessing depression severity among patients. The 17-item version of the HRSD is a standard and most widely used scale over the years. The total score is obtained by summing the score of each item, 0–4 (symptom is absent, mild, moderate, or severe) or 0–2 (absent, slight, or trivial, clearly present). The scores can range from 0 to 50 for the 17-item version of the HRSD. Scores from 0 to 7 were normal, 8 to 13 = mild depression, 14 to 18 = moderate depression, 19 to 22 = severe depression, and  $\geq 23$  = very severe depression. The sensitivity and specificity are 0.93 and 0.98, respectively. Validity of HRSD ranges from 0.65 to 0.90 with global measures of depression severity and correlates high with clinician-rated measures such as Montgomery–Asberg Depression Rating Scale and inventory of depressive symptomatology-clinician rating.<sup>[15]</sup>

### Assessment

After the participants were interviewed, a semistructured pro forma was used to record information about demographic characteristics for younger adults and elderly patients. Depression was assessed and diagnosed clinically by senior psychiatrist using DSM-5 diagnostic criteria. Characteristics of clinical features of depression in patients with the elderly and younger group were assessed using HRSD.

### Statistical Analysis

Collected data were subjected to appropriate descriptive statistics of different variables using frequency and percentage. Chi-square test was used for qualitative data, and  $P < 0.05$  was considered statistically significant. Z-test was applied for comparing the mean scores between the two groups, and results of  $P < 0.05$  was considered statistically significant. Binary logistic regression analysis was used. The Statistical Package for the Social Sciences version 15 was applied to analyse the data.

## RESULTS

Eighty patients (40 in each arm of the elderly and younger adults) were categorically included for analysis in our study. We have compared sociodemographic variables between

younger adult and elderly group [Table 1]. In this study, mean age was 35.7 years in younger adults and 67.13 years in elderly patients with depression. Distribution of participants between the two groups according to marital status, education, occupation, and family type was statistically significant.

In this study, 75% younger adults have single episode in their lifetime compared to the elderly, and 50% elderly participants have more than one episode in their lifetime compared to younger. Comparison of number of lifetime depressive episodes between two groups was statistically significant [Table 2].

Comparison of mean scores of individual items and total score of Ham-D-17 between elderly and younger adult depressed groups is depicted in Table 3. We found depressed mood, insomnia-middle, insomnia-delayed, anxiety-psychic, somatic symptoms-gastrointestinal (GIT), somatic symptoms-general, genital symptoms, and insight were statistically

significant between two groups. Rests of the items do not show statistically significant difference. On further application of binary regression analysis of statistically significant items shows depressed mood, somatic symptoms gastrointestinal and somatic symptoms-general were statistically significant between two groups. Elderly patients reported more somatic symptoms (GIT and general) and insomnia (delayed) compare to younger patients. Depressed mood and genital symptoms are less commonly reported by elderly patients compared to younger [Table 4].

**DISCUSSION**

Our study examined differences in depression between younger adults and elderly age groups. There were more female patients in the elderly and more males in younger age group. Many studies have consistently reported higher rates of depression in elderly females.<sup>[4]</sup> We found more widows in the elderly compared to younger group. Murrell *et al.* also reported that separated, divorced, and widowed participants exhibit more depressive illness than single or married participants.<sup>[16]</sup> Patients with illiteracy, unemployment, and living in joint family were relatively more in the elderly compared to younger age group. Studies on elderly depression in India reported being unemployed, illiterate, and dependent are important predictors of depression.<sup>[4,17]</sup> In our study, clinical features of depression were different in the elderly compared to younger age group. Depressed mood was less commonly reported by elderly patients compared to younger patients, and this difference was highly statistically significant [Table 4]. Shahpesandy found similar

**Table 1:** Sociodemographic distribution of participants

Sociodemographic characteristics	n=40		$\chi^2$	P
	Younger	Elderly		
Gender				
Male	25 (62.5)	17 (42.5)	3.208	0.073
Female	15 (37.5)	23 (57.5)		
Marital status				
Married	34 (85)	28 (70)	15.247	0.009
Unmarried	5 (12.5)	1 (2.5)		
Separated/widow	1 (2.5)	11 (0)		
Education				
Illiterate	11 (27.5)	23 (57.5)	7.924	0.048
Primary	23 (57.5)	14 (35)		
Secondary and above	6 (15)	3 (7.5)		
Religion				
Hindu	32 (80)	33 (82.5)	0.001	1.0
Muslim	8 (20)	7 (17.5)		
Locality				
Rural	19 (47.5)	23 (57.5)	0.802	0.370
Urban	21 (52.5)	17 (42.5)		
Socioeconomic status				
Lower class	4 (10)	2 (5)	3.073	0.546
Middle class	34 (85)	37 (92.5)		
Upper class	2 (5)	1 (2.5)		
Occupation				
Household work	18 (45)	12 (30)	22.430	0.001
Job/business	4 (10)	1 (2.5)		
Labor work	16 (40)	7 (17.5)		
Not working	2 (5)	20 (50)		
Family type				
Nuclear	35 (87.5)	31 (77.5)	11.667	0.001
Joint	5 (12.5)	9 (22.5)		

**Table 2:** Comparison of clinical characteristics of patients with depression between two groups

Participants	n=40 (%)		$\chi^2$	P
	Younger	Elderly		
Personality traits				
Extroverted	19 (47)	24 (60)	1.257	0.262
Introverted	21 (53)	16 (40)		
No of lifetime depressive episode				
Single	30 (75)	20 (50)	5.33	0.021
More than one	10 (25)	20 (50)		
Family history of MDD				
Present	15 (37)	9 (22.5)	2.143	0.143
Absent	25 (63)	31 (77.5)		
Total duration of illness (month)				
<6	24 (60)	21 (52.5)	4.015	0.260
6-12	1 (2.5)	6 (15)		
12-18	3 (7.5)	2 (5)		
>18	12 (30)	11 (27.5)		

MDD: Major depressive disorder

result where mean score for depressed mood was more in younger compared to the elderly, and difference was highly statistically significant with  $Z = 4.828$  and  $P < 0.001$ .<sup>[18]</sup> Elderly patients have a problem in reporting that they have a sad mood, and depressed mood is often absent or masked. The possible reason for a different presentation could be due to sociocultural factors such as the minimal expression of sadness in the current cohort of old people and being not used to complaining about depressed mood. Older people may be much more reluctant to express feeling sad and are much more likely to focus on somatic complaints.<sup>[5,12,19]</sup>

In this study, early morning waking up were reported more frequently by elderly patients with depression than young. The difference was highly statistically significant for insomnia-delayed (odds ratio [OR] = 4.15 and  $P = 0.042$ ). Shahpesandy also found that insomnia-middle and

insomnia-delayed were more frequent in elderly depressed group with statistically significant difference.<sup>[18]</sup> In our study, general somatic symptoms (heaviness in limbs, back or head, diffuse backache, loss of energy, and fatigability) and GIT somatic symptoms (loss of appetite, heavy feeling in abdomen, and constipation) were predominantly reported by elderly patients, and the difference was highly statistically significant (OR =7.6,  $P < 0.023$  for general and OR = 5.18, and  $P < 0.049$  for GIT somatic symptoms). The expression of more somatic symptoms in elderly might be explained by the tendency of the current cohort to express somatic complaints instead of psychological.<sup>[11]</sup> which is similar to the findings of Shahpesandy *et al*, Stage *et al*, Gournellis *et al* and Tan *et al*, elderly patients with depression reported more gastrointestinal and general somatic symptoms with statistically significant difference.<sup>[18,20-22]</sup> Unlike our

**Table 3:** Comparison of clinical features between two groups

HAM-D-17 Items	Mean score±SD		Z score	P
	Younger, n=40	Elderly, n=40		
Depressed mood	2.375±0.774	1.475±0.599	-5.89	0.001
Feeling guilt	0.9±0.955	1.125±1.067	1.008	0.31
Suicide	2.075±1.047	2.3±0.966	1.011	0.311
Insomnia-Initial	1.325±0.797	1.225±0.698	-0.604	0.54
Insomnia-middle	0.875±0.822	1.25±0.776	2.13	0.032
Insomnia-delayed	0.95±0.846	1.525±0.846	3.25	0.001
Work and interest	2.525±0.751	2.85±0.893	1.785	0.074
Retardation	1.375±0.838	1.625±0.952	1.26	0.206
Agitation	1.025±0.62	0.8±0.723	-1.51	0.12
Anxiety-psychic	1.975±1.097	1.025±1.05	-4.01	0.001
Anxiety-somatic	1.6±0.955	1.325±0.917	-1.33	0.183
Somatic symptoms-GIT	0.925±0.526	1.45±0.504	4.618	0.001
Somatic symptoms-general	1.075±0.474	1.6±0.545	4.65	0.001
Genital symptoms	1.6±0.59	1.075±0.639	-4.07	0.001
Hypochondriasis	0.525±0.847	0.825±0.813	1.63	0.10
Loss of weight	0.72±0.724	0.9±0.709	1.14	0.25
Insight	0.2±0.464	0.425±0.549	2.012	0.044
Total score	20.875±5.98	22.275±4.89	1.16	0.246

GIT: Gastrointestinal, SD: Standard deviation

**Table 4:** Binary logistic regression analysis of clinical features of depression between two groups

Clinical features	Odds ratio	P value	95% confidence interval	
			Lower	Upper
Depressed mood	0.98	0.001	0.024	0.404
Insomnia-delayed	4.15	0.042	1.268	13.58
Anxiety-psychic	0.78	0.54	0.368	1.69
Somatic symptoms-GIT	5.18	0.049	0.96	27.83
Somatic symptoms-general	7.06	0.023	1.308	38.158
Genital symptoms	0.20	0.038	0.045	0.913
Insight	0.93	0.913	0.196	4.301

GIT: Gastrointestinal, OR: Odds ratio

study, Brown *et al.* reported no significant difference for general and GIT somatic symptoms.<sup>[23]</sup> Wallace *et al.* and Koenig *et al.* also did not find significant difference for GIT somatic symptoms which is different from our study findings.<sup>[24,25]</sup> Loss of libido and menstrual irregularities were more frequently reported and with higher severity in younger adults compared to elderly depressed patients. The difference was of high statistical significance (OR = 0.20 and  $P < 0.038$ ). Shahpesandy, Brown *et al.*, Wallace *et al.*, and Gournellis *et al.* found more frequent reporting of genital symptoms by younger patients.<sup>[18,21,23,24]</sup> Our study findings also differ from Stage *et al.* and Tan *et al.* who did not report significant difference for genital symptoms which is due to different study methodology.<sup>[20,22]</sup> Not only decrease of sexual desire and function with aging but also a lack of living partner might explain our findings that older patients have less sexual dysfunction caused by depression compared to the younger adult patients. Hypogonadism increases with aging and 20% of men aged over 60 years have total testosterone levels below the normal range and the figure rises to 50% in those aged above 80.<sup>[21]</sup> Prolactin pulse amplitude is blunted in elderly men at night which may be due to age-associated changes in dopaminergic regulation.<sup>[26,27]</sup>

### Future Implications

A prospective, multicenter, longer duration, comparative study with larger sample size should be planned to understand the phenomenology of old age depression. The distinction should be made between somatic symptoms primarily due to depression and physical symptoms of old age.

### Strength of Study

Our study emphasizes the difference in symptom profile of depression in the elderly and younger adult patients.

### Limitations of Study

It was cross-sectional, observational, and hospital-based study. Sample size was limited in our study.

No distinction was made between somatic symptoms whether primarily due to depression or physical symptoms of old age.

### CONCLUSION

Symptom profile of elderly patient with depression is different compare to younger patients. Elderly patients with depression reported more somatic symptoms and sleep problems and did not reported depressed mood and anxiety symptoms compare to younger patients. With the understanding of different clinical profile, early initiation of treatment of depression in the elderly by clinicians would reduce their suffering and improve the quality of life.

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### REFERENCES

- Baldwin RC. Research into depressive disorder in later life: Who is doing what? A literature search from 1998-2001. *Int Psychogeriatr* 2002;14:335-46.
- Grover S, Dutt A, Avasthi A. An overview of Indian research in depression. *Indian J Psychiatry* 2010;52:178-88.
- Aziz R, Steffens DC. What are the causes of late-life depression? *Psychiatr Clin North Am* 2013;36:497-516.
- Grover S, Malhotra N. Depression in elderly: A review of Indian research. *J Geriatr Ment Health* 2015;2:4-15.
- Zahinoor I, Fischer C, Vaughn MW. What characterizes late-life depression? *Psychiatr Clin North Am* 2013;36:483-96.
- Penninx BW, Guralnik JM, Mendes de Leon CF, Pahor M, Visser M, Corti MC, *et al.* Cardiovascular events and mortality in newly and chronically depressed persons >70 years of age. *Am J Cardiol* 1998;81:988-94.
- Penninx BW, Beekman AT, Bandinelli S, Corsi AM, Bremmer M, Hoogendijk WJ, *et al.* Late-life depressive symptoms are associated with both hyperactivity and hypoactivity of the hypothalamo-pituitary-adrenal axis. *Am J Geriatr Psychiatry* 2007;15:522-9.
- Baldwin RC, Gallagley A, Gourlay M, Jackson A, Burns A. Prognosis of late life depression: A three-year cohort study of outcome and potential predictors. *Int J Geriatr Psychiatry* 2006;21:57-63.
- Cornelius KL, Kuttalingam SK. Depression in old age. *Rev Clin Gerontol* 1999;9:343-61.
- Serby M, Yu M. Overview: Depression in the elderly. *Mt Sinai J Med* 2003;70:38-44.
- Hegeman JM, Kok RM, Van Der Mast RC, Giltay EJ. Phenomenology of depression in older compared with younger adults: Meta-analysis. *Br J Psychiatry* 2012;200:275-81.
- Kumar PN, Anish PK, George B. Risk factors for suicide in elderly in comparison to younger age groups. *Indian J Psychiatry* 2015;57:249-54.
- American Psychiatric Association. Depressive disorder. In: *Diagnostic and Statistical Manual of Mental Disorders*. 5<sup>th</sup> ed. Washington, DC: American Psychiatric Association; 2013. p. 160-1
- Folstein M, Folstein SE, McHugh PR. "Mini-mental state" a practical method for grading the cognitive state of patients for the clinician. *J Psychiatr Res* 1975;12:189-98.
- Hamilton M. A rating scale for depression. *J Neurol Neurosurg Psychiatry* 1960;23:56-62.
- Murrell SA, Himmelfarb S, Wright K. Prevalence of depression and its correlates in older adults. *Am J Epidemiol* 1983;117:173-85.
- Venkatachalam J, Muthukumar T, Madhanraj K, Sathya GR. Prevalence of depression and its determinants among elderly population in a rural area of Kanchipuram district, Tamil Nadu. *Int J Med Sci Public Health* 2018;7:147-52.
- Shahpesandy H. Different manifestation of depressive disorder

- in the elderly. *Neuroendocrinol Lett* 2005;26:691-5.
19. Scafato E, Galluzzo L, Ghirini S, Gandin C, Rossi A, Solfrizzi V, *et al.* Changes in severity of depressive symptoms and mortality: The Italian longitudinal study on aging. *Psychol Med* 2012;42:2619-29.
  20. Stage KB, Bech P, Kragh-Sorensen P, Nair NP, Katona C. Differences in symptomatology and diagnostic profile in younger and elderly depressed inpatients. *J Affect Disord* 2001;64:239-48.
  21. Gournellis R, Oulis P, Rizos E, Chourdaki E, Gouzaris A, Lykouras L. Clinical correlates of age of onset in psychotic depression. *Arch Gerontol Geriatr* 2011;52:94-8.
  22. Tan LL, Ng LL, Tan S, Roy K, Brodaty H, Parker G. Depression in Singapore: Failure to demonstrate an age effect on clinical features. *Int J Geriatr Psychiatry* 2001;16:1054-60.
  23. Brown RP, Sweeney J, Lutsch E, Kocsis J, Frances A. Involution melancholia revisited. *Am J Psychiatry* 1984;141:24-8.
  24. Wallace J, Pfohl B. Age-related differences in the symptomatic expression of major depression. *J Nerv Ment Dis* 1995;183:99-102.
  25. Koenig HG, Cohen HJ, Blazer DG, Krishnan KR, Sibert TE. Profile of depressive symptoms in younger and older medical inpatients with major depression. *J Am Geriatr Soc* 1993;41:1169-76.
  26. Stanworth RD, Jones TH. Testosterone for the aging male; Current evidence and recommended practice. *Clin Interv Aging* 2008;3:25-44.
  27. Greenspan SL, Klibanski A, Rowe JW, Elahi D. Age alters pulsatile prolactin release: Influence of dopaminergic inhibition. *Am J Physiol* 1990;258:799-804.

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