

Fading Smiles: Prevalence and Risk Factors of Depression Among Elderly Outpatients in Mohi-ud-Din Teaching Hospital, Mirpur

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ABSTRACT

Objective: To establish the prevalence rate of depression and determine the related socioeconomic and clinical risk factors of depressed patients among the elderly seeking care in a tertiary care outpatient facility in Mirpur, Pakistan.

Methodology: This cross-sectional study was done in three months (March-June 2025) at Mohi-ud-Din Teaching Hospital, Mirpur. Non-probability consecutive sampling was used to enroll 250 patients with the age of 60 years or more. The study's data was obtained through the face-to-face interview method, with the help of the questionnaires which were structured and pre-validated in Urdu. The depression was measured with a cut-off score of 5 or higher by Geriatric Depression Scale -Short Form (GDS-SF). To determine significant predictors, bivariate analysis and multivariate logistic regression was done.

Results: Among 250 participants (mean age: 68.4 +/- 6.7 years; 58.5 percent female), 36.5 percent were found positive for depression. In the bivariate analysis, it was statistically significant to use advanced age as a risk factor in patients 70 years or older, female gender, being a widow, and having low education levels, unemployment, and retirement; low income, living in a nuclear family, chronic illness, polypharmacy, bereavement, poor social support, and prior psychiatric history. Independent predictors identified through multivariate analysis were poor social support (AOR: 3.6; p<0.001), chronic illness (AOR: 2.3; p<0.001), illiteracy (AOR: 2.2; p<0.001), nuclear living arrangement (AOR: 2.0; p=0.002), female gender (AOR: 1.8; p=0.006), age ≥70 years (AOR: 1.6; p=0.031) and polypharmacy (AOR: 1.9; p=0.009).

Conclusion: Depression is highly prevalent among elderly outpatients in Pakistan, particularly among females, those of older age, lower education levels, and individuals with chronic health burdens and inadequate social support. There is a critical need to integrate mental health screening in geriatric care services in tertiary settings.

Keywords: Geriatric depression, elderly, prevalence, risk factors, Pakistan, chronic illness, polypharmacy, social support, GDS-SF.

Introduction

Depression is one of the most common and, perhaps, under-diagnosed psychiatric disorders among the aged population worldwide and has tremendous impact on their quality of life, functional status and physical wellness¹. World Health Organization reports that about 15% of adults aged 60 and above suffer from a mental disorder but depression is the most common one². Depression among seniors is often accompanied by chronic conditions, low levels of social interaction, and bereavement.³ Depression in older Research indicates that behaviors such as biological aging processes, exposure to many medications, and declining financial stability exacerbate depressive conditions⁴. Geriatric depression prevalence rate is increasing in South Asia. From a systematic review, it is observed that the rate of depression reported among elderly Pakistanis is fluctuant between 22.9% to 40.6%.^{5,6} There is increased alarm in tertiary care hospitals in which many aging patients often

have complex comorbidities and physical disabilities accompanied by reduced emotional resilience⁷. During a hospital-based survey in Lahore, it was reported that about 37% of elderly patients in the survey were diagnosed by using the criteria for clinical depression.⁸ Additional research in the region shows that: women, widowed people, people with social isolation are at risk of depression^{9,10}. In addition, living in an institution, problems in thinking and the lack of control over one's actions add greatly to the mental stress faced by those with dementia¹¹. However, many assume that depression in senior adults is a natural part of getting older.¹¹ Evidence shows that the death, suicide and hospitalization rates are higher for those with depression as they get older.¹² As there are few psychosocial support services available, many people here are not diagnosed or treated.^{13,14} Everyone in a tertiary care setting needs to realize this is serious to

identify and respond to it rapidly. The researchers aim to learn how often senior patients in the hospital have depression and the reasons for it, so future care can be improved.

Methodology

The study was carried out in outpatient departments of Mohi-ud-Din Teaching Hospital Mirpur in three months, i.e., 19-03-2025 to 19-06-2025. The main aim was to find out the prevalence of depression and risk factors associated with it in the elderly people of 60 years and older visiting the hospital seeking medical consultation. Verbal and written informed consent were obtained after which a structured pre-tested questionnaire was used through face-to-face interviews using Urdu, the native language of the participants. The standard prevalence-based formula was used to estimate the size of the sample, prevalence of depression was set at 20 percent in the elderly, a confidence level of 95 percent and margin of error of 5 percent. Sample size was calculated as 226. We sampled 250 people. A non-probability consecutive sampling method was used to recruit the participants who met the following inclusion criteria: aged 60 years and more, could understand the questionnaire, and were willing to take part in the study.

The patients who had a cognitive impairment, psychosis, or known neurological disorder were excluded in order to exclude a bias in the depression measurement. The instrument of the study was divided into two parts. The initial part was a collection of sociodemographic information, such as age, gender, marital status, education, living matters, income, employment and medical history. The second part employed the validated 15-item screening tool, the Geriatric Depression Scale-Short Form (GDS-SF), whose cut-off point was 5 and above, characterizing the possible depression. Validity and reliability was catered by translation and back-translation of the questionnaire using WHO guidelines. Analysis of data was done using SPSS version 24. The measures of the categorical variables were assessed as the descriptive statistics of frequency and percentage, and the mean with standard deviation computed the continuous variables. Comparisons of associations between depression and potential risk factors were analyzed through the use of the chi-square tests in bivariate analyses. All those variables whose p-value was <0.05 were also put into logistic regression model to determine independent predictors of depression. The research got ethical approval of the Institutional Review Board of Mohi-ud-Din Islamic Medical College, Mirpur

Results

A total of 250 elderly patients aged 60 years and above participated in the study. The mean age was 68.4 ± 6.7

years, and the majority were female (58.5%), married (52%), and illiterate (41%). Most lived in joint family systems (66.3%), were unemployed or retired (81.8%), and had a monthly income below PKR 30,000 (62%). Using the Geriatric Depression Scale – Short Form (GDS-SF), 91 participants (36.5%) were found to have probable depression. Age and gender were significantly associated with depression. Elderly participants aged ≥ 70 years had a depression rate of 47.2%, compared to 30.5% among those aged 60–69 years. Similarly, females were more affected (41.1%) than males (29.5%). Table I. In multivariate analysis, the strongest predictors of depression were poor social support (AOR: 3.6), chronic illness (AOR: 2.3), illiteracy (AOR: 2.2), living alone or in nuclear family (AOR: 2.0), female gender, age ≥ 70 , and polypharmacy also remained significant. Table III.

Table I: Depression Prevalence by Sociodemographic Variables (n = 250)

Variable	Category	n (%)	Depression n (%)	p-value
Age	60–69 years	160 (64%)	49 (30.5%)	0.012 *
	≥ 70 years	90 (36%)	42 (47.2%)	
Gender	Male	104 (41.5%)	31 (29.5%)	0.004 *
	Female	146 (58.5%)	60 (41.1%)	
Marital Status	Married	130 (52%)	37 (28.4%)	<0.001 *
	Widowed	91 (36.5%)	42 (46.6%)	
	Divorced/Single	29 (11.5%)	12 (41.3%)	
Education	Illiterate	103 (41%)	51 (49.4%)	<0.001 *
	Primary	64 (25.5%)	21 (33.3%)	
	Secondary or above	83 (33.5%)	19 (23.1%)	
Living Arrangement	Joint Family	166 (66.3%)	49 (29.4%)	0.006 *
	Nuclear/Alone	84 (33.7%)	42 (50.0%)	
Employment	Unemployed/Retired	205 (81.8%)	83 (40.3%)	0.002 *
	Employed	45 (18.2%)	9 (19.2%)	
Income	<30,000 PKR	155 (62%)	67 (43.5%)	0.008 *
	$\geq 30,000$ PKR	95 (38%)	24 (25.0%)	

Table II: Clinical Factors Associated with Depression			
Variable	Category	Depression (%)	p-value
Chronic illness	Yes (n=176)	76 (43.1%)	<0.001*
	No (n=74)	16 (21.0%)	
Polypharmacy (>5 drugs)	Yes (n=83)	43 (52.3%)	<0.001*
	No (n=167)	48 (28.7%)	
Bereavement last year	Yes (n=64)	34 (52.9%)	<0.001*
	No (n=186)	57 (30.6%)	
Poor social support	Yes (n=60)	38 (62.5%)	<0.001*
	No (n=190)	53 (27.9%)	
History of psychiatric illness	Yes (n=27)	16 (60.5%)	0.002*
	No (n=223)	75 (33.6%)	

Table III: Multivariate Logistic Regression – Independent Predictors of Depression			
Predictor	Adjusted Odds Ratio (AOR)	95% CI	p-value
Female gender	1.8	1.2 – 2.9	0.006*
Age ≥70	1.6	1.1 – 2.6	0.031*
Illiteracy	2.2	1.4 – 3.5	<0.001*
Living alone/nuclear	2.0	1.3 – 3.1	0.002*
Chronic illness	2.3	1.5 – 3.5	<0.001*
Polypharmacy	1.9	1.2 – 3.1	0.009*
Poor social support	3.6	2.1 – 6.3	<0.001*

Discussion

The study found that 36.5% of the elderly attending outpatient care at the Mirpur hospital were being treated for depression. When compared to similar studies in Lahore (37%) and Karachi (34%)¹⁵. The figure we found aligns closely and fits into Pakistan's national reported prevalence which ranges from 22.9% to 40.6%¹⁶. From our observations, it is clear that the issue of geriatric depression needs more attention in tertiary care centers, where elderly patients usually have several medical conditions, reduced abilities and weak social support¹⁷. The outcome of our research discovered that females were much more probable to suffer from depression than males (41.8% vs. 29.4%). This agrees with a wide range of studies, both across the globe and in this location, showing female gender increases the risk of experiencing late-life depression¹⁸. Several factors believed to contribute include increased biological risk, living longer,

antihormone effects and facing different types of stress¹⁹. Individuals who were older than 75 were most likely to have depressive symptoms. A report from Denmark, together with studies worldwide, has established that elderly individuals are more likely to develop depression²⁰. People may feel depressed when they age because accumulating stresses, fewer contacts with others, slower responses, more health problems and higher dependence²¹. We found that good social support is a crucial factor in good mental health. Among MHA households, residents with a spouse largely experienced depression (46.7%) more often than those living with other relatives (29.8%). For elderly individuals, depression is frequently the result of being socially isolated¹⁸. A lack of family caregivers among the elderly has been associated with both depression²² and diminished mental abilities. A link between depression, ongoing illnesses and taking many medicines was very clear within our group. Earlier research²⁰ found that depression and chronic health problems in older adults can be linked. For seniors, using many medicines one after another can become tiring and harm their disposition²³. Our study showed that more people with less schooling experience depression. Among all groups, more depression cases were reported by individuals who had not completed basic education. Many sociologists believe that an education enables people to find solutions to their problems, maintain good feelings and access the important things they want in life²⁴. Age-related depression in elderly Australians commonly affected those who had less education, just as in Bangladesh and India.²⁴ Results showed household income and employment status strongly determine the mortgage approval process. Adults without a job and supported by their family had greater odds of developing depression, a trend seen in Pakistan and similar countries²⁴. Financial problems in later life can stress older adults out, keep them from utilizing good healthcare facilities and cause them to become less healthy which may lead to depression.

Conclusion

The research determined that 36.5 percent of older outpatients probably had depression. Females were more likely to suffer depression along with individuals who were 70 years of age and above, illiterate and living alone. Significant predictors included chronic illness, insufficient social support and polypharmacy. Risk association was the highest with poor social support. Priority recruitment as well as mental health screening and assistance to the elderly is necessary.

Recommendations: Screening elderly individuals for depression who are aged over depression is a routine. There should also be augmented social support at family and community levels. High-risk

groups of elderly people should become the target of mental health services. Caregivers should be taught how to identify and deal with

depression. Polypharmacy and chronic diseases be managed as cautiously as possible.

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