

Prevalence and Associated Risk Factors of Depression among Elderly People Admitted in a Tertiary Health Care Centre of Nepal

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ABSTRACT

Background: Ageing is associated with various physiological and pathological changes including Mental Health. Mental health is a neglected health problem in Nepal which is underdiagnosed and undertreated, especially among elderly population. However, Depression among elderly people is the most common mental health problem worldwide and in Nepal, Limited research has been conducted. Thus, study aimed to assess the prevalence and associated factors of depression among elderly admitted in tertiary level hospital, Nepal.

Methods: Descriptive cross-sectional study design was used where 330 patients aged 60 years and over and admitted in geriatric ward were purposively selected as sample of the study. Data were collected from September 2021 to March 2022 semi structured face to face interview schedule questionnaire to identify sociodemographic characteristics as well as factors associated with depression and Geriatric depression scale item 15 (GDS 15) to measure prevalence of depression. Data were entered in SPSS, analyzed using descriptive and inferential statistics and presented in tables.

Results: This study had prevalence of depression 65.8%. Male had higher prevalence rate of depression than female. Prevalence of depression was significantly associated with gender, education status, financial support from family (P-value=0.010, 0.042 and 0.00) at 95% of confidence interval.

Conclusion: The prevalence of depression among older adult was found to be high. This emphasizes the need for screening of depression among elderly, to initiate early intervention measures.

Keywords: associated factors; depression; prevalence; elderly.

INTRODUCTION

Depression is a leading cause of disability and a major contributor to the overall global burden of disease.¹ Mental disorder are among the most prevalent chronic diseases of the elderly worldwide, with depression being one of the most common in this population. Depression in elderly is associated with adverse health outcomes including disability, mortality, reduced quality of life and leads higher care burdens for family members and caregivers.² Elderly depression often goes untreated as people typically think, that is normal component of aging and natural reaction to chronic diseases, financial loss, reliance on others, social deprivations loss of self-worth.³ Depression is common mental problem in elderly but undiagnosed in half of cases. Early identification and management can improve quality of life and decrease associated morbidity and mortality. This study aimed to assess prevalence and associated risk factors of depression among elderly in-patient.⁴

METHODS

A cross-sectional, descriptive research design was used to assess the prevalence and associated risk factors of depression among older adults admitted in tertiary level hospital. The study conducted in geriatric unit of central level government hospital, Nepal where admitted geriatric patient aged over 60 were taken as population of the study and Sample size were Calculated by using formula: $n_0 = Z\alpha^2pq/d^2$ considering 95% confidence level, 26.7% prevalence of elderly depression.⁵ The required sample size was 300 and to reduce non-response error additional 10% was taken, so total sample size was 330. Required sample were purposefully (consecutively) selected and from September 2021 to March 2022. Prior to data collection, Ethical Clearance was taken from Institutional Review Committee (IRC) (IRC No:078/79-015HG) Bharatpur Hospital Chitwan and Informed consent was taken from every respondent. Data were collected by using short form Geriatric

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depression scale (SF-GDS) for prevalence of depression and self-developed semi structured face to face interview questionnaire for associated factors. The short form Geriatric Depression Scale (SF- GDS) focuses on psychological symptoms: 10 questions indicated the presence of depression when answered positively while the rest 5 questions indicated depression when answered negatively. This instrument has previously been used in Nepal and in other Asian studies. GDS-15 was already translated and used into nepali version and Permission to use the questionnaire was obtained from the author through e-mail.⁶ The GDS-15 questions were read out to study participants and who were asked how they had felt over the past week using a yes and no response format. The score ranges from 0 to 15 where a test score from 0 to 4 is considered to be normal, 5 to 8 indicates mild depression, 9 to 11 indicates moderate depression, and a score of 12 or more indicates severe depression. Elderly people unable to communicate, hear, complete the interview process, did not consent to participate in this study and those who did not understand Nepali language, taking antidepressant were excluded from the study. The data was analyzed and calculated according to the nature of variables in terms of descriptive statistics (frequency, percentage, mean and standard deviation) whereas inferential statistic (Chi-square test and p-value) was used to examine the association among dependent and independent variables. The finding of the study was presented by the use of tables.

RESULTS

The total number of elderly patients included in the study was 330 where 43.3% were from 60-70 years of age group and 2.1% were from 91-100 years of age group. The mean age was 72.39 years where range of minimum and maximum age was between 60 to 97 years. female constituted 53.9% of total population while 46.1% of total population were male. Regarding caste and religion 48.2% belongs to brahmin and 84.2% following Hindu religion. Majority (72.4%) were married. Majority (72.7%) of them were illiterate. More than three fourth (77.8%) of the participants were unemployed (Table 1).

Table 1. Sociodemographic characteristics of respondents (n=330)	
Sociodemographic variables	Number (%)
Age (Years)	
60-70	143 (43.3%)
71 – 80	134 (40.6%)
81 – 90	46 (13.9%)
91-100	7 (2.1%)
Mean±S.D	72.39±7.936
Gender	
Male	152 (46.1%)
Female	178 (53.9%)
Religion	
Hindu	278 (84.2%)
Buddhist	41 (12.4%)
Christian	10 (3.3%)
Caste	
Brahmin/Chhetri	159 (48.2%)
Janajati	103 (31.2%)
Others	68 (20.6%)
Education	
Literate	90 (27.3%)
Illiterate	240 (72.7%)
Employment status	
Retired	73 (22.2%)
Unemployed	257 (77.8%)
Marital Status	
Married	239 (72.4%)
Unmarried	1 (0.3%)
Widow/ Widower	90(27.3)

Out of all, 219 (66.4%) of the respondents had other chronic comorbidities, among them 149 (68%) had respiratory problem. More than half of the respondents admitted this time because of COPD and other respiratory problem and 26.7% respondents had past history of depression but not taking medicine at present (Table 2).

Table 3. Prevalence of Depression (n=330)	
Level of Depression	Number (%)
Depression	
No depression	113 (34.2%)
Depression	217 (65.8%)
Level of depression	
Mild depression	73 (22.1%)
Moderate depression	132 (40.0%)

Table 2. Health related factors of respondents (n=330)	
Variables	Number (%)
Having chronic comorbidities	
Yes	219 (66.4%)
No	111 (33.6%)
Types of comorbidities present*(n=219)	
Gastritis	40 (18.3%)
Respiratory problem	149 (68.3%)
Diabetes militates	38 (17.4%)
Hypertension and other heart disease	71 (32.6%)
Joint pain	17 (7.8%)
Urinary problem	11 (5.0%)
Vision problem	52(23.9%)
Hearing problem	28 (12.8%)
Reason for hospitalization	
Asthma/COPD	206 (62.4%)
Hypertension and Heart Disease	66 (20.0%)
Urinary problem	15 (4.5%)
GI and Liver Problem	36 (10.9%)
Past history of depression but not in medicine now	
Yes	88 (26.7%)
No	242 (73.3%)

only 3.6% respondents were suffering severe level depression (Table 3). This study found that, there was significant association of gender and education status with level of depression ($p=0.010$ and 0.042) and no association with age and type of family (Table 4). There was significant association of history of depression with level of depression (p -value <0.001) and no association with history of physical problem, family member death and physical capability of daily living (Table 4).

There was significant association between financial support from family and level of association. Having Chronic illness, physical independence, family history of depression found no associated with level of depression (Table 5).

DISCUSSION

In this study, depression was prevalent among 65.8% of hospitalized older adults. This finding of our study is supported with similar studies conducted in tertiary level hospital in Nepal among geriatric inpatient which showed that 57.1% patient experienced depressive symptoms.⁷ Similarly another study conducted in Ethiopia depression was prevalent among 57.9% of older adult.⁴ likewise a study conducted in old age home Kathmandu revealed, 47.33% of population

Table 4. Association between depression and socio-demographic characteristics				
Variables	Depression		χ^2 value	p-value
	Absent(n=113)	Present(n=217)		
Age				
<75	78(36.22%)	138(63.88%)	0.97	0.325
≥ 75	35(30.70%)	79(69.30%)		
Sex				
Male	41(26.97%)	111(73.3%)	6.61	0.01
Female	72(40.4%)	106(60.6%)		
Type of family				
Single	37(46.4%)	80(53.6%)	0.55	0.458
Joint	76(49.4%)	137(50.6%)		
Education status				
Literate	23(25.5%)	67(74.5%)	4.14	0.042
Illiterate	90(37.5%)	150 (62.5%)		

In this study depression was prevalent among more than half (65.8%) of respondents. Out of all depressed nearly half (40.0%) of the respondents were suffering from moderate level depression and

had depression.⁸ A study conducted in Saudi Arabia showed 43.2% respondents had depression.⁹ A community based cross-sectional study conducted among

Table 4. Association of health factors with depression status of respondents				
Variables	Depression		χ^2 value	p-value
	Absent(n=113)	Present(n=217)		
Having chronic physical health problems				
Yes	79 (31.7%)	140 (68.3%)	0.524	0.46
No	34 (30.6%)	77 (69.4%)		
Physically independent for daily living activities				
Yes	13(%)	16(47%)	1.58	0.208
No	100(%)	201(56.7%)		
Financial support from family				
Yes	100(78%)	28(22%)	178.83	<0.001
No	13(15.5%)	189(84.5%)		

elderly people in north west Ethiopia showed prevalence of depression among elderly people was 45%.² In contrast to findings of this study seems contradict with the findings of the study conducted in china where the prevalence of depressive symptoms was 32.8%.¹⁰ This difference could be due to difference in study population and use of different measurements for depression, methodology, diagnostic criteria, and characteristics of the samples. In this study according to GDS classification, out of total 65.8% prevalence 22.1% had mild, 40% had moderate level, and only 3.7% had severe level depression, these findings were compared with the findings of the study conducted in Saudi Arabia where 36.3% were mildly depressed, 4.2% were moderately depressed, and 2.7% were severely depressed.⁹ this study findings also compared with the findings of the study conducted in north east Ethiopia which showed 22 (8.6%) participants were classified as moderately-severely depressed and 79(31%) classified as mildly depressed.² The present study shows that level of depression was statistically significant with sex (gender) (p-value=0.01), education status (p-value=0.042) and financial support from family (p-value<0.00), while comparing these associations with various studies, gender was statistically significant (p-value < 0.001) in the study conducted in Saudi Arabia and Nepal.^{9,11} likewise educational level was statistically significant (p-value<0.010) in the study conducted in Ethiopia and Nepal.^{4,8} The possible explanations for the discrepancies between females and males being exposed to depression because of biological

differences, that is females affected by pregnancy and related physiological changes And also, females take the majority of household responsibilities, and they depend on men, physically and financially dependent on male and other family members, loss of self-worth perpetuates the suffering of elder age.

CONCLUSIONS

This study concluded the prevalence of depression among older adults was found to be huge. They are more likely to suffer from mild to moderate depression rather than sever forms. The findings call for prioritization of delivery of elderly mental health care services. This study can be considered as an early warning and advised health professionals, health policymakers, and other pertinent stakeholders to take effective control measures and periodic care for the elderly population.

RECOMMENDATION

To prevent depression among elderly regular screening and counselling should be done by family, community and national level. Along with routine medical check-up, regular visit by psychiatrists should be done in elderly people to detect and treat elderly suffering from depression and other psychiatric illness.

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LIMITATION

It is a single center hospital-based study so already admitted patients with some other illness

were included as sample of the study: therefore, selection bias is the major limitation.

Conflict of Interest: None.

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