

Psychometric Evaluation of Depression in the Elderly

Nepal SP*, Ceintury KP**, Shrestha BR**, Uprety AB***, Khadka M***, Thakur SK****, Sharma A*****

*Clinical Tutor, **Clinical Tutor, Department of General Practice and Emergency Medicine, ***Clinical Tutor, Department of Internal Medicine, ****Assistant Professor, Department of Internal Medicine, NAMS, *****Nepal Medici Hospital, Lalitpur

ABSTRACT

INTRODUCTION: The number of elderly population is increasing worldwide. The World Health Organization highlighted that ageing process and problems related to elderly should be better understood so that effective elderly health-prevention can be planned and implemented. However, there are very limited studies in Nepal on depression in ageing population. The objective of this study was to estimate the prevalence and severity of depression using the Geriatric Depression Scale.

METHOD: This was a observation survey to study the prevalence and severity of depression among elderly people of Nepal visiting the geriatric clinic in a tertiary center of Nepal. During the one-year study period, 370 elderly patients above seventy years of age were recruited.

RESULT: Total population surveyed comprised of 370 elderly, 58.9% men. The mean age for the population was 77.31 ± 5.47 . Half of the population surveyed had depression score 5 or more suggesting the prevalence to be 50%. The study also found a slightly higher prevalence of depression in females.

CONCLUSION: This preliminary study in the tertiary hospital-based geriatric clinic area revealed many knowledge gaps. The study found that half of the surveyed population had depression. Therefore, a larger survey is needed especially in the urban areas to initiate the effective preventive programs.

KEY WORDS: Depression; Geriatric assessment; Nepal

INTRODUCTION

Ageing is a normal process and it is associated with physical, social and psychological changes.¹ The number of older population of both developed and developing countries has considerably increased in the 21st century.² According to the 2011 census of Nepal, the percentage of the elderly population has increased to 9.1 percent.³ Depression is recognized as an important public health issue, globally depression is one of the most prevalent and burdensome conditions

in older population. Depression is one of the commonest psychiatric disorders among the elderly patients attending the outpatient department of the tertiary care hospital.⁴ Depression is often missed or overlooked as a clinical diagnosis in outpatient departments basis in older adults because depression in seniors is often more difficult to recognize than in younger individuals and senior citizens are unable to describe it spontaneously, clinicians must have more patience and be more proactive in the detection of depression symptoms. Depression in seniors is missed also because it is assumed to be a normal response to ageing, physical losses, or other life events. However, medical intervention for depression is appropriate and improves the quality of life in elderly. The under-diagnosis and under-treatment of depression among the elderly population represent a serious public

Correspondence :

Dr. Suresh Prasad Nepal, Department of General Practice and Emergency Medicine, National Academy of Medical Sciences, Bir Hospital, Kathmandu.
Email: sureshpnepal@gmail.com
Contact: 9851094272

health problem. The consequences of unrecognized and untreated depression in seniors may include excessive use of health care services, increased length of stay during hospitalization, decreased treatment compliance and increased morbidity and mortality from related underlying medical illness or from suicide.⁵

The objective of the study was to estimate the prevalence of depression according to Geriatric Depression Scale (GDS-15)⁶, an internationally validated questionnaire, among older adults in the Nepalese population. The scale has already been validated in the Nepalese population in Nepali language.⁷

METHOD

This observational study was conducted among 370 elderly people attending outpatient geriatric clinic of a tertiary care hospital in Kathmandu, Nepal. The study was conducted from 1st January to 31st December, 2017. The institutional review committee of the hospital approved the study protocol.

The elderly people, who were unable to speak, hear, complete the interview process, did not consent or in front of close relatives to participate in this study and those who did not understand the Nepali language were excluded from the study.

The study was a questionnaire-based survey without leading questions and the questionnaire was previously translated to Nepali language, validated and used.⁷ A written informed consent for participation in the study was taken from all the participants and they were given the liberty of anonymity and answer to the questions without the presence of any of their relatives.

Primary outcome measure was prevalence of depression among elderly. Depression was defined according to the geriatric depression scale. Scores of 0-4 were considered normal; 5-8 indicated mild depression; 9-11 indicated moderate depression; and 12-15 indicate severe depression. The participants were asked the questions from the questionnaire in the OPD room by one the researchers. Close relatives of the participants were requested to stay outside the room during the interview to reduce bias.

The sample size was calculated considering confidence level (CL) =95%, expected proportion of depression (P) = 0.33 taken from the report by Gautam R et al⁷

and total width of confidence interval (W)=0.25; calculation was done using the formula for sample size of observational studies suggested by Hulley et al.⁸

Descriptive statistics was presented in proportion percentage, mean and its standard deviation using SPSS 20.0.

RESULT

We evaluated 397 patients for eligibility. Seven patients did not want to participate in the study and 20 patients did not understand Nepali language (19 could only understand Newari language and one could only understand Hindi Language) were excluded from the study. The aim of this study was to estimate the prevalence of depression. The demographic data is presented in Table 1.

Patients	Total No.	Age (Minimum)	Age (Maximum)	Mean	Standard Deviation
Female	152	70	99	76.03	5.528
Male	218	70	98	78.20	5.267
Total	370	70	99	77.31	5.473

Over the period of 12 months, only 370 were included in the study. The above table elucidate that all the respondents were more than 70 years. The mean age of the respondents was 77.31±5.473. Among respondents, 41.1% were female and mean age was 76.03±5.528 and 58.9% were male and mean age 78.20±5.267.

	Response	Yes	NO
1.	Are you basically satisfied with your life?	89% (328)	11 % (42)
2.	Have you dropped many of your activities and interest?	45.9% (170)	54.1% (200)
3.	Do you feel that your life is empty?	29.5% (109)	70.5% (261)
4.	Do you often get bored?	33.2% (123)	66.8% (247)
5.	Are you in good spirits most of the time?	66.5% (246)	33.5% (124)
6.	Are you afraid that something's bad is going to happen to you?	19.5% (72)	80.5% (298)
7.	Do you feel happy most of the time?	77.3% (286)	22.7% (84)

8.	Do you prefer to stay home or rather than going out and doing new things?	63.8% (236)	36.2% (134)
9.	Do you often feel helpless?	19.7% (73)	80.3% (297)
10.	Do you feel have more problems with memory than most?	77.8% (288)	22.2% (82)
11.	Do you think it is wonderful to be alive now?	76.1% (284)	23.2% (86)
12.	Do you feel pretty worthless the way you are now?	30.5% (113)	69.5% (257)
13.	Do you feel full of energy?	36.5% (135)	63.5% (235)
14.	Do you feel that your situation is hopeless?	19.7% (73)	80.3% (297)
15.	Do you think that most people are better off than you are?	33.8% (125)	66.2% (245)

The above table shows the study found 89 per cent (n=328) of respondents were satisfied with their life. Only 11 per cent (n=42) of respondents were not satisfied with their life. It also found that more than 45.9% (n=170) of elderly people were dropped many of their activities and interest. However, 54.1% (n=200) were not dropped their activities and interest. Most elderly people i.e. 70.5 % (n=261) feels their life is full of joy but 29.5% (n=109) still feel their life empty. Moreover, it reveals that the maximum elderly people 247 (66.8%) have had to get bored, while 123 (33.2%) have often felt bored. The study also shows that 246(66.5%) looks good in spirits mostly while 124 (33.5%) not good in spirits. Similarly, 19.5% (n=72) are afraid that something is going to happen bad however 80.5% (n=298) not feel so.

It expresses that 77.3% (n=286) feel happy mostly whereas 22.7% (n=84) do not. 63.8% (n=236) respondents did not prefer to stay home or rather than going out and doing new things whereas 36.2% (n=134) prefer to do so. Additionally, one fifth (n=73) of the respondents feel helplessness. It demonstrates that the majority of respondents 77.8% (n=288) feel more problems with memory and 22.2% (n=82) feel no problems with their memory.

About three fourth 76.1% (n=284) respondent thought wonderful to be alive now, the remaining 23.20% (n=86) respondents did not feel wonderful to be alive now. A majority 69.5% (n=257) claimed that they weren't feeling pretty worthless the way they are now. The remaining respondent 30.5% (n=113) claim. 36.5% (n=135) respondents felt full of energy. But majority of respondent 63.5% (n=235) did not. In the same way, only 19.7% (n=73) feel that their situation is hopeless whereas remaining 80.3% (n=297) are hopeful. Most of the respondent two third 66.2% (n=245) that they are better than others. About one-third of respondent thought that others were in a prosperous condition.

Depression level (Score)	Sex		Total
	Female	Male	
Normal (0-4)	65 (42.7%)	120 (55.4%)	185 (50%)
Mild (5-8)	64 (42.1%)	68 (31.2%)	132(35.7%)
Moderate (9-11)	20 (13.2%)	24 (11.0%)	44 (11.9%)
Severe (12-15)	3 (1.97%)	6 (2.75%)	9 (2.4%)
Total	152	218	370

As examined by using short Geriatric depression scale, the prevalence of depression among elderly visiting the out-patient department of BirHospital was 50% (n=185). Depression was more prevalent among elderly female (57.2%) than in males (44.95%) (p=0.006). All these suspected were referred to psychiatrist for further management.

DISCUSSION

The finding of this study was calculation of prevalence of depression among people above 70 years of age. Our study revealed that depression is an important public health problem especially in the geriatric population. This is an adequately powered sample size based study in the tertiary care centre in Kathmandu. Bir hospital being a centre visited by low and middle income group, this study may represent the low and middle class of Kathmandu valley.

A study conducted on community-dwelling areas of West Bengal showed 53.7% depression.⁹ A cross-sectional descriptive survey conducted at elderly welfare centre and public health centres in Korea showed the prevalence of depression to be 63%.¹⁰This

study found the prevalence of depression measured through GDS among Bir hospital OPD attending elderly people was 50%. The prevalence was more for females (52.7% of all females) than for males (44.95% of all males). This is similar when compared to the previous study by Khattri et al in 2006.⁴ Khatri et al found 53.2 % older adult patients attending the outpatient department of a hospital had depression. It is high when compared with the study of Chalise et al published in 2013.¹¹ It may vary because that study was conducted only in specific population of Nepal (Rai).

We found a variation in the results when looked at the results of neighboring countries from South Asia. The prevalence of depression was 19.8 % in Pakistan.¹² Studies have revealed that the prevalence rates for depression in community samples of the older adult in India vary from 6% to 53.7%.^{9, 13, 14} These various studies are not exactly comparable in the criteria used to define depression i.e., use of the different cut off point, the selection of samples and cultures too.

Although it was an attempt to study the prevalence of depression in the hospital attending adult patients, several limitations of this study should be considered before its generalization. Because, it was a descriptive study; thus, the results did not establish causal relationships for the study variables. And the data came only from Bir hospital attending patients and covered the elderly, more than seventy years' adult. No other variable, such as family size, married, occupation, income and education level, cast and ethnicity could be properly assessed. In spite of the limitations, the findings of this study suggest that a depression is a serious problem among Nepalese older adults, further research using qualitative method also needed to identify risk factors of increasing depression among the elderly. This may contribute to the empowerment of the older adult and, thus, enhance their quality of life in the future.

The results of the study are alarming; however, they cannot be generalized to the population of Kathmandu valley or Nepal. It is recommended that a larger study should immediately be carried out to find the prevalence of depression among elderly in old age home and community-dwelling areas.

CONCLUSION

Depression is prevalent in half the elderly population attending Geriatric OPD in Bir Hospital Kathmandu. They are more likely to suffer from mild than severe depression.

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