

ORIGINAL RESEARCH ARTICLE

STATUS OF ANXIETY AND DEPRESSION AMONG ELDERLY RESIDING IN A COMMUNITY OF TARAKESHWOR MUNICIPALITY, KATHMANDU

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**ABSTRACT**

**Background:** Together with increase in lifespan of human beings, mental health problems among elderly people are also being noticed more. The common problems are anxiety and depression. Timely identification and treatment improve the quality of life of elderly. This may prevent suicide and premature death too. This study aimed to find out anxiety and depression among elderly in a community of Tarakeshwor Municipality, Kathmandu.

**Methods:** Descriptive cross-sectional survey was done among 84 elderly, aged 65 years and above, residing in rural communities of Kathmandu. Data was collected through interview method in the household survey using tool translated in Nepali language including Geriatric Depression Scale short version (GDS-15) and Geriatric Anxiety Scale (GAS-10). Data analysis was done using SPSS version 22 for window. Descriptive findings were presented in tables including frequency, percentage, mean and standard deviation. Chi-square test was used to measure the association between variables.

**Results:** The mean age of the elderly was 72.29±6.96 years. Proportion of females (59.4%) was greater than male (40.6%). Among the surveyed elderly, 14.3% were having depression and 27.4% were having anxiety where 13.1%, 3.6% and 10.7% had mild, moderate and severe anxiety respectively. Anxiety and depression were not associated with any socio-demographic characteristics, except anxiety was significantly associated with their ability to move (p=0.006). Anxiety and depression among elderly were positively correlated (r=0.388, p<0.001)

**Conclusions:** Few elderly residing in a community have symptoms of depression but more than one forth have anxiety symptoms. Elderly with problem in movement should be assessed and cared for potential anxiety.

**INTRODUCTION**

The population of elderly is expanding worldwide. The World Health Organization<sup>1</sup> has also projected that the proportion of elderly will reach 22% of total population by the year 2050 from 12% in 2015. In Nepal, the proportion of elderly reached 6.8% in 2016<sup>2</sup> from 4% in 2011.<sup>3</sup> Elderly's population is comparatively greater in rural areas. <sup>4</sup> Furthermore, the number of elderly living with physical and mental health problems is also growing.<sup>5</sup>

WHO<sup>1</sup> has claimed that around 15% of elderly are having mental health problem. The common problems are dementia, depression and anxiety disorders.<sup>6</sup> Depression in old age is usually presented with low mood, decreased self-esteem, feelings of worthlessness with paranoid and suicidal ideation.<sup>7</sup> Similarly, anxiety disorder may be presented with symptoms of internal discomfort and fear.<sup>8</sup>

Mental health problems in old age are frequent, but remain undetected. Globally, 7% and 3.8% of elderly are currently having depression and anxiety disorder respectively.<sup>1</sup> In India, depression was prevalent among 72.4% of elderly.<sup>9</sup> Similarly, in Egypt, depression and/or anxiety were prevalent among more

than 80% of elderly.<sup>10</sup> In context of Nepal, 72.8% and 32.4% of elderly living in old aged homes had depression and anxiety respectively.<sup>11</sup> Study from India has revealed that mental health status of elderly living in a family is better than institutionalized elderly.<sup>12</sup>

However, it is unclear about the mental health status of elderly residing in community of Nepal. So, this study was carried out to assess the anxiety and depression among elderly residing in the rural community of Kathmandu.

**METHODS**

The study has adopted Quantitative cross-sectional research design. Elderly people aged 65 years and older living in rural community i.e. Thula Gaun, Naya Gaun, Danda Gaun and Aath Mile of ward number 3 of Tarakeshwor Municipality were the study population. Total 84 elderly, who could communicate in Nepali language, had not been diagnosed with mental health problems and available at their home during household survey were included in this study. The samples were selected using complete enumeration technique.

Geriatric Depression Scale (short version)<sup>13</sup> and Geriatric

Anxiety Scale-10<sup>14</sup> were the standard tools used to collect data about Depression and Anxiety respectively. Both tools are being used to assess mental health problems among elderly in Nepalese context and open to be used. The tools (GDS-15 and GAS-10) have been tested with internal consistencies of 0.920<sup>15</sup> and 0.93<sup>16</sup> respectively. Geriatric Depression Scale (GDS) includes 15 items measuring depression in dichotomous response, whereas Geriatric Anxiety Scale (GAS-10) consists of 4-point Likert Scale with 10 anxiety symptoms including 'not at all', 'sometimes', 'most of the times' and 'all the time' as possible responses. In both tools (GDS-15 and GAS-10), greater scores indicate more severe problem. The tools were translated in Nepali language and back translated to English language to maintain the consistency in meaning.

Data was collected by the researcher and the team members by door to door visit of each household from August, 22 to September, 4, 2019. Before data collection, ethical clearance was obtained from the Institutional Review Committee of the Institute of Medicine {Ref. No. 82(6-11).E<sup>2</sup>/076/077}. Informed written consent was taken from the respondents who could write their names, for those, who could not write, verbal consent was taken in presence of their family members. It took around 15 minutes for the completion of one interview. The interview was taken in a separate room of the house to maintain privacy of the respondents. After completion of the data collection, respondents were thanked. All the collected information had been kept confidentially in a cupboard of researchers.

Data was checked for its completeness and usability for analysis. Responses in each question were coded to make the data entry simpler. After coding, data was entered in EpiData3.1 and transferred to IBMSPSS version 16 program for further analysis process. Negative items were reverse coded before scoring. Descriptive and inferential statistics were used to interpret the findings of the study. Descriptive findings were presented in tables including frequency, percentage, mean and standard deviation depending upon the characteristics of data and Chi-square test (Pearson and Fisher Exact test) was used to measure the association between variables.

## RESULTS

Among 84 respondents, the majority (60.7%) were of the age group 65-74 years. The mean age was 72.29±6.96 years. Female (59.4%) respondents were more in number than male (40.6%). Majority (76.2%) of them were living with their spouses and 77.4 % were not able to read and write. Nearly half (42.8%) were having some sort of physical health problem, among them, 55.5% had hypertension. All the elderly having the health problems (47.6%) were taking regular medication prescribed by their doctor for their health problems and 35.7% were using some sorts of substances like alcohol, tobacco. Most (90.5%) of the respondents were able to move without assistance, whereas 2.4% were unable to move without support. More than half (58.3%) of them were in access to phone facilities for communication and 54.8% were receiving elderly allowance from the government of Nepal (Table-1)

**Table 1: Socio-demographic characteristics of respondents**

Characteristics	Number (%)
Age (in completed years)	
65-74	51(60.7)
75-84	27(32.1)
≥85	6(7.1)
Mean±SD= 72.29±6.96	
Sex	
Female	50(59.5)
Male	34(40.5)
Marital Status	
Married	59(70.2)
Widowhood	25(29.8)
Living With	
Family	17(20.2)
Spouse only	64(76.2)
Alone	3(3.6)
Education Status	
Can read and write	19(22.6)
Cannot read and write	65(77.4)
Previous Occupation	
Agriculture	70(83.3)
Business	5(6.0)
Labour	1(1.2)
Job holder	5(6.0)
Others	3(3.6)
Having Physical Health problem	
Yes	36(42.8)
No	48(57.1)
Types of Health Problem* (n = 36)	
Hypertension	20(55.5)
COPD	8(22.2)
Diabetes Mellitus	6(16.6)
Gastritis	4(11.1)
Gout	3(8.3)
Others#	5(13.8)
Under Regular Medication	
Yes	36(42.8)
No	48(57.1)
Physical Dependency for Movement	
Independent	76(90.5)
Need support	6(7.1)
Difficult to walk even with support	2(2.4)
Receiving Senior Citizens Allowances	
Yes	46(54.8)
No	38(45.2)
Substance Use Habit	
Never	35(41.7)
Current	30(35.7)
Past	19(22.6)

\*Multiple response

# Others includes Back pain-2, cataract-2, hemiparesis- 1

Majority (>80%) of respondents were not having the anxiety

symptoms like feeling terrible, detached and in daze, restlessness, feeling of not having control over life at all. More than one third (39.3 % and 35.7 %) of respondents were feeling tiredness and muscle tension sometimes whereas few respondents were having the anxiety symptoms like difficulty in sitting still (1.2%), feeling tired (1.2%) and feeling muscle tense (2.4%) all the time.

Most commonly experienced symptoms of depression among the respondents were not having interest in going around out of home (42.9%), memory problems (35.7%), thinking own life miserable than others'(34.5%). Similarly 13.1%, 8.3% and 6.0% of respondents were having hopelessness, worthlessness and hopelessness respectively. Exactly the same proportion (20.2%) of respondents had dropped many of their activities and often got bored.

**Table 2: Respondents' anxiety status**

n= 84

Level of Anxiety	Number (%)
Minimal Anxiety (Score ≤ 53)	61(72.6)
Mild Anxiety (Score 54 – 59)	11(13.1)
Moderate Anxiety (Score 60 – 65)	3(3.6)
Severe Anxiety (Score ≥ 66)	9(10.7)
Total	84(100)

Regarding the status of anxiety, 10.7% of respondents were having severe anxiety symptoms, whereas 72.6 % of them had minimal anxiety symptoms (Table 3). Similarly, majority (85.7%) of respondents were not having depression, whereas 9.5% and 4.8% of respondents were having symptoms suggestive of and indicative of depression respectively (Table 4).

**Table 3: Respondents' depression status**

n=74

Status of depression	Number (%)
No depression (Score 1-5)	72(85.7)
Suggestive of depression (Score 6-9)	8 (9.51)
Indicative of depression (Score ≥ 10)	4(34.8)
Total	84(100)

The table 4 indicates that the anxiety and depression status of elderly were not significantly associated with their age, gender, educational status, marital status, presence of physical health problems, receiving allowance from the government and need to take regular medication. Anxiety level was significantly associated with their movement ability, but depression was not associated with that.

Anxiety and depression among respondents were positively correlated (0.388) with strong statistical significance (p=0.000).

**Table 4: Association of anxiety and depression of respondents' sociodemographic variables**

n=84

Variables	Depression		P Value	Anxiety		P Value
	No Depression No. (%)	Presence of Depression No. (%)		No Anxiety No. (%)	Presence of Anxiety No. (%)	
<b>Age</b>						
65-74	45(90)	5(10)	0.173	44 (88)	6(22)	0.468
≥75	27(79.4)	7(20.6)		28(82.4)	6(17.6)	
<b>Sex</b>						
Male	43(86)	7(14)	0.928	44(88)	6(22)	0.468
Female	29(85.3)	5(14.7)		28(82.4)	6(17.6)	
<b>Educational Status</b>						
Can Read and Write	16(84.2)	3(15.8)	0.831*	17(89.5)	29(10.5)	0.726
Cannot Read and Write	56(86.2)	9(13.8)		55(84.6)	10(15.4)	
<b>Marital Status</b>						
Married	51(86.4)	8(13.6)	.770*	52(81.1)	7(11.9)	0.33
Widowhood	21((84)	4(16)		20(80)	5(20)	
<b>Mobility</b>						
Move Independently	67(88.2)	9(11.8)	0.09*	68(89.5)	8(10.5)	0.006*
Move with support	4(66.7)	2(33.3)		4(66.7)	2(33.3)	
Bed ridden	1(50)	1(50)		0(0)	2(100)	
<b>Having Physical Health Problem</b>						
Yes	39 (86.7)	6(13.3)	0.789	38(84.4)	7(15.6)	0.721
No	33(84.6)	6(15.4)		34(87.2)	5(12.8)	
<b>Under Regular Medication</b>						
Yes	34(85)	6(15)	0.858	34(85)	6(15)	0.858
No	38 (86.4)	6(13.6)		38(86.4)	6(13.6)	
<b>Receiving Elderly Allowances</b>						
Yes	38(82.6)	8(17.4)	.533*	39(84.8)	7(15.2)	0.788
No	34(89.5)	4(10.5)		33(86.8)	5(13.2)	

## DISCUSSION

Mental illness is stigmatized in Nepal, resulting in less reporting of symptoms associated with them. In this study, the measurement of anxiety and depression status/symptoms were self-reported by the participants. Discussing about the symptoms of anxiety, >1/3<sup>rd</sup> elderly sometimes felt tiredness and muscle tension. Similar to this finding, a study<sup>17</sup> reported that 45% of elderly without any diagnosed illness had tiredness and muscle tension. This finding suggests that it cannot be said that the people are suffering from anxiety based on these symptoms only, but these symptoms cannot be ignored either. In present study, very few elderly reported other anxiety symptoms such as difficulty in sitting still (1.2%) and feeling muscle tense (2.4%) all the time. The finding indicates that few elderly in the community are having anxiety symptoms. Summarizing their anxiety score, the majority (72.6%) of elderly had minimal anxiety. Whereas, 10.7% of elderly had severe anxiety symptoms. The prevalence of anxiety among elderly in this study seems quite lesser than the study done among elderly living in the community of New York by Richardson et al<sup>18</sup> where 27% of elderly had clinically significant anxiety symptoms. The difference might be because of differences in settings and pre-existing vulnerability of the study samples, as the study samples in later study were having combinations of physical, financial, social and legal problems.

More than one third of elderly were having symptoms of depression like: losing interest in going around out of home (42.9%), having memory problems (35.7%) and thinking their own life as more miserable than others' (34.5%). A study done in India has revealed that 74.7%, 55.7% and 75.9% of clinically diagnosed elderly with depression had the same symptoms of depression respectively.<sup>19</sup> Moreover, few elderly in present study were having depressive cognition like hopelessness (13.1%), helplessness (6%) and worthlessness (8.3%) whereas, greater proportions of elderly (73.4%, 83.5% and 83.5% respectively) with clinical depression were having these symptoms in the Indian study.<sup>19</sup> As hopelessness is considered as a main predictor of suicidal ideation and behavior,<sup>20,21</sup> these symptoms should be addressed carefully among elderly. In the context of depression status, 14.3% of elderly had suggestive and indicative symptoms of depression. In an institution based study, 60% elderly had severe depression and the remaining 30.0% also had moderate depression.<sup>22</sup> The prevalence of depression was nearly four times more than that in present study. In context of India, a comparative study has revealed that the mental health status of elderly living at their own home is significantly better ( $p=0.01$ ) than that of elderly living in institutional care homes.<sup>12</sup> In Nepal too, the study findings by Bhattarai & Dutta<sup>23</sup> had demonstrated a comparatively higher prevalence (47.33%) of depression among institutionalized

elderly. An Indian community based study has revealed that people living single or with children (after death of spouse) are likely to have depression 5 times more than those living with their spouses at old age.<sup>9</sup> In present study, 96.2% of respondents were living with their spouses, which may be the major source of support for them.

The present study could not identify significant association of depression and anxiety of elderly with their socio demographic characteristics, except anxiety level was associated with the ability of people to move around independently ( $p < 0.05$ ). However, a greater proportion of elderly with age more than 75 years had anxiety symptoms in comparison to people with age between 65 to 75 years (20.6% vs 10%). In contrast to depression, the prevalence of anxiety was greater in people with age less than 75 years (22% vs. 17.6%). These differences in anxiety and depression status in two age groups were not significantly associated ( $p>0.5$ ). The study by Barakat et. al<sup>22</sup> has also reported no significant association of anxiety and depression with demographic characteristics except depression with occupation and monthly income and anxiety except with age. Present study has identified that the elderly with anxiety tend to have depression too and vice versa ( $r=0.388$ ,  $p=0.000$ ). The possible reason behind this might be the presence of factors which may increase the vulnerability of both conditions.

## CONCLUSION

More than one third of elderly are having anxiety, some of them with anxiety symptoms are having it in severe intensity. Similarly, depression is also prevalent in some elderly. Anxiety and depression of elderly are positively correlated. These disorders are not associated with age, marital status, educational status and other demographic characteristics of elderly, but the elderly with difficulties in movement tends to have anxiety. The health care provider working on mental health need to treat anxiety and depression of elderly in unison, as they tend to come together. The elderly with decreased functional mobility needs to be assessed for potential anxiety. The study was limited to a small community of Kathmandu. Large scale study can be replicated using larger sample size, so the findings would be more generalizable.

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