Original Article

J Nepal Health Res Counc 2021 Apr-Jun;19(51): 305-10

DOI: https://doi.org/10.33314/jnhrc.v19i2.3120

Anxiety and Depression among Senior Citizens

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ABSTRACT

Background: Senior citizens are at risk of developing mental health problems and the most common are depression and anxiety, which are important public health problems. This study aimed to find out the mental health status and factors associated with it among senior citizens.

Methods: The study design was a cross sectional survey. Among the senior citizens residing in Tansen Municipality, Palpa, 245 participants were selected randomly from the list of senior citizens, enrolled in senior citizen allowance scheme. Data was collected by doing face to face interviews using Geriatric Depression Scale -15 and Geriatric Anxiety Scale-10. The data was entered in Epi Data 3.1 and transferred to SPSS version 16 program for analysis.

Results: The mean age of the participants was 78.33 years. Most of the participants were female (52.2%), 95.5% were physically independent and 68.2% had some physical problems. Regarding depression, 30.6% and 2% of the participants had the symptoms suggestive and indicative of depression respectively. Whereas, 8.2% had severe symptoms of anxiety. The anxiety and depression were correlated (rs = 0.615) and were associated with companion of living, education status, physical dependency, and comorbid physical problem.

Conclusions: Senior citizens have symptoms of depression and anxiety. Having physical health problems, being physically dependent are likely to result in poor mental health in elderly. There is a need to recognize the mental health problem of elderly in community settings.

Keywords: Anxiety; depression; elderly; mental health status; senior citizens

INTRODUCTION

The world's population is ageing rapidly.[1] The number of people aged 65 years and above in Nepal accounts for 0.24% of old persons in the world and 5.27 % of Nepal's population.[2] Senior citizens are at risk of developing mental and physical health problems[3] and are particularly vulnerable to major depressive episodes and also suffer from comorbid anxiety disorders.[4] Depression and anxiety are the most common mental health problems and were identified as leading contributors to global disability.[5] Together with modernization, elderly in Nepal also are living alone and are vulnerable to mental health.[6] In such context, identification and treatment of mental health problems in older adults has become increasingly important.[7] Therefore, this study aimed to find out the mental health status (anxiety and depression) of senior citizens and identifying the factors associated with them.

METHODS

A cross-sectional survey was conducted among senior citizens residing in Tansen Municipality of Provence -5, Nepal. Among the 1967 people, enrolled in the senior citizen allowance scheme of Nepal Government, living in Tansen municipality, 245 people were selected randomly through computer generated random tables. All together there were 14 wards in that municipality, and participants included in study were the available one and able to communicate in Nepali language. Geriatric Depression Scale (short version) and Geriatric Anxiety Scale-10 were used to collect data about mental health problems of senior citizens after seeking permission to use from related authorities. The instrument was translated in Nepali language. The internal consistency reliability (Cronbach alpha coefficient) for Geriatric Depression scale short version was 0.9.[8] The internal consistency alpha (α) value of Geriatric Anxiety scale was 0.91.[9] After random selection of the participants from the list of senior citizen allowance scheme, address of the participants and ward was taken. Participants' households were identified by door to door visit with the help of local volunteers from Feb, 27, 2020 to March, 18, 2020. Six enumerators were trained before for data collection. The data was collected through face-to-face interviews, while researchers read out the questions as well as their options for the participant one by one and

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requested to select the best responses which represent their condition. It took around 20 minutes to complete one interview.

Before data collection, the selected senior citizens were explained about the nature of the study and its objective. To maintain participants' right to self-determination, informed consent was taken. Consent was also taken from their main family member (guardian). The collected data were kept in a locked rack with access only to the researcher. Ethical clearance was obtained from the Ethical Review Board of NHRC, Nepal. Administrative approval for data collection was obtained from the Tansen Municipality. The data was coded and entered in EPI Data3.1 and transferred to IBMSPSS version 16. Descriptive statistics was applied to check distribution of data. To check correlation between anxiety and depression, Spearman's Rho was used. Chi square test was used to find out association of anxiety and depression with participant's demographic variables. Before the association test, anxiety was categorized according to the score obtained by the participants as ≤ 53 (Minimal), 54 - 59 (Mild), 60 - 65 (Moderate), and ≥ 66 (Severe). Similarly, depression was categorized as: 1 - 5 (No depression), 6 - 9 (Suggestive depression) and ≥ 10 (Indicative depression).

RESULTS

Among the 245 senior citizens surveyed, the mean age was 78.3 years with ±6.3SD. Majority of the respondents [128(52.2%)] were female and 12(4.9%) were living alone in their home. Majority [133(54.2%)] could not read and write, 67(68.2%) had some sort of physical health problems, and 164(66.9%) were taking some types of regular medications for their health conditions (Table 1).

Table 1. Respondents' Demography (n=245).

Variables	Number	Percentage
Age (in completed years)		
70 - 80	169	69.0
81 - 90	67	27.3
≥91	9	3.7
Sex		
Female	128	52.2
Male	117	47.8
Marital Status		
Married	157	64.1
Widowhood	88	35.9
Living Companion		
Family	173	70.6
Husband and Wife only	60	24.5
Alone	12	4.9
Education Status		
Cannot read and write	133	54.3
Can read and write	112	45.7
Current Occupation		
Still Working	149	60.8
Retired	96	39.2
Having Physical Health problem		
Yes	167	68.2
No	78	31.8
Physical Dependency		
Independent	235	95.9
Need support	6	2.4
Difficult to walk even with support	4	1.7

The anxiety symptoms, such as feeling terrible [5(2.0%)], tired [80(32.7%)], muscle tense [91(37.1%)] and restless [32(13.1%)] were experienced most of the time by the respondents. Senior citizens [200 (>80%)] never experienced anxiety symptoms like; feeling detached or isolated, difficulty in sitting still, and feeling like something terrible was going to happen. Respondents [235(95.9%)] were satisfied with life, 217(88.6%) felt wonderful to be alive and 212(86.5%) felt happy most of the time. On the other hand, the depressive symptoms experienced by them were feeling of helplessness 27(11.0%), worthlessness 28(11.4%) and hopelessness 35(14.3%). (Table 2). Regarding the depression category, 165 (67.3%) of respondents had no depression, 75(30.6%) had suggestive and 5(2%) had indicative of depression symptoms. Similarly, regarding the level of anxiety, 158(64.5%) respondents had minimal symptoms of anxiety, 38(15.5%) had mild, 29(11.8%) had moderate and 20(8.2%) had severe symptoms of anxiety.

Table 2. Respondents' Depression Status (n=245).

Variables	Yes	No
	N (%)	N(%)
Satisfied with life*	235 (95.9)	10 (4.1)
Dropped many of activities and interests	122 (49.8)	123 (50.2)
Feel that life is empty	33 (13.5)	212 (86.5)
Often get bored	76 (31.0)	169 (69.0)
Most of the time in good spirits*	193 (78.8)	52 (21.2)
Afraid that something bad is going to happen	39 (15.9)	206 (84.1)

Feel happy most of the time*	212 (86.5)	33 (13.5)
Often feel helpless	27 (11.0)	218 (89.0)
Prefer to stay at home, rather than going out and doing new things	50 (20.4)	195 (79.6)
Feel having more problems with memory than most	177 (77.2)	68 (27.8)
Think it is wonderful to be alive now*	217 (88.6)	28 (11.4)
Feel pretty worthless the way now	28 (11.4)	217 (88.6)
Feel full of energy*	147 (60.0)	98 (40.0)
Feel that his situation is hopeless	35(14.3)	210 (85.7)
Think that most people are better off than he/she is	150 (61.2)	95 (38.8)

**Negative statements*

Both the depression and anxiety were significantly associated with marital status (p=0.001, and p = .001, OR = 3.002), companion of living (p=0.000 and 0.004), education status (p=0.004, and p = 0.000, OR = 3.673), physical dependency (p=0.000, and p = 0.005, OR = 6.698) and presence of physical health problem (p=0.000, OR = 2.408, and p=.037) among senior citizens. Depressive symptoms were significantly higher in female (p=0.012, OR= 2.010), but anxiety was not significantly associated with sex of the respondents. Anxiety and depression of senior citizens were positively correlated Spearman's Rho (rs) =0.615, p=0.000) (Table 3).

Table 3. Association of Depression and Anxiety with Demographic Characteristics (n=245).

Variables	Depression		Anxiety	
	No 167 (67.3%)	Suggestive & Indicative 80 (32.7%)	Minimal to Mild 196 (80%)	Moderate to Severe 49 (20%)
Age				
70-80	116 (68.6)	53 (31.4)	138 (81.7)	31 (18.3)
81-90	44 (65.7)	23 (34.3)	51 (76.1)	16 (23.9)
≥91	5 (56.6)	4 (44.4)	7 (77.8)	2 (22.2)
p value	.421*		.622*	
Sex				
Male	88 (75.2)	29 (24.8)	98 (83.6)	19 (16.2)
Female	77 (60.2)	51(39.8)	98 (76.6)	30 (23.4)
Odds Ratio	2.010		.633	
C.I. (p value)	1.161, 3.480 (.012)		.334, 1.200 (.106)	
Marital Status				
Married	118 (75.2)	39 (24.8)	136 (86.6)	21(13.4)
Widow hood	47 (53.4)	41(46.6)	60 (68.2)	28 (31.8)
Odds Ratio	.379		3.002	
C.I. (p value)	.218, .659 (.001)		1.590,5.74 (.001)	
Living Companion				
Family	113 (65.3)	60 (37.7)	133 (76.9)	40 (23.1)
Husband and wife	49 (81.7)	11 (18.3)	56 (93.9)	4 (6.7)
Alone	3(25.0)	9 (75.0)	7 (58.3)	5 (41.4)
p value*	.000		.004	
Education Status				
Can read and write	86 (76.8)	26 (23.2)	101 (90.2)	11 (9.8)
Cannot read and write	79 (59.4)	54(40.6)	95 (71.4)	38 (28.6)
Odds Ratio	.442		3.673	
C.I. (p value)	.253, .773 (.004)		1.775,7.60 (.000)	
Physical Dependency				
Dependent	1 (10.0)	9 (90.0)	4 (40.0)	6 (60.0)
Independent	164 (69.8)	71 (30.2)	192 (81.7)	43 (18.1)
Odds Ratio	.048		6.698	
C.I. (p value)	.006, .387 (.000) †		1.811, 24.7 (.005)	
Physical Health Problem				
Yes	103 (61.7)	64 (38.3)	128 (76.6)	39 (23.4)
No	62 (79.5)	16 (20.5)	68 (87.2)	10 (12.8)
Odds Ratio	2.408		.483	
C.I. (p value)	1.280, 4.530 (.006)		.227, 1.026 (.037)	

*† continuity correction, * fisher exact*

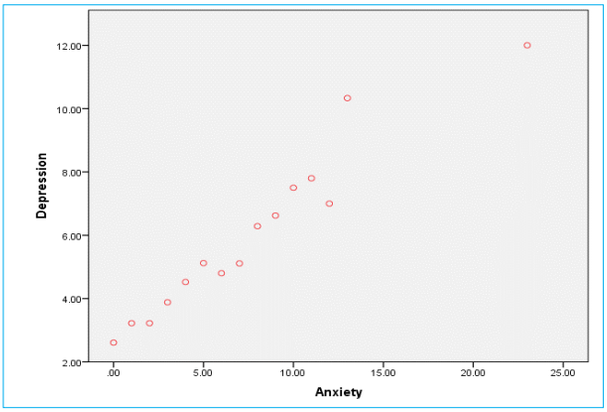

Figure 1. Correlation between Respondents' Anxiety and Depression Score.

DISCUSSION

Mental health problems among elderly are a challenge and a subject of concern. Because elderly population tend to

have several complex health issues.[10] In this study too, 68.2% senior citizens had some sorts of physical health problems, the commonest was hypertension (43.2%) and 32.9% had multiple physical health problems including diabetes, hypertension and cardiac problems. Previous studies conducted in Kathmandu,[11] Portugal[12] and India[13] also found several health problems among elderly. Additionally, in the study, 4% elderly were dependent physically for their daily activities. Higher than this finding, 49% elderly of the Netherlands had functional limitations.[14] With this understanding, it can be said that senior citizens have multiple health problems that may cause dependence and have to be the subject of discussion.

During discussion, it has to be considered that the depression and anxiety in this study was self-reported by the respondents. Regarding anxiety symptoms, in the study, >1/3rd of senior citizens felt tiredness and muscle tension most of the time. Although elderly do not have health problems, 45% of them have muscle tension and tired feeling.[15] In this point we can say that although these symptoms could not be ignored, one cannot rely only on these symptoms to express anxiety. On the other hand, talking about overall anxiety score, 64.5% senior citizens in this study had minimal,15.5% had mild, 11.8% had moderate, and 8.2% had severe symptoms of anxiety. The prevalence of anxiety in this study was higher than that of China (5.0%),[16] India (3.6),[17] and Portugal (10.48%)[12] and seemed quiet lesser than that of Bosnia and Herzegovina (84%),[4] and New York (27%).[18] To this point it can be argued that anxiety is prevalent among elderly and likely to differ with society, their preexisting financial, social, legal and health conditions. The population of later studies had combinations of these issues.

In respect to the symptoms of depression, in the study, 1/5th respondents preferred to stay at home than going around out of home, >3/4th had memory problems and >3/5th felt their own life as more miserable than others. These symptoms were also observed around 3/5th elderly who were diagnosed depression clinically in India.[19] Although, few respondents of this study experienced helplessness (11.0%), worthlessness (11.4%) and hopelessness (14.3%), these symptoms need careful attention due to their link with suicidal ideation.[20] To categorize depression, in this study, 67.3% respondents had no depression, 30% had suggestive of depression and 2% had symptoms indicative of depression. Previous studies reported higher prevalence of depression among elderly.[4,11,21-23] However, a population based study in India[16] found lower prevalence (0.8%) of depressive disorders than that of this study. There are discrepancies regarding populations, methods of data collection, instruments measuring depression and anxiety, different in labeling of depression and anxiety severity in these studies. Nevertheless, >95% senior citizens in the study were living with family or spouse, this might be the support for lesser prevalence of depression in this study.

Regarding association, in present study, depression and anxiety were positively correlated (rho = .615, p = 0.000) with each other. Previous study among similar population has found concurrent anxiety and depressive disorder in 47.5% and 21% of elderly.[14] Additionally, living without partner (p = 0.001, OR = 3.00) and having lower education status (p = 0.000, OR = 3.67) would likely to 3 times increase respondents' chances of having anxiety in the study. Moreover, anxiety was associated with having physical health problems and physical dependence of the respondents. Similar to this finding, Sousa and friend[11] found significant association of female sex (OR = 2.77) and low educational level (OR = 2.30) with anxiety symptoms. Previous studies[24,25] also reported higher prevalence of anxiety among women than male. However, anxiety was not significantly associated with the sex of senior citizens in this study. Nevertheless, present study demonstrated being female (p = .012, OR = 2.01) and having physical health problems (p = .006, OR = 2.40) would likely to 2 times increase the chances of having depression. According to Sousa,[12] low educational levels (OR = 2.30) significantly associates with depression of elderly. On the other hand, education level, marital status, living companion and physical dependency were associated with depression in the study. Literature also supported health problems, financial problems, education, female gender and disability with depression.[17,21,22, 25-27] Contrary to this, a study found a significantly higher incidence of depression in male (63%) and anxiety among female (42%) respondents.[4] As this study showed a greater incidence of depression among female participants, it would be interesting to explore the reason behind this. In addition, Mental health status of the senior citizens in the community needs to be explored more for developing recognition and preventive programs. However, study limitations should be considered when interpreting results; the cross-sectional design does not allow to draw conclusions about the causality.

CONCLUSIONS

It is concluded that some of the senior citizens residing in Tansen Municipality have anxiety and depression. Senior

citizens with anxiety tend to have depression too and vice versa. There are chances of increased anxiety level with lower education status and living without a partner. Having physical health problems and being female sex increases the chances of having depression. The senior citizens, living without companions and having physical health problems need to be assessed and cared for mental health status like anxiety and depression. There is still a need for evidence to find out factors associated with mental health status of elderly.

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Competing interests: None declared

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