# Psychiatric morbidities among old people of a city of Eastern Nepal

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**Abstract**

**Introduction:**

The data regarding prevalence of overall and common psychiatric disorders among community elderly people are scarce in Nepalese context.

**Objective:**

To measure the prevalence of mental problems among old people in a community setting.

**Methodology:**

All people of age ≥ 60 years from 'Urlabari', a city in eastern Nepal, being members of a local old-age committee were called to participate in this study. A total of 140 old people attended a health-camp and with informed written consent and authority approval, the response to the GHQ-12 and demographic information were collected. The GHQ-12 score ≥2 was adopted for 'psychiatric caseness' analysis. However, people with scores ≥4 were assessed by a psychiatrist for further evaluation and management. Diagnoses were made according the ICD-10.

**Results:**

Majority (87%) were in age groups of (61-70) and (71-80) years. Many (44%) had stressors, common being: dispute with family, illness and death of close person. Many old people had health complaints; mainly physical/ somatic, mood and anxiety symptoms. About 2/5$^{th}$ subjects 55 (39.29%) had GHQ-12 score ≥2 and 26.43% had ≥3; i.e. 'psychiatric caseness'. Among the subjects with score ≥4 (23) assessed for psychiatric diagnosis, 21 (91.30%) had some ICD-10 diagnosis. Depression, adjustment and anxiety disorders were common diagnoses, and 2% had suicidality,

**Conclusion:**

A remarkable proportion of old people had current 'psychiatric caseness'. Common mental disorders were depression, adjustment and anxiety disorders among elder people.

**Key words:**

Health-camp, old people, 'psychiatric caseness', psychiatric disorders, Nepal

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## INTRODUCTION

Population is getting old globally, also in Nepal.[1] Along with the changes affecting body, mind and social relationship; elder people may have many health issues and problems.[2] With the fast ageing of population, there has been a great concern about the problems, needs and priorities of the senior citizens.[1]

Though a remarkable proportion of psychiatric out-patients[3] and in-patients[4] are elderly, old people receive inadequate and those with mental illness receive even less attention. Available literature indicates high prevalence of mental illness among old people[5] though we lack community data from Nepal. Previous studies from our setting show depression (mood affective), anxiety, substance use and organic psychiatric disorders as major psychiatric diagnoses among elderly psychiatry out-patients[6,7] and those geriatric patients visiting various psychiatric services combined in BPKIHS.[8]

Information about the prevalence of psychiatric morbidity (of common disorders) will help uplift awareness about the problems and facilitate appropriate management at all levels. Though we have some hospital based data regarding mental disorders among elderly patients, there is a lack of data regarding the morbidity rates among old people from a community setting. This cross sectional study was designed to measure the prevalence of overall and sort out common mental disorders among old people of a community from eastern Nepal. In this study, we screened over all psychiatric morbidity with the GHQ-12[9,10] as psychiatric 'caseness' and psychiatric diagnoses (ICD-10)[11] were sort out with psychiatric assessment among those screened with high scores of the GHQ-12.

# MATERIALS AND METHODS

A cross sectional study was conducted among people of age 60 years and above, from and around 'Urlabari', a city in eastern Nepal, being the members of a local old-age committee. Old people of the city were the members of the group; and they were informed about and requested to attend a health-camp through the proper channel of the committee. After a brief explanation about the study to the subjects and significant care-giver, an informed consent was collected. The information was kept confidential.

After informed written consent and authority approval including Institute Ethical approval, the response to the GHQ-12[9,10] and demographic and relevant clinical information (co-morbid conditions, and psychiatric diagnosis) were collected and were recorded on the particular sheet.

The GHQ-12 score of 2 or more was adopted for 'psychiatric caseness' for psychiatric morbidity prevalence.[9,10] The people with the GHQ-12 score of 4 or more were assessed by a psychiatrist for further evaluation and management. Diagnoses were recorded according the 'International classification of disease and infirmity, 10th edition' ICD-10 criteria.[11] The data were collected, tabulated and statistically analyzed using Statistical Package for Social Sciences version 10. The elderly with the GHQ-12 score of 2 or more were seen by general physician and provided needful advices for further management and referral.

# RESULTS

A total of 140 elderly subjects were enrolled in this study; majority (82.85%) were Upper Hilly ethnicities (e.g. Brahmin, Chhetri, Thakuri), followed by Disadvantaged hill Janajati (e.g. Magar, Tamang, Rai, Limbu) (6.44%) and others (10.71%). More subjects (108, 77.14%) were female, and only (32, 22.86%) male, with M : F ratio of 1 : 3.37. Participants of age groups (60-70) and (71-80) years constituted the largest proportion (123, i.e. 87.86%) with-Average age: 70.87, minimum: 60, maximum: 98 years. Most of them were married (70.71%), followed by widow (20.00%), separated (8.57%) and single (0.71%). There were 53.57% with no formal education; followed by 17.86% below class ten and 4.29% intermediate level and 25.71% did not answer.

Majority of old people 107 (76.43%) had one or other health problem/ illness: mental or physical or both; 52 (37.14%) had only physical, 5 (3.57%) had only mental and 50 (35.71%) had both mental and physical illness. Only 33 (23.57%) did not report any illness diagnosis upon the screening assessment and consultation.

***Table 1: Socio-Demography of Old People***

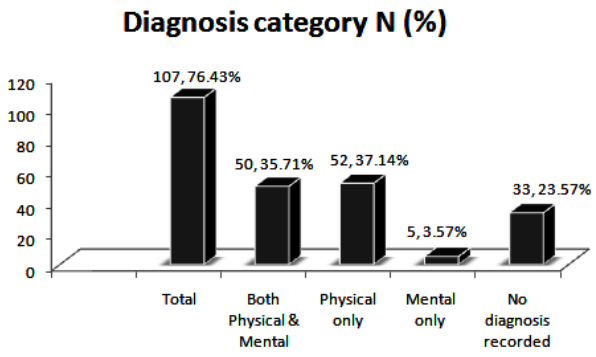
| Characteristic | Groups | Number (%) |
|---|---|---|
| Caste-ethnicity | Upper hill | 116 (82.85) |
| | Upper Terai | 4 (2.86) |
| | Relatively advantaged Janajati | 7 (5.00) |
| | Disadvantaged hill Janajati | 9 (6.44) |
| | Disadvantaged Terai Janajati | 1 (0.71) |
| | Hill Dalit | 2 (1.43) |
| | Terai Dalit | 1 (0.71) |
| Age (in years) | 60- 70 | 69 (49.29) |
| | 71- 80 | 54 (38.57) |
| | 81- 90 | 14 (10.0) |
| | > 90 | 3 (2.15) |
| Marital Status | Married | 99 (70.71) |
| | Single | 1 (0.71) |
| | Separated | 12 (8.57) |
| | Widow | 28 (20.00) |
| Education | Illiterate | 73 (53.57) |
| | < 10 class | 25 (17.86) |
| | Intermediate | 6 (4.29) |
| | unanswered | 36 (25.71) |
| | **Total** | **140 (100%)** |

Majority (73.57%) of the subjects came from joint family; followed by nuclear (10%) and broken (5.71%) family. Some subjects (10.71%) did not answer.

***Table 2: Family Type among Old Subjects***

| Family Type | Number (%) |
|---|---|
| Nuclear | 14 (10.00) |
| Joint | 103 (73.57) |
| Broken | 8 (5.71) |
| Unanswered | 15 (10.71) |

***Fig.1: Type of Illness among Old Subjects***




In the GHQ-12, out of total 12 score, the score of 2 or more has been adopted as 'psychiatric caseness'. This way, 55 (39.29%) subjects had 'psychiatric caseness'. With cut off 3, 37 (26.43%).

*Table 3: GHQ score distribution among Elderly subjects*

| GHQ score category | Number (%) |
|---|---|
| < 2 | 85 (60.71) |
| ≥ 2 | 55 (39.29) |
| < 3 | 103 (73.57) |
| ≥ 3 | 37 (26.43) |

The top 3 items of GHQ-12 were: 'difficulty with sleep', 'felt that you couldn't overcome your difficulties' and 'felt constantly under strain'.

*Table 4: GHQ-12 items*

| GHQ item related to | No. (%) |
|---|---|
| 1. Concentrate | 19 (13.57) |
| 2. Sleep | 39 (27.86) |
| 3. Useful activity | 10 (7.14) |
| 4. Decision making | 22 (15.71) |
| 5. Strain | 26 (18.57) |
| 6. Overcome difficulty | 32 (22.86) |
| 7. Enjoyment | 10 (7.14) |
| 8. Facing problem | 13 (9.29) |
| 9. Depressed | 22 (15.71) |
| 10. Self confidence | 13 (9.29) |
| 11. Worthlessness | 12 (8.57) |
| 12. Happiness | 5 (3.57) |

Most number of the elderly subjects (68.58%) had the scores of the mild (1-12) and 30% moderate severity range (13-24). Average GHQ-12 item score is 9.9.

*Table 5: Symptom Severity Grading by GHQ-12*

| Severity of GHQ item | No. | % |
|---|---|---|
| Nil (0) | 1 | 0.71 |
| Mild (1- 12) | 96 | 68.58 |
| Moderate (13- 24) | 42 | 30.00 |
| Severe (25- 36) | 1 | 0.71 |

Those elder subjects with ≥4 score were assessed by a psychiatrist in the camp to sort out common psychiatric diagnoses. Many of these old people (44%) reported to have stressors, common being: dispute with family, illness and death of close person. Many of these old people had some health complaints, mainly physical and somatic symptoms. Mood and anxiety were other symptoms.

Many (18 out of these 23 subjects, 78.26%) had physical diagnosis at the time of study assessment. Among 23 with the GHQ-12 score of ≥4, 21 (91.30%) had some ICD-10 diagnosis. Rest 2 had physical disease. Depression, adjustment and anxiety disorders were common diagnosis; one had dementia and 2 subjects had suicidal idea.

*Table 6: Psychiatric diagnosis among elder subjects n= 23*

| ICD 10 diagnosis * | Among GHQ-12≥4 No. (%) |
|---|---|
| Dementia | 1 (4.35) |
| Depressive episode/ disorder | 12 (52.17) |
| Anxiety | 4 (17.39) |
| Adjustment | 5 (21.74) |
| Somatoform | 2 (8.70) |
| Physical/ physiological | 1 (4.35) |
| Absent | 2 (8.70) |

* multi-response question- may have one or more than one response.

# DISCUSSION

Nepalese population is also ageing and the average life span of Nepalese is gradually increasing.[12,13] Considering the context, we adopted 60 years and above as our age-inclusion criteria in this study.[14] For the objective of generating a community based data regarding psychiatric disorders among elderly people, we choose a city with a group of senior citizens which welcomes, encourages and includes many of them of the area as its members. Hence, we conducted this study among the members of senior citizens of Urlabari, a city in eastern Nepal who represented the local community residents of old age.

In current study, 107 (76.43%) old people had some illness: one or other mental or physical or both; 52 (37.14%) had only physical, 5 (3.57%) had only mental and 50 (35.71%) had both mental and physical illness. Only 33 (23.57%) did not report any illness diagnosis upon the screening assessment and consultation. Prior to the consultation assessment in the health camp, the response to the GHQ-12 questionnaire was collected. Fifty five subjects (39.29%) had the GHQ-12 score of 2 or more, i.e. 'psychiatric caseness' and 37 (26.43%) had ≥3. This figure of overall psychiatric disorder prevalence (GHQ-12: 'Psychiatric caseness') is comparable with the Indian cities- Calcutta (36.95%)[15] and Pune (30.69%)[16]. Comprehensive exploration into the possible cause/s is warranted for further intervention and management.

In this study, mood (depression), adjustment and anxiety disorders were the common diagnoses seen. Others were Suicidality, Somatoform and dementia. Preponderance of depression, anxiety (neurotic) is consistent with community based[15,16] and clinical setting based studies, also in our part[6,7,8]. This picture is also similar to overall picture of mental disorders in a community[17,18]. Physical/ somatic complaints predominating as presenting complaint is consistent with study conducted in out-patient setting of eastern Nepal.[19]

Among the total enrolled 140 subjects, more (108, 77.14%) were female and only (32, 22.86%), with M : F ratio of 1 : 3.37. This female preponderance in a health camp study may indicate many possibilities, like: 1. Real representation of community picture with higher expectancy among females here, 2. Better help seeking in a local health camp setting among old females, 3. More female members in the senior citizen group though it claimed to be for all senior people of the locality, etc; indicating the need for further comprehensive study. Patients of age groups of (60-70) and (70-80) years constituted the largest proportion (123, 87.86%), possibly indicating the trend of ageing in Nepalese society. Most of the subjects were married (70.71%), followed by widow (20.00%), separated (8.57%) and single (0.71%). There were 53.57% with no formal education; followed by 17.86% below class ten and 4.29% intermediate level. Majority of the elder subjects here (82.85%) belonged to Upper Hilly ethnicities (e.g. Brahmin, Chhetri, Thakuri), followed by Disadvantaged hill Janajati (e.g. Magar, Tamang, Rai, Limbu) (6.44%) and others (10.71%). Majority (73.57%) of the subjects came from joint family; followed by nuclear (10%) and broken (5.71%) family. It is understandable that the presence of senior people in a family will make it joint and it is predominating in its family type.

This study has some limitations. First, it was conducted in a group of old people in a city, not community. However, the group represented the community old people. Second, sample size was small. However, we believe, among small sample, current study offers us good idea about the overall prevalence and common mental disorders among old age people. We conducted study with screening tool initially for over all prevalence of psychiatric morbidity and psychiatrist's assessment for only those with high GHQ-12 score (4 or more) to sort out common psychiatric disorders. Collaborative and larger sample size study with wider area and with more comprehensive diagnostic tool is warranted for better picture. Study into the risk factors, e.g. comorbid physical diseases etc. would add to the strength of our project. We had looked into physical comorbidity among these senior people as other important aspect of the study.

# CONCLUSIONS

A high proportion of old people have current 'psychiatric caseness'. Among them, common disorders are mood (depression) and anxiety disorders. Suicidality, stress related and somatoform disorders are other problems. Physical co-morbidities are remarkably common among elderly people.

## List of abbreviations

BPKIHS: B. P. Koirala Institute of Health Sciences
GHQ-12: General health questionnaire- 12
ICD-10: International classification of disease and infirmity, 10th edition'
IRC: Institutional Research Committee

## Declarations

Ethics approval and consent to participate-
The study was done after obtaining the approval of Institutional Research Committee of BPKIHS (IRC). Cases were enrolled after informed written consent from the subject. Also, approval of the Senior citizen group was obtained. Strict confidentiality of information was maintained.
Competing interests- The authors declare that they have no competing interests.
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