Prevalence of depression among elderly in an urban slum of Bangalore, a cross sectional study

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Abstract
In India the geriatric population (above 60 years) has tripled in the last 50 years. Projections are being made of close to 300 million elderly by 2050. Mental health among the elderly is an area that is largely undiscovered. The aim of this study was to assess the prevalence of depression among the elderly in an Urban Slum of Bangalore. An internationally validated semi-structured questionnaire Geriatric Depression Scale – Short form was administered to 210 elderly- mean age being 66.86 ± 6.35 years. The Mean Geriatric Depression score was 8.34 ± 4.32 (depression is a score of < 5). The mean score among females was 10.02 ± 4.32 and among males was 6.72 ± 4.32. Thus based on the scores 109 (51.9 %) elderly were depressed according to the scale, 74 out of 104 (71.15%) females and 35 out of 106 (33.02%) males. Some of the chief causes for depression were loneliness, health issues, financial insecurity, no social interaction and lack of a geriatric friendly environment. Identification of depression in the elderly is half the battle won. Several steps need to be taken to provide the elderly with social recognition, health insurance schemes, geriatric clinics and facilities for social gatherings and above all tender love and care.

Keywords: Elderly, depression, Urban, scale

Introduction
World Health Organization defines Health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. The elderly – those above 60 years of age have just as much right to enjoy this state of Health as any younger person. In our country the age of sixty is a period of transition for many, where they move from the hustle bustle of work and a respectable place in society to a quite retired life. From this age on, it is not only the physical ageing that affects them but also the challenges one has to face with their mental and social well being. It has been estimated that by 2050, there will be well around 2 billion over the age of 60 and around 300 million of them in our country.

20% of illness in the elderly is due to mental or a neurological illness and the most common being dementia and depression. (1) Depression can be attributed to a number of causes such as physical problems of ageing leading to limitations in daily activities, financial insecurities after retirement, loss of a social recognition, loss of a spouse leading to loneliness and depression. Several studies have shown an association between elderly depression and factors like illiteracy, poverty and manual labour. (2-4) Thus approach to manage depression must be multipronged – care for physical ailments and most importantly a healthy psychosocial environment.

Elderly living in large cities have the additional challenges of urbanization. Limited spaces, rising costs of living, nuclear families, depleting cultural values coupled with the ignorance of symptoms of depression or mental health as a whole has compounded the issue further.

The main challenge in depression is to pick up the subtle signs and to identify it. Very often it goes undiagnosed and the elderly are left without seeking healthcare for the same. This study was thus undertaken to gauge the prevalence of depression in the elderly. This study also aimed to elicit the contributory factors and to if found depressed to encourage them to seek and utilize health care services for the same.
Objective
To assess the prevalence of depression among elderly in an Urban Slum of Bangalore city.

Materials and Methods
Study design: A cross sectional study.
Study subjects: Elderly of a selected Urban Slum, Bangalore city.
Study period: The study was done from August 2014 to November 2014.
Study Setting: A selected Urban Slum, Bangalore city
Questionnaire: An internationally validated semi-structured questionnaire Geriatric Depression Scale – Short form was administered to them. The demographic data was also collected.
Study Tool: The Geriatric Depression Scale – Short form is a 15 item questionnaire. 
Assessment of Geriatric Depression Scale (Short Form): The answer is either Yes / No to each of the 15 questions. Depending on whether the question indicates depression or not, the question is awarded a score of either 1 or 0 respectively. A total score of 0 – 5 is Normal, and a score greater than 5 suggests depression.
Data Collection: The elderly were assured of strict confidentiality. Each elder was administered the questionnaire privately and in the conducive environment of their homes. The questionnaire was administered to the 210 elderly of the urban slum. The major issues affecting them in terms of whether they feel lonely, health concerns, not utilizing the available health care services, financial concerns and a general discussion of how they are spending the autumn of their life were also discussed with each of the elderly.
Data Analysis: Statistical Analysis was done using Microsoft Word Excel 2007 and SPSS Version 16. Data was thus tabulated in the form of frequency distribution tables and bar graphs. Chi Square associations were also worked out.

Results
Table 1: shows that of the 210 elderly who participated in the study, the number of males were 106 (50.5%) and the number of females were 104 (49.5%). The mean age of the population is 66.86 ± 6.35 years. The distribution based on religion : 130 (61.9%) belong to the Muslim religion and the rest 80 (39.1%) belonged to the Hindu Religion. The types of family that the elderly lived in : 84 (40%) lived in a Joint family, 70 (33.3%) lived in three generation family, 42 (20%) lived alone and 14 (6.7%) lived in a nuclear family. Based on the marital status, 147 (70%) are widowed, 56(26.7%) are married and living with their spouse and 7 (3.3%) have separated from their spouses or living apart from them.
The Mean Geriatric Depression score was 8.34 ± 4.32. Figure 1 shows The Mean Geriatric Depression score among females was 10.02 ± 4.32 and among males the score was 6.72 ± 4.32.
Based on the scores of the Geriatric Depression Scale, 74 out of 104 (71.15%) females and 35 out of 106 (33.02%) males are depressed as shown in Figure 2. Thus overall among the elderly, 109 (51.9%) elderly were depressed according to the scale.
Chi Square association: Significance was obtained for female sex (p = 0.00) and widowed elderly (p = 0.00) with the presence of depression.

Discussion
The distribution of male and female in this study is almost equal. The overall Mean Geriatric Depression score was 8.34 ± 4.32. This is above the cut off of a score of 5, below which it is an indication of depression. It is good to observe that
the overall score of the elderly does not indicate prevalence of depression. The mean score was higher in the female elderly 10.02 ± 4.32 when compared to the male elderly 6.72 ± 4.32. Predominant number of the elderly were widowed 147 (70%) and most of them 84 (40%) lived in a Joint family. Widowhood has contributed to significant loneliness and neglect in the elderly (p <0.05).

In a study done by Nair et al, in an urban area of Raichur district in Karnataka, the prevalence of depression in the elderly was found to be 32.4%, using the Geriatric Depression Scale[8]. In another study by Jain et al, in the urban slums of Mumbai, the prevalence of depression among the elderly was found to be 45.9%. Among the female elderly 57.8% were depressed[9].

In a study by Sati et al, on an older adult rural population in Tamil Nadu, the overall prevalence of depression was 42.7%, among women 60% and among men 29.3%(10). Another study was conducted by Ranjan et al, in old age homes of Kathmandu, on the prevalence of depression among elderly above 65 years, using the Geriatric Depression Scale – 30 item questionnaire. The prevalence of depression was found to be 47.33%(11).

Compared to the above studies, the prevalence of depressed elderly was found to be 51.9% in this study. This brings out the fact that whether urban or rural community or in old age homes, the elderly are depressed.

Several issues were highlighted by the elderly for their cause of feeling low and sad. Many said after the death of their spouse they experienced feelings of loneliness. Financial insecurity was a main cause for worry for most elderly, most of them being daily wage labourers are now left with no income and are at the mercy of their family members. Physical problems of ageing were being neglected due to financial concerns, inability to visit a hospital and lack of adequate knowledge of cure and treatment. Living in an urban environment, with all the family members out at work, they are not able to find means of social interaction. High cost of living, hectic lifestyle of the family members coupled with the lack of geriatric friendly environment has increased the prevalence of depression in the elderly.

**Conclusion**

Intervention at the primary level in terms of health education of the community, is the need of the hour. Tender love and care for the elderly, sensitize the community of the health concerns in the elderly whether physical or psychosocial. Several steps need to be taken to provide the elderly with geriatric friendly environments in terms of social recognition, health insurance schemes, geriatric clinics and facilities for social gatherings.

**References**


**Table 1:**

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**Figure 1:** Mean Geriatric Depression Score (GDS-15 Score)

- **Females:** 10.02
- **Males:** 6.72

Score < 5 indicates Depression

**Figure 2:** Gender Based Distribution of Depression in the Elderly

- **% Prevalence of Depression**
  - **Males:** 35 (33.02%) (74 (71.15%)
  - **Females:**