Prevalence of depression among institutionalized elders in the Colombo district

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Abstract

Objectives: To assess the prevalence of different degrees of depression, age and gender specific prevalence of depression and factors which are associated with depression among elderly residing in elderly homes in the district of Colombo.

Method: A descriptive cross sectional study involving 100 senior citizens aged 60 years and above institutionalized in five randomly selected "Homes for the Elderly" in the district of Colombo. A pre-tested, interviewer administered questionnaire in Sinhalese medium containing the Geriatric Depression Scale was used in the study.

Results: The prevalence of depression in the study population (n=100) was 56%, of which 23.2% had severe depression. Sixty percent of the female population (n=50) and 52% of the male population (n=50) were found to have depression. Prevalence of depression was found to be significantly higher among those with chronic diseases (p<0.01), family conflicts (p<0.05) and lack of psychological support (p<0.05). There was no significant association (p>0.05) with age, lack of financial support, literacy level, marital status and absence of a leisure time activity.

Conclusions: There are several factors which are seen to be associated with the existence of depression in the elderly. In the light of these results, a multidisciplinary approach is required for preparing social arrangements, enhancing family and community support and home care for elderly persons.

Introduction

Sri Lanka has the fastest growing elderly population in the world (1). Those who are 60 years and above, are considered as elderly. The preliminary analysis of the Census of the population of Sri Lanka, conducted in 2001, indicates that the proportion of elderly is 9.3% (2). It is estimated that by the year 2041, about a quarter of the Sri Lanka population would comprise of those who are 60 years and above (3).

Psychiatric disorders are especially prevalent among elderly (5). With a greater percentage of people living beyond the age of 60 in both the developed and the developing countries, the problem of mental illness among the elderly has grown significantly (4). Out of the psychiatric disorders amongst the elderly, depression is one of the most frequent and debilitating mental disorders, with a world-wide prevalence of about 10-15% (5). Further adding to this problem, depression in the elderly is often undiagnosed or untreated (5).

In today's context, the contribution of the Homes for the Elderly, towards providing care for the elderly population has become important. Statistics reveal that over 5800 of the elderly population in Sri Lanka reside in around 162 elderly homes registered under the National Secretariat for elders (6).

Not many studies have been conducted to look into the mental wellbeing of this population in Sri Lanka. Therefore assessment of depression among the elderly is timely and important for the future.

Methodology

A descriptive cross sectional study was conducted in five "Homes for the Elderly" which were selected randomly, from a list of all the "Homes for the elderly" registered with the Social Services Department in the Colombo District.

Study population

The study population consisted of all the elderly residing in the "Homes for the Elderly" in the Colombo district. The inclusion criterion was being resident in the" Home for the Elderly" for more than one year. The exclusion criterion was having being diagnosed with a mental illness.

Sample size
100 elderly individuals, residing in 5 randomly selected "Homes for the Elderly" in the Colombo district.

Sampling Method
The sampling frame consisted of all "Homes for the Elderly" registered with the National Secretariat for the Elderly in the district of Colombo. Five "Homes for the Elderly" were selected using simple random sampling. A list of all the members fulfilling our inclusion & exclusion criteria from the above selected "Homes for the Elderly" was prepared and stratified according to gender (male & female). Fifty individuals were selected from each stratum by simple random sampling (50 males and 50 females) as the study sample.

Study instrument
Data was collected using a pre-tested, interviewer administered questionnaire in Sinhalese medium, consisting of two parts.

Part A: It is the Sinhalese version of the Geriatric Depression Scale (GDS), an internationally accepted standardized questionnaire (7). It's a 15-item questionnaire especially developed as a screening instrument of depressive symptoms in the elderly to which they respond by indicating "yes" or "no" answers (7).

It was originally formulated in English and for the purpose of this study, it was translated into Sinhalese and back translated into English to minimize inconsistencies (The Sinhalese version was used in the study).

A Depression Score was given out of 15 in order to categorize the study population into no depression, mild depression or severe depression.

GDS is an internationally validated questionnaire showing a sensitivity of 85% and specificity of 74% (7).Based on the research that used depression rating scales in the elderly population, it is clear that GDS is the best validated instrument in various geriatric populations (7).

Part B: A single paged questionnaire intended to elicit socio-demographic information of the study population (i.e., age, gender, nationality, religion, marital status, level of education, past occupation, information on leisure time activities done in the elderly home, psychological & financial support from family members and friends.) "Psychological

support" was taken as any visits or communication with a relative, friend or any other known person. "Financial support" was taken as, a relative, friend or any other known person giving money to the individual.

The questionnaire was administered by the investigators by interviewing the respondents at their bed side. A standard method was used to conduct the interviews to minimize interviewer bias. Verbal consent was obtained from respondents and their caregivers prior to administering the questionnaire.

Data was collected over a period of five days during the morning hours in order to minimize interference to the activities at the elderly homes.

Before conducting the research, permission from the directors of the relevant "Homes for the Elderly" was obtained. Anonymity of respondents and confidentiality of information were assured. Thus the names and date of birth were not included in the questionnaire. Respondents were given the provision to refrain from answering any questions. All data collected was considered confidential, and only the investigators handled the data.

Data was analyzed manually and statistical methods (Chi square tests, P values) were used to carry out internal comparisons.

Results
Response rate was 100%. More than half (53%) of our sample was between the ages of 60 to 69 years. The mean age of the sample was 69.9 years. In the sample the majority were Sinhalese (96%). Eighty five percent of the sample was Buddhists.

Twenty eight percent had never got married. Ten percent had a living spouse. More than half of the elderly in the sample (55%) were widowed. Among the unmarried 67.86% were males. All who were separated or divorced were females.

Only 4% of the sample had not attended school during their lifetime. Seven percent had continued their education up to the Advanced Level. Literacy rate of the sample was 56% (An individual was considered literate if he or she can read and write /and went to school at least up to year 5). In our study, 39% of the elderly were not employed during any stage of their life and all of them were females whereas all the males had been employed.

Table 1: Socio-demographic characteristics of the study population

	Number of elderly (n=100)	%
Age category (Years)		
60 – 69	53	53%
70 – 79	40	40%
≥ 80	7	07%
Ethnicity		
Sinhalese	96	96%
Other	4	04%
Religion		
Buddhist	85	85%
Catholic & Christian	13	13%
Hindu	2	2%
Marital status		
Never married	10	10%
Widowed	55	55%
Divorced/separated	28	28%
Currently married	7	7%
Educational status		
No schooling	4	04%
Year 1- 5	40	40%
Year 6-11	49	49%
Completed Advanced Level	6	6%
Higher education	1	1%

The GDS was used to assess the presence and the severity of depression in the sample. Those who obtained a score of more than 4 out of 15 were classified as having depression according to the GDS. The depressed group was subdivided into mild and severe depression. A score of 5 to 10 was considered as mild depression whereas a score of 11 or more was regarded as severe depression. The mode of the depression score in the study was 9/15 and the mean score was 6.06.

Table 2: Prevalence of different degrees of depression.

Severity of Depression	Males No (%)	Females No (%)	Total No (%)
No Depression	24 (48)	20 (40)	44 (44)
Mild Depression	20 (40)	23 (46)	43 (43)
Severe depression	6 (12)	7 (14)	13 (13)
Total	50 (100)	50 (100)	100 (100)

Out of the 100 in the sample, a majority (56%) were depressed. Twenty six males (52%) and 30(60%) females had depression. Out of the depressed population, 46.42% were males and 53.57% were females ($X^2_{(df)} = 0.64$, p>0.05). Fifty percent of depressed individuals belong to the age category 60-69 years.

Figure 1: Reasons for admission to "Homes for Elderly"
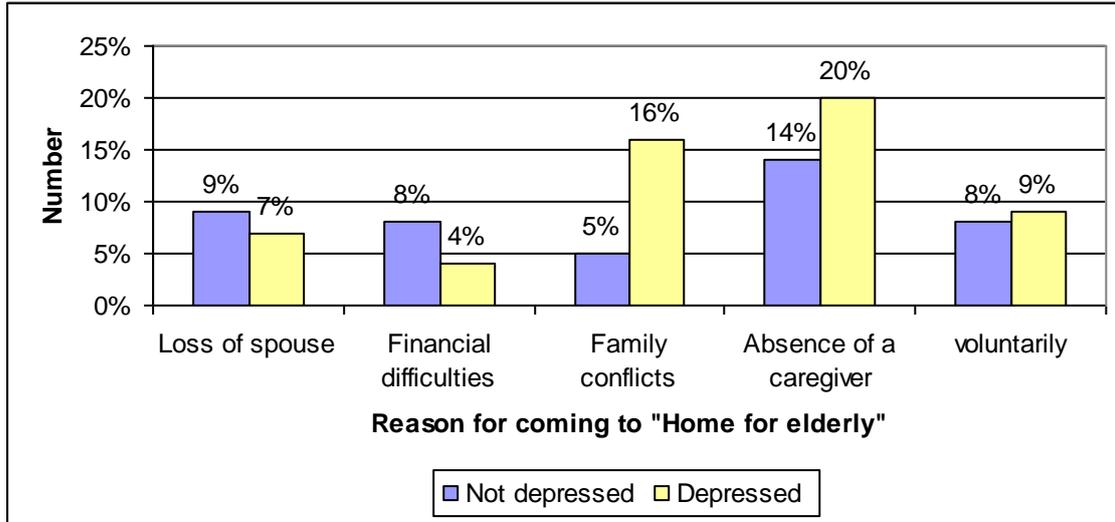
The most common reason (34%) for admission was absence of a care- giver. (Some had more than one reason and the most influential reason was taken in the study)

Prevalence of depression was higher among those who came to the "Homes for the Elderly due to family conflicts ($X^2_{(df)} = 4.398$, p<0.05) and an absence of a caregiver ($X^2_{(df)} = 0.166$, p>0.05), compared to other reasons for admission.

Figure 2: Presence or absence of psychological support and depression in the sample
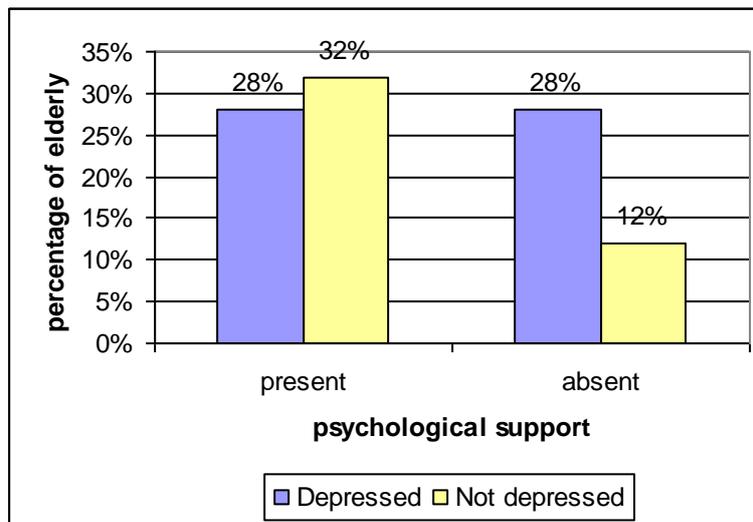
A majority (60%) of the sample had psychological support, whereas 40% did not. Seventy percent of those who did not have psychological support were depressed ($X^2_{(df)} = 5.30$, p<0.05). Out of the 68% of individuals who lacked any financial support 60.3% had depression ($X^2_{(df)} = 1.591$, p>0.05). All depressed males in the study population were previously employed whereas a majority (76.7%) of females with depression were previously unemployed (SND= 0.282, p>0.05). Of those who are depressed, a majority 53(94.64%) were currently unmarried (SND = 1.23, p>0.05). Currently unmarried group includes widowed, separated, divorced and never married individuals. Out of those depressed (n=56), 25(44.64%) were illiterate ($X^2_{(df)} = 0.021$, p>0.05). Only 9(16.7%) of depressed individuals were lacking a leisure time activity (SND= 1.3, p>0.05), whereas a majority were occupied in such activities. From the total depressed population 41(73.21%) were having various chronic diseases ($X^2_{(df)} = 7.184$, p<0.01) such as arthritis, diabetes mellitus, bronchial asthma, hypertension and ischaemic heart diseases.

Discussion

Since research on geriatric psychiatry in Sri Lanka is sparse, the Sri Lankan figures of prevalence of depression among the elderly could not be obtained. According to global figures the prevalence of depression among elderly was 10-15% (5). In the present sample, severity was assessed using the GDS. The mean score was 6.06/15 and the mode was 9/15. A majority (76.78%) were having mild depression.

A study done in Turkey to estimate the prevalence of depression among institutionalized elderly, found that 58.3% of the total study population was having depressive symptoms (45.1% in males and 54.9% in females) (8). Literature states that women are twice as likely to suffer from depression as men as the result of hormonal changes resulting from menstruation, pregnancy and menopause (9). The above statistics closely match the results of our study in which the prevalence of depression was 56% (n=100) in the total sample with a female preponderance (46.4% in males vs. 53.6% in females). However, the female preponderance was not statistically significant (p > 0.05).

More than a half of our sample was aged between 60 to 69 years (mean age 69.9 years). Depression was more prevalent among elderly aged 60-69 years. However, the individuals' age was not seen to be significantly associated with depression.

Depression is caused by a chemical imbalance in the brain. The exact mechanism is unknown, but bouts of depression can be triggered by sad or stressful life events, hormonal changes, disease, or certain medications. People with low self-esteem and a pessimistic outlook on life, seem to be particularly prone to depression (9). Since marital status, leisure activities, psychological and financial support, can be considered as factors which may contribute towards mental well-being, the study was carried out with an objective to find any association of these factors with depression.

Majority (73.21%) had chronic diseases, the presence of which was significantly associated with depression. Absence of psychological support was significantly associated with depression.

The most common two reasons for admission to "Homes for the Elderly" were absence of a caregiver and family conflicts (with children, in-laws, grand children etc. Of the above two reasons, family conflicts had a statistically significant association with the occurrence of depression. Depression was not significantly associated with marital status, financial support or employment status with depression.

The elderly in our sample has had a reasonably good level of schooling, with a literacy rate of 56%. Though some studies have shown that low literacy level is a risk factor for depression in the elderly, there was no statistically significant association between the existence of depression and literacy level in our study sample.

Conclusion

In our study the prevalence of depression was 56% with a female preponderance (53.6%). Absence of psychological support, presence of chronic diseases and family conflicts had a statistically significant association with the occurrence of depression in the study sample. Depression among institutionalized elderly is an important timely issue often undiagnosed and untreated, which needs to be addressed. In the light of the results of this paper, a multidisciplinary approach is required for preparing social arrangements enhancing family and community support and home care for elderly individuals.

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