A Study of Depression Among Aged in Urban and Rural Areas of Lucknow City

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ABSTRACT

Background

This cross-sectional study interviews 400 elderly belonging to different socioeconomic and varying demographic groups of urban and rural areas of Lucknow as per predefined inclusion and exclusion criteria with their informed consent.

Introduction

The elderly in India face a multitude of psychological, social, and physical health problems. As age advances there is increased morbidity and functional loss, also presence of a variety of depressive factors and occurrence of varying life events, greatly impact on one's psychological status, making them more prone to depression. As health care facilities improve in countries, the proportion of the elderly in the population and the life expectancy after birth increase accordingly. This is the trend which has been seen in both developed and developing countries

Aim and Objectives

To study the problem of depression amongst elderly.To suggest measures to reduce depression amongst elderly.

Materials And Methods

A total of 400 elderly people were interviewed, comprising of 200 people each from the elderly living in the rural areas and 200 elderly living in the urban areas of Lucknow city. . A predesigned and pretested interview schedule was used to elicit information on sociodemographic characteristics and required information. Necessary modifications were made in the schedule to overcome the difficulties encountered during pretesting. All the analysis was carried out by using SPSS 16.0 version and the results were recorded as frequencies, means ± standard deviations and p-values. Tables and figures were used for comprehensive viewing of the results. Chi-square test was used for categorical variables. A p-value of <0.05 was taken as the criteria of significance. The study explores depression and important correlates thereof.

Results

More than one third (38.2%) of the males and 15.3% of females in rural area were in the age group of 60-64 years , in urban areas 28.2 % of males and 15.8% of females belonged to 60-64 yrs age groups. 59.6% males and 82% females in rural area belonged to Hindu community while in urban areas, 37.1% were male and 65.8% were females who belonged to hindu community. In all, 46.5% of the males and 75.4% of females were Hindu.

Conclusions

In our study the overall prevalence of depression in the rural areas were 32.0% and the overall prevalence of depression amongst elderly in urban areas were 33.0%.The prevalence of depression was slightly higher amongst urban elderly than amongst rural elderly. The prevalence of depression was moderately high(32.5%) among the elderly in our study population. The prevalence of depression according to marital status was found to be higher in the elderly who were single (never married) than in those who were married. In our study greater number of literates had depression amongst elderly than illiterates.

INTRODUCTION

It has been documented that elderly are more prone to psychological problems and depression is the commonest geriatric psychiatric disorders. In fact the elderly in India face a multitude of psychological, social, and physical health problems. As age advances there is increased morbidity and functional loss, also presence of a variety of depressive factors and occurrence of varying life events, greatly impact on one's psychological status, making them more prone to depression. Ageing is a universal process. In the word of Seneca "old age is an incurable disease," however as Sir James sterling commented "you do not heal old age, you protect it, you promote it and you extend it." These are in fact the underlying principles of Preventive Medicine. The Bhore Committee1 had perceived that patients requiring psychiatric institutional treatment would be 2 per 1000 in the country. In 1966, the Mental Health Advisory Committee to Govt. of India suggested a prevalence rate of mental illnesses of

20 per 1000 population with 14 per 1000 in rural areas (Elnagger MN et al)2 Depression is among the commonest psychiatric disorder among elderly manifested as major or minor depression characterized by a collection of depressive symptoms3. Many studies have indicated severe under-recognition and undertreatment of depression in the elderly, even in developed countries4-6.

The expectancy of life at birth in 2011-16 is projected to be 67 and 69 years respectively for males and females. Between the years 2000 and 2050, the world wide proportion of persons over 65 years of age is expected to more than double, from the current 6.9% to 16.4%7. Around 60% of the 580 million older people in the world live in developing countries, and by 2020, this value will increase to 70% of the total older population8. As health care facilities improve in countries, the proportion of the elderly in the population and the life expectancy after birth in-

crease accordingly. This is the trend which has been seen in both developed and developing countries9 It has been suggested that urbanization leads to households becoming more nuclear in developing countries10. Industrialization, urbanization, education, and exposure to Western life styles are bringing changes in values and life style. Mason has suggested that urbanization is likely to erode the family's ability to care for elderly as well as decrease co-residence of adult children with the elderly.11 Old age is not a disease in itself, but the elderly are vulnerable to long term diseases of insidious onset such as cardiovascular illness, cancer, diabetes, musculoskeletal and mental illnesses. A study conducted in Udaipur Rajasthan had 42% elderly had psycho-social problems, in which 21.05% males and 27.3% females12. In a study by ICMR17 (1987) it was reported that prevalence of mental morbidity among elderly was 20.2 per thousand persons13. The goal of this study is to explore the magnitude and risk factors of problem of depression in elderly people residing in the urban and rural field practice areas of Era's Lucknow Medical College,Lucknow.

AIM AND OBJECTIVES:
1.To study the problem of depression amongst elderly.
2.To suggest measures to reduce depression amongst elderly.

MATERIAL AND METHODS
This cross-sectional study was conducted among elderly belonging to different socioeconomic and varying demographic groups of urban and rural areas Lucknow.

Study area: The study was conducted in the urban and rural field practice areas of Era's Lucknow Medical College and Hospital.

Study unit: People of either sex , 60 yrs of age and above residing in the field practice areas of Department Of Community Medicine constitute the study unit.

Study design: It was a community based cross sectional study.

Study period: The period of study was one year from October 2011 to September 2012 which was used for the development of study tools, collection of data, analysis and presentation of findings.

Sampling technique: Multistage random sampling techniques was used to select the study unit.

Sample size : Sample size was calculated by the formula

$$n = z^2 . p . q / d^2$$

Prevalence is taken as 52.2%20 and the value of allowable error , d is taken to be 10% of p

Sample size = 366 population
Adding data loss (10%)=400 population.

A total of 400 elderly people were interviewed, comprising of 200 people each from the elderly living in the rural areas and 200 elderly living in the urban areas of Lucknow city. Multistage random sampling techniques was used to select the study unit. Elderly residing for at least six months in the area were be considered as a resident and included in the study. Elderly whose native place is other than present place of residence but the duration of stay was more than six months ,were included in the study. Those elderly living in the area for less than six months were not included in the study. Those elderly, who were non cooperative or refused to provide necessary information, were not included in the study. A predesigned and pretested interview schedule was used to elicit information on sociodemographic characteristics and required information. The schedule was pretested in a sample of 50 elderly,25 each from urban and rural areas. Necessary modifications were made in the schedule to overcome the difficulties encountered during pretesting.

The questionnaire was divided into two parts. The first part

comprised of socio-demographic information covering a diverse set of parameters as age, sex, marital status, education, living conditions and the type of family. The second part comprised of a scale known as the "Geriatrics Depression Scale ," used for measuring depression in the elderly, the scale was first developed in 1982 by J.A. Yesavage and others. The Geriatric Depression Scale (GDS) exists in both short and long forms The original 30-item form of the GDS has been shown to be an effective screening test for depression in a variety of settings. The short version of the GDS designated **GDS SF(Annexure I),** like its longer predecessor, is an effective screening tool in the cognitively intact. Many studies have validated that the shorter form of Geriatrics depression scale is adequate substitute for the longer form. The **Hindi version of GDS SF(Annexure II)** was also used which was developed by Prof .Dr. Mary Ganguli MD MPH, Professor of Psychiatry and Epidemiology, Division of Geriatrics and Neuropsychiatry, Department of Psychiatry, University of Pittsburgh School of Medicine, Western Psychiatric Institute and Clinic, 3811 O, Hara Street, Pittsburgh, Pennsylvania , U.S.A. The GDS: SF consists of 15 questions requiring "yes" or "no" answers.

Evaluation Of Functional Assessment: One of the best ways to evaluate the health status of older adults is through functional assessment which provides objective data that may indicate future decline or improvement in health status, allowing the caregiver to intervene appropriately. Overview: Created 45 years ago, the **Katz Index of Independence in Activities of Daily Living(ANNEXURE III)** has shown itself to be an important tool in measuring an older adult's capacity to care.

The data collected was entered in Microsoft Excel and checked for any inconsistency. The dichotomous/categorical variables were analyzed by using Chi-square statistics. The unpaired t-test was used to test association between different parameters. The p-value<0.05 was considered as significant. All the analysis was carried out by using SPSS 16.0 version.

RESULTS:
Shows that more than one third (38.2%) of the males and 15.3% of females in rural area were in the age group of 60-64 years , in urban areas 28.2 % of males and 15.8% of females belonged to 60-64 yrs age groups . 29.2% of males and 48.6% of females in rural areas belonged to age group 65-69 years, in urban areas 31.5% of males and 40.8% of females were of the age group of 65-69 yrs. About one fifth (20.2%) of the males and 31.5% of females of rural areas were in the age group of 70-74 years, in urban areas 25.0% of males and 38.2% of females were in the age group 70-74 yrs. Only 12.4% of the male and 4.5% of females in rural areas were >=75 years ,in urban areas 15.3% of males and 5.3% of females were >=75 yrs.In total, 32.4% of the males and 15.5% of females were in the age group of 60-64 years. However, 30.5% of the males and 45.5% of females belonged to 65-69 years About one fifth (23%) of the males and 34.2% of females were in the age group of 70-74 years. Only 14.1% of males and 4.8% of females were >=75 years. **Table-1**

Table -1: Distribution of elderly according to age & sex by area of residence

Age group	Rural (n=200)		Urban (n=200)		Total (n=400)	
	Male (n=89) No. (%)	Female (n=111) No. (%)	Male (n=124) No. (%)	Female (n=76) No. (%)	Male (n=213) No. (%)	Female (n=187) No. (%)
60-64	34 (38.2)	17 (15.3)	35 (28.2)	12 (15.8)	69 (32.4)	29 (15.5)
65-69	26 (29.2)	54 (48.6)	39 (31.5)	31 (40.8)	65 (30.5)	85 (45.5)
70-74	18 (20.2)	35 (31.5)	31 (25.0)	29 (38.2)	49 (23.0)	64 (34.2)
>=75	11 (12.4)	5 (4.5)	19 (15.3)	4 (5.3)	30 (14.1)	9 (4.8)

Shows that 59.6% males and 82% females in rural area belonged to Hindu community while in urban areas, 37.1% were male and 65.8% were females. In all, 46.5% of the males and

75.4% of females were Hindu. Majority of the males (78.7%) and females (92.8%) in rural areas belonged to OBC category while in urban area, 66.9% males and 88.2% females were of OBC category. In all, 71.8% of the males and 90.9% of the females belonged to OBC category.Most of the males (78.7%) and females (95.5%) in rural areas were illiterate. Similarly, 81.5% of the males and 94.7% of the females of the urban areas were illiterate. In all, 80.3% of the males and 95.2% of the females were illiterate.Most of the males (Rural=39.3%, Urban=66.9%) and females (Rural=88.3%, Urban=88.2%) of both rural and urban were unemployed. In all, 55.4% of the males and 88.2% of the females were unemployed. **Table-2.**

Table -2: Distribution of elderly according to socio-demographic characteristics by area of residence

Socio-demographic	Rural (n=200)		Urban (n=200)		Total (n=400)	
	Male (n=89) No. (%)	Female (n=111) No. (%)	Male (n=124) No. (%)	Female (n=76) No. (%)	Male (n=213) No. (%)	Female (n=187) No. (%)
Religion						
Hindu	53 (59.6)	91 (82.0)	46 (37.1)	50 (65.8)	99 (46.5)	141 (75.4)
Muslim	36 (40.4)	20 (18.0)	78 (62.9)	26 (34.2)	114 (53.5)	46 (24.6)
Caste						
SC/ST	5 (5.6)	3 (2.7)	2 (1.6)	0 (0.0)	7 (3.3)	3 (1.8)
OBC	70 (78.7)	103 (92.8)	83 (66.9)	67 (88.2)	153 (71.8)	170 (90.9)
General	14 (15.7)	5 (4.5)	39 (31.5)	9 (11.8)	53 (24.9)	14 (7.5)
Education						
Illiterate	70 (78.7)	106 (95.5)	101 (81.5)	72 (94.7)	171 (80.3)	178 (95.2)
Just literate	5 (5.6)	4 (3.6)	4 (3.2)	1 (1.3)	9 (4.2)	5 (2.7)
Primary-junior high school	5 (5.6)	0 (0.0)	3 (2.4)	0 (0.0)	8 (3.8)	0 (0.0)
High school-Intermediate	8 (9.0)	1 (0.9)	8 (6.5)	0 (0.0)	16 (7.5)	1 (0.5)
Graduate+	1 (1.1)	0 (0.0)	8 (6.5)	3 (3.9)	9 (4.2)	3 (1.6)
Occupation						
Unemployed	35 (39.3)	98 (88.3)	83 (66.9)	67 (88.2)	118 (55.4)	165 (88.2)
Unskilled	10 (11.2)	6 (5.4)	6 (4.8)	1 (1.3)	16 (7.5)	7 (3.7)
Semi-skilled	10 (11.2)	2 (1.8)	8 (6.5)	1 (1.3)	18 (8.5)	3 (1.6)
Skilled	0 (0.0)	0 (0.0)	3 (2.4)	0 (0.0)	3 (1.4)	0 (0.0)
Clerical/Shop owner	9 (10.1)	1 (0.9)	10 (8.1)	1 (1.3)	19 (8.9)	2 (1.1)
Farmer	23 (25.8)	4 (3.6)	9 (7.3)	4 (5.3)	32 (15.0)	0 (0.0)
Semi-professional	2 (2.2)	0 (0.0)	3 (2.4)	0 (0.0)	5 (2.3)	8 (4.3)
Professional	0 (0.0)	0 (0.0)	2 (1.6)	2 (2.6)	2 (0.9)	2 (1.1)

Shows the overall prevalence of depression was 32.5%. The prevalence of depression was higher among urban (33%) elderly than rural (32%) but this was statistically insignificant(p>.05) **Table-3.**

Table-3: Comparison of Depression by areas of residence

Areas	n	Depression		RR (95%CI), p-value
		Present No. (%)	Absent No. (%)	
Rural	200	64 (32.0)	136 (68.0)	1.03, 95%CI=0.77-1.36,0.83
Urban	200	66 (33.0)	134 (67.0)	
Total	400	130 (32.5)	270 (67.5)	

RR-Relative risk, CI-Confidence Interval

Shows The prevalence of depression was insignificantly (p>0.05) higher among age <70 years (34.3%) than >=70 years (29.6%). The percentage of depression was higher among females (33.7%) than males (31.5%). Greater number of literates (37.3%) had depression than illiterates (31.8%) . **Table- 4**

Table-4: Comparison of depression among elderly by demographic profile

Variable		n Present No. (%)	Depression		
			Present No. (%)	Absent No. (%)	
Age	<70	248	85 (34.3)	163 (65.7)	1.15 (0.85-1.56), 0.33
	>70	152	45 (29.6)	107 (70.4)	
Gender	Male	213	67 (31.5)	146 (68.5)	0.93 (0.70-1.23), 0.63
	Female	187	63 (33.7)	124 (66.3)	
Education	Literate	51	19 (37.3)	32 (62.7)	1.17 (0.79-1.72), 0.43
	Illiterate	349	111 (31.8)	238 (68.2)	
Marital status	Married	328	103 (31.4)	225 (68.6)	0.83 (0.59-1.17), 0.31
	Unmarried	72	27 (37.5)	45 (62.5)	

RR-Relative risk, CI-Confidence Interval

Shows that 7.5% of elderly in rural areas and 4.5% of elderly in urban areas had decreased activities of daily living scores.92.5% of rural elderly and 95.5% of urban elderly had score 6 in Katz ADL scoring. **Table 5**

Table-5: ADL score amongst elderly by area of residence

ADL score	Rural (n=200)		Urban (n=200)	
	No.	%	No.	%
3	1	0.5	0	0
4	3	1.5	1	0.5
5	11	5.5	8	4
6	185	92.5	191	95.5

DISCUSSIONS:
In this study about 38.2% of the males and 15.3% of females in rural area were in the age group of 60-64 years and 28.2 % of males and 15.8% of females in urban areas were in the age group of. 60-64 yrs. However, 29.2% of males and 48.6% of females in rural areas were in the age group of 65-69 years and 40.8% of males and 31.5% of females in urban areas were in age group 65-69 yrs. One fifth (20.2%) of the males and 31.5% of females in the rural areas were in the age group of 70-74 years . Only 12.4% of the males and 4.5% of females in rural areas were >=75 years. In our study most of the elderly belonged to age group of 65-69 yrs and this corresponds with the findings reported by **Singh et al(2005)[21.]**

In our study the overall prevalence of depression in the rural areas were 32.0% and the overall prevalence of depression amongst elderly in urban areas were 33.0%.The prevalence of depression was slightly higher amongst urban elderly than amongst rural elderly but this was not significant.The prevalence of depression was moderately high(32.5%) among the elderly in our study population. Studies have revealed that the prevalence rates for depression in community samples of elderly in India vary from 6% to 50%[14-15]. The prevalence of depression in Caucasian elderly populations in the West vary from 1% to 42%[16]. Studies reveal that the prevalence of cases of mental disorders needing institutional treatment is around 67 per 1000 population[17].

The prevalence of depression according to marital status was

found to be higher in the elderly who were single (never married) than in those who were married. Several studies have found these as risk factors for depression in the elderly. In our study greater number of literates had depression amongst elderly than illiterates . The prevalence of depression was also slightly higher in the females than males but this was not statistically significant. Several studies have found these as risk factors for depression in the elderly.18-19 There were no significant differences which could be attributed to gender.

CONCLUSIONS:

In this study about 38.2% of males and 15.3% of females in rural area were in the age group of 60-64 years and in urban areas 28.2 % of males and 15.8% of females belonged to 60-64 yrs.However, 29.2% of males and 48.6% of females of rural areas were between 65-69 years age group and 40.8% of males and 31.5% of females in urban areas were in age group 65-69 yrs and about one fifth (20.2%) of the males and 31.5% of females of the rural areas were in the age group of 70-74 years . Only 12.4% of the males and 4.5% of females in rural areas were >=75 years.

In our study the overall prevalence of depression in the rural areas were 32.0% and the overall prevalence of depression amongst elderly in urban areas were 33.0%.The prevalence of depression was slightly higher amongst urban elderly than amongst rural elderly.The prevalence of depression was moderately high(32.5%) among the elderly in our study population. The prevalence of depression according to marital status was found to be higher in the elderly who were single (never married) than in those who were married. In our study greater number of literates had depression amongst elderly than illiterates. The prevalence of depression was also slightly higher in the females than males but this was not statistically significant.

RECOMMENDATIONS:

There is a need to effectively develop geriatrics health care services and if geriatric health care facility exists proper monitoring and evaluation of these services are needed.

There is also a need for proper regular health check up of elderly in both urban and rural areas.There should be a proper support from all sections of the society towards elderly.The psychosocial problems of the elderly must be looked into.There is also a need to implement government legislation and laws for elderly.The community should be encouraged to let elderly participate in different activities.The health care providers should be properly trained in the care of the elderly.More qualitative research is needed in India to assess morbidity amongst elderly in India.Health care services for elderly needs to be fully integrated with primary health care services. They should be given periodic free medical check up.

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