



Original Research Article

## Are Our Elderly Really Depressed?: A Cross Sectional Study on Depression among Geriatric Population in a Slum of Kolkata

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### ABSTRACT

**Background:** Ageing is a universal process associated with deteriorating physical and mental health status. On-going economic and social changes in family structure makes the rising elderly population loses their relevance and significance in their own house and they start feeling lonely and depressed. **Objectives:** 1.To assess the prevalence of depression among the adult population in a slum of Chetla, Kolkata 2.To find out the socio demographic variables of study population and association of their depression with sociodemographic and other relevant factors. **Materials and Methods:** It was a cross-sectional, community based study conducted on a sample of 130 elderly adults of 60 years and more. The study was conducted for a period of 3 months. Depression was assessed using the 15-item Geriatric Depression Scale. **Statistical Analysis:** Data was analysed by using SPSS version 20.A multivariate analysis was done to ascertain the relationship of variables. **Result:** The prevalence of depression in this study was 46.9%. In Multivariate analysis depression had significant association with Female Sex (AOR=3.224), Unmarried status (AOR=3.140), Nuclear Family (AOR=4.054), Economic dependence (AOR=3.073), Not satisfied with sleep at night (AOR = 4.710) and Not Consulted for decision (AOR= 3.960). **Conclusion:** The overall mental status was far from satisfactory. With increasing number of old people and with radical change of social structure it is high time that health policy makers take serious steps to provide significant social, economic and medical services to the elderly more so the economically deprived elderly of this country.

**Key words:** Geriatric population, Depression, Urban slum

### INTRODUCTION

Ageing is associated with deteriorating health status. As age advances there is increased morbidity and functional loss. Presence of a variety of depressive factor and occurrence of varying life events, give a great impact on one's psychological status, making them more prone to depression. The rise in the proportion of the

ageing population represents one of the most significant demographic shifts in history. Again two-thirds of the world's elderly people live in developing countries. In 1950 there were 205 million people who were over 60, in 2000 there were 606 million people and by 2050 there will be 2 billion elderly people. In India, the 60 plus

population in 1951 was just 5.43% that had gone up to more than 7.7% in 2001. [1]

Today India's health programs and policies have been focusing on issues like population stabilisation, maternal and child health and disease control. However the current statistics for the elderly in India gives a prelude to a new set of medical social and economic problems that may become very grave if a timely initiative in this direction is not taken by the program managers and policy makers. [2,3] With on-going economic development and consequent change in family structure the elderly lose their relevance and significance in their own house and start feeling lonely. This has detrimental influence on the mental health of the elderly.

Keeping in mind about the different problems of the elderly, it is strongly felt, a study to assess the prevalence of depression and its determinants among the elderly is the need of the hour since the result would guide policy makers and health administrators to evolve with appropriate plans and programmes to address the problems of this section of the population especially at the slum level.

### **Objectives**

1. To assess the prevalence of depression among geriatric population in a slum of Kolkata
2. To find out the socio demographic variables of the study population
3. To elicit the association of their depression with sociodemographic and other relevant factors.

## **MATERIALS AND METHODS**

**Type of Study:** Descriptive, community based, cross-sectional study

**Study Setting:** The study was conducted in a slum in Chetla, Kolkata which is the service area of the Urban Health Centre (UHC), Chetla and is the urban field practice area of All India Institute of Hygiene and

Public Health, Kolkata which is divided into 6 sectors.

**Study Period:** 3 months (from September 2013 to November 2013).

**Study Sample:** A sample of 130 adults, aged 60 years and more (both male and female) were included in the study. Taking prevalence of depression among geriatric population as 45.9% from a study of urban slum of Mumbai, [4] and with relative precision of 20% at 95% confidence interval the sample size was calculated to be 118. Taking 10% as non-response, the final sample calculated was (118+12) 130. Population was stratified at the level of the 6 Sectors of the Chetla slum and from each sector respondents were selected randomly according to proportion of its population size. Thus a total of 130 such elderly persons were selected.

**Study Tool:** The elderly persons were interviewed with Bengali (local language) version of a pretested semi structured schedule. The schedule was divided into two parts.

- The first part comprised of socio-demographic and other relevant information covering a diverse set of parameters namely; age, sex, marital status, education, living conditions, employment status, financial support, common morbidities, substance abuse, sleep pattern, and the type of family system the subject was currently residing in.
- The second part comprised of a scale for measuring depression in the elderly with the 15-item Geriatric Depression Scale (GDS). [5,6] Of the 15 items, 10 indicated the presence of depression when answered positively, while the rest (question numbers 1, 5, 7, 11, 13) indicated depression when answered negatively. Answers in bold indicate depression. Score 1 point for each

bold answer. Scores of 0-4 are considered normal,  $\geq 5$  indicate depression. GDS-15 showed a good internal consistency with Cronbach's alpha = 0.73

**Statistical Procedure:** Appropriate statistical analysis was done using SPSS version 20. A univariate analysis was done to ascertain the relationship of dependent variable with other variables. Only important and significant variables were selected for model (binary logistic: link function= logit), by “Enter” method.

## RESULT

Prevalence of depression among the elderly found in this study was 46.9%. Again 42.3% of study population belonged to age group of 60-69 years, followed by

46.2% in age group of 70-79 years only 11.5 were over 80 years. Majority of them were Hindus (65.4%). Females were more in the study population (53.1%) Joint families were more common in slum of Chetla (76.9%). 71.5% study population were currently married and 35.4 % of study population was illiterate, 30% studied till primary school, 17.7% studied up to middle school while only 16.9 % studied up to secondary school or more. 47.7% were residing in pucca house. 73.8% belonged to upper middle class while 20 % to lower middle class according to modified Prasad Scale. 65.4% study population was financially dependent on others and 45.4% were consulted for decision. 30% had a feeling of ill being while only 45.4% were satisfied with sleep at night.

Table 1: Association of Depression with Socio-demographic, and other relevant variables (Substance Abuse, Satisfied with sleep at night, Feeling of Ill-being, Consulted for decision) *Univariate and Multivariate Logistic Regression* (n=130).

Sl no	Variable	Depression Present (46.9%)		OR (CI)	AOR (CI)	
		n	%			
1	Age in years (Mean age 70 years)	60 – 70	32	43.8	1	-
		>70	29	50.9	1.327 (0.662 – 2.660)	
2	Sex	Male	22	36.1	1	3.224 (1.261 – 8.247)
		Female	39	56.5	2.305 (1.137 – 4.673)	
3	Education	Literate	48	45.3	1	-
		Illiterate	13	54.2	1.428 (0.587 – 3.475)	
4	Marital Status	Currently Married	35	37.6	1	3.140 (1.054 – 9.353)
		Unmarried, Widow and other	26	70.3	3.917 (1.725 – 8.896)	
5	Type of Family	Joint	42	42.0	1	4.054 (1.122 – 14.647)
		Nuclear	19	63.3	2.385 (1.028 – 5.537)	
6	PCI (Mean PCI 2000)	>2000	23	42.6	1	-
		$\leq$ 2000	38	50.0	1.348 (0.668 – 2.720)	
7	Personal Income	Yes	21	31.3	1	3.073 (1.216 – 7.767)
		No	40	63.5	3.810 (1.840 – 7.884)	
8	Substance Abuse	No	34	39.5	1	4.013 (0.649-7.231)
		Yes	27	61.4	2.429 (1.153 – 5.117)	
9	Satisfied with sleep at night	Yes	23	32.4	1	4.710 (1.859 – 11.936)
		No	38	64.4	3.776 (1.882 – 7.826)	
10	Feeling of Ill-being	No	36	39.6	1	3.018 (0.787 – 9.183)
		Yes	25	64.1	2.728 (1.254 – 5.937)	
11	Consulted for Decision	yes	19	32.2	1	3.960 (1.560 – 10.051)
		No	42	59.2	3.049 (1.480 – 6.280)	

Analysis with univariate and multivariate Logistic Regression showed that depression was more among the females (AOR=3.237, 95% CI=1.273 – 8.236) among the unmarried, widow and others (AOR=3.440, 95% CI=1.259 – 9.397), among those belonging to nuclear family (AOR=4.112, 95% CI=1.154 – 14.651) and among those who had no personal income (AOR=3.233, 95% CI=1.341 – 7.793) Depression was more among those who were less satisfied with sleep at night (AOR=4.689, 95% CI=1.852 – 11.872) and were not consulted for decision in the family (AOR = 4.132, 95% CI 1.656 – 10.314). Proportion of depression was more among those persons having a feeling of ill-being (OR=2.728, 95% CI=1.254 – 5.937), but it lost its significance on multivariate analysis. Similarly study population with substance abuse were more depressed (OR=2.429, 95% CI=1.153 – 5.117), but it lost its significance on multivariate analysis (as shown in table 1). Some variables like age, socioeconomic status, literacy and presence of disease did not show any statistical significance on both univariate and multivariate analysis.

## DISCUSSION

It was observed that 46.9% of the elderly persons suffered from depression which is quite similar to the study conducted in Mumbai by R. K. Jain and R.Y. Aras, where it was found to be 45.9% among elder individuals. In another study conducted in urban slum of Chennai by Balaji Arumugam et al, [7] prevalence of depression was found to be 41.1% which is more or less similar to the present study. Similar result was also found in a study by Saira Javed and Nazia Mustafa carried out in the premises of Islamabad and Rawalpindi, Pakistan, [8] where the prevalence of depression in

elderly was found to be 42%. However prevalence of depression among the elderly was found to be 37.1% by Jariwala Vishal et al conducted in Surat city of Gujarat, [9] and 32.4% by Sreejith S. Nair et al conducted in urban slums of Ashapur, Raichur Dist. Karnataka, India. [10] This difference in the prevalence may be due to the fact that depression was measured by another scale and also because of the difference of sample size.

This study showed no significant relationship between age and prevalence of depression similar to Hussaini. [11]

Elderly women were more depressed than their male counterparts (56.52% vs 36.07%) and this difference was statistically significant (AOR=3.224, 95% CI=1.261-8.247). This finding corroborates with other similar studies. [9,12]

Indian society is mostly patriarchal society in which women's roles and positions are limited. Because of socially fixed limitations in roles that women are expected to perform, elderly women may have a high rate of depression. A study by Gautam et al. (2007) explained that women, who are significantly more depressed than men, do not give high priority to outdoor activities.

This study found significant difference in depression between married and unmarried, widow and others (AOR=3.140, 95% CI=1.054 -9.353) like other studies. [4,9,10] One probable reason may be due to the fact that these elders are deprived of the mental support that their spouses if present could have provided.

Perhaps due to the same reason elderly of nuclear family showed more depression than the joint family (AOR=4.054, 95% CI=1.122 -14.647). This finding is similar to other studies. [4,6]

Elderly population losing their relevance and significance in their own house may be a reason behind depression for those who were not consulted for decision (AOR=3.960, 95% CI=1.560 – 10.051). Similarly financial insecurity was one such reason behind depression for those who had no personal income (AOR=3.233, 95% CI=1.341 – 7.793). These findings corroborate with another such study of Maulik S and Dasgupta A. [13] Elderly persons less satisfied with sleep at night were found to be more depressed (AOR=4.689, 95% CI=1.852 – 11.872). Similar finding was observed in other studies. [4,13]

## CONCLUSION

From this study it may be concluded that the overall mental health status was not satisfying in the slum dwelling geriatric population of Kolkata with the prevalence of depression being higher in the females than in the males. The significant determinants of depression in this study were gender, marital status, type of family, personal income along with satisfied with sleep at night and consulted for decision.

A slum has its own unique problems of overcrowding, squalor, food insecurity and high morbidity and mortality along with poor mental health especially depression which has engulfed the elderly as is evident in this study.

All steps must be taken to improve the mental health of this vulnerable population since this will in the long run bring them to the mainstream of the society so that they too can contribute to the welfare of the community and not remain as a neglected and inactive segment of the population.

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