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**Original Article**

# A STUDY OF DEPRESSION AMONG AGED IN SURAT CITY

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## ABSTRACT

This cross-sectional study interviews 105 elderly belonging to different socioeconomic and varying demographic groups of Surat city as per predefined inclusion and exclusion criteria with their informed consent in compliance with 'Ethical principles for medical research involving human subjects' of Helsinki Declaration, employing a probability sample technique. The data was analyzed using SPSS-15 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.

## 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 Committee[1] 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 symptoms[3]. Many studies have indicated severe under-recognition and under-treatment of depression in the elderly, even in developed counties. [4-6]

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 population.[8] 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[9] It has been suggested that urbanization leads to households becoming more nuclear in developing countries.[10] 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% females.[12]. In a study by ICMR[17] (1987) it was reported that prevalence of mental morbidity among elderly was 20.2 per thousand persons.[13] The goal of this study is to explore the magnitude and risk factors of problem of depression in elderly people residing in the old age homes and among those living at home in both, affluent and slums of Surat city.

## MATERIAL AND METHODS

This cross-sectional study was conducted among elderly belonging to different socioeconomic and varying demographic groups of Surat city. A total of 105 elderly people were interviewed, comprising of 35 people each from the elderly living in the old age homes, those living in the affluent areas and those living in the slums of Surat city. This sample size was determined according to the number of the aged that could be studied in one month spread over 1st to 30th August 2010. The inclusion criteria comprised of all consenting subjects, aged ≥60 years, and who were permanent residents of Surat city. The exclusion criteria comprised of subjects who refused to give informed consent for participating in this study (10 persons), those who were not comfortable with the interview process conducted in Gujarati, and English Language (4 persons) and those in whom we could not complete the interview process (3 persons) and those who could not hear and speak (3 persons). In

this manner 20 persons were excluded from participating in this study. The majority of the non-responders were females.

A probability sample was obtained by approaching all the subjects in a consecutive manner. The subjects were interviewed using were conducted by senior medical students. The interview schedule was administered in the residential settings after obtaining informed consent. The study was conducted in compliance with 'Ethical principles for medical research involving human subjects' of Helsinki Declaration, after deliberating possible ethical issues.

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 "Back Depression Inventory," used for measuring depression in the elderly, standardized by the American Psychiatry Association. Its Gujarati version was developed, pretested and made ready for use by Dr. Ritam Bhara Mehta, Professor and Head of the Department of Psychiatry at New Civil Hospital, Surat, as we did not expect the majority of the elderly subjects to be comfortable with English language usage,. Pre-testing was carried out on five elderly subjects to screen for potential problems in the questionnaire. As no significant changes were deemed necessary based upon the pre-testing, the results of the pre-test were discarded. The interviewers discussed the questionnaire thoroughly before data collection, to decrease interviewer bias and variability.

The data was analysed using SPSS-15 and the results were recorded as frequencies, means ± standard deviations (SD) and p-values. Tables and figures were used for comprehensive viewing of the results. The Chi-square test was used for categorical variables. A p-value of < 0.05 was taken as the criteria of significance for all purposes. In our study we took the different variables like age, sex, Marital Status ,Education, Co morbid medical Condition(HT/DM/Arthritis/IHD/Skin disorders /Others),Past illness(Depression/Other Psychiatric illness/ Medical illness)and different habits (Tobacco chew /Alco/smoking) ,Back depression Score (0-4 = None, 5-8 = Mild ,9-16 = mode and > 16 = sever).

## RESULTS

Our respondents comprised of a total of 105 elderly people. The majority (80.8%) of the subjects were in the age range of 64–76 years. The mean age of the subjects was 69 ± 8.84 years.

**Table 1: Depression as per general profile**

| Variable | | Depression | | p- value |
|---|---|---|---|---|
| | | Absent | Present | |
| Age | <70 | 39 (68.4) | 18 (31.6) | 0.088 |
| | >70 | 25 (52.1) | 23 (47.9) | |
| Gender | Male | 28 (65.1) | 15 (34.9) | 0.4685 |
| | Female | 36 (58.1) | 26 (41.9) | |
| Education | Illiterate | 22 (73.3) | 8 (26.7) | 0.1016 |
| | Literate | 42 (56.0) | 33 (44.0) | |
| Marital status | Married | 54 (81.8) | 12 (18.2) | 0.0000* |
| | Unmarried | 10 (25.6) | 29 (74.4) | |

43 (41%) were males and 62 (59%) were females and 36.5% females and 63.5% males were aged >70 years and the remaining were aged <70 years. Table 1 reveals the association between the back depression score with various variables.

Table 2 reveals the depression in different socioeconomic-demographic groupwise, we get that overall 39.04% of depression in city. In which 20% aged in severe depression need institutional treatment. Severe depression old age is more in affluent area and old age home and it is twice that of slum area, though a statistically significance depression in particular group was not observable.

**Table 2: Depression according to area of residence**

| Area | Depression | |
|---|---|---|
| | Absent | Present |
| Affluent area | 23 (65.7) | 12 (34.3) |
| Old age home | 19 (54.3) | 16 (45.7) |
| Slums | 22 (62.9) | 13 (37.1) |
| Total | 64 (61.9) | 41 (39.0) |

**Table 3- Depression according literacy and area of residence**

| Literacy | Area | Depression | |
|---|---|---|---|
| | | Absent | Present |
| Illiterate | Affluent area | 7 (87.5) | 1 (12.5) |
| | Old age home | 5 (71.4) | 2 (28.6) |
| | Slums | 10 (66.7) | 5 (33.3) |
| | Total | 22 (73.3) | 8 (26.7) |
| Literate | Affluent area | 16 (59.3) | 11 (40.7) |
| | Old age home | 14 (50.0) | 14 (50.0) |
| | Slums | 12 (60.0) | 8 (40.0) |
| | Total | 42 (56.0) | 33 (44.0) |

Table 3 reveals depression according literacy and area of residence. It was observed that illiterates have a much lower rate of depression (26.6%) than literates (44%). This association was not observable in the slum area, however those residing in the affluent areas and in the old age homes had a higher rate of severe depression among the literates. In our study 14.3%, 6.7% and 10.5% individuals were chewing tobacco, smoking tobacco and consuming

alcohol respectively and only 2 (1.9%) were habituated to all of these three.

## DISCUSSION

The prevalence of depression was moderately high(39.04%) among the elderly in our study population and it was observed that several important socio-demographic variables had shown a significant association with depression in the elderly. 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]. We found that those aged who are severely depressed and who require an institutional treatment are more in old age homes (25.71%), followed by those living in the affluent areas (22.8%) and those living in the slums (11.4%). 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 significantly higher in the elderly who were single (never married), widowed, divorced or separated. Several studies have found these as risk factors for depression in the elderly [18-19-20.] In our study 74.35% singles have a depression. Death of a spouse renders them vulnerable to mental stress. Indeed, widowhood has been found to be strongly associated with depression in several instances [21-22] The absence of a caregiver was deduced to be a possible risk factor for depression. However, we did not find any significant association with depression in our study. One possible reason for this finding could be that we did not ask the number of caregivers or who the caregiver was. There was a higher rate of depression in literates, mainly because of a higher life expectancy amongst them. There were no significant differences which could be attributed to gender.

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