ASSESSMENT OF SOCIO-DEMOGRAPHIC CORRELATES OF DEPRESSION AMONG THE ELDERLY IN AN URBAN AREA IN MAHARASHTRA

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ABSTRACT: Population aging is a result of demographic transition, resulting in increased proportion of older people in total population. Old age being highly prone for psychiatric disorders, depression is the most common of all. Socio-demographic factors have consistently been correlated with prevalence of depression among elderly. The present study was conducted to assess the socio-demographic factors among elderly in an urban area ofNanded City, Maharashtra. This cross-sectional study was conducted in the two wards of urban health training centre, field practice area of Dr. ShankarraoChavan Government Medical College, Nanded viz. Ambedkar Nagar and NayiAbadi of Nanded City which were selected randomly for the study during 1stAugust 2012 to 31th October 2012. **METHODS AND MATERIAL:** Total 270 participants were included in our study. **Inclusion criteria:** age ≥ 60 years, permanent residents of Nanded city. **Exclusion criteria:**Elderly having hearing problem, unable to complete an interview. After obtaining informed consent, the participants were interviewed by paying house to house visits using preformed and semi-structured questionnaire comprised of socio-demographic information regardingage, sex, religion, marital status, living arrangement, working status, education, socio-economic statusand chronic illnesses and a scale known as the "Geriatric Depression Scale-15," used for assessing depression in the elderly. Statistical software Open Epi Version 3.4.3 was used for chi-square test. Out of total 270 participants, depression wasmore commonly found in 12.94% respondents belonging to60-69 years of age group, females (17.73%), Muslims (19.44%), widowed (22.54%), living alone (33.96%), unemployed (19.21%), illiterates (16.46%), Socio-economic Class V (33.33%), Chronic illness (21.28%). Socio-demographic correlates like age, living arrangement, working status, chronic illness were significantly associated with depression among elderly in our study ($P<0.05$).
KEY WORDS: Socio-demographic correlates, depression, elderly, urban area, Nanded, Maharashtra

INTRODUCTION: Population aging is the result of a process known as demographic transition, in which there is a shift from high mortality/high fertility to low mortality/low fertility, resulting in an increased proportion of older people in the total population. India is presently undergoing such demographic transition[1]. The elderly population (aged 60 years or above) accounted for 8.2% of total population in 2011[2]. With emerging changes in our social and cultural values, the elderly who are economically unproductive are sadly neglected. It is recognised that the elderly are prone for psychiatric disorders[3].Among all psychiatric disorders in geriatric population, depression is the most common.It is demonstrated that, it is on fourth rank among all global burden of diseases. The global burden of diseases showed that it will come to second number by the year 2020 in developing countries[4].

Depression being difficult to diagnose, will lead to an increase in morbidity, mortality and health care costs along with reduction in quality of life. Elderly patients with depression are more

prone for cardiovascular, lung diseases and are less likely to adhere to diet, exercise and medications as compared to elderly patients without depression[5]. Along with the physiological and psychological changes associated with aging, changes in the associated risk factors also modify the prevalence and prognosis of geriatric depression[6]. Socio-demographic factors have consistently been identified as a major factor in demonstrating the variability in the prevalence of depression[4].

To our knowledge, very few studies[1, 3, 6, 7] were attempted in the past regarding the assessment of socio-demographic correlates for depression in elderly in India and no such study was undertaken in urban areas of Nanded City, Maharashtra in recent past. Therefore, the presentstudy was planned to assess socio-demographic correlates for depression in elderly in an urban area of Nanded City, Maharashtra.

MATERIAL AND METHODS: This cross-sectional study was conducted in the two wards of urban health training center field practice area of Dr. ShankarraoChavan Government Medical College, Nanded viz. Ambedkar Nagar and NayiAbadi of Nanded City which were selected randomly for the study during 1stAugust 2012 to 31th October 2012 amongelderly (≥60 years of age). First a list of all the households in the study area was obtained from Municipal Corporation. Then the areas were surveyed to identify any temple, hospital, mosque or restaurant situated approximately at the centre of the areas, the pen was whirled and the sampling commenced in the direction of the ballpoint. Beginning with the first house every 5th house was sampled. All the elderly satisfying inclusion criteria in these houses were interviewed with pretested questionnaire to collect basic demographic information and level of depression. If from selected houses, respondents refuse to participate in study or no member from that household satisfying the inclusion criteria, then the consecutive next house was selected and that house was skipped from the study. Thus total 270participants were includedin our study. The criteria for inclusion in our study were: age should be≥60 years and permanent residents of Nanded city whereas the criteria for exclusion were those who had hearing impairment and could not complete the interview process.

The participants were interviewed using preformed and semi-structured questionnaire after obtaining informed consent from all the respondents by paying house to house visit. The questionnaire was divided into two parts. The first part comprised of socio-demographic information regardingage, sex, marital status, education, socio-economic statusand the type of family and the second part comprised of a scale known as the "Geriatric Depression Scale-15 (GDS-15)[8], " used for assessing depression in the elderly. This scale is a reliable screening instrument for major depression according to ICD-10 and DSM-IV[9].The Marathi is the local language of Maharashtra so the questionnaire was explained verbally in Marathi language to enhance comprehension without changing meaning of questionnaire.The data was entered in Microsoft Excel sheet and analyzed by using statistical software Open Epi Version 3.4.3 for chi-square test.

RESULTS: Results were shown in table no. 1. Out of total 270 participants, depression wasmore commonly found in 12.94% respondents belonging to60-69 years of age group, females (17.73%), Muslims (19.44%), widowed (22.54%), living alone (33.96%), unemployed (19.21%), illiterates (16.46%), Socio-economic Class V (33.33%), Chronic illness (21.28%). Socio-demographic correlates like age, living arrangement, working status, chronic illness were significantly associated with depression among elderly in our study ($P<0.05$).

DISCUSSION: Geriatric psychiatry will be increasingly important in the years to come as a public health problem in India. Improved health care promises longevity, but the social and economic conditions like poverty, the breakup of the joint family system and poor services especially for the aged, poses a potential threat to them[10].

Out of total 270 participants, 74.44%were belonged to the 60-69 years of age group but depression was found only in 12.94% respondents. Remaining 25.56% respondents belonged to age group more than 70 years in which depression was present in 24.64% participants. This difference of age was found statistically significant ($p<0.05$). Mubeen SM et al[11]in his study conducted at Karachi, Pakistan showed high proportion of depression among >70 years age group as compared to 60-69 years age group but the difference was not found statistically significant.

Depression was present in 13.95% males out of total 129 (47.78%) whereas17.73% females showed depression out of total 141 (52.22%). Though females showed more preponderance of depression than males, the difference was not found statistically significant ($P>0.05$). Other studies by Seby K et al[1], JavedS et al[4] and Kamble SV[10] et al showed high level of depression among females as compared to males and this difference was statistically significant in their studies showing sex as a risk factor associated with depression.

Depression was more common in Muslim (19.44%) as compared to Boudha (15.45%) and Hindu (12.94%) in our study.But religion wise difference in depression was not found statistically significant in present study ($P>0.05$). This finding is consistent with study by Mubeen SM et al[11] which showed high proportion of depression among Muslim as compared to Hindu.

In the present study, depression was more common among widowed (22.54%), single / separated (21.43%) and divorced (16.67%) as compared to married (11.95%) who were living with their spouse but no significant association was found between marital status and depression ($p>0.05$). Contradictory to our findings, many studies[3, 4, 5, 6, 10] demonstrated marital status as an important risk factor for depression among elderly ($p<0.05$). But Mubeen SM et al[11] showed contrasting results in their study which said that depression was more common among married respondents who were staying with their spouse as compared unmarried or widowed respondents.

In this study living status of respondents was proved to be an important risk factor associated with elderly depression. Almost 34% respondents were suffering from depression who were living alone as compared to 11.52% found among those who were living with their family. This difference was found statistically significant ($p<0.05$). Similar findings were shown by other studies[1, 11] conducted in urban areas at Karachi, Pakistan and Pune, India respectively.

Out of total 203 (75.19%) respondents who were unemployed or not working at the time of study, 39 (19.21%) respondents showed depression; whereas only 5.97% respondents were having depression who were employed or working. This difference was found statistically significant ($p<0.05$). As financial stability and economic independence are very important factors for better psychological health and unemployment is directly associated with low levels of family income which is ultimately associated with depression. This was again proved by other studies[1, 3, 4]in different parts of world.

The level of depression was slightly higher among illiterates (16.46%) as compared to literates (15.71%) in the present study and this difference was not found to be statistically significant ($p>0.05$). But many studies[1, 3, 5] established education as an important risk factor for

elderly depression ($p<0.05$) as they have found out that depression was more common among illiterates as compared to literates.

According to Modified BG Prasad classification, all respondents were divided into class I to class V and proportion of depression was measured among respondents belonging to the same class. Out of 6 respondents belonging to the class V, 02 (33.33%) showed depression followed by class III (18.81%), class-IV (14.81%), class-I (14.29%) and class-II (4.76%). This difference was not found statistically significant ($p>0.05$). Dissimilar results were shown by other studies[3, 5]showed that socioeconomic status of elderly respondents played a major role and was an important risk factor in depression ($p<0.05$).

Out of total 141 (52.22%) respondents who were suffering from different types of chronic morbidities like diabetes, hypertension, visual impairment, locomotor disabilities etc, 21.28% respondents showed presence of depression. On the other side, only 10.08% respondents were suffering from depression out of total 129 (47.78%) who were not suffering from any of the co-morbidities. This difference was found statistically significant ($p<0.05$). Very similar results were shown bySeby K et al[1].

In summary, socio-demographic correlates like age, living arrangement, working status, chronic illness were significantly associated with depression among elderly in our study.

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Factor		Depression		Total (n=270)	P-value
		Present (n=43)	Absent (n=227)		
Age	60-69 yrs	26 (12.94)	175 (87.06)	201 (74.44)	P=0.035
	≥ 70 yrs	17 (24.64)	52 (75.36)	69 (25.56)	
Gender	Male	18 (13.95)	111 (86.05)	129 (47.78)	P=0.496
	Female	25 (17.73)	116 (82.27)	141 (52.22)	
Religion	Hindu	11 (12.94)	74 (87.06)	85 (31.48)	P=0.601
	Muslim	14 (19.44)	58 (80.56)	72 (26.67)	
	Boudha	17 (15.45)	93 (84.55)	110 (40.74)	
	Others	01 (33.33)	02 (66.66)	03 (1.11)	
Marital status	Married	19 (11.95)	140 (88.05)	159 (58.89)	P=0.184
	Widowed	16 (22.54)	55 (77.46)	71 (26.3)	
	Divorced	02 (16.67)	10 (83.33)	12 (4.44)	
	Single/separate	06 (21.43)	22 (78.57)	28 (10.37)	
Living arrangement	With family	25 (11.52)	192 (88.48)	217 (80.37)	P=0.001
	Alone	18 (33.96)	35 (66.04)	53 (19.63)	
Working status	Working	04 (5.97)	63 (94.03)	67 (24.81)	P=0.017
	Not working	39 (19.21)	164 (80.79)	203 (75.19)	
Education	Illiterate	13 (16.46)	66 (83.54)	79 (29.26)	P=0.977
	Literate	30 (15.71)	161 (84.29)	191 (70.74)	
Socio-economic status (Mod.B.G. Prasad)	Class-I	01 (14.29)	6 (85.71)	7 (2.59)	P=0.146
	Class-II	1 (4.76)	20 (95.24)	21 (7.78)	
	Class-III	19 (18.81)	82 (81.19)	101 (37.41)	
	Class-IV	20 (14.81)	115 (85.19)	135 (50.0)	
	Class-V	02 (33.33)	04 (66.67)	06 (2.22)	
Chronic illness	Present	30 (21.28)	111 (78.72)	141 (52.22)	P=0.019
	Absent	13 (10.08)	116 (89.92)	129 (47.78)	

Table No. 1: Socio-demographic factors associated with depression among elderly (n=270)

Figures in parenthesis denote percentages

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