ORIGINAL ARTICLE

A Cross Sectional Study on Assessment of Health Problems and Psychosocial Problems of Elderly Tribal Population

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Abstract:

Background: India has nearly 9% of tribal population; around 6.9% of elderly was 60 years and above. Health problems are major concern for elderly as they are prone for numerous ailments, disability and morbidity due to aging process. Scientific facts envisage that the elderly population has comorbidity including psychosocial problems, which was associated with advance age, gender, life style factors and socio-economic status. Assessment of bio-psycho-social problems has significant implications for wellbeing and quality of life of elderly. *Aim and Objectives:* This study aimed to assess the health problems and psychosocial problems of elderly population residing at tribal area, and its association with socio-demographic attributes. *Material and Methods:* Non experimental, descriptive study with cross sectional survey was carried out among 120 elderly populations at Akole Taluka, Ahmednagar District of Maharashtra. The prevalidated structured proforma was used to collect data related to study variables. The ethical principles of biomedical research were kept in mind during the course of study. The survey was conducted with the help of structured proforma which includes Mini Mental Status Examination (MMSE), Brief Psychiatric Rating Scale (BPRS) and Geriatric Depression Scale (DGS). Collected data was analyzed by using appropriate statistical methods wherever required. *Results:* The findings revealed that elderly population of tribal area suffers (34%) cognitive impairment, (21%) depression, and (5%) mental illness and other numerous physical problems, morbidity and psychosocial problems like helplessness, isolation, death anxiety etc. Advanced age (x^2=3.87) associated with cognitive impairment, and living status of elderly (x^2=7.41) had significant association with depression at p<0.05 level and it was evident that a positive correlation was existed between the study variables. *Conclusion:* Elderly at tribal area had high prevalence of cognitive impairment, depression and psychosocial problems. It is required to provide cost effective geriatric health care services in conjunction with traditional health care practices to improve the wellbeing and quality of life of elderly population.

Keywords: Assessment, Physical Problems, Psychosocial Problems, Elderly Population

Introduction:

India has second largest elderly population in the world after China, and as per the Census Report 2011, elderly people account for 8.6% of total population. Due to the decline in fertility, and increase in life expectancy, the number of elderly population is expected to rise from 71 million in 2001 to 173 million in 2026 which is an increase of 6.9% to 12.4% [1].

In line with Scheduled Tribes population it constituted 8.63% and scheduled tribes in India have a lesser proportion of aged with (6.9%) of the population above 60 years compared to 8.6 among the general population in India. The majority of

the scheduled tribe populations live in rural areas and their population is 10.4 % of the total rural population of the country [2].

Health problems are the major concern for all and the elderly are no exception, and they are more prone to suffer from illness than the younger ones. It is often noted that the elderly affected with physical limitations challenges and numerous ailments. Besides physical illness, the elderly are likely to be the victims of poor mental health like anxiety, dementia, depression, isolation, and social health like loss of status, loneliness, worthlessness and poor wellbeing and quality of life etc [3].

Half (50%) of elderly in India has chronic morbid illness, and tribal population is exceedingly susceptible to illness, as they are not having an essential access to basic health care facilities. They are most exploited, neglected and highly vulnerable to diseases with higher prevalence of malnutrition, morbidity and mortality. It is mainly because of poverty, illiteracy especially health literacy, ignorance of causes of diseases, environment, poor sanitation, lack of safe drinking water and other basic amenities and blind beliefs etc [4].

Study on problems of elderly reported that majority (85.9%) of the tribal elderly have some kind of physical problems. The overall prevalence of multi morbidity is (57%) among tribal elderly and the most common diseases are: arthritis, Chronic Obstructive Pulmonary Disease (COPD), high blood pressure, cataract, anemia, asthma, diabetes and accidental injury. It was noted that age, economical status and life style indicators are the most important measured predictors of multi morbidity [5].

Clinico-epidemiological study on health of elderly tribes revealed that the common health problems are upper respiratory infection (80%), low back pain, joint pain (73%), problems of vision (50%) and hearing (24%), chewing problem (37%), constipation (28%) and poor appetite (24%). A good number of elderly (54%) had hypertension, (14%) had obesity, (42%) showed an evidence of distress and one in every four respondents felt unhappy or depressed [6]. Scholarly studies highlight the fact that elderly population in tribal areas, as like rest of the elderly population are affected with variety of health problems by different domains of functional limitation and it is progressive.

Despite a high pattern of morbid illness among elderly in India, limited numbers of scholarly research articles have been conducted among the tribal population. Assessments of the bio-psycho-social problems and morbidity pattern have greater implications for elderly people wellbeing and quality of life. The present study was conducted with an aim to assess the physical and psychosocial problems of elderly population residing at tribal areas.

Material and Methods:

A non-experimental, descriptive study with cross sectional survey design was undertaken among tribal people residing at Akole Taluka, Ahmednagar District of Maharashtra, during 02.06.2019 to 29.01.2020. Ahmednagar District is largest district in Maharashtra state, which comprised of 14 talukas, out of which Akole has maximum tribal population.

Study included 120 elderly persons aged 60 years and above, who were present during data collection period, and willing to participate in study whereas,

elderly those who were institutionalized, known cases of psychiatric or neurological illnesses, acutely ill and unable to respond was excluded. Sample size was determined with help of Openepi, Version 3, open source calculator, and found to be 120. Out of 124 tribal villages in Akole Taluka, 10 villages were selected using lottery method, and all eligible elderly was enrolled by purposive sampling technique.

The respondents were informed about study purpose and informed consent was obtained. The study was approved (full review) by Institutional Ethics Committee (IRC) of Pravara Institute of Medical Sciences and Administrative permission was sought from concerned authority.

Content validated Marathi translated version of structured proforma was used for data collection; and it consists of three sections such as A: Socio demographic data, B: Health history related to physical and psychosocial problems and physical examination proforma, C: Mini Mental Status Examination (MMSE) –five areas items were intended to assess cognitive function. Score of 24 – 30 indicate no cognitive impairment wherein score of 19 – 23 indicates mild, 10 – 18 moderate, and <9 indicates severe cognitive impairment [7], D: Brief Psychiatric Rating Scale (BPRS) – the 18 items was intended to assess mental health. Each item was assessed on a 7-point scale, and total score of 31 indicates mildly ill, 41 moderately ill and score of 53 and above markedly ill [8] F: Geriatric Depression Scale (GDS) – the 15 items was intended to assess depression. Each item was assessed on dichotomous response, and scores between 0 – 5 are normal, and score >5 suggests depression [9].

After self introduction and description of study purpose, researcher collected data by survey method with help of health care worker, and interview were taken. Socio demographic details were collected first followed by elderly was asked to report ailments experienced, and physical examination was performed to find presence of health problems and the same was supplemented by history and scrutiny of relevant medical documents (if any). The participants were further evaluated with help of MMSE for assessing cognitive function; BPRS and GDS used to assess psychiatric illness and depression. The collected data was organized, tabulated and analyzed by using appropriate descriptive and inferential statistics methods wherever required, p<0.05 was considered of significant level.

Results:

Socio-demographic Attributes of Elderly:

A total of 361 elderly identified, 120 elderly was assessed; higher proportion 41% (49) of elderly was above 70 years of age and significant percent 36% (43) was 66 – 70 years old. More than half, 54% (65) of them were females and remaining 46% (55) were males. Majority 72% (86) were married and one fourth 26% (31) were widows/widowers, nearly half 48% (58) of them had no formal education while one third 33% (40) completed primary education. Half 50% (60) of elderly were doing daily wages work (agricultural coolie) and 25% (30) depended on agriculture. Majority 56% (67) had Rs 3001 to 6000 monthly income and notably 42% (51)of them had less than Rs 3000. A sizable proportion 44% (53) belonged to nuclear family and 28% (34) belonged to joint family. Hindu religion 72% (87) outnumbered with other

categories of religion, elderly living with spouse and children was the most with about 45% (54), followed by 21% (25) lived with spouse. About 52% (63) consumed tobacco, 18% (21) and 14% (17) used smoking and drinking alcohol respectively.

Assessment of Health Problems of Elderly:

The self-reported morbidities of elderly showed that majority 54% (65) had pain in joints as a significant problem, followed by a good proportion 48% (58) had fatigue (weakness), 44% (53) had problems of vision, 26% (31) sleep disturbances, 25% (30) cough with difficulty in breathing, 21% (25) history of falls, 16% (19) loss of hearing and 13% (16) had constipation. In line with morbidity, a significant proportion of elderly suffered with morbid illness such as diabetes mellitus 41% (49), cataract 33% (40), hypertension 26% (31), dental problems 22% (27) and anemia 14% (17) respectively.

Assessment of Psychosocial Problems of Elderly:

Table 1 indicates that elderly under study had 35% (42) of prevalence of cognitive impairment, 09% (11) of mental illness and 21% (25) of depression.

The overall mean scores for cognitive function was (20.01 ± 1.76), and area wise mean score was depicted in Table 3, whereas the overall mean score of psychological health was (21.05 ± 2.14) and depression was (6.42 ± 1.79) respectively and the same was presented in Table 2. The assessment of psychosocial problems revealed that majority 56% (67) had 'satisfaction with life', higher proportion 36% (43) felt 'empty in life', 32% (39) had 'feeling of isolation', 26% (31) felt 'helplessness', 25% (30) of them were 'afraid of something bad will happen' and only 21% (25) of them 'felt full of energy'

It was noted that higher number and level of health problems and morbidity among elderly with advanced age, female and elderly living alone. There was an association found between cognitive function with age (x^2=3.87) and depression with living status (x^2=7.41) of elderly, and it was statistically significant at p<0.05 level, and other socio demographic attributes did not have any significant associations. There was a weak positive correlation witnessed between the cognitive function and psychological health (r=0.51), and psychological health and depression (r=0.37) respectively.

Table 1: Level of Cognitive Impairment, Mental Illness and Depression among Elderly

Psychosocial problems	Number (%)			Total Number (%)
	Normal	**Mild**	**Moderate**	
Cognitive impairment	78 (65)	29 (24)	13 (11)	120 (100)
Mental illness	109 (91)	11 (09)	--	120 (100)
Depression	95 (79)	25 (21)	--	120 (100)

Table 2: Mean Scores of Psychosocial Problems of Elderly

Psychosocial problems	Max. Score	Mean ± SD
MMSE (cognitive function)	30	20.01 ± 1.76
BPRS (mental illness)	120	21.05 ± 2.14
GDS (depression)	15	6.42 ± 1.79

Table 3: Area Wise Mean Scores of Cognitive Function of Elderly

Cognitive function	Max. Score	Mean ±SD
Orientation	13	7.66 ± 0.85
Attention and calculation	05	2.78 ± 0.97
Recall	03	2.43 ± 0.51
Language	03	2.57 ± 0.69
Paper work	06	4.48 ± 0.72
Overall	30	20.01 ± 1.76

Discussion:

Consumption of alcohol and tobacco products is an ill habit that many tribal people possess which leads to development of non-communicable and life style related diseases among tribal population in India. The present study revealed that half of elderly tribal under study consume tobacco and significant proportion has drinking (alcohol) and smoking habits. The findings were coincident with findings reported by Bang Expert Committee Report that almost 72% of tribal men use tobacco as compared to non-tribal men, and around 41% of them use alcohol which increases the incidence of serious diseases and mortality [10].

The elderly populations are susceptible to numerous age-related health problems, disabilities and poor quality of life, wherein the socio-economically disadvantaged indigenous tribal population in particular is highly vulnerable to various diseases and disabilities due to several reasons. It was noted that majority of elderly under study had following health problems such as joint problems, fatigue, problems of vision, sleep disturbances, cough with difficulty in breathing, falls, loss of hearing and constipation. Kishore *et al.*, 2007 reported that hypertension was the commonest morbidity followed by elderly

presented with respiratory problems, eye problems, musculoskeletal problems, gastro-intestinal problems and sleep problems in their study participants [11].

In line with morbidity pattern, high prevalence of morbidity was observed in the present study. A significant number of elderly suffered with aging-associated comorbid disorders, wherein the common disorders were diabetes mellitus, cataract, hypertension, dental problems and anemia respectively. A similar finding was available in studies by Dasgupta *et al*., 2018 that most of elderly participants had comorbidities wherein hypertension, diabetes mellitus, cataract were the most commonly reported conditions [12].

The result points out that elderly under study had (35%) of prevalence of cognitive impairment and (21%) of depression. Further it was noticed that higher level of health problems and morbidity was prominent among elderly with advanced age, female gender and elderly living alone. Similar to study by Reddy *et al*., 2012 found the prevalence of cognitive impairment (43.25%) and it was more among females, elderly aged above 80 years, similarly overall prevalence of depression was (47%) and it was more among females, elderly aged above 80 years, lower social class and those living alone [13]. In line with Chandrashekhar *et al*., 2014 also reported similar results that morbidity and psychosocial problems were more common in females compared to males [14]. It shall coincide with the fact that the presence of physical illness affects psychological health and leads to distress and depression of elderly people.

The incidence of distress, hopelessness, death anxiety and loneliness were common among aging population across the world. The current study highlights that significant number of elderly felt 'empty in life', 'feeling of isolation', 'helplessness', and 'afraid of something bad will happen'. It was consistent with the study of Sahin *et al.,* that around 81% of elderly (8 out of 10) experienced hopelessness, ranging from mild to severe level [15] and similarly Vakili *et al*., 2017, also reported similar results that many of elderly had moderate and severe feeling of loneliness [16].

In general, elderly people residing at tribal areas face voluminous health morbidity because of their functional disability, economic liability, depen-dence and backwardness status. The present study showed that there was a statistically significant association noticed between cognitive impairment with age, and depression with living status of elderly. Similarly these findings were consistent with the studies of Sengupta and Benjamin [17] and Bhuvneshkumar *et al*., 2018 that socio demographic factors such as age, gender and living status (being widowed) was significantly associated with cognitive impairment and depression [18]. It upholds the well-known fact that as aging advances the cognitive functioning and mental health declines due to senile changes.

Conclusion:

Aging is an unavoidable universal phenomenon of everyone life. The findings revealed that tribal elderly under study had high prevalence of health problems like pain in joints, fatigue, difficulty in breathing, vision and hearing problems and sleep disturbance etc, and age-related morbidities like diabetes mellitus, cataract, hypertension, dental problems and anemia. It was evident that tribal

elderly had cognitive impairment, depression, and psychosocial problems like isolation, hopelessness, helplessness and death anxiety. Socio demographic attributes like age and living status was associated with cognitive impairment and depression, similarly a positive correlation existed with study variables. The prevalence of health problems, psychosocial problems warranted a cost-effective geriatric health services in congruence with traditional health practice of tribal people. It is recommended to conduct regular public health awareness campaigns, camps and wellness clinics for elderly population especially for tribal people to improve the wellbeing and quality of life.

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