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Original Research Article

Health of elderly tribes: a community based clinico-epidemiological study in West Bengal, India

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ABSTRACT

Background: Reported literatures suggested that health of elderly, mainly tribes, still remains unsatisfactory. They are the most neglected and highly vulnerable to diseases with high degree of morbidity and mortality. The present study was conducted to measure the overall health status and awareness of any beneficial scheme and also associated factors among the elderly tribes.
Methods: A community based, cross sectional survey was conducted among 120 elderly tribes, for three months. Data on socio-demographic attributes, self-reported morbidities and mental health parameters was collected by direct interview with a predesigned, structured proforma. Clinical examination was done to find out any systematic morbidity. Anthropometric measurements, blood pressure were recorded by standardized instruments. Prevalence of stress was assessed by general health questionnaire (GHQ-12). Data was analysed by licensed SPSS 20.0.
Results: Out of 120 elderly tribes, majorities were female (61.7%), aged between 60 to 69 years. The mean (SE) age was 64.50 (0.421) years. Ninety nine subjects were illiterate. Tobacco addiction was noted in 84.3% elderly. Common cold (80.0), low back pain and joint pain (73.3%), alcohol addiction (63.3), smoking (56.0), problems of vision (50.0) were also common. Overweight, hypertension and pallor was noted in nearly half. Women were more affected. One in every four felt unhappy or depressed. Severe distress was found among one in every five respondents. Distress was more in persons aged more than 70 years, illiterate and in lower social class ($p<0.05$).
Conclusions: There is a high prevalence of social problems like illiteracy, unemployment, financial dependence, morbidities and stress among the elderly tribes.

Keywords: Elderly, Distress, General health questionnaire, Morbidity, Tribes

INTRODUCTION

Ageing is an inevitable outcome of the demographic transition. The major reasons behind are declining fertility and increasing longevity. Change in socio-economic status and various health problems diversely affect an individual's way of life during old age. The aged population (aged 60 years and above) in India is around 104 million (Census 2011) and by 2050, the expected increase is up to 296.6 million making 20 per cent of the total population (United Nations, 2013). West Bengal falls in same legacy by contributing nearly one-fourth (24.5%) of the household population.[1] The aged tribes (ST) constituted 12 per cent of all tribes (5.8% of total) in West Bengal.[2] The Santal represents more than half of the total tribal population (51.8%). Oraon (14%), Munda (7.8%) and Bhumij (7.6%) are the other major STs having sizeable population.[3] In India, 8.2% of the total population that is 84 million are tribals belong to around 698 communities or clans. Primitive tribal groups are

seventy five and the name is due to pre-agricultural level of knowledge and extreme backwardness. There is interstate overlapping of groups making the exact number less than 500. The scheduled tribes are honoured special status under the constitution of India. In reality, their status especially their health still remains unsatisfactory. They are most exploited, neglected, and highly vulnerable to diseases with high degree of malnutrition, morbidity and mortality.[4] Elderly tribes play the role of transformer of their culture and they possess a distinctive culture, heritage and socio-economic backwardness. Health is a vital component for high life expectancy. Most of the tribals don't have the access to basic principles of primary health care. Therefore they are prone to suffer from diseases with high morbidity and mortality. There is scanty data regarding the actual burden of morbidities among this marginalised society. Communicable diseases such as tuberculosis, malaria, gastroenteritis, measles, skin diseases like scabies etc. are high among the tribals. Night blindness, sexually transmitted diseases are well known public health problems of tribals in India.[5,6] In general, old age diseases are not always curable and they pose a financial burden. The study done by Kerketta et al among four primitive tribes of Orissa found impairment in vision, hearing and mobility in considerable numbers. The other less common morbidities found are acid peptic disease, non-specific fever, goitre, common cold, asthma, tuberculosis and leprosy.[7] Self-rated health, recommended by World Health Organization is very important indicator of health related research and particularly of great concern in evaluation of geriatric health.[8] Studies mainly for the elderly tribes were less attempted in past. Therefore this study was undertaken to assess the overall health status, self-rated health and to find out the association between socio-demographic characteristics and distress and self-rated health of elderly tribes.

METHODS

An observational, descriptive study with cross-sectional design was undertaken among elderly tribes residing in the service area of the teaching hospital, situated in Nadia district of West Bengal for three months. The tribal community people in this area were mainly Santals residing for more than last 20 years. The people were well conversant in Bengali but their mother tongue was Alchiki. Current research included all person aged 60 years and above, who were present during the time of survey. The respondents were informed about the nature, objectives and rationality of the study and written consent was obtained before data collection. Institutional ethical clearance was obtained prior to initiating the current study. A pre designed, structured proforma was used for getting the information from the participants. The proforma had information on socio economic and demographic attributes, history of self-reported morbidities, high risk behaviours, anthropometric measurements and general examination, General Health Questionnaire-12 (GHQ 12), health care seeking behaviour and awareness of currently available social welfare schemes or Govt. schemes for elderly tribes. A local female resident of tribal community worked as social worker under the Department of Community Medicine. Complete enumeration of the household was done during the time of survey. The final number of respondents was 120. Data collection was done twice a week. Researchers with help of the health worker of the concerned department gathered information on the attributes listed in the proforma by direct interview. Anthropometric measurements were recorded by standardised instruments. Social class was determined by B G Prasad's socio economic scale.[9] Study population was asked to report ailments they experienced within last three months. Body weight will be measured using a standard portable weighing scale. For overweight and obesity, WHO classification was considered. In the present study, people having BMI between 25.00-29.99 were overweight and BMI of >30.00 regarded as obese.[10] Hypertension is defined as SBP more than 140 mm of hg and DBP more than 90 mm of hg as per WHO criteria.[11] Level of stress was assessed by twelve item General Health Questionnaire (GHQ-12). The twelve-item was intended to screen for general psychiatric morbidity. Each item was rated on a four-point scale. Scores between 11-12 indicate typical whereas score >15 indicates evidence of distress and score >20 suggests severe problems and psychological distress.[12] Confidentiality regarding the respondent identity was strictly maintained. Mean value was calculated for age, income and also for weight, height, BMI, GHQ-12 score, systolic and diastolic blood pressure. Proportion was done for categorical variables. Presence of association between socio-demographic variables and mental health status was done by either Fisher's exact chi square test or Yates corrected chi square. $P<0.05$ was considered significant. Odds ratio, confidence interval was calculated. Licensed statistical software (SPSS 22.0) was used for data analysis.

RESULTS

The mean (SE) age of the subjects was 64.50 years (0.421) and majority were elderly females (61.7%). Seventy tribes had lived in kutcha house and 99 were illiterate. Unemployment was seen in 59.2% tribes. More than half respondents were in the lower socioeconomic class followed by lower middle group. The proportion of respondents who had lost either their wife or husband was 34.2%. Children and either spouse (70.9% and 15.8% respectively) provided financial help to the elderly for their livelihood (Table 1). The proportion of self-reported morbidities varied. Tobacco addiction was most prevalent (84.3%) followed by alcohol addiction (63.3%) and smoking (46.6%). Common cold (80.0%), low back pain, joint pain (73.3%), problems of vision (50.0%) and hearing (24.2%) were reported. One each case of malaria and kidney disease, four tuberculosis and diabetic subjects were among the elderly population (Table 2). Clinical examination revealed pallor in half of the population. Out of 70 women, 63.50% had pallor while

among males; the prevalence was a bit less (50%). The weight of the elderly respondents varied vividly from 32 kg to 78 kg. The variability among the height was also more (1.27 mt to 1.82 mt). Mean height (SE) was 1.50 mt (0.009). Out of 120 respondents, fifty nine had more than normal body mass index (>25.00). Obesity was noted among 17 subjects. Overweight and obesity were also more among female (40 vs. 19). The mean (SE) body mass index was 25.26 (0.467) that indicated a trend of already crossing the borderline and this data was well supported by a high mean weight of 56.55 kg. A good number of elderly were seen to have high blood pressure (54, 45.0). Obesity was noted among 17 subjects. Overweight and obesity were also more among female (40 vs. 19). Eighteen (18) men and thirty six (36) women had hypertension (Table 3).

Table 1: Background information (N=120).

Variables	Number	Percentage (%)
Age group(years)		
60–69	105	87.5
70–79	12	10.0
≥80	3	2.5
Sex		
Male	46	38.3
Female	74	61.7
Type of family		
Nuclear	13	10.8
Joint	107	89.2
Educational status (N=119)		
Illiterate	99	82.5
Primary	5	4.2
Middle/secondary	13	10.8
Higher secondary and above	2	1.7
Occupation		
Unemployed/homemaker	71	59.2
Retired Govt. employee	21	17.5
Farmer/own land	4	3.3
Labourer	17	14.2
Others	7	5.8
Marital status		
Unmarried	2	1.7
Currently married	75	62.5
Widow/widower	41	34.2
Divorced/separated	2	1.7

Analysing the responses of general health questionnaire-12 (GHQ-12) showed that higher proportion of study population had not been able to face their problems (47.5%), felt capable of making decisions (43.3%), been able to enjoy their daily activities (40.8%), able to concentrate (39.1%), felt worth (35.(%), felt not to overcome their difficulties (35.0%). Nearly one third of the elderly lost sleep over worry and felt constantly under strain. One in every four respondents felt unhappy or depressed. In spite of this worsening mental health, nearly 80% or more still had self-confidence and considered themselves as worthy. Finally nine out of ten had felt reasonably happy, all things considered. Distress was evident among 26 subjects. Severe distress was found in one among every five respondents. The highest and lowest scores obtained by an individual were 31 and 3 respectively with a mean (SE) score of 13.62 (0.627) (Figure 1).

Table 2: Self- reported morbidities and diseases in last three months (N=120).

H/O self-reported morbidities	Present (Number,%)
Vision problem	60 (50.0)
Hearing problem	23 (24.2)
Chewing problem	44 (36.7)
Acidity	30 (25.0)
Common cold	96 (80.0)
Joint pain	88 (73.3)
Low back pain	88(73.3)
Abdominal pain	13 (10.5)
Asthma	18 (15.8)
Moderate to poor appetite	27 (22.5)
Urinary problem	22 (18.3)
Constipation	34 (28.3)
Hypertension	20(16.7)
Sexual disease	14 (11.7)
Skin disease	29 (24.2)
Addiction to smoked products	56 (46.6)
Addiction to tobacco products	101 (84.2)
Alcohol addiction	76 (63.3)

Table 3: Findings of clinical examination (N=120).

Variables	Number (%)
Presence of pallor	70 (50.3)
BMI	
Underweight	9 (7.5)
Overweight	42 (35.0)
Obese	17 (14.2)
Blood pressure	
Normal	28(23.3)
Pre hypertension	38 (31.7)
Stage 1 hypertension	6 (5.0)
Stage 2 hypertension	9 (7.5)
Systolic hypertension	29 (24.2)
Diastolic hypertension	10 (8.3)

Fifty percent (50%) of respondents had faith on private institution or practitioner in comparison to Government set up (33.3%). Nearly 10% practiced self-medication. All the twenty geriatric persons who were on self-medication or went to other branch of medicine were not literate. Similar could be said about the social class that is all the twenty respondents belonged to either lower

middle or lower social class. More than 90% were not aware of any welfare scheme available for elderly, either government or private. Out of 10 respondents who were aware of the scheme, three were illiterate. Distress was more common in female, living singly and in nuclear family (p>0.05). Distress was seen more in persons aged more than 70 years (p<0.05). Association was found between mental health condition and social class, education status, self-rated health and it was significant (p<0.05). Stress was more among lower middle and lower social class and illiterate people (Table 4).

Table 4: Association between stress and other variables (N=120).

Variables	Mental health condition		Statistics
	Normal	Distressed	
Age group			OR= 9.33, 95% CI= 1.20 -197.24, df=1, x^2=4.98, p= 0.025
<70 yrs	42	63	
≥70 yrs	1	14	
Sex			
Male	20	26	OR = 1.71, 95% CI= 0.74 -3.93, df= 1, x^2=1.40, p= 0.23
Female	23	51	
Type of family			
Nuclear	2	11	OR = 0.29, 95% CI= 0.04 – 1.51, df= 1, x^2=1.75, p= 0.132
Joint	41	66	
Educational status			
Illiterate	54	45	OR = 0.23, 95% CI= 0.07 – 0.69, df= 1, x^2=7.61, p= 0.005
Literate	15	5	
Living status			
Single	3	13	OR = 0.42, 95% CI= 0.09 – 1.72, df= 1, x^2=1.08, p= 0.298
With family	40	73	
Socio economic class			
Upper middle/middle	17	9	OR = 4.87, 95% CI= 1.77-13.68, df= 1, x^2=10.77, p= 0.001
Lower middle/lower	26	67	

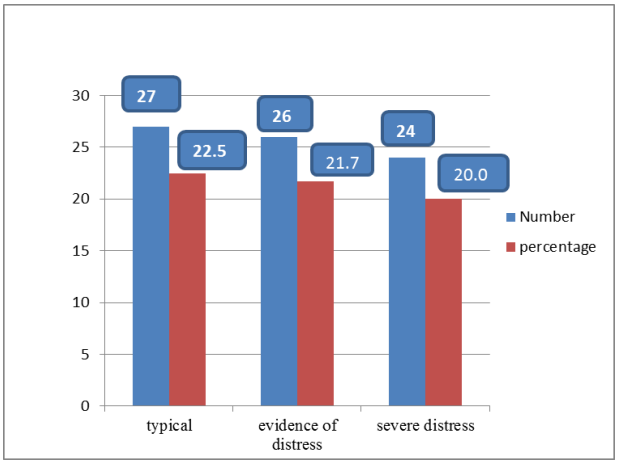

Figure 1: Prevalence of distress by GHQ-12.

DISCUSSION

Geriatric age group is an age group where there is large number illness leading to disability, impairment, morbidity or mortality. It is seen that elderly are more vulnerable to develop illness due to physiological attrition and adjusted defence mechanisms. Both Central and State Governments have implemented new welfare programmes for old age people to improve their socio economic status and health conditions.[13] The old age illnesses sometimes have no permanent solution in terms of cure whereas there may be a major financial burden on the family that makes the situation even worse.

The present study was conducted among 120 elderly tribes residing in a tribal community of a district of West Bengal with the predetermined aim of finding out the health status and associated factors. The current research among the elderly tribes found that most of the subjects were female like in case of an Orissa study (61.7% vs. 54.9%).[7] A study conducted among elderly tribal women in Kancheepuram district of Tamil Nadu had some findings similar to the present study such as more respondents were in 60–69 years age group, illiterate, had lived in joint families and lived in kutcha houses. Majority (three-fourth) of them belonged to lower middle or lower socio-economic class. Present study had 25% homemaker which was pretty less (46.7%) than the Kancheepuram study and the reason might be this study was done only among women. Another study carried among elderly tribal women in Kodaikanal hills also had more representation from 60–64 years age group. The other similar findings were noted in the variables like literacy status (illiteracy rate was 91.2% vs. 82.5%), marital status (currently married were 53.6% as compared with 62.5% in present one). It was observed that children and either spouse provided financial help to the elderly for their livelihood in the present study like in other

study. Nearly half of the elderly women were housewives taking care of the grandchildren and attending to household chores. All the respondents had health problems, the most common being hypertension (22%), arthritis (17%), diabetes (10%), or constipation (2%). Others included anaemia (10%), skin problems (12%) vision problems (18%) and other minor ailments (5%). Hypertension, arthritis and diabetes were found to be more common among females.[14,15]

The research among elderly women of Kodaikanal hills showed that age is an important demographic trend of a respondent. A good number (31.8%) of them belonged to the age group between 60-64 years. And 2.6% of them were above 80 years old. Analysis of educational status found that there were more of illiterate (91.2%), and a few of the (8.8%) respondents completed only primary level education. Marital status revealed that out of 390 respondents a vast majority of them (53.6%) were married and living with their spouse. 24.9% of the respondents were widow. It was observed that 31.9% of the respondents get financial support from their daughters. 12.1% of the respondents are getting financial support from their spouse and remaining 11.7% of the respondents are receiving from their sons. When assessed the level of awareness of supportive systems and welfare of the elderly tribal people, the majority (58.2%) responded that they did not know about the Government programmes. The elderly people were not well aware of Government tribal welfare programmes due to ignorance and illiteracy. 85.9% of the respondents have some kind of physical problems like gastro intestinal disease, chronic constipation, chronic headache, joint pain, loss of vision, loss of hearing. In addition, they suffer from communicable diseases such as tuberculosis and malaria. In this modern medicine era, 45.1% were following Siddha medicine for their physical illness. Regarding visual or eye sight problems 38.2% of the respondents have visual problems. Psychological problem is most common among elderly. Loneliness in old age is a common problem found in many of the developed and developing countries. 13.3% of the respondents stated that they have the feeling of isolation. The analysis of self-reported morbidities reflected the fact that the some health problems namely vision problems, hearing problem, backache, joint pain, constipation found in present study were similar to some other studies. But it was also noticed that the proportion of different morbidities were more among the current study subjects. The reason attributed might be lack of knowledge regarding when to seek health care among the respondents. Visual problem was marked in about half of population which reflected that it was a common problem of geriatric age group. An earlier study from Orissa reported nearly similar proportion in both sexes. In the present study, there is less prevalence of hearing problem, chewing problem in comparison to Orissa study. Similar proportion of non-specific fever was reported in previous studies.[7,14,15]

A study from Chennai showed 56% visual disability among the general elderly population. High proportion of visual (65%) and loco motor disability (36%) was also reported in a rural India study.[16,17] The reported case of tuberculosis was less in the current study but the prevalence was quite higher in other studies, ranging from 17% to 30%.[18] A high prevalence of pallor cases were seen in both sexes (50.0% males and 63.5% females). The haemoglobin estimation could be a better and more sensitive indicator for knowing the true picture. The Orissa study showed that none of the females had normal haemoglobin status and severe anaemia was noted among 70% of males and 77% of females. Self-reported cases of hypertension were less in comparison with Orissa study (16% vs. 35% approx.) whereas Kodaikanal study (22%) revealed a much close result. The reason for the less percentage could be due to the fact that the respondents of present study were not aware of their morbidities due to high rate of illiteracy among them. In the Orissa study, blood pressure levels indicated a higher prevalence of hypertension in these groups with the overall prevalence among males and females being 31.8% and 42.2%, respectively. In the present study, the prevalence of high blood pressure was also more in females. The high prevalence could be due to urbanisation and acculturation among the tribes.[7,14]

Severe distress was found in one among every five respondents. Loneliness in old age is a common problem found in many of the developed and developing countries. The study from Kodaikanal, India had observed that one in two individuals felt uncomfortable with their family members regarding respect and love. In addition to loss of respect, 35.4% were not having food along with family members. Feeling of isolation was reported by 13.3% of the respondents. Among the study subjects, more than 90% were not aware of any old age welfare scheme, either government or private whereas in a previous study from South India showed that the level of awareness about old age welfare schemes was 68.2% and the most astonishing fact was that the illiteracy rate of these two studies were quite similar. Therefore the reason behind could be due to lack of initiative from the local administrative government bodies for making them aware of the fact and this also reflected a sense of negligence towards these elderly.[14]

CONCLUSION

The in-depth analysis of the present study findings reflected the fact that there is a high prevalence of social problems like illiteracy, unemployment, financial dependence among the elderly tribes. The living status and the economic status is a matter of concern. As there is no alternative vocational rehabilitation for the elderly in the local area therefore it leads to aggravate their external financial dependence. The ignorance and lack of health education make these people more prone to develop different systemic illnesses. This study also revealed a grave fact regarding the mental health

condition of these people and the proportion of distress is really high. The non-communicable diseases are progressing as evident from this present study. Another point of focus is complete unawareness of any elderly scheme among the majority. The major limitation of this study was shortage of resources in form of time and also some obstacles in communication. A future broader comparative study involving more manpower, time and funds is the prime aim of the researcher. Finally it is concluded that old age related problem is unavoidable but the quality of life can be enhanced by inner will, dissemination of adequate knowledge and active involvement by the local Governmental administration.

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