*International Research Journal of Social Sciences*_____ ISSN 2319–3565
Vol. **4(6),** 72-76, June **(2015)** *Int. Res. J. Social Sci.*

Life Style and Economic Correlates of Self-Rated Health Among Elderly in Rural India: Evidence from SAGE

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Available online at: www.isca.in
Received 17th April 2015, revised 22nd May 2015, accepted 9th June 2015

Abstract

Population ageing is the consequence of demographic transition, which affects the age structure of the world's population drastically. The perceived health status of elderly is an important measure for making better plan and policies related to health. The self-rated health not only states the determinants of health status, but also related to the acceptance of health-promoting behaviour. The purpose of the present study is to investigate the influence that socioeconomic determinants, economic hardship and life style factors have on self-rated health among elderly persons (60 years and older) living in the rural India. The present study has utilized the Study on Global Ageing and Adult Health (SAGE-2007) data for analysis, which was conducted with the collaboration of IIPS and WHO. A total of 11,230 respondents were interviewed in the survey out of which 3618 were elderly (60+) out of which 2702 elderly were used with the help of SPSS and STATA 13 software. The results depicts that bad self-rated health is more prevalent among oldest-old, female, Muslim, scheduled tribe, elderly suffering from economic hardship and ever used but not currently using tobacco and alcohol. The old-old, oldest-old and Muslim are more likely to have bad self-rated health whereas rural elderly with less than primary education is less likely to have bad self-rated health. Elderly not suffering from economic hardship are less likely to have bad self-rated health. The likelihood of having bad self rated health is more among elderly who ever used but not currently using tobacco and similarly in case of alcohol than their counterpart of those who ever used and currently using. The present study findings will be useful for policy makers and researchers who are working in the field of health and ageing in India.

Keywords: Self-rated health, elderly, SAGE, socio-economic, economic hardship, life style, rural India.

Introduction

Population ageing is the consequence of demographic transition, which affects the age structure of the world's population drastically. Mostly developed regions have attained older population age structures, which is now rapidly experienced by the developing regions. India is passing through such a stage of demographic transition, and it has the world's second largest aged population. According to United Nations Population Division, the population ageing in India is projected to increase from 8 percent in 2010 to 20 percent in 2050[1]. The growth rate of elderly in developing countries like India is very rapid than the developed countries. The ageing comes up with several changes such as physical, mental change and changes in social relations[2]. The Rapid increase in the elderly population gives rise to several challenges related to health, income to support themselves, jobs, social security, psychological, etc. The burden of disease and mortality will shift from communicable diseases to non-communicable diseases[3]. There is inverse relationship has been investigated between socio-economic status and disease and mortality[4]. The retirement, loss of spouse and economic hardship has shown to account for rise in the loss of functional ability and physical control in older ages[5]. Rapid growth and modernization have lead to increasing in the concept of nuclear family. Due to this reason, the elderly facing psychological distress and sometimes they move to old age home[6].

In India, differentials in morbidity and mortality as per socio-economic status have become a major area of concern for research scholars and policy makers[7-8]. Studies have shown family support system as an important factor to resolve the ageing issues[9]. The self-rated health is becoming the most widespread indicator in research for accessing the health status of elderly. The World Health Organization has recommended self-rated health as the indicator for health monitoring. The self-perception is gaining importance over the objective situation in geriatric research. Usually, objective assessment of health status is not feasible and in such occasions self-reported health is considered for clinical assessment[10].

Self-rated health is also called self-perceived, self-assessed or subjective health; it is a subjective assessment of one's health condition[11-12]. Subjective health assessment differs for different people[13]. Self-rated health is very frequently used in social epidemiology and in elderly health research because of its consistency in predicting functional decline and mortality[14]. A series of studies have shown self-rated health as a major predictor of mortality of various diseases, some researchers have investigated its association with morbidity and disability.

Socio-economic factors are also its main determinant. This association has been widely illustrated in both cross-sectional[15-17] and longitudinal studies[18]. Previous study conducted in Netherlands has found that lifestyle factors such as smoking and drinking alcohol are major predictors of related to impaired self-rated health of elderly[19]. According to Subramanian and associates (2009), people with low or no education level were significantly more likely to report poor perceived health than compared to high-educated people[20].

The self-rated health measure is a valid for accessing morbidity and mortality. This measure has been found to have a strong association with demographic and socio-economic characteristics in developed countries but in developing countries, this association is not clear[21]. Usually the presence of illness is not identify and report by socially deprived people as the self-assessment of one's own health is directly relate to its social experiences and expectations[22-23]. In the literature the self-rated health has face validity mainly its relationship with socio-economic status[20].

The rapid increase of the rural elderly population especially of women does not have drawn public attention and remained it is to be a hibernating issue for the social scientists and policy makers. With the increasing growth rate of elderly, India soon will become an ageing society[24]. Studies have shown that the process of ageing leads to increase in the burden of disease as well as the economic hardship. The women are the more sufferer as they have to face the triple burden as of being women, aged and widowhood. There is very little literature on the problems and issues faced by rural elderly. By understanding, the factors associated with self-rated health may help public health professionals to prioritize health-promotion and disease-prevention interventions. Therefore, the aim of the study is to investigate the association between socioeconomic status, economic hardship and lifestyle factors, and self-rated health among rural elderly in India.

Methodology

For pursuing the objective of the study, present study has utilized the Wave-1 SAGE (Global Ageing and Adult Health) data which was conducted by International Institute for Population Sciences, Mumbai in collaboration with World Health Organization, Geneva. The SAGE is a longitudinal study, here information was collected from people belonged aged 50 and above. Within the study there is a small comparison group with a sample of aged 18-49 years adults. The survey was conducted in 6 countries namely including Mexico, Russia, South Africa, Ghana, China and India. In India, the survey carrying the information of elderly of six states namely West Bengal, Karnataka, Rajasthan, Maharashtra, Assam and Uttar Pradesh. In Wave-1 of SAGE, total 11,230 respondents were interviewed out of which 4,670 belong to aged 18-49 and 6560 respondents belong aged 50 and above. In the survey, out of 3618 elderly 2885 were interviewed in urban area and 733 in rural area. Present study has analyzed the information of 733 rural elderly.

Dependent variable: In the present study, a concept of 'Self-rated health' was measured with help of following question such as In general, how would you rate your health today?' (With given options of 'very good', 'good health', 'moderate, 'bad', and 'very bad'). For the analysis, above options such as 'very good' and 'good' and 'moderate' options were combined into 'not bad' and the rest of the two options were combined into 'bad health'. Information on the following demographic and socioeconomic factors of elderly has been used such as age-group, sex, marital status, religion, caste, education level, currently working.

Independent variable: Socio-economic covariates: The variables taken for socio-economic status of elderly are sex (male, female), age (youngest old, old-old, oldest old), marital status (Never married, currently married, widow, other), caste (schedule tribe, schedule caste, other caste), religion (Hindu, Muslim, others), education (no education, less than primary, primary school completed, secondary school completed, high school completed, college/university and above), current working status (working, non-working).

Economic Hardship: The concept of 'economic hardship'was assessed with the help of following questionsuch as 'Do you have enough money to meet your needs?' with their given options 'completely', 'mostly', 'moderately', 'a little', and 'not at all'. The options 'completely', 'mostly' and 'moderately' were combined in to 'not suffering from economic hardship' and rest two were combined into 'suffering from economic hardship'.

Lifestyle factors: For assessing the concept of lifestyle factors, certain habits of respondent were taken such as tobacco smokingand alcohol consumption. These habits have been assessed to find out the association of lifestyle factors on the self-rated health of elderly who currently living in rural area. In the study tobacco use has been categorized into major four categories 'ever used and currently using daily', 'ever used and currently using but not daily', 'ever used but not currently using', and 'never used' with the help of two questions which were asked in the survey such as 'Have you ever smoked tobacco or used smokeless tobacco?' and 'Do you currently use (smoke, sniff or chew) any tobacco products?'. Alcohol use has been categorized into three categories 'ever used and currently using', 'ever used but not currently using', 'never used' with the help of two questions 'Have you ever consumed a drink that contains alcohol?' and 'Have you consumed alcohol in the last 30 days?'

Statistical analysis: In present study bivariate analysis technique called 'chi-square test of significance' was applied to measure the relationship between self-rated health by economic hardship, lifestyle factors and selected socioeconomic

characteristics. After knowing the association, it was examined which factors are able to explain and predict the self-rated health in rural India with the help of 'multiple logistic regression model' statistical technique. All the analysis and statistical techniques were used with the help of using SPSS 20.0 and Stata version 13 statistical software packages.

Results and Discussion

A total of 11,230 respondents were interviewed in the survey out of which 3618 were elderly (60+), 2702 elderly from the rural area and 916 elderly from the urban area. The Table 1 shows that the older the people, the more common are the bad self-rated health. The level of poor self-rated health among elderly increased with age was highest among oldest-old age group (52.1%). The percent of reporting poor self-rated health is more among female (32.6). Nearly 50% of the divorced/separated have reported poor self-rated health. According to religion, the higher proportion of Muslim elderly reported their health as poor (39%). A higher percentage of scheduled tribe (39%) has been reported bad self-rated health. Educational level among rural elderly did not show any pattern though bad self-rated is higher among illiterate (33%). A Higher percentage of not currently working elderly has reported bad self-rated health than those of currently working. Economic hardship is significantly associated with self-rated health. The proportion of poor self –rated health is much higher among elderly suffering from economic hardship (46%) than those who are not suffering from economic hardship (18%). By lifestyle factors, the higher percentage of bad self-rated is among those who ever used tobacco but not currently using. Similarly, those who have ever used alcohol but not using currently have more reported bad self-rated health.

The results of a multiple logistic regression in Table 2 show that increasing age is positively and significantly associated with the reporting poor self-rated health. Old-old elderly (70-79) (odds ratio [OR] = 1.40, p = .008, 95% confidence interval [CI] = [1.095, 1.808] and oldest-old (80 years and above) elderly (odds ratio [OR] = 2.92, p = .000, 95% confidence interval [CI] = [2.028, 4.229] are more likely to report bad self-rated health compared to youngest-old elderly.

The likelihood of bad self-rated health is more among Muslim elderly (1.54) compared with their Hindu counterpart. There is a negative association between rural elderly with less than primary level education and bad self-rated health. Elderly with less than primary education (0.70) are less likely to report bad self-rated health than their counterpart with no education. The bad self-rated health is significantly lower among rural elderly not suffering from economic hardship (odds ratio [OR] = .26, p = .000, 95% confidence interval [CI] = [.205, .325] than that of elderly suffering from economic hardship. Elderly ever used tobacco but not currently using (1.44) significantly more likely to report bad self-rated health than those elderly who ever used tobacco and currently using daily. The likelihood of bad self-rated health is more among elderly ever used alcohol but not currently using (2.11) than those elderly who ever used alcohol and currently using.

Table-1
Percentage distribution of self-rated poor health according to selected background characteristics

Variables	N	Percentage
Sex		
Male	372	26.3
Female	361	32.6
Age		
Youngest old (60-69)	369	23.5
Old Old (70-79)	245	34.0
Oldest old (80+)	119	52.1
Marital Status		
Never married	7	37.9
Currently married	425	25.1
Widow	295	38.2
Other	6	48.6
Caste		
Schedule Tribe	50	38.6
Schedule Caste	153	32.2
Other caste	530	28.0
Religion		
Hindu	591	27.7
Muslim	125	38.7
Others	17	36.8
Education		
No education	502	33.2
Less than primary	87	23.1
Primary school completed	81	25.3
Secondary school completed	34	22.3
High school completed	18	16.6
College/University and above	11	20.3
Current Working Status		
Working	134	16.4
Non-Working	369	36.5
Economic Hardship		
No	249	18.1
Yes	484	46.1
Tobacco use		
Ever use and currently using daily	353	28.9
Ever use and not currently use daily	20	26.3
Ever use but not currently using	70	40.3
Never used	290	28.6
Alcohol use		
Ever use and currently using	37	19.5
Ever use but not currently using	75	37.8
Never used	621	29.3

Table-2
Logistic regression results: likelihood estimates of poor self-rated health among older population

Variables	Odds Ratio	p value	95% CI
Sex			
Male®	1.000	-	-
Female	0.866	0.359	[0.64, 1.18]
Age			
Youngest old (60-69) ®	1.000	-	-
Old Old (70-79)	1.407	0.008	[1.10, 1.81]
Oldest old (80+)	2.928	0.000	[2.03, 4.23]
Marital Status			
Never married®	1.000	-	-
Currently married	1.048	0.926	[0.39-2.81]
Widow	1.067	0.900	[0.39, 2.91]
Other	2.930	0.222	[0.52,16.44]
Caste			
Schedule Tribe®	1.000	-	-
Schedule Caste	0.764	0.013	[0.48, 1.23]
Others	0.764	0.897	[0.49, 1.19]
Religion			
Hindu®	1.000	-	-
Muslim	1.538	0.266	[1.10, 2.16]
Others	0.956	0.232	[0.49, 1.19]
Education			
No education®	1.000	-	-
Less than primary	0.701	0.053	[0.49, 1.00]
Primary school completed	0.788	0.199	[0.55, 1.13]
Secondary school completed	0.854	0.533	[0.52, 1.40]
High school completed	0.628	0.124	[0.35, 1.14]
College/University and above	1.157	0.693	[0,56, 2.39]
Current Working Status			
Working®	1.000	-	-
Non-Working	2.295	0.000	[1.79, 2.94]
Economic Hardship			
Yes®	1.000	-	-
No	0.258	0.000	[0.21, 0.33]
Tobacco use			
Ever use and currently using daily®	1.000	-	-
Ever use and not currently use daily	0.826	0.562	[0.43, 1.58]
Ever use but not currently using	1.438	0.075	[0.96, 2.14]
Never used	0.965	0.790	[0.74, 1.26]
Alcohol use			
Ever use and currently using®	1.000	-	-
Ever use but not currently using	2.107	0.006	[1.24, 3.57]
Never used	1.478	0.098	[0.93, 2.35]

® Reference Category

The study attempted to enquire the association of socio-economic covariates, economic hardship and lifestyle factors with self-rated health among elderly in rural India. The present study findings have supported the previous findings self-rated health. In several studies age, sex, employment and some physical health problem have been identified as the determining factors of self-rated health [25-26].

Conclusion

The present study shows that bad self-rated health is more prevalent among oldest-old, female, Muslim, scheduled tribe, elderly suffering from economic hardship and ever used but not currently using tobacco and alcohol. The older and Muslim are significantly more likely to have bad self-rated health whereas rural elderly with less than primary education is less likely to have bad self-rated health. Elderly not suffering from economic hardship are less likely to have bad self-rated health. Elderly ever used but not currently using tobacco and alcohol are more likely to have bad self-rated health. The study shows the socioeconomic status and economic hardship as a major predictor of bad self-rated health. The study findings will be useful for the policy makers and researchers working in the field of ageing and health in rural India.

Acknowledgement

The authors would like to acknowledge WHO-SAGE for allowing us to use the dataset.

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