

RESEARCH ARTICLE

Lifestyle and Socio-economic factors associated with Cause of Death among Insured Persons in Rural Areas of Mahabubnagar district, AP, India

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Abstract

The District Rural Development Agency (DRDA)-Indira Kranthi Patham (IKP) of Mahabubnagar district has initiated various insurance schemes for rural population which has certainly helped in improving the social status of poor families in rural Mahabubnagar, district. To study the lifestyle and social factors related with the cause of death a verbal autopsy tool was framed in the form of a pre-designed, pre-tested questionnaire. Three hundred insured persons who died prematurely were selected from 30 clusters. A responsible adult person preferably 1st degree relative in the household of the insured was interviewed to answer the questionnaire. An observational study was carried out. The results were analyzed by descriptive statistical method. Out of 300, 74% were males and 26% were females. Highest numbers of deaths (21%) were reported in the age group of 50-54 years. Majority about 85% were illiterate and 88% belonged to lower socio-economic status. Around 58% used to consume alcohol and 49% of them were smokers and 15% were addicted to tobacco chewing. Major causes of death were due to circulatory (23.66%) and infectious diseases 23.66%.

Keywords: Insurance schemes, life style, socio-economic factors, deaths, tobacco chewing, infectious diseases.

Introduction

The term 'lifestyle' is rather a diffuse concept often used to denote 'the way people live', reflecting a whole range of social values, attitudes and activities. It is composed of cultural and behavioral patterns and lifelong personal habits (e.g. smoking, alcoholism and tobacco chewing) that have developed through process of socialization. Lifestyles are learnt through social interactions with parents, peer groups, friends and siblings and through school and mass media (WHO, 1986). India is experiencing rapid health transition with a rising burden of non-communicable diseases causing significant morbidity and mortality both in urban and rural population with considerable loss in potentially productive years of life (Park, 2013).

The SERP (Society for Elimination of rural poverty) has implemented community run insurance covering 1 crore individuals consisting of 70 lakh households under various insurance schemes for the poor and also informed that on average 70,000 deaths are registered per annum and requested to find out cause of death so that government can get detailed insight into various major killer diseases which are associated with lifestyle and socio-economic factors and can put in place preventive measures.

Against these backdrops, this study was aimed to investigate the lifestyle and socio-economic factors associated with cause of death among insured persons in rural areas of Mahabubnagar district, Andhra Pradesh.

Materials and methods

Experimental design: An observational study among insured persons in rural areas of Mahabubnagar district was carried out in SVS Medical College, Mahabubnagar, Andhra Pradesh during July-August 2013. Necessary information regarding the person insured under AABY (Aam Admi Bima Yojana) and ABH (Abhaya Hastham) schemes in the district and the number of these insured who died during the April 2012-March 2013 was obtained from the DRDA project office. It was found that the district has 64 Mandals. A total of 170617 persons were insured under AABY of whom 2449 died during the year and under AHY, 159607 persons were insured and 251 died.

Study sample: As per the terms of reference we are required to survey minimum 10% of the total deaths that occurred among the insured persons under AABY and ABH. The mandal and village wise lists of insured persons were prepared with the help of the nodal agency. Out of the 64 mandals, 30 were selected on the basis of 30 cluster sampling technique. Totally 300 insured people (275 deaths under AABY and 25 deaths under ABH) were taken as study sample.

Sampling technique: Cluster sampling technique was done in 2 stages. In first stage, 30 clusters i.e. mandals from the district were selected randomly. In second stage, the villages in the 30 selected mandals were listed and 4 villages in each mandal were randomly selected by lots. The cases in these villages were also selected by random sampling technique using lots.

Questionnaire and data analysis: In all 300 cases, a responsible adult person preferably 1st degree relative in the households of the insured death was interviewed using questionnaires (Wife/husband/father/mother/son). Additional information was obtained from the Bima Mitra (grass root level worker for DRDA), neighbors/village heads/members of self help groups of the villages for confirming the data. The team (one faculty and one assistant doctor) visited household of the insured for interviewing. For studying the socio-economic status modified Kuppaswamy classification was used (Kumar *et al.*, 2007). Collected data were analyzed by descriptive statistical method.

Results

In Mahabubnagar district, totally 3,30,224 persons were registered under DRDA-IKP (AABY and ABH schemes) during April 2012-March 2013. Out of this, 2700 insured persons died. Out of total 300 insured persons, 91% were from AABY and 9% were from AHY insurance scheme. About 129 (43%) belonged to BC, 127 (42.33) belonged to SC, 35 (11.66%) belonged to ST and 9 (3%) belonged to OC. In our sample, 85.33% belong to SC and BC. Out of 300 insured person's highest numbers of deaths, 21% were reported in the age group of 50-54 years followed by 20.66% in 45-49 years and lowest 1% was in the group of 15-19 years. Around 37% insured persons died below the age of 40 years which shows high mortality in much younger age group (Table 1).

Table 1. Age-wise distribution of the insured deaths.

Age-wise distribution (years)	Number	Percentage
15-19	03	1%
20-24	08	2.66%
25-29	18	6%
30-34	38	12.66%
35-39	44	14.66%
40-44	57	19%
45-49	62	20.66%
50-54	63	21%
55-59	07	2.33%

Table 2. Sex-wise distribution of the insured deaths.

Sex wise Distribution	Number	Percentage
Male	222	74%
Female	78	26%
Total	300	100%

Table 3. Socio-economic status of the insured deaths.

Socio-economic class	Number	Percentage
Lower (V)	264	88%
Upper-lower (IV)	36	12%
Total	300	100%

Table 4. Lifestyle habits of the insured deaths.

Habits	Number	Percentage
Smoking	147	49%
Tobacco	45	15%
Alcohol	174	58%

Table 5. Cause of deaths among insured persons.

Cause of deaths	Percentage
Circulatory diseases	23.66%
Infections and parasitic diseases	23.66%
External causes	14.66%
Diseases of digestive system	10.00%
Neoplasm	7.00%
Respiratory diseases	6.33%
Genito urinary	5.66%
Intestinal disorders	4.37%
Mental and behavioral disorders	3.66%
Unidentified	1.00%

Among the insured deaths, 74% were males and 26% were female (Table 2). About 264 persons (88%) belonged to lower (V) class and 36(12%) belonged to upper lower (IV) (Table 3). Among 300 insured persons, 174 persons (58%) used to consume alcohol, 147(49%) of them were smokers and 45 (15%) were addicted to tobacco chewing (Table 4). The major causes of deaths were recorded in Table 5. High percentage of deaths was recorded (23.66%) due to circulatory disease which includes ischemic heart disease, cerebro vascular disease, shock, bleeding etc. Infectious and parasitic diseases also recorded the same percentage (23.66%) which includes respiratory infection mainly tuberculosis and intestinal infections namely typhoid, diarrhea, HIV/AIDS, malaria, hyperpyrexia and septicemia. Out of 300 persons, 78% of the insured died at home, 15% died in the hospital and 7% died on the way to the hospital/medical help.

Discussion

Health is both a consequence of an individual's lifestyle and the factors in determining it. Health requires the promotion of healthy lifestyle. Considerable evidence has accumulated which indicates that there is an association between health and lifestyle of individuals. In developing countries like India where traditional practices still persists, the risk of illness and death linked with poor sanitation, nutrition, personal hygiene, elementary human habits, customs and cultural patterns exists (Wingard, 1982). Nowadays trend of non-communicable diseases are also increasing rapidly. Causes of death in rural adult population of North India (2002-2007) using verbal autopsy tool was done by Palanivel *et al.* (2013) which revealed 61% of deaths occurred among males and 59% occurred among those aged ≥ 60 years. The leading causes of death were diseases of the respiratory system (18.7%) and the circulatory system (18.1%). Infectious causes and injuries and other external causes, each accounted around 15% of total deaths followed by neoplasms (6.8%) and diseases of the digestive system (4%). Among those, 45 years of age, more than half of deaths were attributed to non-communicable diseases (NCDs) alone. These findings were relatively similar with our study.

In a similar kind of study conducted by Bathula *et al.* (2013) by verbal autopsy showed predominance of lifestyle diseases (52%) followed by infectious diseases (35%) and accidental deaths (12%). Acute myocardial infarction is the most predominant cause of death followed by viral fevers, pulmonary Tuberculosis, HIV/AIDS and cerebral stroke. On other hand in a similar kind of study done in Andhra Pradesh, by Joshi *et al.* (2006) revealed that diseases of the circulatory system were the leading causes of mortality (32%). Infectious and parasitic diseases (12%) came third which showed similarity with the present findings.

Conclusion

Lifestyles and behavioral patterns of people are changing rapidly, these being favorable to the onset of disease and illness. The impact of these diseases on the lives of people is serious when measured in terms of loss of life, disablement, family hardship and poverty. Out of 300, 74% were males and 26% were females. Highest numbers of deaths (21%) were reported in the age group of 50-54 years. Majority (85%) of them was illiterate and 88% belonged to lower socio-economic status. Around 58% used to consume alcohol and 49% of them were smokers and 15% were addicted to tobacco chewing. Major causes of death were due to circulatory diseases (23.66%) and infectious diseases (23.66%). Lifestyle related risk factors like smoking, tobacco chewing, alcohol consumption were found to be common in people belonging to low socio-economic class which is leading to premature deaths.

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