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HEALTH STATUS OF GERIATRIC POPULATION AMONG TRIBAL COMMUNITIES OF KERALA

Dr. Shabeer KP[1], Dr. Rejuna C A[2]
[1]*Associate Professor, Govt Arts and Science College Calicut. Kerala (India)*
[2]*Associate Professor, Govt Arts and Science College Calicut. Kerala (India)*

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BACKGROUND

The concept of health has gained importance in the past few decades. Health is the basis of all productive activities. A person can acquire his full potential only by maintaining a sound health and thus health is crucial for human development. Various health indicators have been observed to be directly related to economic prosperity and well being(Rugar et al 2001; WHO, 2001; Thomas and Frankenberg, 2002). The progress of a community and thereby the development of any nation thrusts on improving the health standards of its population. Labour productivity and labour force participation rate in any economy increases as a result of improvement in health standards. Health conditions of people belonging to various socio-economic groups across the world have improved significantly, in the past few decades. Financing of health expenditure deals with acquiring and allocating money to meet the health expenses of the masses individually and collectively (WHO 2000). Health systems provide a wide range of services to people that might be preventive, curative, promotive, rehabilitative or palliative (Pavan Pandey &Shivendra Kumar Singh 2017).Accessing health care is a vital component of a health system which helps in realizing the performance of health system within a country. Actual access to health care is determined by the quality of care available and the ability of people to utilize the existing health care facilities. This in turn is further influenced by people's attitude in receiving medical services, an understanding about the disease and knowledge of available medical facilities. Accessing health services might turn out to be expensive for households that spend a higher portion of their income for health and at times such expenditures may become catastrophic and might push families into poverty. Thus, adopting a proper financial strategy helps in protecting the households from financial catastrophe.

As far as India is concerned, right to health is Fundamental Right that is incorporated in Article 21 of Indian Constitution. The Constitution requires that states must consider improvement of public health as its primary duty. India has a wide network of health care system. Indicators like maternal mortality rate, infant mortality rate, life expectancy at birth, neonatal and postnatal mortality rates and morbidity rates have been improving throughout the years. Prior to Independence, the health system of the country was in an extremely dismal state. As India gained Independence, the government began focusing on establishing a better and well developed health care system by concentrating on building up skilled medical professionals (Sathyamala and Kurian 2012). But with structural adjustment pragramme, public spending on social sectors like health went down and a massive reconstruction of health system, based on cost benefit considerations began. As a result, a conducive environment for the growth of private sector in health services emerged and the affordability of the available essential health services to the people of the country has become a serious issue. Furthermore, public spending on health care reduced, which resulted in deterioration of the quality of public health services and thereby imposed serious implications on utilization and access of health services by poorer sections.

Kerala has a comparatively better health status with impressive health indicators that has secured international attention. Vital health indicators like birth, death and mortality rates have been higher in the state than the national averages in past years. In spite of the widely approved and applauded Kerala model of health, the state faces several challenges. The state exhibits high morbidity rates even though mortality rates are low, which in turn implies that the quality of life is deteriorating. Chronic diseases account for 20.8% of the morbidity burden of the state. The private per capita health expenditure is highest in the state compared to other states of the country (Sivakumar et al 2011, Divadanam et al 2012). Health expenditures have been growing rapidly due to rapid development of private sector health services and limited insurance coverage. For marginalised communities it become difficult to face the expenses if serious ailments strike the households, unless they get covered by insurance or get access to subsidised health services. Many

studies have reported that families of lower economic strata have been pushed into indebtedness as a result of higher cost of treatment and this in turn has aggravated poverty among this section of the society (Shabeer and Krishnan 2017).

Around 73 percent of the country's population accounts for backward caste population and they live in rural areas. It has been observed that there exists an increased dependence on private health care services by the poor and vulnerable. Lack of health insurance among the marginalised communities and the increasing out-of-pocket expenditure push them into poverty (Ray et al.,2002, Mukherjee et al 2010). India's health care market is unregulated and favours the affluent, while the treatment offered aim to raise the hospital performance by enhanced procedure volumes. As a result, marginalised sections fail to reach hospitals or receive low standard care (Daivadanam et al., 2012, Shabeer and Krishnan 2017).

Demographic factors also play an important role in the increasing health expenditure. This includes factors like increasing age, increasing longevity and increasing number of older adults. Population ageing is one of the most crucial issues of the present century and Kerala accounts for highest proportion of elderly population compared to other states of the country. With the population ageing, proportion of older persons in the society is rising and thereby the health expenditure. According to the 60th round of NSSO survey, the incidence and prevalence and thereby the hospitalisation rates are in the case of older people. Non communicable diseases (NCDs)which require greater attention and health care, are widely prevalent among the elderly population. Frequently the disabilities caused by these NCDs affect their day-to-day activities.

In spite of gaining an impressive heath achievement and reputation, Kerala faces certain challenges like marginalisation of indigenous groups. As a result, these groups lag behind in case of health and welfare, compared to other sections of the society. Thus, there persists a need to analyse the health status of elderly from the marginalised communities and the paper focuses on detailing the socio-economic and health conditions of the Scheduled Tribes in Kerala.

Theoretical Issues

Out of the several studies reviewed, it has been observed that magnitude and distribution in health care payments along with OOP payments have been analysed, mostly in cross country studies. These studies explored factors determining catastrophic health expenditure and its incidence along with coping mechanisms. Rising burden of OOP payments and its impoverishing effects have been discussed in studies in Indian context. Inter state variation in health expenditure have also been highlighted. Studies in Kerala context deals with trends, determinants and patterns of morbidity and looks into economic burden of treatment.

Liu et al(1995) studied the health care system in China and observed that health expenditure has an impact on income and indebtedness. Kei Kawabata et al (2002) analysed the income and expenditure data of sixty nations and observed that catastrophic health expenditure is higher in households of lower income strata compared to higher income group. Income level, age of members and employment status of head of the household determines catastrophic health spending. Presence of elderly, members with chronic illness or handicapped members in households increased the incidence of catastrophic health expenditure whereas households with younger and healthy members are less likely to be prone to catastrophic health expenditure. A study by Jayaprakash and Saravanan (2015) examines the health seeking behaviour of tribal women in Villupuram district of Tamil Nadu and observes that most of them rely on government hospitals followed by ayurvedic hospitals for treatment. Less than 10 percent rely on private hospitals. This was true especially for those above 45 years of age. A contrasting observation has been portrayed in a study by Sachdev (2012) on health awareness and perception of Nomad tribal population in three districts of Rajasthan. It was observed that 92 percent of the study population prefers private hospitals due to ready availability and good service. The nomadic tribal environment and non-acceptance of professional doctors in the community has resulted in poor health status of the nomadic tribes.

RESULTS AND OUTCOMES

Socio economic profile of study population

The study population consists of eight prominent tribal communities from Wayanad, Idukki and Palakkad covering major tribal habitats of the state. These communities account for around 51.86 percent of tribal population of the State. Five communities chosen for the study are concentrated mainly in Wayanad (Paniyan, Adiyan, Kurichian, Uraly Kuruma and Kuruman) , two of them in Idukki district(Mala Arayan, Muthuvan) and Irular community in Palakkad district. Households with at least one aged member have been selected for the study which constitutes 240 sample households. Among them, Paniyan community constitutes majority of the samples (82) followed by Mala Arayan (47) and Kurichiyan (30) community. Uraly Kuruma is the least represented community (9). Majority of the households had male members as head of the family and around 23 percent of the households have female members as head of the family.

While analysing the financial condition of households, employment status and monthly income gain attention. Average monthly income of Mala Arayan community seems to be higher from the sample, followed by Kurichiyan and Kuruman communities. Descriptive statistics of monthly income , detailed in table1, indicates significant difference in monthly income among various sub castes.

Table 1.Descriptive Statistics of Monthly Income of Sample Households

Sub-Caste	Mean (in Rs)	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
				Lower Bound	Upper Bound
Paniyan	7410.24	4697.10	515.57	6384.60	8435.88
Adiyan	8821.43	3993.30	1067.25	6515.77	11127.09
Kuruman	9181.82	5718.69	1219.23	6646.29	11717.35
Kurichiyan	9966.67	8758.18	1599.02	6696.31	13237.03
Uraly Kuruma	4388.89	3370.62	1123.54	1798.00	6979.78
Mala Arayan	20404.26	12844.66	1873.59	16632.92	24175.59
Muthuvan	6694.44	3835.36	904.00	4787.17	8601.72
Irular	7861.11	6707.78	1581.04	4525.41	11196.81
Total	10373.65	9089.87	585.53	9220.22	11527.09

Source: Primary Survey

Land holdings are productive assets possessed by tribal families and form yet another indicator of economic status of the community. Ownership of land determines their employment and income status. Analysing the landholdings of households, high positive skewness (3.11) could be observed. The average land holding is 57.1307 cents and a high degree of dispersion from mean value could be seen. Mean land holding was higher in case of Irular community (87 cents) and lowest in case of Uraly Kuruman (16.33 cents). As their major source of employment is agriculture (29.9 per cent) followed by non-agricultural (24.9) and land related labour(19.9), land holdings depict a crucial picture about their economic status.

Table 2.Descriptives of Land holdings

Sub-Caste	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
				Lower Bound	Upper Bound
Paniyan	60.12	148.32	16.28	27.73	92.51
Adiyan	39.43	51.56	13.78	9.66	69.20
Kuruman	32.09	44.91	9.58	12.18	52.00
Kurichiyan	47.00	44.33	8.09	30.45	63.55
Uraly Kuruma	16.33	31.53	10.51	-7.90	40.57
Mala Arayan	78.82	103.88	15.15	48.32	109.32
Muthuvan	38.50	33.85	7.98	21.67	55.33
Irular	87.00	128.20	30.22	23.25	150.75
Total	57.13	108.45	6.99	43.37	70.89

Source: Primary Survey

Analysing ownership of households, it was observed that higher proportion of paniyan community possess houses. Among these a major share possesses houses provided by the government. Own houses is higher among Mala Arayan community. Certain communities like Mala Arayan and Kurichiyan were in a better off position compared to others ,as observed from the survey.

Health Status

For analysing the health status of elderly in marginalised communities several indicators have been detailed, including mortality, morbidity, hospitalisation rate, health perception, health care needs, ill health behaviour and hygiene.

Morbidity

Morbidity refers to rate of disease in a population. Thus, prevalence of morbidity gains importance, which is the number of cases reported in a reference period to total population open to the threat of the disease.

Table 3: Morbidity Prevalence Rate

Sub Caste	Number of Ailments	Total Population	Morbidity Prevalence Rate
Paniyan	16	82	192.77
Kuruman	6	22	272.73
Kurichiyan	12	30	400.00
Mala Arayan	16	47	340.43
Muthuvan	2	18	111.11
Irular	8	18	444.44
Total	60	218	275.23

Source: Primary Survey

Morbidity prevalence rate for the study population is 275.23. Two communities namely Adiyan and Uraly Kuruman have not reported any cases of ailing elderly. Among others highest morbidity rate prevails in Irular community followed by Kurichiyan and the lowest reported in Muthuvan community. Fever of unknown origin is the major ailment that has affected

the study population. Life style diseases have been reported to possess a significant share of the ailments, especially among forward communities.

Hospitalisation

Certain issues like varying and lack of knowledge on diseases and about ailment of family members by respondents and problems like unwillingness to accept disorders as ailments affects the calculations and hence might lead to reporting errors . Focus group discussions also revealed the presence of late and underreporting of ailments. Thus, morbidity being a subjective matter, annual hospitalisation rate is calculated which accounts to the number of hospitalised persons, one year prior to survey, to the total population. Annual Hospitalisation rate is 456.43 for the Scheduled Tribe in which Kuruman community bags the highest score with most of the cases being cardiovascular ailments and blood sugar. Lowest rate is among Muthuvan tribe. Major ailments that led to hospitalisation include accidents/injury or fracture followed by fever.

Table 4: Annual Hospitalisation Rate

Sub-Caste	Number of Hospitalisation	Total Population	Annual Hospitalisation Rate
Paniyan	40	82	481.93
Adiyan	7	14	500.00
Kuruman	14	22	636.36
Kurichiyan	10	30	333.33
Uraly Kuruma	3	9	333.33
Mala Arayan	22	47	468.09
Muthuvan	3	18	166.67
Irular	11	18	611.11
Total	110	240	456.43

Source: Primary Survey

Mortality

In order to obtain an insight about the health status of tribal population, mortality record is also verified. A total of 16 deaths have been reported. Cancer accounts for most of the deaths.

Table 5. Descriptive Statistics of Age at Death

Descriptive Statistic		Statistic	Standard Error
Mean		54.47	6.41
95% Confidence Interval for Mean	Lower Bound	40.72	
	Upper Bound	68.21	
Median		58.00	
Standard Deviation		24.82	
Variance		616.27	
Minimum		7.00	
Maximum		98.00	
Interquartile Range		40.00	
Skewness		-0.07	0.58
Kurtosis		-0.24	1.12

Source: Primary Survey

Health Perception

As lack of informational base on their own health status is evident among the respondents, a high possibility of perception bias exists in case of self-assessed health perception. Health care need is assessed using prevalence of chronic illness and is observed to be high among majority of the respondents with 96 percent of Paniyan community requiring high health care need.

CONCLUSION

Examining the indicators of health, it is evident that forward or better off communities among the scheduled tribe also suffer from ailments like fever, cancer and most commonly lifestyle ailments like blood pressure, teeth / gum diseases and diabetes. Paniyas, being the poorest and most marginalised group requires much attention among others in case of health and welfare. Prevalence of ill health behaviour such as drinking, tobacco and drugs usage have accounted for the deteriorating health and economic status of these groups.

The study showcases the not -so- glorious side of the much appreciated growth in the health sector of Kerala. The actual health conditions portrayed by the state thrust aside the health needs of the marginalised groups and thus conceals the real picture. Health care requirements are higher, especially among the elderly of the most vulnerable of the Scheduled tribe community. Measures should be taken to bring such groups into the health care frame of the State and in ensuring the betterment of their health conditions.

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